

*The University of
Texas
at Austin*



**UNDERGRADUATE CATALOG
2010–2012**

THE UNIVERSITY OF TEXAS AT AUSTIN

WHAT STARTS HERE CHANGES THE WORLD

THE CATALOG OF THE UNIVERSITY OF TEXAS AT AUSTIN

The catalog of the University comprises four issues: *General Information*, the *Undergraduate Catalog*, the *Graduate Catalog*, and the *Law School Catalog*. Each issue is available from the Office of the Registrar.

The *Undergraduate Catalog* is published in August of even-numbered years; the *Graduate Catalog* is published in August of odd-numbered years; the *Law School Catalog* is published in February of even-numbered years. These issues contain regulations and degree requirements that apply to undergraduates, graduate students, and students in the School of Law. Regulations are valid only for the period given on the title page; for an explanation of the period for which degree requirements are valid, see "Graduation under a Particular Catalog" in each issue. The list of courses to be offered in the following sessions is preliminary and is superseded by the *Course Schedule*, published each semester and summer session.

General Information, published every August, contains current and historical information about the University and regulations that apply to all students during the academic year given on the title page. *General Information* is meant to be used along with each of the other issues; each student must be familiar with the regulations given there and with those given in the issue that covers his or her degree program.

The catalog of the University is the document of authority for all students. Any academic unit may issue additional or more specific information that is consistent with approved policy. The information in the catalog supersedes that issued by any other unit if there is a conflict between the two. The University

reserves the right to change the requirements given in the catalog at any time.

Catalogs are published both in print and online at <http://registrar.utexas.edu/catalogs/>. The information in the online catalog may reflect changes to policy approved after the printed catalog is published, and supersedes the information in the printed catalog if there is a conflict between the two. Printed catalogs may be ordered by visiting the Office of the Registrar Catalog Store at TXShop, <http://utdirect.utexas.edu/txshop/>; by calling (512) 475-7555; or by writing to The University of Texas at Austin, Office of the Registrar, Catalogs, P O Box 7216, Austin TX 78713-7216.

Assistance in obtaining information about the University, including costs, refund policies, withdrawal, academic programs, the faculty, accreditation, and facilities and services for disabled persons, is available from V. Shelby Stanfield, Registrar, at (512) 475-7510 and at The University of Texas at Austin, Office of the Registrar, P O Box 7216, Austin TX 78713-7216.

Cover: Hargis Hall, one of the oldest buildings on campus. Built in 1891 but not owned by the University until 1925, it was originally named the Little Campus Building, serving as a men's dormitory and later as the human resources office. In 1987 the building was renamed John W. Hargis Hall in honor of one of the first African Americans to earn an undergraduate degree from the University. The building currently houses the Undergraduate Admissions Center.

ISSUE NUMBER 2010/3

AUGUST 2010

THE UNIVERSITY OF TEXAS AT AUSTIN (USPS 652-360) is published four times a year, two issues in February and two issues in August. Published by The University of Texas at Austin, Office of the Registrar, 1 University Station Stop M5506, Austin TX 78712-0636. Periodicals Postage Paid at Austin TX.

POSTMASTER: Send address changes to The University of Texas at Austin, Office of the Registrar, 1 University Station Stop M5506, Austin TX 78712-0636.

The price of the *Undergraduate Catalog* is four dollars.

THE UNIVERSITY OF TEXAS AT AUSTIN

UNDERGRADUATE CATALOG
2010–2012

★ *The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.*

SAM HOUSTON

★ *Cultivated mind is the guardian genius of Democracy, and while guided and controlled by virtue, the noblest attribute of man. It is the only dictator that freemen acknowledge, and the only security which freemen desire.*

MIRABEAU B. LAMAR

★ *Where liberty has arisen, learning must be cherished—or liberty itself becomes a fragile thing.*

LYNDON B. JOHNSON

THE MISSION OF THE UNIVERSITY is to achieve excellence in the interrelated areas of undergraduate education, graduate education, research, and public service. The University provides superior and comprehensive educational opportunities at the baccalaureate through doctoral and special professional educational levels. The University contributes to the advancement of society through research, creative activity, scholarly inquiry, and the development of new knowledge. The University preserves and promotes the arts, benefits the state's economy, serves the citizens through public programs, and provides other public service.

HONOR CODE. The core values of the University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Officers of Administration

THE UNIVERSITY OF TEXAS AT AUSTIN

William Powers Jr., JD, *President*

Steven W. Leslie, PhD, *Executive Vice President and Provost*

Gregory J. Vincent, JD, EdD, *Vice President for Diversity and Community Engagement*

Kevin P. Hegarty, MPA, CPA, *Vice President and Chief Financial Officer*

Patricia C. Ohlendorf, JD, *Vice President for Legal Affairs*

Donald A. Hale, BS, *Vice President for Public Affairs*

Juan M. Sanchez, PhD, *Vice President for Research*

Juan C. González, PhD, *Vice President for Student Affairs*

Patricia L. Clubb, PhD, *Vice President for University Operations*

James L. Hill, PhD, *Senior Vice President*

Shirley Bird Perry, MA, *Senior Vice President*

DeLoss Dodds, BS, *Athletic Director*

Christine A. Plonsky, BS, *Athletic Director*

Nancy A. Brazzil, BS, *Deputy to the President*

Charles A. Roeckle, PhD, *Deputy to the President*

John H. McCall Jr., MBA, *Associate Vice President for Development*

David S. Onion, BSRTF, *Associate Vice President for Development*

Gwen W. Grigsby, MPA, *Associate Vice President for Governmental Relations*

ADMINISTRATIVE OFFICERS OF THE COLLEGES AND SCHOOLS

Victoria E. Rodríguez, PhD, *Vice Provost and Dean of Graduate Studies*
 Frederick R. Steiner, PhD, *Dean, School of Architecture*
 Thomas W. Gilligan, PhD, *Dean, Red McCombs School of Business*
 Roderick P. Hart, PhD, *Dean, College of Communication*
 Judy C. Ashcroft, EdD, *Dean, Division of Continuing and Innovative Education*
 Manuel J. Justiz, PhD, *Dean, College of Education*
 Gregory L. Fenves, PhD, *Dean, Cockrell School of Engineering*
 Douglas Dempster, PhD, *Dean, College of Fine Arts*
 Sharon Mosher, PhD, *Dean, John A. and Katherine G. Jackson School of Geosciences*
 Andrew P. Dillon, PhD, *Dean, School of Information*
 Lawrence Sager, LLB, *Dean, School of Law*
 Randy L. Diehl, PhD, *Dean, College of Liberal Arts*
 Mary Ann Rankin, PhD, *Dean, College of Natural Sciences*
 Alexa K. Stuijbergen, PhD, RN, FAAN, *Interim Dean, School of Nursing*
 Miles L. Crismon, PharmD, *Dean, College of Pharmacy*
 Robert L. Hutchings, PhD, *Dean, Lyndon B. Johnson School of Public Affairs*
 Barbara W. White, PhD, *Dean, School of Social Work*
 Paul B. Woodruff, PhD, *Dean, School of Undergraduate Studies*

THE UNIVERSITY OF TEXAS SYSTEM

Francisco G. Cigarroa, MD, *Chancellor*
 David B. Prior, PhD, *Executive Vice Chancellor for Academic Affairs*
 Scott C. Kelley, PhD, *Executive Vice Chancellor for Business Affairs*
 Kenneth I. Shine, MD, *Executive Vice Chancellor for Health Affairs*
 Tonya Moten Brown, JD, *Vice Chancellor for Administration*
 Barry D. Burgdorf, JD, *Vice Chancellor and General Counsel*
 Randa S. Safady, PhD, *Vice Chancellor for External Relations*
 William H. Shute, JD, *Vice Chancellor for Federal Relations*
 Barry R. McBee, JD, *Vice Chancellor for Governmental Relations*
 Keith McDowell, PhD, *Vice Chancellor for Research and Technology Transfer*
 Sandra K. Woodley, DBA, *Vice Chancellor for Strategic Initiatives*
 Francie A. Frederick, JD, *General Counsel to the Board of Regents*

Board of Regents

OFFICERS

Colleen McHugh, *Chairman*
Paul L. Foster, *Vice Chairman*
Janiece Longoria, *Vice Chairman*
Francie A. Frederick, *General Counsel to the Board of Regents*

MEMBERS

TERMS SCHEDULED TO EXPIRE FEBRUARY 1, 2011

Janiece Longoria, Houston
Colleen McHugh, Corpus Christi
Brenda Pejovich, Dallas

TERMS SCHEDULED TO EXPIRE FEBRUARY 1, 2013

James D. Dannenbaum, Houston
Paul L. Foster, El Paso
Printice L. Gary, Dallas

TERMS SCHEDULED TO EXPIRE FEBRUARY 1, 2015

R. Steven Hicks, Austin
Wm. Eugene Powell, San Antonio
Robert L. Stilwell, Houston

STUDENT REGENT WITH TERM TO EXPIRE MAY 31, 2011

Kyle J. Kalkwarf, University of Texas Health Science Center at San Antonio

Each regent's term expires when a successor has been appointed and qualified and has taken the oath of office. The student regent serves a one-year term.

Directory of Offices

The following list includes some University offices of general interest. A complete directory of offices on campus is published at <http://www.utexas.edu/directory/offices/>.

ACADEMIC CALENDAR

The academic calendar is published in *General Information* and at <http://registrar.utexas.edu/calendars/>.
A recording of the calendar may be heard at (512) 475-7591.

The University of Texas at Austin
Office of the Registrar
P O Box 7216
Austin TX 78713-7216

ADMISSION

Freshmen: Freshman Admissions Center, John Hargis Hall 1.200,
(512) 475-7440, fax (512) 475-7475
Transfer students: Office of Admissions, Main Building 7,
(512) 475-7387, fax (512) 475-7478
<http://bealonghorn.utexas.edu/>

The University of Texas at Austin
Office of Admissions
P O Box 8058
Austin TX 78713-8058

CATALOGS AND COURSE SCHEDULES

Printed catalogs may be purchased at campus-area bookstores and from the Office of the Registrar Catalog Store at TXShop, <http://utdirect.utexas.edu/txshop/>. Catalogs and *Course Schedules* are also published at the registrar's Web site, <http://registrar.utexas.edu/>.

The University of Texas at Austin
Office of the Registrar /
Mail and Publications Distribution
P O Box 7216
Austin TX 78713-7216

HOUSING

Residence halls: Division of Housing and Food Service, Kinsolving, 200 West Dean Keeton Street, (512) 471-3136, fax (512) 475-6532
University apartments: Division of Housing and Food Service, 3501 Lake Austin Boulevard, (512) 232-5299, fax (512) 232-5353
<http://www.utexas.edu/student/housing/>

The University of Texas at Austin
Division of Housing and Food Service
P O Box 7666
Austin TX 78713-7666

INTERNATIONAL STUDENTS

International Office, 600 West 24th Street,
(512) 471-2477, fax (512) 471-8848
<http://www.utexas.edu/international/>

The University of Texas at Austin
International Office
P O Drawer A
Austin TX 78713-8901
USA

MEDICAL SERVICES

University Health Services, Student Services Building 2.212,
 (512) 471-4955
<http://healthyhorns.utexas.edu/>

The University of Texas at Austin
 University Health Services
 P O Box 7339
 Austin TX 78713-7339

ORIENTATION

Office of the Dean of Students, Student Services Building 4.400,
 (512) 471-3304, fax (512) 471-7833
<http://deanofstudents.utexas.edu/nss/index.php>

The University of Texas at Austin
 New Student Services
 Office of the Dean of Students
 1 University Station A5800
 Austin TX 78712

PLACEMENT TESTS

Division of Instructional Innovation and Assessment—Student Testing
 Services, 2616 Wichita Street, (512) 232-2662, fax (512) 471-3509
[http://www.utexas.edu/academic/diia/assessment/
 credit_exam_cp/index.php](http://www.utexas.edu/academic/diia/assessment/credit_exam_cp/index.php)

The University of Texas at Austin
 DIIA—Student Testing Services
 P O Box 7246
 Austin TX 78713-7246

REGISTRATION INFORMATION

Registration, Main Building 1,
 (512) 475-7656, fax (512) 475-7515
<http://registrar.utexas.edu/students/registration/>

The University of Texas at Austin
 Office of the Registrar /
 Registration
 P O Box 7216
 Austin TX 78713-7216

SERVICES FOR STUDENTS WITH DISABILITIES

Division of Diversity and Community Engagement, Student Services
 Building 4.104, (512) 471-6259, video phone (866) 329-3986,
 fax (512) 475-7730
<http://www.utexas.edu/diversity/ddce/ssd/>

The University of Texas at Austin
 Services for Students with Disabilities
 Division of Diversity and
 Community Engagement
 1 University Station A5800
 Austin TX 78712

TRANSCRIPTS

Office of the Registrar, Main Building 1,
 (512) 475-7689, fax (512) 475-7515
<http://registrar.utexas.edu/students/records/transcripts/>

The University of Texas at Austin
 Office of the Registrar /
 Transcripts
 P O Box 7216
 Austin TX 78713-7216

TSI

Texas Success Initiative, Flawn Academic Center 411,
 (512) 471-8277, fax (512) 232-8418
<http://www.utexas.edu/ugs/tsi/>

The University of Texas at Austin
 TSI Office
 1 University Station G8000
 Austin TX 78712

Contents

Officers of Administration	iv	Strategic Advising • 15	
		Learning Communities • 15	
Board of Regents	vi	Interdisciplinary Programs • 15	
		Undergraduate Research • 16	
Directory of Offices	vii		
1. The University	1	Basic Education Requirements	16
Statement on Equal Educational Opportunity • 1		Core Curriculum	16
Accreditation • 1		Additional Basic Education Requirements • 18	
The University of Texas at Austin • 1		Skills and Experiences Flags • 18	
The University of Texas System • 2		Foreign Language • 18	
Organization of the University • 2			
Academic Affairs • 2		Admission and Registration	18
Student Services • 2		Center for Strategic Advising • 18	
Undergraduate Degrees • 2			
Degree Programs • 3		Signature Course Program	19
Simultaneous Majors • 7			
Interdisciplinary Opportunities • 7		First-Year Interest Groups	19
Transcript-Recognized Certificate Programs • 7			
Preprofessional Programs • 8		Bridging Disciplines Programs	19
Preparation for Health Professions • 8			
Preparation for Law • 9		Office of Undergraduate Research	20
Preparation for Teacher Certification • 10			
Coursework in the Graduate School and the		University Honors Center	21
School of Law • 10		Honor Societies for Freshmen • 21	
Graduate Work for Undergraduate Credit • 10		National Society of Collegiate Scholars • 21	
Reservation of Work by Undergraduates		Phi Beta Kappa • 21	
for Graduate Credit • 10		Phi Kappa Phi • 21	
Courses in the School of Law • 11		Mortar Board • 21	
Honors • 11			
Academic Advising • 11		Longhorn Scholars Program	21
Student Responsibility • 11			
Graduation • 12		Courses	22
General Requirements • 12		Bridging Disciplines: BDP • 22	
Multiple Degrees • 13		Developmental Studies: DEV • 23	
Graduation under a Particular Catalog • 13		Undergraduate Studies: UGS • 24	
2. School of Undergraduate Studies	15		
Mission	15	3. School of Architecture	25
Common Curriculum • 15		General Information	25
		Purpose • 25	
		History • 25	
		Facilities for Study and Research • 26	
		Study Abroad • 26	

Student Organizations • 26
 Honors • 26
 University Honors • 26
 Graduation with University Honors • 26
 School of Architecture Recognition Awards • 27
 Financial Assistance Available through the School • 27

Admission and Registration **27**

Admission • 27
 Freshman Admission • 27
 Students in Other Colleges of the University • 28
 Transfer Admission • 28
 Transfer Credit • 28
 Duration of Programs • 28
 Registration • 28
 Minimum Number of Hours in the Long Session • 29
 Registration for Advanced Design Courses • 29
 Third-Year Portfolio Requirement • 29
 Advising • 29

Academic Policies and Procedures **29**

Equipment and Supplies • 29
 Ownership of Student Work • 29
 Standard of Work Required • 29
 Employed Students • 30

Graduation **30**

The Degree Audit • 30

Degrees **30**

Degrees Offered • 30
 Sequence of Work • 31
 Applicability of Certain Courses • 31
 Correspondence and Extension Courses • 31
 Courses Taken on the Pass/Fail Basis • 31
 Physical Activity Courses • 31
 ROTC Courses • 31
 Admission Deficiencies • 31
 Bachelor of Architecture • 32
 Curriculum • 32
 Suggested Arrangement of Courses • 33
 Bachelor of Architecture/Bachelor of Science in
 Architectural Engineering Dual Degree
 Program • 34
 Curriculum • 34
 Suggested Arrangement of Courses • 35
 Bachelor of Architecture/Bachelor of Arts, Plan II,
 Dual Degree Program • 36
 Curriculum • 36
 Suggested Arrangement of Courses • 37

Bachelor of Science in Architectural Studies • 38
 Curriculum • 38
 Suggested Arrangement of Courses • 39
 Bachelor of Science in Interior Design • 40
 Curriculum • 40
 Suggested Arrangement of Courses • 41

Courses **42**

Architectural Interior Design: ARI • 42
 Architecture: ARC • 43
 Community and Regional Planning: CRP • 45

4. Red McCombs School of Business **46**

General Information **46**

Objectives • 46
 History and Facilities • 46
 Financial Assistance Available through the School • 46
 Student Services and Academic Advising • 47
 Self-Advising • 47
 BBA Career Services • 47
 Student Organizations • 48
 Leadership Development Program • 48
 BBA International Programs • 48

Admission and Registration **49**

Requirements for Admission to the McCombs School of
 Business • 49
 Freshman Admission Requirements
 for Texas Residents • 49
 Freshman Admission Requirements
 for Nonresidents • 49
 Application Procedures for Freshman Admission • 49
 Students in Other Divisions of the University • 49
 Transfer Admission • 49
 Claiming a Major • 50
 Admission-to-Major Requirements for Students Previously
 Enrolled in the School • 50
 Registration • 50

Academic Policies and Procedures **50**

Honors • 50
 Business Honors Program • 50
 University Honors • 51
 Graduation with University Honors • 51
 The Minor • 51
 The Business Foundations Program • 51
 Business Foundations Certificate • 51

Graduation **52**

Special Requirements of the McCombs School
 of Business • 52

The Degree Audit and Graduation Application • 52

Degrees 53

- Applicability of Certain Courses • 53
 - Physical Activity Courses • 53
 - ROTC Courses • 53
 - Courses Taken on the Pass/Fail Basis • 53
 - Correspondence and Extension Courses • 53
 - Concurrent Enrollment • 54
- Core Curriculum • 54
- BBA Degree Requirements • 54
- Program Degree Requirements • 55
 - Accounting • 55
 - Business Honors Program • 57
 - Engineering Route to the BBA • 58
 - Finance • 60
 - International Business • 61
 - Management • 62
 - Management Information Systems • 62
 - Marketing • 63
 - Supply Chain Management • 63

Courses 64

- Business Administration • 64
 - Business Administration: B A • 64
- Department of Accounting • 65
 - Accounting: ACC • 65
- Department of Finance • 68
 - Finance: FIN • 68
 - Real Estate: R E • 70
- Department of Information, Risk,
and Operations Management • 70
 - Legal Environment of Business: LEB • 70
 - Management Information Systems: MIS • 71
 - Operations Management: O M • 73
 - Risk Management: R M • 74
 - Statistics: STA • 75
- Department of Management • 76
 - Management: MAN • 76
- Department of Marketing • 78
 - International Business: I B • 78
 - Marketing: MKT • 78

5. College of Communication 81

General Information 81

- Facilities • 81
- Financial Assistance Available through the College • 82
- Academic Advising • 82
- Communication Career Services • 82
- Student Organizations • 82

Admission and Registration 82

- Admission to the University • 82
- Admission Policies of the College • 83
- Registration • 83

Academic Policies and Procedures 83

- Honors • 83
 - Senior Fellows Program • 83
 - Departmental Honors Programs • 83
 - University Honors • 84
 - Graduation with University Honors • 85
- Communication and Society Concentration • 85
 - Concentration Courses • 85
- US Latino and Latin American
 - Media Studies Concentration • 85
 - Concentration Courses • 85
- Courses for Teacher Preparation • 86

Graduation 86

- Special Requirements of the College • 86
- The Degree Audit • 86
- Applying for Graduation • 86

Degrees 87

- Degrees Offered • 87
- The Minor • 87
- Writing Requirement • 87
- Communication and Culture Requirement • 87
- Applicability of Certain Courses • 88
 - Internship Credit • 88
 - Physical Activity Courses • 88
 - ROTC Courses • 88
 - Concurrent Enrollment and Correspondence
and Extension Courses • 88
 - Courses Taken on the Pass/Fail Basis • 88
 - Bible Courses • 88
- Bachelor of Science in Advertising • 88
 - Areas of Study • 89
 - The Consent Procedure • 89
 - Special Requirements • 90
 - Core Curriculum • 90
 - Prescribed Work • 90
 - Major Requirements • 91
 - Order and Choice of Work • 91
- Bachelor of Science in Communication Sciences
and Disorders • 91
 - Special Requirements • 91
 - Core Curriculum • 92
 - Prescribed Work • 92
 - Special Emphases in Communication Sciences and
Disorders • 92

- Major Requirements • 92
- Order and Choice of Work • 93
- Bachelor of Science in Communication Studies • 93
 - Special Requirements • 94
 - Core Curriculum • 94
 - Prescribed Work • 94
 - Major Requirements • 95
 - Order and Choice of Work • 95
- Bachelor of Journalism • 95
 - Areas of Study • 96
 - Grammar, Spelling and Punctuation Test • 96
 - Word Processing Test • 96
 - Special Requirements • 97
 - Core Curriculum • 97
 - Prescribed Work • 97
 - Major Requirements • 98
 - Order and Choice of Work • 98
- Bachelor of Science in Public Relations • 99
 - The Consent Procedure • 99
 - Special Requirements • 99
 - Core Curriculum • 99
 - Prescribed Work • 100
 - Major Requirements • 100
 - Order and Choice of Work • 100
- Bachelor of Science in Radio-Television-Film • 101
 - Special Requirements • 101
 - Core Curriculum • 101
 - Prescribed Work • 102
 - Major Requirements • 102
 - Areas of Study • 102
 - Order and Choice of Work • 103

Courses **104**

- Communication • 104
 - Communication: COM • 104
- Department of Advertising • 105
 - Advertising: ADV • 105
 - Public Relations: P R • 107
- Department of Communication Sciences and Disorders • 109
 - Communication Sciences and Disorders: CSD • 109
- Department of Communication Studies • 110
 - Communication Studies: CMS • 111
- School of Journalism • 114
 - Journalism: J • 114
- Department of Radio-Television-Film • 118
 - Radio-Television-Film: RTF • 119

6. College of Education **127**

General Information **127**

- Mission and Functions • 127
- Facilities • 127
- Financial Assistance Available through the College • 128
- Student Services • 128
- Academic Advising • 128
- Student Organizations • 128
- Education Career Services • 128

Admission and Registration **128**

- Admission • 128
- Registration • 128
 - Admission to the Professional Development Sequence • 129

Academic Policies and Procedures **129**

- Honors • 129
 - University Honors • 129
 - Graduation with University Honors • 129

Graduation **129**

- Special Requirements of the College • 129
- Applying for a Degree • 129

Degrees **129**

- General Requirements • 129
- Applicability of Certain Courses • 130
 - Physical Activity Courses • 130
 - ROTC Courses • 130
 - Correspondence and Extension Courses • 130
- Bachelor of Science in Applied Learning and Development • 130
 - Core Curriculum • 130
 - Prescribed Work • 130
 - Major Requirements • 131
 - Electives • 132
- Bachelor of Science in Athletic Training • 132
 - Core Curriculum • 133
 - Prescribed Work • 133
 - Major Requirements • 133
 - Electives • 134
- Bachelor of Science in Kinesiology and Health • 134
 - Core Curriculum • 134
 - Prescribed Work • 134
 - Major Requirements • 135
 - Electives • 137
- Middle Grades, Secondary, and All-Level Teacher Certification • 138
 - Certification Requirements • 138
 - Minimum Scholastic Requirements • 138

Teaching Fields • 138	
Courses	139
Applied Learning and Development • 139	
Applied Learning and Development: ALD • 139	
Department of Curriculum and Instruction • 140	
Curriculum and Instruction: EDC • 140	
Department of Educational Psychology • 143	
Educational Psychology: EDP • 143	
Department of Kinesiology and Health Education • 145	
Health Education: HED • 145	
Kinesiology: KIN • 146	
Physical Education (Activity Courses): PED • 152	
Science • 153	
Science: SCI • 153	
Department of Special Education • 154	
Special Education: SED • 154	
7. Cockrell School of Engineering	156
General Information	156
History • 156	
Engineering Education • 156	
Instructional Facilities • 157	
Libraries • 157	
Office of Student Affairs • 158	
International Engineering Education • 158	
Engineering Career Assistance Center • 158	
Cooperative Engineering Education Program • 159	
Equal Opportunity in Engineering (EOE) Program • 159	
Engineering Scholarship Program • 159	
Office of Student Life • 159	
Women in Engineering Program • 160	
Research Organizations • 160	
Engineering Foundation • 160	
Admission and Registration	161
Information for Freshmen • 161	
Information for Transfer Students • 161	
Guidelines for Transfer Students • 161	
Admission to a Major Sequence • 161	
Registration • 162	
Concurrent Enrollment • 163	
Advising • 163	
Academic Advising • 163	
Counseling and Referral Services • 163	
Transfer to an Engineering Major (Internal Transfer) • 163	
Academic Policies and Procedures	164
Grade Point Average for Academic Decisions • 164	
Quantity of Work Rule • 164	
Maximum Number of Hours in the Long Session • 164	
Rules for the Summer Session • 164	
Repetition of a Course • 164	
Attendance • 164	
Standard of Work Required and Scholastic Policies • 165	
Pass/Fail Option • 165	
Certificate in Computational Science and Engineering • 165	
Honors • 166	
Engineering Honors Program • 166	
Engineering Scholars • 166	
University Honors • 166	
Graduation with University Honors • 166	
Professional and Honor Societies • 166	
Graduation	167
Special Requirements of the Cockrell School • 167	
Residence Rules • 167	
The Degree Audit • 167	
Applying for Graduation • 167	
Nonresidence Coursework • 167	
Final Degree Audit • 168	
Second Degrees • 168	
Commencement • 168	
Registration as a Professional Engineer • 168	
Degrees	168
Dual Degree Programs • 168	
Engineering/Plan II Honors Program • 168	
Architectural Engineering/Architecture • 169	
Simultaneous Majors • 169	
Technical Area Options • 169	
Preparation for Professional School • 169	
The Minor • 170	
ABET Criteria • 170	
Liberal Education of Engineers • 170	
Social and Behavioral Sciences Requirement • 171	
Visual and Performing Arts Requirement • 171	
Foreign Language Requirement • 171	
Applicability of Certain Courses • 171	
Physical Activity Courses • 171	
ROTC Courses • 171	
Correspondence and Extension Courses • 171	
Requirements Included in All Engineering Degree Plans • 171	
Length of Degree Program • 172	
Bachelor of Science in Aerospace Engineering • 172	
Curriculum • 173	
Technical Area Options • 174	
Special Projects Laboratories • 174	
Suggested Arrangement of Courses • 175	
Bachelor of Science in Architectural Engineering • 175	

Program Outcomes • 176
 Program Educational Objectives • 176
 Dual Degree Program in Architectural Engineering and
 Architecture • 176
 Curriculum • 176
 Technical Electives • 177
 Suggested Arrangement of Courses • 178
 Bachelor of Science in Biomedical Engineering • 178
 Program Outcomes • 179
 Program Educational Objectives • 179
 Curriculum • 179
 Technical Area Options • 180
 Senior Engineering Electives • 182
 Suggested Arrangement of Courses • 182
 Bachelor of Science in Chemical Engineering • 183
 Curriculum • 183
 Honors Program • 184
 Technical Focus Areas • 184
 Suggested Arrangement of Courses • 187
 Bachelor of Science in Civil Engineering • 187
 Program Outcomes • 188
 Program Educational Objectives • 188
 Curriculum • 188
 Level I and Level II Technical Electives • 189
 Suggested Arrangement of Courses • 190
 Bachelor of Science in Electrical Engineering • 191
 Program Educational Objectives • 191
 Program Outcomes • 191
 Curriculum • 192
 Upper-Division Technical Core Areas • 192
 Suggested Arrangement of Courses • 196
 Bachelor of Science in Geosystems Engineering
 and Hydrogeology • 197
 Curriculum • 197
 Suggested Arrangement of Courses • 198
 Bachelor of Science in Mechanical Engineering • 199
 PROCEED (Project-Centered Education) • 200
 Curriculum • 200
 Bridges to the Future Certificate Program • 201
 Career Gateway Elective Options • 201
 Suggested Arrangement of Courses • 203
 Bachelor of Science in Petroleum Engineering • 204
 Curriculum • 205
 Suggested Arrangement of Courses • 205

Courses **207**

General Engineering • 207
 General Engineering: G E • 207
 Department of Aerospace Engineering
 and Engineering Mechanics • 208
 Aerospace Engineering: ASE • 208

Engineering Mechanics: E M • 212
 Department of Biomedical Engineering • 212
 Biomedical Engineering: BME • 212
 Department of Chemical Engineering • 216
 Chemical Engineering: CHE • 216
 Department of Civil, Architectural,
 and Environmental Engineering • 218
 Architectural Engineering: ARE • 218
 Civil Engineering: C E • 220
 Department of Electrical and Computer Engineering • 223
 Electrical Engineering: E E • 223
 Department of Mechanical Engineering • 230
 Mechanical Engineering: M E • 230
 Department of Petroleum
 and Geosystems Engineering • 237
 Petroleum and Geosystems Engineering: PGE • 237

8. College of Fine Arts **241**

General Information **241**

History and Mission • 241
 Facilities • 241
 Texas Performing Arts • 241
 Computer Facilities • 241
 Fine Arts Library • 242
 Study Abroad • 242
 Financial Assistance Available through the College • 242
 Student Services and Academic Advising • 242
 Office of the Dean, Student Affairs • 242
 Departmental Advising • 243
 Career Advising • 243
 Education Career Services • 243

Admission and Registration **243**

Special Admission Requirements in
 the College of Fine Arts • 243
 Department of Art and Art History • 243
 Sarah and Ernest Butler School of Music • 243
 Department of Theatre and Dance • 244
 Students Transferring from Another College
 or University • 244
 Students Transferring within the University • 244
 Registration • 244
 Approvals Required • 244
 Prerequisites • 244
 Fine Arts Registration Requirements • 244

Academic Policies and Procedures **245**

Class Attendance and Absences • 245
 Special Regulations of the College • 245
 Honors • 245
 University Honors • 245

Graduation with University Honors • 246	
Special Honors in Art History • 246	
Certificate of Recognition in Music Performance • 246	
Student Organizations • 247	
Graduation	247
Special Requirements of the College • 247	
Residence • 247	
Grade Point Average • 247	
Butler School of Music Special Requirements • 248	
Receiving an Official Degree Audit • 248	
Applying for Graduation • 249	
Teacher Certification • 249	
Degrees	249
Degrees Offered • 249	
Department of Art and Art History • 249	
Sarah and Ernest Butler School of Music • 250	
Department of Theatre and Dance • 250	
Applicability of Certain Courses • 251	
Physical Activity Courses • 251	
Bible Courses • 251	
Courses Taken on the Pass/Fail Basis • 251	
Credit by Examination, Correspondence, and Transfer • 251	
Bachelor of Fine Arts • 251	
Core Curriculum • 251	
Studio Art Major • 251	
Design Major • 252	
Visual Art Studies Major • 252	
Theatre Studies Major • 253	
Dance Major • 253	
Bachelor of Music • 254	
Core Curriculum • 254	
Voice Performance Major • 254	
Piano Performance Major • 254	
Organ or Harpsichord Performance Major • 255	
Harp Performance Major • 255	
Orchestral Instrument Performance Major • 256	
Jazz Performance Major • 256	
Composition Major • 257	
Jazz Composition Major • 257	
Music Studies Major • 258	
Music Business Major • 259	
Recording Technology Major • 259	
Bachelor of Arts in Art • 260	
Core Curriculum • 260	
Studio Art Major • 260	
Art History Major • 261	
Bachelor of Arts in Theatre and Dance • 262	
Bachelor of Arts in Music • 262	

Courses	264
Fine Arts • 264	
Fine Arts: F A • 264	
Department of Art and Art History • 265	
Art History: ARH • 265	
Design: DES • 267	
Studio Art: ART • 268	
Visual Art Studies: VAS • 273	
Sarah and Ernest Butler School of Music • 274	
Areas of Study • 274	
Music: MUS • 276	
Ensemble: ENS • 282	
Performance • 283	
Department of Theatre and Dance • 284	
Theatre and Dance: T D • 284	

9. John A. and Katherine G. Jackson School of Geosciences **288**

General Information	288
Jackson School Academic Programs • 289	
Undergraduate Research • 289	
Certificate in Computational Science and Engineering • 289	
UTeach-Natural Sciences • 289	
Program Assessment Activities • 289	
Financial Assistance • 289	
Career Services • 290	
Admission and Registration	290
Admission • 290	
Admission to the Environmental Science Program • 290	
Academic Advising • 290	
Registration • 290	
Academic Policies and Procedures	291
Repetition of a Course • 291	
Honors • 291	
Departmental Honors Program • 291	
Graduation	291
Special Requirements of the Jackson School • 291	
Correspondence and Extension Courses • 291	
Applying for a Degree • 291	
Degrees	292
Applicability of Certain Courses • 292	
Physical Activity Courses • 292	
ROTC Courses • 292	
Bible Courses • 292	
Bachelor of Arts in Geological Sciences • 292	

Prescribed Work • 292
 The BA Major and Minor • 293
 Electives • 294
 Minimum Scholastic Requirements • 294
 Bachelor of Science in Environmental Science • 294
 Prescribed Work • 294
 Major Requirements • 295
 Special Requirements • 295
 Bachelor of Science in Geological Sciences • 295
 Prescribed Work Common to All Options • 295
 Additional Prescribed Work for Each Option • 296
 Bachelor of Science in Geosystems Engineering and
 Hydrogeology • 298
 Curriculum • 299

Courses **301**
 Environmental Science: EVS • 301
 Geological Sciences: GEO • 301

10. School of Information **309**

11. College of Liberal Arts **311**

General Information **311**
 Arts and Sciences Education • 311
 Scholarships Awarded through the
 College of Liberal Arts • 312
 UTeach-Liberal Arts • 312
 Program in Comparative Literature • 312
 Transcript-Recognized Certificate Programs • 312
 Certificate in Computational Science and
 Engineering • 313
 Core Texts and Ideas Certificate • 313
 Indigenous Studies Certificate • 313
 Texas IP Certificate • 314
 Concentrations • 314
 Cultural Studies • 314
 Science, Technology, and Society • 315
 Western Civilization and American Institutions • 315
 Career Services • 315

Admission and Registration **316**
 Admission • 316
 The Bachelor of Science in Environmental
 Science • 316
 Registration • 316
 Academic Advising • 316

Academic Policies and Procedures **317**
 Repetition of a Course • 317
 Honors • 317
 Dean’s Honor List • 317

Liberal Arts Honors Programs, Plan I • 317
 Scholastic Honorary Societies • 326

Graduation **327**
 Special Requirements of the College of Liberal Arts • 327
 Receiving a Degree Audit and Applying for
 Graduation • 327

Degrees **327**
 Applicability of Certain Courses • 328
 Physical Activity Courses • 328
 ROTC Courses • 328
 Conference Courses and Internship Courses • 328
 Bible Courses • 328
 Admission Deficiencies • 328
 Correspondence and Extension Courses • 328
 Courses Taken on the Pass/Fail Basis • 328
 Courses in a Single Field • 329
 Bachelor of Arts, Plan I • 329
 Prescribed Work • 329
 Electives • 330
 Majors and Minors • 330
 Bachelor of Arts, Plan II • 343
 Special Requirements • 344
 Choice of Work • 344
 Electives • 345
 Order of Work • 346
 Bachelor of Science in Environmental Science • 346
 Prescribed Work • 347
 Additional Prescribed Work • 347
 Major Requirements • 348
 Electives • 348
 Bachelor of Science in Psychology • 348
 Prescribed Work • 349
 The Major • 350
 The Minor • 350
 Electives • 350

Courses **351**
 Liberal Arts • 351
 Liberal Arts: L A • 351
 Liberal Arts Honors • 352
 Liberal Arts Honors: LAH • 352
 Department of African and African Diaspora Studies • 353
 African and African American Studies: AFR • 353
 Yoruba: YOR • 357
 Department of American Studies • 358
 American Studies: AMS • 358
 Department of Anthropology • 361
 Anthropology: ANT • 361
 Science, Technology, and Society: STS • 367
 Archaeology: ARY • 367

- Department of Asian Studies • 368
 - Asian Studies: ANS • 368
 - Bengali: BEN • 372
 - Chinese: CHI • 373
 - Hindi: HIN • 374
 - Japanese: JPN • 375
 - Korean: KOR • 376
 - Malayalam: MAL • 376
 - Sanskrit: SAN • 377
 - Tamil: TAM • 377
 - Telugu: TEL • 378
 - Urdu: URD • 378
 - Vietnamese: VTN • 379
- Department of Classics • 380
 - Ancient History and Classical Civilization: AHC • 380
 - Classical Civilization: C C • 381
 - Greek: GK • 384
 - Latin: LAT • 385
- Cognitive Science • 386
 - Cognitive Science: CGS • 386
- Comparative Literature • 386
 - Comparative Literature: C L • 386
- Thomas Jefferson Center for the Study of Core Texts and Ideas • 387
 - Core Texts and Ideas: CTI • 387
- Américo Paredes Center for Cultural Studies • 388
 - Cultural Studies: CLS • 388
- Department of Economics • 389
 - Economics: ECO • 389
- Department of English • 392
 - English: E • 392
- Ethnic Studies Program • 398
- Center for Asian American Studies • 398
 - Asian American Studies: AAS • 398
- Center for Mexican American Studies • 399
 - Mexican American Studies: MAS • 399
- Center for European Studies • 402
 - European Studies: EUS • 402
- Department of French and Italian • 404
 - Course Levels and Placement • 404
 - French: FR • 405
 - French Civilization: F C • 407
 - Italian: ITL • 407
 - Italian Civilization: ITC • 409
- Department of Geography and the Environment • 409
 - Geography: GRG • 409
 - Urban Studies: URB • 414
- Department of Germanic Studies • 415
 - Danish: DAN • 416
 - Dutch: DCH • 416
 - German: GER • 416
 - Germanic Civilization: GRC • 419
 - Norwegian: NOR • 422
 - Scandinavian: SCA • 423
 - Swedish: SWE • 424
 - Yiddish: YID • 424
- Department of Government • 425
 - Government: GOV • 425
- Department of History • 431
 - History: HIS • 431
- Humanities Program • 441
 - Humanities: HMN • 441
- International Relations and Global Studies Program • 442
 - International Relations and Global Studies: IRG • 442
- Schusterman Center for Jewish Studies • 443
 - Jewish Studies: JS • 443
- Teresa Lozano Long Institute of Latin American Studies • 445
 - Latin American Studies: LAS • 445
- Department of Linguistics • 450
 - American Sign Language: ASL • 450
 - Linguistics: LIN • 451
- Department of Middle Eastern Studies • 453
 - Arabic: ARA • 453
 - Hebrew: HEB • 455
 - Islamic Studies: ISL • 457
 - Middle Eastern Studies: MES • 459
 - Persian: PRS • 463
 - Turkish: TUR • 464
- Department of Philosophy • 465
 - Philosophy: PHL • 465
- Plan II Honors Program • 469
 - Social Science: S S • 469
 - Tutorial Course: T C • 469
- Department of Psychology • 470
 - Psychology: PSY • 470
- Department of Religious Studies • 476
 - Religious Studies: R S • 476
- Department of Rhetoric and Writing • 481
 - Rhetoric and Writing: RHE • 481
- ROTC Courses • 483
- Department of Air Force Science • 483
 - Air Force Science: AFS • 484
- Department of Military Science • 484
 - Military Science: M S • 485
- Department of Naval Science • 486
 - Naval Science: N S • 486
- Center for Russian, East European, and Eurasian Studies • 487
 - Russian, East European, and Eurasian Studies: REE • 487
- Department of Slavic and Eurasian Studies • 489

- Czech: CZ • 489
- Polish: POL • 490
- Russian: RUS • 491
- Serbian/Croatian: S C • 493
- Slavic: SLA • 493
- Department of Sociology • 494
 - Sociology: SOC • 494
- Department of Spanish and Portuguese • 499
 - Portuguese Civilization: PRC • 499
 - Portuguese: POR • 500
 - Spanish: SPN • 501
- UTeach-Liberal Arts • 505
 - UTeach-Liberal Arts: UTL • 505
- Center for Women's and Gender Studies • 506
 - Women's and Gender Studies: WGS • 506

12. College of Natural Sciences **511**

General Information **511**

- Arts and Sciences Education • 511
- Student Programs • 512
 - Biology Scholars Program • 512
 - Emerging Scholars Program • 512
 - Freshman Research Initiative • 512
 - Texas Interdisciplinary Plan • 512
 - Undergraduate Research • 512
 - UTeach-Natural Sciences • 512
 - Women in Natural Sciences • 513
- Honors Programs • 513
 - Dean's Scholars Honors Program • 513
 - Turing Scholars in Computer Science • 513
- Transcript-Recognized Certificate Programs • 514
 - Certificate in Computational Science and Engineering • 514
 - The Elements of Computing Program • 514
 - Certificate in Scientific Computation • 514
 - Texas IP Certificate • 515
- UTeach Teacher Certification • 515
 - Professional Development Sequence • 516
 - Supporting Courses • 516
- Study Abroad Opportunities • 516
- Scholarships • 516

Admission and Registration **516**

- Admission to the College • 516
 - The Entry-Level Major • 516
- Admission-to-Major Requirements • 516
 - The Major in Computer Science • 516
 - The Coordinated Program in Dietetics • 517
 - The Bachelor Of Science in Environmental Science • 518

- The Major in Public Health • 518
- The Major in Textiles and Apparel • 518

Academic Policies and Procedures **519**

- Academic Advising • 519
- Academic Policies • 519
 - Calculus Placement • 519
 - Repetition of a Course • 519
 - Concurrent Enrollment • 520
 - Undergraduates in a Graduate Course • 520
 - Petitions for Degree Requirements • 520
- Natural Sciences Career Services • 520
- Health Professions Advising Office • 520
- Departmental Honors • 521
 - Departmental Honorary Societies • 521
 - Departmental Honors Programs • 521

Graduation **523**

- Special Requirements of the College • 523
- Applying for a Degree • 524
- Graduating with Honors • 524

Degrees **524**

- Applicability of Certain Courses • 524
 - Physical Activity Courses • 524
 - ROTC Courses • 525
 - Bible Courses • 525
 - Admission Deficiencies • 525
 - Courses Taken on the Pass/Fail Basis • 525
 - Courses in a Single Field • 525
- Bachelor of Arts, Plan I • 525
 - Prescribed Work • 525
 - Electives • 526
 - Majors and Minors • 526
- Bachelor of Science in Astronomy • 529
 - Prescribed Work Common to Both Options • 530
 - Additional Prescribed Work for Each Option • 530
 - Special Requirements • 531
- Bachelor of Science in Biochemistry • 531
 - Prescribed Work Common to All Options • 531
 - Additional Prescribed Work for Each Option • 531
 - Special Requirements • 533
 - Order and Choice of Work • 533
- Bachelor of Science in Biology • 533
 - Prescribed Work Common to All Options • 533
 - Additional Prescribed Work for Each Option • 534
 - Special Requirements • 538
 - Order and Choice of Work • 538
- Bachelor of Science in Chemistry • 538
 - Prescribed Work Common to All Options • 539
 - Additional Prescribed Work for Each Option • 539
 - Special Requirements • 541

Order and Choice of Work • 542	
Bachelor of Science in Computer Science • 542	
Prescribed Work Common to All Options • 542	
Additional Prescribed Work for Each Option • 543	
Special Requirements • 545	
Order and Choice of Work • 546	
Bachelor of Science in Environmental Science • 546	
Prescribed Work • 546	
Major Requirements • 547	
Special Requirements • 547	
Bachelor of Science in Human Development and Family Sciences • 547	
Prescribed Work Common to All Options • 548	
Additional Prescribed Work for Each Option • 548	
Special Requirements • 550	
Bachelor of Science in Interdisciplinary Science • 550	
Prescribed Work Common to Both Options • 550	
Additional Prescribed Work for Each Option • 551	
Special Requirements • 552	
Bachelor of Science in Mathematics • 552	
Prescribed Work Common to All Options • 552	
Additional Prescribed Work for Each Option • 552	
Special Requirements • 556	
Bachelor of Science in Medical Laboratory Science • 556	
Prescribed Work • 556	
Special Requirements • 557	
Order and Choice of Work • 557	
Bachelor of Science in Nutrition • 557	
Prescribed Work Common to All Options • 558	
Additional Prescribed Work for Each Option • 558	
Special Requirements • 561	
Bachelor of Science in Physics • 562	
Prescribed Work Common to All Options • 562	
Additional Prescribed Work for Each Option • 562	
Special Requirements • 565	
Bachelor of Science in Public Health • 565	
Prescribed Work • 565	
Special Requirements • 566	
Bachelor of Science in Textiles and Apparel • 567	
Option I: Apparel Design and Conservation • 567	
Option II: Retail Merchandising • 568	
Order and Choice of Work • 568	
Courses	569
Natural Sciences • 569	
Natural Sciences: NSC • 569	
Department of Astronomy • 570	
Astronomy: AST • 570	
School of Biological Sciences • 572	
Biology: BIO • 572	
Public Health: PBH • 581	

Department of Chemistry and Biochemistry • 582	
Biochemistry: BCH • 582	
Chemistry: CH • 582	
Department of Computer Science • 586	
Computer Science: C S • 586	
School of Human Ecology • 592	
Human Development and Family Sciences: HDF • 592	
Human Ecology: H E • 595	
Nutrition: NTR • 596	
Textiles and Apparel: TXA • 598	
Department of Marine Science • 600	
Marine Science: MNS • 600	
Department of Mathematics • 603	
Actuarial Foundations: ACF • 603	
Mathematics: M • 604	
Department of Physics • 610	
Physical Science: P S • 610	
Physics: PHY • 610	
Division of Statistics and Scientific Computation • 614	
Statistics and Scientific Computation: SSC • 614	
UTeach-Natural Sciences • 616	
UTeach-Natural Sciences: UTS • 616	

13. School of Nursing **617**

General Information **617**

History • 617	
Facilities • 618	
Financial Assistance Available through the School of Nursing • 618	
Endowed Scholarships • 618	
Nonendowed Scholarships • 621	
Other Financial Aid Programs • 621	
ROTC Nursing Scholarships • 621	
Vocational Rehabilitation • 621	

Admission and Registration **621**

Admission to the University • 621	
Preprofessional Sequence • 621	
Admission to the Professional Sequence in Nursing • 622	
Students from Other Institutions • 622	
Preprofessional Sequence • 622	
Professional Sequence • 622	
Registration • 622	
Academic Advising • 622	

Academic Policies and Procedures **622**

Student Responsibility • 622	
School of Nursing Code of Honor • 623	
Standards of Nursing Performance and Progress • 623	
Compliance Requirements for Clinical Courses • 624	
Medical Clearance Requirements • 624	

Criminal Background Checks • 624	
Employment Background Check • 624	
Drug Screen • 624	
CPR and First Aid Requirements • 624	
Professional Liability Insurance • 624	
Training Modules • 624	
Health and Hospitalization Insurance • 624	
Uniforms and Other Expenses • 625	
Transportation • 625	
Honors • 625	
University Honors • 625	
Graduation with University Honors • 625	
Nursing Honors Program • 625	
Sigma Theta Tau International • 625	
Credit by Examination • 626	
Graduation	626
Special Requirements of the School of Nursing • 626	
Degree Audit • 626	
Graduation Application Form • 626	
Licensure as a Professional Nurse • 626	
Degrees	627
Programs in the School of Nursing • 627	
Purpose of the School of Nursing • 627	
Objectives of the Bachelor's Degree Program • 627	
Applicability of Certain Courses • 628	
ROTC Courses • 628	
Correspondence and Extension Courses • 628	
Bachelor of Science in Nursing • 628	
Foreign Language Requirement • 628	
Flag Requirements • 628	
Preprofessional Sequence • 628	
Professional Sequence • 629	
BSN for Registered Nurses • 629	
Courses	630
Nursing: N • 630	
14. College of Pharmacy	633
General Information	633
History • 633	
Accreditation • 634	
Aims and Curricula • 634	
Legal Requirements for Professional Practice • 634	
Facilities • 635	
The Pharmacy Building • 635	
Pharmacy Facilities in San Antonio • 635	
Pharmacy Facilities in El Paso • 635	
Pharmacy Facilities in Edinburg • 636	
Office of Pharmacy Continuing Education • 636	
Learning Resource Center • 636	
Libraries • 636	
Honors and Awards • 637	
University Honors • 637	
Graduation with University Honors • 637	
College of Pharmacy Recognition Awards • 637	
Financial Assistance Available through the College of Pharmacy • 637	
Endowed Presidential Scholarships • 637	
Other Endowed Scholarships • 637	
Other Scholarships • 637	
Loan Funds • 638	
Student Organizations • 638	
Placement Services • 639	
Graduate Degrees • 640	
Admission and Registration	640
Admission to the University • 640	
Admission to the Professional Curriculum • 640	
Admission to the First Professional Year • 641	
Technical Standards • 643	
Registration • 643	
Professional Liability Insurance • 643	
Medical Clearance Requirements • 643	
Registration as a Student Pharmacist-Intern • 643	
Student Health Insurance • 643	
Academic Policies and Procedures	644
Academic Standards in the College • 644	
Academic Progress • 644	
Academic Probation and Dismissal • 644	
Calculation of Grade Point Averages • 645	
The Academic Performance Committee • 645	
Course Load and Sequence of Work • 645	
Early Practice Experience • 646	
Standards of Ethical Conduct • 646	
Attendance in Classes and Laboratories • 646	
Academic Advising • 646	
Career Counseling in the College of Pharmacy • 647	
Honors • 647	
Pharmacy Honors Program • 647	
Graduation	647
Degrees	647
The Minor • 648	
Applicability of Certain Courses • 648	
Physical Activity Courses • 648	
ROTC Courses • 648	
Correspondence and Extension Courses • 648	
Prescribed Work • 648	
Core Curriculum • 649	

Additional Basic Education Requirements • 649	
Professional Electives • 649	
Preprofessional and Professional Coursework • 649	
Courses	652
Pharmacy: PHR • 652	
15. Lyndon B. Johnson School of Public Affairs	660
16. School of Social Work	661
General Information	661
Accreditation • 661	
History • 661	
Purpose • 661	
Program Objectives • 662	
Facilities • 662	
Financial Assistance Available through the School of Social Work • 662	
Career Services • 663	
College Council of Social Work • 664	
Professional Liability Insurance • 664	
Admission and Registration	664
Requirements for Admission to the University • 664	
Requirements for Admission to the School of Social Work • 664	
Admission to the School of Social Work as a Pre-Social Work Major • 664	
Admission to the Major in Social Work • 664	
Transfer Credit • 665	
Registration • 666	
Academic Policies and Procedures	666
Academic Advising • 666	
Career Choice Information • 666	
Honors • 666	
Social Work Honors Program • 666	
University Honors • 667	
Graduation with University Honors • 667	
Review and Grievance Procedures • 667	
Graduation	667
Special Requirements of the School • 667	
Applying for a Degree • 668	
Advanced Standing in Master’s Degree Programs • 668	
Degrees	668
Applicability of Certain Courses • 668	
Physical Activity Courses • 668	
ROTC Courses • 668	
Correspondence and Extension Courses • 668	
Courses Taken on the Pass/Fail Basis • 668	
Other Courses • 669	
The Minor • 669	
Bachelor of Social Work • 669	
Prescribed Work • 669	
Core Curriculum • 669	
Skills and Experiences Flags • 669	
Foreign Language • 669	
Major Requirements • 669	
Special Requirements • 671	
Order and Choice of Work • 671	
Courses	673
Social Work: S W • 673	
17. The Faculty	675
Appendix A: Texas Common Course Numbering System	728
Appendix B: Course Abbreviations	734

1. The University

STATEMENT ON EQUAL EDUCATIONAL OPPORTUNITY

The University of Texas at Austin is committed to an educational and working environment that provides equal opportunity to all members of the University community. In accordance with federal and state law, the University prohibits unlawful discrimination, including harassment, on the basis of race; color; religion; national origin; gender, including sexual harassment; age; disability; citizenship; and veteran status. Discrimination on the basis of sexual orientation, gender identity, and gender expression is also prohibited pursuant to University policy. The following person has been designated to handle inquiries regarding nondiscrimination policies, including but not limited to serving as the University's Title VI/Title IX/ADA/ADAAA, and 504 Coordinator: Linda Millstone, Associate Vice President for Institutional Equity and Workforce Diversity, North Office Building A 4.302, (512) 471-1849. The mailing address is Equal Opportunity Services, P O Box 7609, Austin TX 78713.

ACCREDITATION

The University of Texas at Austin is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelor's, master's, first-professional, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur GA 30033-4097 or call (404) 679-4500 for questions about the accreditation of the University of Texas at Austin.

THE UNIVERSITY OF TEXAS AT AUSTIN

The University of Texas was established by the state legislature in 1881; by popular vote, the Main University was located at Austin and the Medical Branch at Galveston. The Austin campus was opened in September, 1883, with a faculty of 8 and a student body of 218; about three-quarters of the students were registered in the Academic Department and the remainder in the Law Department. In the intervening decades, the central campus has grown from 40 to more than 360 acres, while the student body has increased to about 39,000 undergraduates and 11,000 graduate students. In 1967, with the creation of The University of Texas System, the name of the Main University was changed to the University of Texas at Austin.

University students represent both the diverse population of the state and the full range of contemporary scholarship: an undergraduate may choose courses from more than 180 fields of study while pursuing any of more than 100 majors. Undergraduate study is supported by extensive computer facilities and by one of the largest academic libraries in the nation. Students also benefit from the broad range of scholarly and technical research conducted by the faculty and the research staff.

The city of Austin, with a population of about 1.7 million, is a relaxed and cosmopolitan setting for the University. The city is home to respected professional communities in theatre, dance, the visual arts, and classical and popular music that offer a wide range of cultural events. Students may also take part in recreational activities made possible by the temperate climate and Austin's location in the Hill Country of central Texas.

For further historical and current information about the University, see *General Information*.

THE UNIVERSITY OF TEXAS SYSTEM

The University of Texas at Austin is the largest component of The University of Texas System. The system is governed by a nine-member Board of Regents appointed by the governor with the advice and consent of the state Senate. In addition to the University, the system consists of the following institutions. Information about the system and its components is published at <http://www.utsystem.edu/>.

- ▶ The University of Texas at Arlington
- ▶ The University of Texas at Brownsville
- ▶ The University of Texas at Dallas
- ▶ The University of Texas at El Paso
- ▶ The University of Texas - Pan American
- ▶ The University of Texas of the Permian Basin
- ▶ The University of Texas at San Antonio
- ▶ The University of Texas at Tyler
- ▶ The University of Texas Southwestern Medical Center at Dallas
- ▶ The University of Texas Medical Branch at Galveston
- ▶ The University of Texas Health Science Center at Houston
- ▶ The University of Texas Health Science Center at San Antonio
- ▶ The University of Texas M. D. Anderson Cancer Center
- ▶ The University of Texas Health Science Center at Tyler

ORGANIZATION OF THE UNIVERSITY

ACADEMIC AFFAIRS

Subject to the supervision of the Board of Regents and to the authority the board has vested in administrative officers, the General Faculty is responsible for the governance of the University. The president is the chief executive officer; the executive vice president and provost is the chief academic officer. The administration of each college or school is the responsibility of that division's dean; in most colleges and schools, an associate or assistant dean for academic affairs oversees the day-to-day academic life of the division. Several colleges are further divided into departments and academic centers; academic and administrative matters in these units are the responsibility of the department chair or center director. A list of the University's colleges and schools and their constituent departments and academic centers is given in *General Information*.

STUDENT SERVICES

Student services are provided by the Division of Student Affairs, under the direction of the vice president for student affairs. The division consists of several units, which administer the University's programs in such areas as financial aid, student record management, counseling and learning support, housing and food, recreation, health services, and student media. The services of these units are described in *General Information*. Services provided by the colleges and schools are described in chapters 2 through 16 of this catalog.

UNDERGRADUATE DEGREES

The University offers the following undergraduate degrees.

Bachelor of Architecture	BArch
Bachelor of Arts	BA
Bachelor of Arts in Art	BAArt
Bachelor of Arts in Geological Sciences	BAGeoSci
Bachelor of Arts in Music	BAMusic
Bachelor of Arts in Theatre and Dance	BATD
Bachelor of Business Administration	BBA
Bachelor of Fine Arts	BFA
Bachelor of Journalism	BJ
Bachelor of Music	BMusic
Bachelor of Science in Advertising	BSAdv
Bachelor of Science in Aerospace Engineering	BSAsE
Bachelor of Science in Applied Learning and Development	BSALD
Bachelor of Science in Architectural Engineering	BSArchE
Bachelor of Science in Architectural Studies	BSArchStds
Bachelor of Science in Astronomy	BSAst
Bachelor of Science in Athletic Training	BSAthTrng
Bachelor of Science in Biochemistry	BSBioch
Bachelor of Science in Biology	BSBio
Bachelor of Science in Biomedical Engineering	BSBiomedE
Bachelor of Science in Chemical Engineering	BSChE
Bachelor of Science in Chemistry	BSCh
Bachelor of Science in Civil Engineering	BSCE
Bachelor of Science in Communication Sciences and Disorders	BSCSD
Bachelor of Science in Communication Studies	BSCCommStds
Bachelor of Science in Computer Science	BSCS
Bachelor of Science in Electrical Engineering	BSEE
Bachelor of Science in Environmental Science ¹	BSEnviroSci

1. Final approval is pending for the Bachelor of Science in Environmental Science.

Bachelor of Science in Geological Sciences	BSGeoSci
Bachelor of Science in Geosystems Engineering and Hydrogeology	BSGEH
Bachelor of Science in Human Development and Family Sciences	BSHDFS
Bachelor of Science in Interdisciplinary Science	BSIntrdscSci
Bachelor of Science in Interior Design	BSID
Bachelor of Science in Kinesiology and Health	BSKin&Health
Bachelor of Science in Mathematics	BSMath
Bachelor of Science in Mechanical Engineering	BSME
Bachelor of Science in Medical Laboratory Science	BSMedLabSci
Bachelor of Science in Nursing	BSN
Bachelor of Science in Nutrition	BSNtr
Bachelor of Science in Petroleum Engineering	BSPE
Bachelor of Science in Physics	BSPhy
Bachelor of Science in Psychology	BSPsy
Bachelor of Science in Public Health	BSPublicHealth
Bachelor of Science in Public Relations	BSPR
Bachelor of Science in Radio-Television-Film	BSRTF
Bachelor of Science in Textiles and Apparel	BSTA
Bachelor of Social Work	BSW
Doctor of Pharmacy	PharmD

DEGREE PROGRAMS

The University offers the undergraduate majors listed in the first column; the degree(s) available in each field are given in the second column. All undergraduate degree programs require students to complete at least 120 semester hours of coursework; some programs require more coursework. Degree programs are described in chapters 3 through 16.

The University offers graduate study in most of the following areas and in other fields. Information about graduate courses and degrees and other information for graduate students is given in the graduate catalog.

A list of the fields of study in which undergraduate and graduate courses are offered is given in Appendix B.

SCHOOL OF ARCHITECTURE

Architectural studies	BSArchStds
Architecture	BArch
Interior design	BSID

RED MCCOMBS SCHOOL OF BUSINESS

Business Honors Program	BBA
-------------------------	-----

Department of Accounting

Accounting	BBA
Integrated approach	BBA and MPA

Department of Finance

Finance	BBA
---------	-----

Department of Information, Risk, and Operations Management

Engineering route to the Bachelor of Business Administration	BBA
Management information systems	BBA
Supply chain management	BBA

Department of Management

Management	BBA
------------	-----

Department of Marketing

International business	BBA
Marketing	BBA

COLLEGE OF COMMUNICATION

Department of Advertising

Advertising	BSAdv
Public relations	BSPR

Department of Communication Sciences and Disorders

Communication sciences and disorders	BSCSD
--------------------------------------	-------

Department of Communication Studies

Communication studies	BSCommStds
-----------------------	------------

School of Journalism

Journalism	BJ
------------	----

Department of Radio-Television-Film

Radio-television-film	BSRTF
-----------------------	-------

COLLEGE OF EDUCATION

All-level generic special education	BSALD
Early childhood through grade six generalist	BSALD
Youth and community studies	BSALD

Department of Kinesiology and Health Education

Applied movement science	BSKin&Health
Athletic training	BSAthTrng
Exercise science	BSKin&Health
Health promotion	BSKin&Health

Physical culture and sports	BSKin&Health
Sport management	BSKin&Health

COCKRELL SCHOOL OF ENGINEERING**Department of Aerospace Engineering and Engineering Mechanics**

Aerospace engineering	BSAsE
-----------------------	-------

Department of Biomedical Engineering

Biomedical engineering	BSBiomedE
------------------------	-----------

Department of Chemical Engineering

Chemical engineering	BSChE
----------------------	-------

Department of Civil, Architectural, and Environmental Engineering

Architectural engineering	BSArchE
Civil engineering	BSCE

Department of Electrical and Computer Engineering

Electrical engineering	BSEE
------------------------	------

Department of Mechanical Engineering

Mechanical engineering	BSME
------------------------	------

Department of Petroleum and Geosystems Engineering

Petroleum engineering	BSPE
Geosystems engineering and hydrogeology ²	BSGEH

COLLEGE OF FINE ARTS**Department of Art and Art History**

Art history	BAArt
Design	BFA
Studio art	BAArt, BFA
Visual art studies	BFA

Sarah and Ernest Butler School of Music

Composition	BMusic
Jazz composition	BMusic
Jazz performance ³	BMusic
Music	BAMusic
Music business	BMusic
Music studies	BMusic
Performance ³	BMusic
Recording technology	BMusic

Department of Theatre and Dance

Dance	BFA
Theatre and dance	BATD
Theatre studies	BFA

JOHN A. AND KATHERINE G. JACKSON SCHOOL OF GEOSCIENCES**Department of Geological Sciences**

Geological sciences	BAGeoSci, BSEnviroSci ⁴
Geological sciences	
Option I: General geology	BSGeoSci
Option II: Geophysics	BSGeoSci
Option III: Hydrogeology	BSGeoSci
Option IV: Environmental science and sustainability	BSGeoSci
Option V: Teaching	BSGeoSci
Geosystems engineering ²	BSGEH

COLLEGE OF LIBERAL ARTS

Humanities	BA
International relations and global studies	BA

Department of African and African Diaspora Studies

African and African diaspora studies	BA
--------------------------------------	----

Department of American Studies

American studies	BA
------------------	----

Department of Anthropology

Anthropology	BA
--------------	----

Center for Asian American Studies

Ethnic studies ⁵	BA
-----------------------------	----

Department of Asian Studies

Asian cultures and languages ⁶	BA
Asian studies	BA

Department of Classics

Ancient history and classical civilization	BA
Classical archaeology	BA
Classics	BA
Greek	BA
Latin	BA

- The program in geosystems engineering and hydrogeology is offered jointly by the Department of Petroleum and Geosystems Engineering and the Jackson School of Geosciences.
- The performance student may major in voice, piano, organ, harpsichord, harp, or one of the orchestral instruments (including euphonium, guitar, and saxophone). The jazz performance student may major in double bass, drum set, guitar, piano, saxophone, trombone, trumpet, or vibraphone.
- Final approval is pending for the Bachelor of Science in Environmental Science.
- The student majoring in ethnic studies concentrates in Asian American studies or Mexican American studies.
- The student majoring in Asian cultures and languages specializes in Chinese, Japanese, Hindi/Urdu, Malayalam, Sanskrit, or Tamil.

Department of Economics			
Economics	BA		
Department of English			
English	BA		
Center for European Studies			
European studies	BA		
Department of French and Italian			
French	BA		
Italian	BA		
Department of Geography and the Environment			
Geographical sciences	BSEnviroSci ⁷		
Geography	BA		
Urban studies	BA		
Department of Germanic Studies			
German	BA		
Scandinavian studies	BA		
Department of Government			
Government	BA		
Department of History			
History	BA		
Schusterman Center for Jewish Studies			
Jewish studies	BA		
Teresa Lozano Long Institute of Latin American Studies			
Latin American studies	BA		
Department of Linguistics			
Linguistics	BA		
Center for Mexican American Studies			
Ethnic studies ⁸	BA		
Department of Middle Eastern Studies			
Arabic language and literature	BA		
Hebrew language and literature	BA		
Islamic studies	BA		
Middle Eastern studies	BA		
Persian language and literature	BA		
Turkish language and literature	BA		
Department of Philosophy			
Philosophy	BA		
Plan II Honors Program			
Plan II			BA
Department of Psychology			
Psychology			BA, BSPsy
Department of Religious Studies			
Religious studies			BA
Department of Rhetoric and Writing			
Rhetoric and writing			BA
Center for Russian, East European, and Eurasian Studies			
Russian, East European, and Eurasian studies			BA
Department of Slavic and Eurasian Studies			
Czech language and culture			BA
Russian language and culture			BA
Department of Sociology			
Sociology			BA
Department of Spanish and Portuguese			
Portuguese			BA
Spanish			BA
Center for Women's and Gender Studies			
Women's and gender studies			BA
COLLEGE OF NATURAL SCIENCES			
Interdisciplinary science			
Option I: Middle grades teaching in mathematics and science			BSIntrdscSci
Option II: Secondary school teaching in computer science and mathematics			BSIntrdscSci
Department of Astronomy			
Astronomy			BA
Astronomy			
Option I: Astronomy			BSAst
Option II: Astronomy honors			BSAst
School of Biological Sciences			
Biological sciences			BSEnviroSci ⁷
Biology			BA
Biology			
Option I: Ecology, evolution, and behavior			BSBio
Option II: Human biology			BSBio
Option III: Marine and freshwater biology			BSBio

7. Final approval is pending for the Bachelor of Science in Environmental Science.

8. The student majoring in ethnic studies concentrates in Asian American studies or Mexican American studies.

Option IV: Microbiology	BSBio
Option V: Cell and molecular biology	BSBio
Option VI: Neurobiology	BSBio
Option VII: Plant biology	BSBio
Option VIII: Teaching	BSBio
Option IX: Biology honors	BSBio
Option X: Computational biology	BSBio
Medical laboratory science	BSPublicHealth
Public health	BSPublicHealth

Department of Chemistry and Biochemistry

Biochemistry	BA
Biochemistry	
Option I: Biochemistry	BSBioch
Option II: Computation	BSBioch
Option III: Biochemistry honors	BSBioch
Chemistry	BA
Chemistry	
Option I: Chemistry	BSCh
Option II: Computation	BSCh
Option III: Teaching	BSCh
Option IV: Chemistry honors	BSCh

Department of Computer Science

Computer science	BA
Computer science	
Option I: Computer science	BSCS
Option II: Turing Scholars honors	BSCS
Option III: Computer science honors	BSCS
Option IV: Integrated approach	BSCS and MSCS

School of Human Ecology

Human ecology	BA
Textiles and apparel	
Option I: Apparel design and conservation	BSTA
Option II: Retail merchandising	BSTA
<i>Department of Human Development and Family Sciences</i>	
Human development and family sciences	
Option I: Early childhood	BSHDFS
Option II: Human development	BSHDFS
Option III: Families and personal relationships	BSHDFS

Option IV: Families and society	BSHDFS
Option V: Human development and family sciences honors	BSHDFS

Department of Nutritional Sciences

Nutrition	
Option I: Dietetics	BSNtr
Option II: Nutritional sciences	BSNtr
Option III: Nutrition in business	BSNtr
Option IV: Teaching	BSNtr
Option V: Nutrition honors	BSNtr
Option VI: International nutrition	BSNtr

Department of Mathematics

Mathematics	BA
Mathematics	
Option I: Actuarial science	BSMath
Option II: Applied mathematics	BSMath
Option III: Mathematical sciences	BSMath
Option IV: Pure mathematics	BSMath
Option V: Teaching	BSMath
Option VI: Mathematics honors	BSMath

Department of Physics

Physics	BA
Physics	
Option I: Physics	BSPHy
Option II: Computation	BSPHy
Option III: Radiation physics	BSPHy
Option IV: Space sciences	BSPHy
Option V: Teaching	BSPHy
Option VI: Physics honors	BSPHy

SCHOOL OF NURSING

Nursing	BSN
---------	-----

COLLEGE OF PHARMACY

Pharmacy	PharmD
----------	--------

SCHOOL OF SOCIAL WORK

Social work	BSW
-------------	-----

SIMULTANEOUS MAJORS

With proper approval, an undergraduate may pursue two majors simultaneously. The two majors may lead either to a single degree or to two degrees. For example, a student who majors simultaneously in history and government is awarded a single Bachelor of Arts degree; a student who majors simultaneously in journalism and government receives the Bachelor of Journalism and the Bachelor of Arts.

The student is admitted to the University with a single major. He or she may choose a second major after completing thirty semester hours of coursework in residence at the University. The student must follow any application procedures and meet any admission requirements that have been established for the second major; information about these and other relevant college policies is available from the dean.

Students with simultaneous majors must pay all applicable major-related fees for both fields, and they have the right to use the advising and student services provided by both colleges. Decisions about admission to programs, honors, scholastic probation, and dismissal are based independently on the criteria for each major.

A student who chooses to pursue two majors simultaneously is expected to take responsibility for his or her educational development. The student must know and abide by all policies of each of the colleges in which he or she is enrolled. The student must also know and meet the requirements of both degree programs, enroll in courses appropriate to both, meet prerequisites and take courses in the proper sequence, and seek advice from both colleges about degree requirements and other University policies when necessary.

INTERDISCIPLINARY OPPORTUNITIES

Several of the majors listed in the section “Degree Programs” above are interdisciplinary in nature. The Bachelor of Science in Biomedical Engineering, for example, is offered by the Cockrell School of Engineering but involves substantial coursework in the life and physical sciences; in the various area studies programs in the College of Liberal Arts, such as Latin American studies and Middle Eastern studies, students examine a geographic area from the viewpoints of several traditional disciplines.

In addition to interdisciplinary majors, the simultaneous major option described above, and the formal dual degree programs described later in this catalog, the University provides various ways for students to

add breadth and diversity to their studies. These include the transcript-recognized certificate programs listed below; other concentrations, not reflected on the graduate’s transcript, are described in the later chapters of this catalog. The Study Abroad program, described in *General Information*, allows students to consider their own field from the unique viewpoint of another culture. The Bridging Disciplines Programs and other initiatives of the School of Undergraduate Studies help students traverse the traditional boundaries between colleges and disciplines.

Cross-disciplinary initiatives of the colleges and schools are often described on their Web sites, which may be reached via <http://www.utexas.edu/dept/>.

TRANSCRIPT-RECOGNIZED CERTIFICATE PROGRAMS

Transcript-recognized certificate programs offer interdisciplinary curricula that support and extend a student’s major. Undergraduates who complete certificate requirements in conjunction with their degree requirements or within one year after earning the degree receive recognition on the University transcript; students in integrated undergraduate/graduate programs must complete certificate requirements within one year after they complete their undergraduate degree requirements. A maximum of nine hours of certificate coursework may be taken after the student has earned the undergraduate degree. At least half of the required certificate coursework must be completed in residence at the University.

A student may not earn a certificate in the same field as his or her major, and at least one certificate course must be outside the requirements of the major. However, certificate courses outside the major may be counted toward other degree requirements.

Students should apply for the certificate when they apply for graduation or when they complete the certificate program, whichever is later. Transcript recognition is awarded at the end of that semester or summer session.

Each of the following transcript-recognized certificate programs is described in the chapter for the college that sponsors it. Certificate programs that do not lead to transcript recognition are also described in the following chapters.

- ▶ School of Undergraduate Studies
 - Bridging Disciplines Programs
- ▶ McCombs School of Business
 - Business Foundations

- ▶ College of Liberal Arts
 - Core Texts and Ideas
 - Indigenous Studies
 - Texas Interdisciplinary Plan
- ▶ College of Natural Sciences
 - Elements of Computing
 - Scientific Computation
 - Texas Interdisciplinary Plan

CERTIFICATE IN COMPUTATIONAL SCIENCE AND ENGINEERING

The foundations of science and engineering are under rapid, dramatic, and irreversible change brought on by the advent of the computer. Steady growth in computer capabilities, and enormous expansion in the scope and sophistication of computational modeling and simulation, have added computation as the third pillar of scientific discovery and have revolutionized engineering practice. Computational science and engineering can affect virtually every aspect of human existence, including the health, security, productivity, and competitiveness of nations.

The Computational Science and Engineering Certificate program is sponsored by the Cockrell School of Engineering, the Jackson School of Geosciences, the College of Liberal Arts, and the College of Natural Sciences; it is administered by the Institute for Computational Engineering and Sciences (ICES). The program offers highly qualified upper-division students an opportunity for in-depth study and research in computational science and engineering, including computational and applied mathematics, numerical simulation, scientific computation, and visualization. A student who completes the general requirements above and the specific requirements below receives recognition on his or her University transcript and a letter from the director of ICES that describes the program and the work completed. Along with supporting letters from supervising faculty and graduate mentors, these are valuable assets for students applying to graduate school and pursuing competitive job opportunities.

To apply for admission, students must have completed sixty semester hours of coursework and must have a grade point average of at least 3.00. Students are expected to have broad training in quantitative methods, comparable to that provided by Mathematics 408D or 408M, Computer Science 303E or Statistics and Scientific Computation 222, Mathematics 427K, and Mathematics 340L.

Students must complete the following eighteen semester hours of coursework with a grade of at least *B* in each course:

1. Three semester hours in numerical computing chosen from the following: Computer Science 323E, 323H, 367, Mathematics 348.
2. Three semester hours in numerical applications chosen from the following: Aerospace Engineering 347, Biology 337J, Biomedical Engineering 341, 342, 346, Chemical Engineering 348, Civil Engineering 379K, Economics 363C, Geological Sciences 325K, Mathematics 374M, Mechanical Engineering 369L, Physics 329, Statistics and Scientific Computation 339.
3. Nine semester hours chosen from the following: Computer Science 377, Engineering Mechanics 360, Mathematics 346, 368K, 372K, 376C, Statistics and Scientific Computation 374C, 374E.
4. A scientific computing project supervised by a member of the computational science, engineering, and mathematics (CSEM) graduate program faculty. The research project is completed in a three-semester-hour research methods or individual instruction course, which the student should take during the senior year. The research project may include mentoring by ICES postdoctoral fellows and CSEM graduate students as part of a vertical instructional research team.

With the approval of the certificate program's faculty adviser, course substitutions may be made within the broad area of computational science and engineering.

More information about the certificate is available at <http://www.ices.utexas.edu/ices/> and in the Institute for Computational Engineering and Sciences, Applied Computational Engineering and Sciences Building 4.102.

PREPROFESSIONAL PROGRAMS

PREPARATION FOR HEALTH PROFESSIONS

The rapid expansion and diversification of services designed to meet the health needs of society provide students with a variety of career opportunities in health care. However, since competition for admission to professional school programs is keen, it is important to maintain a strong academic record.

ADVISORY SERVICES

Students interested in a health career should contact Health Professions Advising, T. S. Painter Hall 5.03, for

course and career advising designed to prepare them for admission to professional schools. Health Professions Advising maintains a Web page, a reference collection of information on health careers, and an e-mail distribution list. The office sponsors a lecture series, an annual Health Professions Fair, and other programs.

In general, professional schools do not indicate a preferred undergraduate major, leaving the student free to choose a degree program suited to his or her interests and abilities. The student should complete minimum professional school course requirements before taking a nationally standardized admission test such as the Dental Admission Test, Medical College Admission Test, Pharmacy College Admission Test, or Graduate Record Examinations. Health Professions Advising provides guidance concerning courses that meet professional school admission requirements; advising for degree requirements is available in the student's major department. Students are encouraged to register using the special advising area code appropriate to the health career they are pursuing.

A student planning to pursue a degree in dietetics, medical laboratory science, nursing, or public health at the University should consult an adviser in the appropriate department or school.

TRANSFER OF PROFESSIONAL SCHOOL COURSEWORK TOWARD AN UNDERGRADUATE DEGREE

All students preparing for graduate health professions schools should plan to complete a bachelor's degree in the field of their choice before entering professional school, since the number of students admitted without a degree is small. Most professional pharmacy programs, including those in Texas, do not require a bachelor's degree for admission.

If a preprofessional student undertakes work leading to an established undergraduate degree in the College of Liberal Arts or the College of Natural Sciences but is accepted into the professional school before finishing the degree, it may be possible by special petition for the student to use professional school coursework toward the degree as transfer hours. In this instance, to graduate the student must meet, without exception, all requirements for the degree. If the petition is approved, limited transfer of unspecified upper-division credit in chemistry and biology is allowed as applicable and necessary to the degree.

In a few cases in which a bachelor's degree is not required to enroll in a professional program, a student who completes his or her studies at a University of

Texas System school of health professions may be either eligible or required to receive a bachelor's degree jointly awarded by UT Austin and the health professions school. If a student has received an undergraduate or graduate degree from a UT System general academic institution before enrolling at a UT System health science center to pursue a second bachelor's degree, the health science center awards the second degree. For more information, students should contact their college's advising office.

APPLYING TO PROFESSIONAL SCHOOL

The Health Professions Advising Web site, <http://cns.utexas.edu/careers/health-professions/>, lists the minimum admission requirements for most dental, medical, occupational therapy, optometry, pharmacy, physical therapy, physician assistant, and veterinary programs in the state. Articles of current interest, admission statistics, and information on application procedures are available for reference in Health Professions Advising.

All applicants to health professions programs should consult the schools' Web sites and catalogs as well as the most recent editions of admissions guides such as *Admissions Requirements of United States and Canadian Dental Schools*, *Medical School Admission Requirements*, *Veterinary Medical School Admission Requirements*, and *Pharmacy School Admission Requirements*. These publications are available in the Health Professions Advising resource library.

PREPARATION FOR LAW

There is no sequential arrangement of courses prescribed for a prelaw program, nor is any particular major specified. For answers to specific questions about a prelaw program, the student should consult the prelaw adviser in his or her major department.

Services for prelaw students in the College of Liberal Arts are provided by Liberal Arts Career Services (LACS), Peter T. Flawn Academic Center 18. These include the annual fall law fair, information on how to research law schools, and assistance with the application procedure, including the personal statement. Prelaw students in all majors may consult the prelaw adviser in LACS. Additional information about preparation for law is available at http://www.utexas.edu/cola/lacs/pre-law_services/.

Information about admission to the School of Law at the University is given in *General Information* and in the law school catalog. Like most professional

schools, the University's law school has a number of specific requirements and limitations. For example, the applicant must have completed a bachelor's degree. Students are admitted only at the beginning of the fall semester. Each applicant for admission must take the Law School Admission Test, administered by the Law School Admission Council. This is usually taken by December of the senior year. The applicant's test score and undergraduate academic performance are important in determining eligibility for admission to law school; but all law schools consider a variety of factors in their admission policies, and no single factor by itself will guarantee admission or denial.

PREPARATION FOR TEACHER CERTIFICATION

Students who plan to teach in the early grades in Texas public schools must earn the Bachelor of Science in Applied Learning and Development in the College of Education and must meet the appropriate state certification requirements.

Students who plan to teach in Texas public middle schools or high schools must earn a bachelor's degree in the field they intend to teach and must meet the requirements for teacher certification. Students pursuing either middle grades or secondary math or science certification must follow the curriculum prescribed by the UTeach-Natural Sciences program. Students pursuing either middle grades or secondary certification in English language arts, social studies, or languages other than English must follow the curriculum prescribed by the UTeach-Liberal Arts program. Students pursuing other areas of certification should consult an adviser in the major department about degree requirements and an adviser in the College of Education about certification requirements.

COURSEWORK IN THE GRADUATE SCHOOL AND THE SCHOOL OF LAW

GRADUATE WORK FOR UNDERGRADUATE CREDIT

An undergraduate may enroll in a graduate course under the following conditions:

1. He or she must be an upper-division student and must fulfill the prerequisite for the course (except graduate standing).
2. He or she must have a University grade point average of at least 3.00.

3. He or she must receive the consent of the instructor of the course and of the graduate adviser for the field in which the course is offered. Some colleges and schools may also require the approval of the dean's office. Individual divisions may impose additional requirements or bar undergraduates from enrolling in graduate courses.
4. Students in most colleges must have their dean's approval before they register for a graduate course.

Undergraduate students may not enroll in graduate courses that have fewer than five graduate students enrolled.

A graduate course taken by an undergraduate is counted toward the student's bachelor's degree in the same way that upper-division courses are counted, unless the course is reserved for graduate credit as described in the next section. Courses reserved for graduate credit may not also be used to fulfill the requirements of an undergraduate degree.

An undergraduate student enrolled in a graduate course is subject to all University regulations affecting undergraduates.

RESERVATION OF WORK BY UNDERGRADUATES FOR GRADUATE CREDIT

Under the following conditions, a degree-seeking undergraduate may enroll in a graduate course and reserve that course for credit toward a graduate degree.

1. The student must have a University grade point average of at least 3.00.
2. The student must have completed at least ninety semester hours of coursework toward an undergraduate degree.
3. The student may not register for more than fifteen semester hours in the semester or for more than twelve semester hours in the summer session in which the course is reserved.
4. No more than twelve semester hours may be reserved for graduate credit.
5. All courses reserved for graduate credit must be approved by the twelfth class day of the semester or the fourth class day of the summer session by the course instructor, the student's undergraduate adviser, the graduate adviser in the student's proposed graduate major area, the dean of the student's undergraduate college, and the graduate dean. A form for this purpose is available in the Office of Graduate Studies.

An undergraduate student enrolled in a graduate course is subject to all University regulations affecting undergraduates.

A student who reserves courses for graduate credit must be admitted to a University graduate program through regular channels before the credit may be applied toward a graduate degree. By allowing the student to earn graduate credit while still an undergraduate, the University makes no guarantee of the student's admissibility to any graduate program.

COURSES IN THE SCHOOL OF LAW

Undergraduate students may not take courses in the School of Law.

HONORS

Honors programs and organizations of the colleges and schools are described in chapters 3 through 16 of this catalog; the programs of the University Honors Center are described in chapter 2. *General Information* gives the requirements for recognition as a College Scholar or Distinguished College Scholar, inclusion on the University Honors list, and graduation with University honors.

ACADEMIC ADVISING

The University views sound academic advising as a significant responsibility in educating students. Academic advisers assist students in developing intellectual potential and exploring educational opportunities and life goals. Many people in the campus community contribute to the advising process, including faculty, staff, student, and professional advisers. Through the relationship established between adviser and student within a friendly, helpful, and professional atmosphere, a student has the opportunity to learn about educational options, degree requirements, and academic policies and procedures; to clarify educational objectives; to plan and pursue programs consistent with abilities, interests, and life goals; and to use all resources of the University to best advantage.

Ultimately, the student is responsible for seeking adequate academic advice, for knowing and meeting degree requirements, and for enrolling in appropriate courses to ensure orderly and timely progress toward a degree. Frequent adviser contact provides students with current academic information and promotes progress

toward educational goals. The University supports that progress and encourages effective academic advising campus-wide.

The advising systems of the colleges and schools are described in chapters 3 through 16.

STUDENT RESPONSIBILITY

While University faculty and staff members give students academic advice and assistance, each student is expected to take responsibility for his or her education and personal development. The student must know and abide by the academic and disciplinary policies given in this catalog and in *General Information*, including rules governing quantity of work, the standard of work required to continue in the University, scholastic probation and dismissal, and enforced withdrawal. The student must also know and meet the requirements of his or her degree program, including the University's basic education requirements; must enroll in courses appropriate to the program; must meet prerequisites and take courses in the proper sequence to ensure orderly and timely progress; and must seek advice about degree requirements and other University policies when necessary.

The student must give correct local and permanent postal addresses, telephone numbers, and e-mail address to the Office of the Registrar and to the offices of the student's deans and must notify these offices immediately of any changes. Official correspondence is sent to the postal or e-mail address last given to the registrar; if the student has failed to correct this address, he or she will not be relieved of responsibility on the grounds that the correspondence was not delivered.

The student must verify his or her schedule of classes each semester, must see that necessary corrections are made, and must keep documentation of all schedule changes and other transactions.

All students should be familiar with the following sources of information:

University catalogs. *General Information* gives important information about academic policies and procedures that apply to all students. It includes the official academic calendar, admission procedures and residence requirements, information about tuition and fees, and policies on quantity of work, grades and the grade point average, credit by examination and correspondence, adding and dropping courses, withdrawal from the University, and scholastic probation

and dismissal. This catalog also gives historical and current information about the University's organization and physical facilities. It describes the services of the Division of Student Affairs and the libraries and research facilities that support the University's academic programs.

The undergraduate catalog gives information about degrees offered by the undergraduate divisions and lists the faculty. The chapter for each college or school describes the academic policies and procedures that apply to students in that division and lists the division's undergraduate courses. The graduate catalog and the law school catalog give similar information about graduate programs and the programs of the School of Law.

Printed catalogs are available at campus-area bookstores and from the Office of the Registrar Catalog Store at TXShop, <http://utdirect.utexas.edu/txshop/>. The online catalogs are available at <http://registrar.utexas.edu/catalogs/>.

The Course Schedule. The *Course Schedule* is published by the Office of the Registrar and is available before registration for each semester and summer session at <http://registrar.utexas.edu/schedules/>. It includes information about registration procedures; times, locations, instructors, prerequisites, and special fees of classes offered; and advising locations.

Dean's offices. In each college, the office of the assistant or associate dean for student affairs serves as a central source of information about academic affairs and student services. The student should consult the dean's office staff for information not provided in the publications listed above; a student who is in doubt about any University regulation should always seek clarification in the dean's office before proceeding.

GRADUATION

The University holds commencement exercises at the end of the spring semester. Each college and school also holds a commencement ceremony in the spring, and many hold graduation exercises in the fall. Graduating students are encouraged to participate. Those who graduate in the summer or fall may attend Commencement the following spring. Each student should consult his or her dean early in the semester of graduation for information about commencement activities and procedures.

No degree will be conferred except on publicly announced dates.

GENERAL REQUIREMENTS

To receive an undergraduate degree from the University of Texas at Austin, a student must fulfill all requirements for the degree as set forth in a catalog under which he or she is eligible to graduate and any special requirements of the college or school and department offering the degree, as well as the following minimum general requirements:

1. The student must have a grade point average of at least 2.00 on all courses undertaken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded. Additional requirements imposed by a college or school, if any, are given in the college's chapter of this catalog.
2. The student must fulfill the following requirements regarding coursework taken in residence. Residence credit includes only courses taken at the University of Texas at Austin; it does not include credit by examination, courses taken by extension or correspondence, and online courses that are recorded as transfer credit. Coursework in University-approved affiliated study abroad programs (international provider programs) is treated as residence credit for requirements 2a and 2b below. However, coursework in University-approved affiliated study abroad programs may not be used to fulfill requirement 2c.
 - a. The student must complete in residence at least sixty semester hours of coursework counted toward the degree.⁹
 - b. Twenty-four of the last thirty semester hours counted toward the degree must be completed in residence.
 - c. At least six semester hours of advanced coursework in the major must be completed in residence.

Additional requirements imposed by a college or school, if any, are given in the college's chapter of this catalog. Many degree plans include residence rules in addition to the above University-wide requirements; the appropriate academic units have the discretion to determine applicability of University-approved affiliated study abroad credit toward all college- and school-specific requirements for coursework in residence. Course equivalency and University approval of study abroad courses are determined by the appropriate academic units.

9. This requirement is waived for students in the Accelerated Track for the Bachelor of Science in Nursing, a degree program for registered nurses who hold associate's degrees or diplomas in nursing.

3. Coursework in American government and American history (the legislative requirement):

- a. Each student must complete six semester hours of coursework in American government, including Texas government. Because these courses are not electives, they may not be taken on the pass/fail basis at the University. Credit by examination may be counted toward the requirement.

The six hours of coursework used to fulfill the requirement must cover both the United States and the Texas constitutions. Texas colleges and universities differ in the way they include this material in the courses they offer. As a result, some combinations of government courses taken at different institutions do not fulfill the requirement, even though they provide six hours of credit. The following combinations of coursework, some of which include transferred work, fulfill the government requirement at the University:

1. Government 310L and 312L
2. Government 310L and three hours of transfer credit in United States government (entered into the student's University record as "GOV 3 US")
3. Government 310L and three hours of transfer credit in Texas government ("GOV 3 TX")
4. Three hours of transfer credit in United States government ("GOV 3 US") and three hours of transfer credit in Texas government ("GOV 3 TX")

A number of sections of Government 312L are offered each semester. Because some of these sections deal with state government and some deal with federal government, credit for Government 312L in combination with transfer credit in United States government ("GOV 3 US") or in Texas government ("GOV 3 TX") may fail to fulfill the legislative requirement. If a student has such a combination of credit, his or her dean's office will evaluate the coursework to determine whether both the state and the federal components of the requirement have been met.

- b. Each student must complete six semester hours of coursework in American history. Up to three hours in Texas history may be counted toward this requirement. Because these courses are not electives, they may not be

taken on the pass/fail basis at the University. Credit by examination may be counted toward the requirement.

In some colleges, ROTC courses may be counted toward the legislative requirement. Policies about the use of ROTC courses are given in these colleges' chapters of the catalog.

4. A candidate for a degree must be registered at the University either in residence or in absentia the semester or summer session the degree is to be awarded and must apply to the dean for the degree no later than the date specified in the official academic calendar. Some colleges require that their students be registered in that college the semester of graduation; these rules are given in the colleges' chapters of this catalog.

MULTIPLE DEGREES

No second bachelor's degree will be conferred until the candidate has completed at least twenty-four semester hours in addition to those counted toward the bachelor's degree that requires the higher number of hours of credit. The McCombs School of Business, the Cockrell School of Engineering, the College of Education, and the School of Nursing require the student to complete at least twenty-four hours in addition to those counted toward the first bachelor's degree.

A student may not receive more than one degree with the same title; for example, he or she may not earn more than one Bachelor of Arts degree.

GRADUATION UNDER A PARTICULAR CATALOG

To receive a bachelor's degree, a student must fulfill all the degree requirements in a catalog under which he or she is eligible to graduate; the choices open to students in each college and school are explained below. The student must complete degree requirements within a specified time period; if he or she leaves school to enter military service during a national emergency, the time required to meet the military obligation is excluded from the time allowed for completion of the degree.

A student who transfers to the University from another Texas public institution of higher education has the same catalog choices that he or she would have had if the dates of attendance at the University had been the same as the dates of attendance at the other institution.

Since each college and school must retain the flexibility to improve its curriculum, course offerings may be changed during the student's education. If a course

required under a previous catalog is no longer offered, students eligible to graduate according to that catalog should consult the dean of the college to learn whether another course may be used to fulfill the requirement.

Catalog choices. The catalog choices open to business, engineering, nursing, and pharmacy students are described below. In all other divisions, a student may graduate under the catalog covering any academic year in which he or she was enrolled at the University. Whichever catalog the student chooses, all degree requirements must be completed within six years (seven years for the Bachelor of Architecture) of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2010–2012 catalog must do so by the end of the summer session 2018 (2019 for the Bachelor of Architecture).

McCombs School of Business. A business student may graduate under the catalog covering any academic year in which he or she was enrolled at the University. A business honors student who adds a second business major must graduate under the same catalog for both majors.

Whichever catalog the student chooses, all degree requirements must be completed within six years of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2010–2012 catalog must do so by the end of the summer session 2018.

Cockrell School of Engineering. An engineering student may graduate under the catalog covering any academic year in which he or she was enrolled in the school. Whichever catalog the student chooses, all degree requirements must be completed within six years of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2010–2012 catalog must do so by the end of the summer session 2018.

Course substitutions in the degree program are permitted only with the approval of the departmental undergraduate adviser and the dean.

School of Nursing. A nursing student may graduate under the catalog covering any academic year in which he or she was enrolled in the School of Nursing. Whichever catalog the student chooses, all degree requirements must be completed within six years of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2010–2012 catalog must do so by the end of the summer session 2018.

College of Pharmacy. A pharmacy student may graduate under the catalog in effect immediately preceding the student's admission to the college or the catalog covering any academic year in which he or she was enrolled in the professional curriculum in the college. Whichever catalog they choose, students must complete all degree requirements within seven years of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2010–2012 catalog must do so by the end of the summer session 2019.

2. School of Undergraduate Studies

Paul B. Woodruff, PhD, *Dean*
Lawrence D. Abraham, EdD, *Associate Dean*
Cassandre G. Alvarado, PhD, *Assistant Dean, Learning Communities and Assessment*
Jeanette M. Herman, PhD, *Assistant Dean, Academic Initiatives*
David B. Spight, MA, *Assistant Dean, Strategic Advising*
<http://www.utexas.edu/ugs/>

MISSION

The School of Undergraduate Studies oversees the components of a college education that are shared by all undergraduates at the University. The mission of the school includes the responsibility for sustaining a dynamic common curriculum and enriching the undergraduate experience through innovative advising, learning communities, interdisciplinary programs, and undergraduate research. The overall functions of the school are organized as follows:

COMMON CURRICULUM

- ▶ To instill in each student the distinctive traits of a University of Texas at Austin graduate and broadly educated person.
- ▶ To ensure a high-quality core curriculum by working closely with the other colleges and schools to set and enforce standards for the courses required of all undergraduate students.
- ▶ To develop and maintain innovative classes for first-year students.
- ▶ To set standards for and to evaluate courses that satisfy campus-wide requirements in writing and speaking, ethics and leadership, global cultures, cultural diversity, quantitative reasoning, and independent inquiry.
- ▶ To support ongoing curricular innovation and teaching excellence in these courses and throughout the undergraduate curriculum.

STRATEGIC ADVISING

- ▶ To offer advising services that help students find coherent paths through the University that suit their academic and career interests, focusing on students who are unsure of their majors or who are considering a change.
- ▶ To help students explore the resources of the University in areas that interest them.
- ▶ To provide training and resources for advisers from every college and school.

LEARNING COMMUNITIES

- ▶ To cultivate community-based academic experiences, especially for first-year students, through seminars, interest groups, residence hall-based interaction with faculty, and honors programs.
- ▶ To foster leadership among students in these communities, especially through training student mentors.

INTERDISCIPLINARY PROGRAMS

- ▶ To create and coordinate interdisciplinary certificate and degree-granting programs, working closely with the other colleges and schools.
- ▶ To develop integrated strands of courses for satisfying campus-wide requirements.

UNDERGRADUATE RESEARCH

- ▶ To foster undergraduate participation in the University's creative activity and research.

BASIC EDUCATION REQUIREMENTS

The University strives to enroll exceptionally well-prepared, highly motivated students and to produce self-reliant graduates who will become leaders in both their chosen professions and their communities. The University must not only equip its graduates with occupational skills but also educate them broadly enough to enable them to adapt to and cope with the accelerated process of change occurring in business, professional, and social institutions today. Students must be exposed to a broad spectrum of arts and science so that they may be educated beyond vocational requirements and thus be prepared for responsible citizenship in an increasingly complex world.

Every graduate of the University is expected to

- ▶ be able to express himself or herself clearly and correctly in writing;
- ▶ be capable of reasoning effectively from hypotheses to conclusions and of logically analyzing the arguments of others;
- ▶ have a critical appreciation for the social framework in which we live and the ways it has evolved through time;
- ▶ have experience in thinking about moral and ethical problems;
- ▶ have an understanding of some facets of science and the ways in which knowledge of the universe is gained and applied;
- ▶ have an understanding of some aspects of mathematics and the application of quantitative skills to problem solving;
- ▶ have gained familiarity with a second language;
- ▶ have an appreciation for literature and the arts; and
- ▶ be competent in the basic use of computers.¹

To help students in all majors acquire the traits of an educated person, the General Faculty of the University has adopted the core curriculum outlined below. All students, regardless of major, must complete the core

curriculum prior to earning an undergraduate degree.

Often, courses required by the student's degree program may be used concurrently to fulfill one or more of the core curriculum requirements listed below. When possible, students should select core courses that also satisfy the specific requirements of their intended degrees. For more information, students should consult their advisers and the degree requirements given in chapters 3 through 16 of this catalog.

CORE CURRICULUM

All students pursuing an undergraduate degree at the University must complete the following required coursework. These requirements are consistent with statewide core curriculum guidelines; the area of the statewide core that each requirement meets is given in parentheses in the following table.

A single course may not be counted toward more than one core area.

CORE AREA	SEM HRS
First-year signature course (090, Institutionally designated option) <i>One of the following courses, completed during the student's first year in residence:</i> <ul style="list-style-type: none"> ▶ Undergraduate Studies 302, 303 Students in the Plan II Honors Program may complete this requirement by taking Tutorial Course 302.	3
English composition (010, Communication) Six hours are required. <ul style="list-style-type: none"> ▶ Rhetoric and Writing 306 Nonnative speakers of English may complete three hours of this requirement by taking Rhetoric and Writing 306Q. Students in the Plan II Honors Program may complete three hours of this requirement by taking English 603A or Tutorial Course 603A. <i>The second half of this six-hour core requirement is fulfilled by the completion of the three-hour course with a writing flag or substantial writing component that is required in every undergraduate degree program. The writing flag or substantial writing component course counted toward this area of the core may also be used to satisfy other flag and major requirements outside the core, but may not be used to satisfy any other requirement of the core.</i>	6
Humanities (040, Humanities) <ul style="list-style-type: none"> ▶ English 316K Students in the Plan II Honors Program may complete this requirement by taking English 603B or Tutorial Course 603B.	3

1. Within each discipline, the faculty defines and assesses student computer competence through learning activities that require the use of computers.

CORE AREA	SEM HRS	CORE AREA	SEM HRS
American and Texas government (070, Government)	6	Science and technology, Part I (030, Natural science)	6
Six hours are required. This coursework partially fulfills the legislative requirement given on pages 12–13.		Six hours in a single field of study.	
<ul style="list-style-type: none"> ▶ Government 310L is required for all students ▶ Government 312L, 312P, or 312R may be used to satisfy the second half of this requirement 		<i>The following courses may be counted:</i>	
Transfer students with five or more hours of coursework in American government may complete this requirement of the core by taking Government 105, which includes Texas government content that is consistent with the legislative requirement described on pages 12–13.		<ul style="list-style-type: none"> ▶ Astronomy 301, 302, 303, 307, 309, 309L, 309N, 309Q, 309R, 309S, 309T 	
.....		<i>Only one of the following may be counted: Astronomy 301, 302, 303, 307. Astronomy 309Q may not be paired with 309N or 309R.</i>	
American history (060, History)	6	<ul style="list-style-type: none"> ▶ Biology 301D, 301L, 301M, 311C, 311D, 315H, 325H, 326M 	
Six hours are required; three hours may be in Texas history. This coursework partially fulfills the legislative requirement given on pages 12–13.		<i>It is recommended that students complete two courses chosen from Biology 301D, 301L, and 301M; or one of the following pairs of courses: Biology 311C and 311D, Biology 311C and 326M, Biology 315H and 325H.</i>	
<i>The following courses may be counted:</i>		<ul style="list-style-type: none"> ▶ Chemistry 301, 302, 301H, 302H, 304K, 305, 314N 	
<ul style="list-style-type: none"> ▶ History 314K, 315G, 315K, 315L, 317L, 320L, 320P, 320R, 329K, 333L, 333M, 334L, 334M, 336L, 340S, 341N, 345J, 345L, 345M, 350R, 351N, 351P, 355F, 355M, 355N, 355P, 355S, 356G, 356K, 356N, 356P, 356R, 357C, 357D, 357F, 357P, 365G, 373C, 376F 		<i>It is recommended that students complete one of the following pairs of courses: Chemistry 301 and 302, 301H and 302H, 304K and 305.</i>	
.....		<ul style="list-style-type: none"> ▶ Geological Sciences 401, 302C, 302D, 302E, 302K, 302M, 302P, 303, 404C, 405, 305E, 307, 420H 	
Social and behavioral sciences (080, Social and behavioral sciences)	3	<i>Only one of the following may be counted: Geological Sciences 401, 303, 420H. Geological Sciences 404C may not be paired with 405.</i>	
<i>One of the following courses:</i>		<ul style="list-style-type: none"> ▶ Natural Sciences 306J, 306K, and 306L³ 	
<ul style="list-style-type: none"> ▶ Anthropology 302, 305, 307, 318L ▶ Core Texts and Ideas 302, 365 ▶ Economics 301, 304K, 304L ▶ Geography 305, 306C, 307C, 308, 309, 312, 319 ▶ Linguistics 306, 312 ▶ Psychology 301 ▶ Religious Studies 310 ▶ Sociology 302, 308, 308C, 308D, 309, 313K, 318, 319 		<i>It is recommended that students complete one of the following pairs of courses: Physics 301 and 316, 302K and 302L, 303K and 303L, 309K and 309L, 317K and 317L.</i>	
Students in the Plan II Honors Program may complete this requirement by taking Social Science 301.		Students in the Plan II Honors Program may use Biology 301E or Physics 321 to fulfill half of this requirement. To complete the six-hour requirement in this area, Plan II students may pair Biology 301E with Biology 301D or 311C, or Physics 321 with any physics course listed above. If Plan II students do not use Biology 301E or Physics 321 to fulfill this requirement, they may use them to fulfill the science and technology, part II, requirement.	
.....		Science and technology, Part II (031, Additional natural science)	3
Mathematics (020, Mathematics)	3	Three hours in a field of study different from the field counted toward the preceding requirement.	
<i>One of the following courses:</i>		<i>Courses listed under science and technology, part I, may be counted toward this requirement; the following courses may also be counted:</i>	
<ul style="list-style-type: none"> ▶ Mathematics 302, 303D, 403K, 305G, 408C, 408K, 408N, 408R, 316 ▶ Statistics and Scientific Computation 302, 303, 304, 305, 306, 318 		<ul style="list-style-type: none"> ▶ Anthropology 301, 304 ▶ Biology 301C, 305E, 305F, 406D, 307D, 309D, 309F ▶ Computer Science 302, 307 ▶ Electrical Engineering 302, 306 ▶ Geography 301C, 301K, 304E ▶ Natural Sciences 306J, 306K, and 306L³ 	
Students in the Plan II Honors Program may complete this requirement by taking Mathematics 310P.		

3. Students may use this nine-hour sequence to fulfill the requirements for science and technology, part I, and science and technology, part II.

CORE AREA	SEM HRS
Visual and performing arts (050, Visual/performing arts)	3
<i>One of the following courses:</i>	
▶ American Studies 330	
▶ Architecture 308, 318K, 318L	
▶ Art History 301, 302, 303	
<i>The following courses may also be counted: Art History</i>	
325, 327J, 327L, 327M, 327N, 327P, 327R, 329J, 329K, 329R,	
330G, 331K, 331L, 331M, 332K, 332L, 333K, 333L, 334, 335N,	
335P, 337K, 338L, 338M, 339J, 339K, 339L, 339M, 341K,	
341L, 346, 347K, 347L, 347M, 359, 360L, 361, 361L, 362,	
362R, 363, 364, 365, 366J, 366N, 366P, 367, 370, 372.	
▶ Classical Civilization 301, 302, 303, 307C, 307D, 317	
▶ Core Texts and Ideas 350, 351	
▶ Fine Arts 310, 320	
▶ Music 302L, 302P, 303M, 303N, 303P, 606A, 307, 313,	
334	
▶ Philosophy 317K, 346	
▶ Radio-Television-Film 305, 314, 316	
▶ Studio Art 320K, 320L	
▶ Theatre and Dance 301, 302T, 303	
▶ Visual Art Studies 320	
TOTAL 42	

ADDITIONAL BASIC EDUCATION REQUIREMENTS

SKILLS AND EXPERIENCES FLAGS

In the process of fulfilling the core curriculum and other degree requirements, all undergraduates are expected to complete courses with content in the following six areas:

- ▶ Writing: three flagged courses beyond Rhetoric and Writing 306 or its equivalent
- ▶ Quantitative reasoning: one flagged course
- ▶ Global cultures: one flagged course
- ▶ Cultural diversity in the United States: one flagged course
- ▶ Ethics and leadership: one flagged course
- ▶ Independent inquiry: one flagged course

Courses with sufficient content in these areas will be identified in the *Course Schedule* by the appropriate flags. A course may carry more than one flag. The School of Undergraduate Studies monitors flagged courses to ensure that they meet the guidelines set by the General Faculty.

Most degree programs are in the process of implementing flag requirements. Students who choose to graduate according to the requirements of the 2010–2012 *Undergraduate Catalog* should consult their advisers and the degree requirements listed in chapters 3 through 16 of this catalog to determine which of the flag requirements apply to them.

FOREIGN LANGUAGE

In addition to the core curriculum requirements above, undergraduates are expected to have completed two years in a single foreign language in high school. Students without two years of high school foreign language coursework must earn credit for the second college-level course in a foreign language; this credit does not count toward the student's degree. Students should consult their advisers and the degree requirements listed in chapters 3 through 16 of this catalog to determine whether additional foreign language requirements apply to them.

ADMISSION AND REGISTRATION

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Because enrollment in some colleges and schools is limited by the availability of academic resources, some students may be admitted to the University but denied admission to their college or school of choice.

Detailed information about the admission process is provided in *General Information*, which also includes information about registration, adding and dropping courses, transferring from one division of the University to another, and the academic calendar. The *Course Schedule*, published before registration each semester, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are available through the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is available at campus-area bookstores.

CENTER FOR STRATEGIC ADVISING

The School of Undergraduate Studies provides academic advising services for students in three categories:

- ▶ New students who select the School of Undergraduate Studies so that they may delay their choice of college or school until after a period of exploration
- ▶ New students who are admitted to the School of Undergraduate Studies after having been denied admission to their first two choices of major
- ▶ Continuing students in transition from one major to another

The Center for Strategic Advising helps students examine career aspirations and academic interests with the goal of developing a viable and rewarding path through the University. After a one- to four-semester period of

exploration and strategic advising, students enrolled in the School of Undergraduate Studies choose a major in one of the University's other colleges or schools. More information about the Center for Strategic Advising is available at <http://www.utexas.edu/ugs/csa/>.

SIGNATURE COURSE PROGRAM

The purpose of the first-year signature course program is to provide all first-year students with a course that helps them to mature intellectually from promising high school students to good college students.

Signature courses introduce undergraduates to academic discussion and analysis of issues from an interdisciplinary perspective. The issues discussed in signature courses are sufficiently complex that in order to view such issues completely, students must apply the perspectives of multiple disciplines.

Signature courses are taught in seminar format and large format. All signature courses should

- ▶ engage students with an issue of contemporary importance, introduce them to the methods of more than one discipline, and emphasize college-level skills in communication, reasoning, and the interpretation of data;
- ▶ help students become familiar with at least one of the University's special resources, such as libraries, museums, and research facilities, either during a scheduled class or as assigned homework;
- ▶ incorporate at least one University Lecture, which will help create a common experience for all first-year students; and
- ▶ help students acquire a measure of information literacy in disciplines relevant to the class.

The signature course is required for all new students, regardless of major. New students with previous experience at other institutions of higher education are encouraged to enroll in signature courses that are specifically recommended for more experienced students. More information about signature courses is available at <http://www.utexas.edu/ugs/sig/>.

FIRST-YEAR INTEREST GROUPS

First-Year Interest Groups (FIGs) are cohorts of fifteen to twenty-five students who take two to four courses together during the first semester of their first year. These small groups help students get to know each other and make the transition from high school to college. In addition, every FIG includes a weekly one-hour seminar, led by a trained peer mentor. During

the seminar, participants are introduced to University resources and have opportunities to explore their intellectual interests and to interact with each other, the mentor, advising staff, and faculty members.

The Residential First-Year Interest Group program (ResFIG) offers incoming freshmen the opportunity to live as well as take classes with a cohort.

In a Residential FIG, students will

- ▶ be part of a small group that lives and studies together;
- ▶ enroll in a FIG together for their first academic year;
- ▶ participate in community service projects each semester; and
- ▶ have a room in one of the coeducational buildings in Whitis Court.

More information about FIGs is available at <http://www.utexas.edu/ugs/fig/>.

BRIDGING DISCIPLINES PROGRAMS

The Bridging Disciplines Programs (BDPs) support students in becoming versatile thinkers with the skills to collaborate across disciplines and cultures. The BDPs are designed to complement a student's major with an interdisciplinary specialization in one of the following areas:

- ▶ Children and Society
- ▶ Cultural Studies
- ▶ Digital Arts and Media
- ▶ Environment
- ▶ Ethics and Leadership
- ▶ Film Studies
- ▶ Human Rights and Social Justice
- ▶ Innovation, Creativity, and Entrepreneurship
- ▶ International Studies
- ▶ Social Entrepreneurship and Nonprofits
- ▶ Social Inequality, Health, and Policy

Each BDP is overseen by an interdisciplinary faculty panel that sets policy, approves courses, and selects students. Within each broad area, students choose a specific strand of specialized courses drawn from disciplines across the University. Students are encouraged to use the BDP theme to select courses and integrate degree requirements; to this end, courses taken to fulfill core curriculum requirements, courses fulfilling major requirements, and electives may also be counted toward a BDP. Participation in undergraduate research and internships is also central to the design of the BDPs.

All degree-seeking undergraduates at the University are eligible to apply for the BDPs. With careful planning, a BDP can complement most degree plans. However, because the BDPs build on core requirements

and electives, students are encouraged to start early in their University careers.

Undergraduates who complete BDP requirements in conjunction with their degree requirements or within one year after earning the degree receive a certificate and recognition on the University transcript; students in integrated undergraduate/graduate programs must complete certificate requirements within one year after they complete their undergraduate degree requirements. A maximum of nine semester hours of the certificate coursework may be taken after the student has earned the undergraduate degree. At least half of the required certificate coursework must be completed in residence at the University.

A student may not earn a certificate in the same field as his or her major, and at least one certificate course must be outside the requirements of the major. However, certificate courses outside the major may be counted toward other degree requirements.

Students should apply for the certificate when they apply for graduation or when they complete the certificate program, whichever is later. Transcript recognition is awarded at the end of that semester or summer session.

1. At least nineteen semester hours of coursework. The distribution of coursework varies by specialization, and students should consult the BDP office for the requirements of each program. For all specializations, the coursework requirements consist of the following:
 - a. *Foundation Courses*: One to ten hours in foundation courses that introduce key concepts and methodologies related to the interdisciplinary concentration.
 - b. *Connecting Experiences*: Three to nine hours in undergraduate research, internships, and/or independent creative project courses that connect students' interdisciplinary concentration to their major.
 - c. *Courses in a Strand*: Six to twelve hours in courses in a strand, which allows students to focus their remaining BDP coursework. Course listings for BDP strands are located on the BDP Web site at <http://www.utexas.edu/ugs/bdp/>.
2. A three- to four-page integration essay in which students reflect on what they have learned and accomplished through their BDP experience. These essays will be reviewed by members of a BDP faculty panel. Additional guidelines are available from the BDP advisers.

3. Students must earn a grade of at least C- in each of the courses taken to fulfill BDP requirements and the cumulative grade point average in all courses counting toward a student's BDP certificate must be at least 2.0. All but one of the courses taken to fulfill BDP requirements must be taken on the letter-grade basis.
4. Completion of the requirements of a major. More information about BDPs is available at <http://www.utexas.edu/ugs/bdp/>.

OFFICE OF UNDERGRADUATE RESEARCH

Every undergraduate at the University has the opportunity to become a researcher and to take part in the vibrant intellectual work of the University. Undergraduates often bring enthusiasm and fresh ideas to the research process and are valuable contributors to this work. The Office of Undergraduate Research connects students to research opportunities and resources, raises awareness of undergraduate research in all disciplines, and provides support to faculty members and advisers who work with undergraduates.

Services offered through the Office of Undergraduate Research include weekly information sessions on research involvement, individual advising sessions, and workshops on a variety of topics tailored to the needs of student groups and advisers. The office also offers a workshop series that guides students through the process of submitting an abstract and presenting their work at a national conference.

To facilitate involvement in undergraduate research, the School of Undergraduate Studies offers two courses that students may take to receive credit for research experiences with University faculty members: Undergraduate Studies 310 and 320. Enrollment in these courses is coordinated through the Office of Undergraduate Research.

The Office of Undergraduate Research also oversees EUREKA (<http://www.utexas.edu/research/eureka/>), a Web site devoted to undergraduate research resources and opportunities at the University. The site provides a searchable database of more than two thousand faculty research profiles, a list of faculty projects with opportunities for undergraduates, a research guide with information on getting started, and spotlights on successful faculty/student collaborations.

More information on the Office of Undergraduate Research is available online at <http://www.utexas.edu/ugs/ugr/> or by phone at (512) 471-5949.

UNIVERSITY HONORS CENTER

The Honors Center in the School of Undergraduate Studies is a focal point for interdisciplinary honors activities at the University. The center offers a variety of enrichment programs for undergraduate honors students and support to the campus activities of several national honor societies.

More information about the Honors Center is available at <http://www.utexas.edu/ugs/uhc/>.

HONOR SOCIETIES FOR FRESHMEN

Alpha Lambda Delta and Phi Eta Sigma are national honor societies with chapters that recognize scholastic achievement during the first year at the University. Their purpose is to encourage superior academic achievement among students in their first year at institutions of higher education, to promote intelligent living and a continued high standard of learning, and to assist men and women in recognizing and developing meaningful goals for their roles in society. Membership is by invitation only. New members are chosen each fall and spring and are inducted in the spring semester.

NATIONAL SOCIETY OF COLLEGIATE SCHOLARS

The National Society of Collegiate Scholars (NSCS) is an honor society that recognizes high-achieving second-year students. Members have opportunities to participate in networking, career resource, and leadership development activities. Members can also apply for scholarships and awards and attend special NSCS programs throughout the country.

PHI BETA KAPPA

Phi Beta Kappa, established in 1776 at the College of William and Mary, is the nation's oldest and most prestigious honor society. The chapter at the University was organized in 1904 as the first (Alpha) chapter in the state of Texas. Eligibility is limited to upper-division students with outstanding records of achievement in what the Phi Beta Kappa Society designates as the liberal arts and sciences. The student must have completed at least sixty semester hours of coursework at the University. Elections to Phi Beta Kappa are traditionally held in the fall, spring, and summer each year. New members are inducted at ceremonies each December and May.

PHI KAPPA PHI

Founded in 1897 at the University of Maine, Phi Kappa Phi is the nation's oldest, largest, and most selective honor society. The University of Texas at Austin chapter was founded in 1962. The society gets its name from the initial letters of the Greek words forming its adopted motto: *Philosophía Krateíto Photôn*, which means "Let the love of learning rule humanity." Phi Kappa Phi awards more than \$800,000 annually through graduate and undergraduate scholarships, member and chapter awards, and grants for local and national literacy initiatives. Membership is by invitation only to second-semester juniors and seniors. Elections are traditionally held in the fall and spring. New members are inducted in the spring semester.

MORTAR BOARD

Mortar Board is a national honor society that recognizes college seniors for distinguished ability and achievement in scholarship, leadership, and service. It was founded in 1918 by representatives from Cornell University, the University of Michigan, the Ohio State University, Swarthmore College, and Syracuse University. The University of Texas at Austin chapter was founded in 1923. Members are chosen each spring.

LONGHORN SCHOLARS PROGRAM

The Longhorn Scholars Program is designed for students from selected Texas high schools whose graduates have historically been underrepresented at the University.

Throughout their four years at the University, Longhorn Scholars benefit from strategic academic advising, peer mentoring, a curriculum taught by outstanding faculty members, and opportunities to develop leadership skills, participate in faculty research, and integrate classroom, research, and internship experiences.

Participation in the Longhorn Scholars Program is by invitation. To be eligible, a student must graduate from a participating Texas high school and be the recipient of a Longhorn Opportunity Scholarship, President's Achievement Scholarship, Terry Foundation Scholarship, or other qualifying scholarship.

More information about the Longhorn Scholars Program is available at <http://www.utexas.edu/ugs/lsp/>.

COURSES

Undergraduate Studies has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

BRIDGING DISCIPLINES: BDP

LOWER-DIVISION COURSES

- 101, 201, 301. Forum Seminar Series.** Restricted to freshmen and sophomores, and to students in the Bridging Disciplines Programs. Discussion of various contemporary issues, with an emphasis on interdisciplinary perspectives and critical discourse. For 101, two lecture hours a week for eight weeks; for 201, two lecture hours a week for one semester; for 301, three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the letter-grade basis only; these are identified in the *Course Schedule*. Only one of the following may be counted unless the topics vary: Bridging Disciplines 101, 201, 301, Connexus 118, 218, 318, Freshman Seminar 118, 218, 318. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 306. Fundamentals of Ethical Leadership.** Restricted to freshmen and sophomores, and to students in the Bridging Disciplines Programs. Discussion of various contemporary issues related to ethical leadership, with an emphasis on interdisciplinary perspectives and critical discourse. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Only one of the following may be counted: Bridging Disciplines 306, Connexus 318 (Topic: *Fundamentals of Ethical Leadership*), Freshman Seminar 318 (Topic: *Fundamentals of Ethical Leadership*).
- 306C. Principles of Business.** Restricted to nonbusiness students. Interdisciplinary examination of how businesses function in the Western world. Discusses the development of the corporation in the United States, ethical issues, and the primary areas of business. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Bridging Disciplines 301 (Topic: *Principles of Business*) and 306C may not both be counted.
- 110, 210, 310. Connecting Research Experience.** Restricted to students in the Bridging Disciplines Programs. Supervised research with a faculty member, related to the interdisciplinary themes of a Bridging Disciplines Program. Research may consist of an individual project or assisting a faculty research project. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit. Prerequisite: Consent of the Bridging Disciplines research coordinator.
- 310S. Connecting Research Experience: Service-Learning.** Restricted to students in the Bridging Disciplines Programs. Supervised research with a faculty member, related to the interdisciplinary themes of a Bridging Disciplines Program and including an academic service-learning component. Research may consist of an individual project involving service to the community or assisting a faculty research project with a community service component. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit. Prerequisite: Consent of the Bridging Disciplines research coordinator.
- 111, 211, 311. Connecting Internship Experience.** Restricted to students in the Bridging Disciplines Programs. Supervised internship experience related to the interdisciplinary themes of a Bridging Disciplines Program. Internships may be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 111, three hours of fieldwork a week for one semester; for 211, six hours of fieldwork a week for one semester; for 311, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines research coordinator, may be repeated once for credit. Prerequisite: Consent of the Bridging Disciplines research coordinator.
- 311S. Connecting Internship Experience: Service-Learning.** Restricted to students in the Bridging Disciplines Programs. Supervised internship experience related to the interdisciplinary themes of a Bridging Disciplines Program and including an academic service-learning component. Internships must be unpaid and may include work with nonprofit organizations or other organized community service entities. Ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines research coordinator, may be repeated once for credit. Prerequisite: Consent of the Bridging Disciplines research coordinator.
- 119, 219, 319. Specialized Forum Seminar Series.** Restricted to freshmen and sophomores. Discussion of various contemporary issues, with an emphasis on multidisciplinary perspectives and critical discourse. For 119, two lecture hours a week for eight weeks; for 219, two lecture hours a week for one semester; for 319, three lecture hours a week for one semester. Some topics require additional hours or laboratory hours; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Some topics are offered on the letter-grade basis only; these are identified in the *Course Schedule*. Only one of the following may be counted unless the topics vary: Bridging Disciplines 119, 219, 319, Connexus 118, 218, 318, Freshman Seminar 118, 218, 318. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

UPPER-DIVISION COURSES

- 120, 220, 320. Connecting Research Experience.** Restricted to students in the Bridging Disciplines Programs. Supervised research with a faculty member, related to the interdisciplinary themes of a Bridging Disciplines Program. Research may consist of an individual project or assisting a faculty research project. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator.
- 320S. Connecting Research Experience: Service-Learning.** Restricted to students in the Bridging Disciplines Programs. Supervised research with a faculty member, related to the interdisciplinary themes of a Bridging Disciplines Program and including an academic service-learning component. Research may consist of an individual project involving service to the community or assisting a faculty research project with a community service component. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator.
- 121, 221, 321. Connecting Internship Experience.** Restricted to students in the Bridging Disciplines Programs. Supervised internship experience related to the interdisciplinary themes of a Bridging Disciplines Program. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 121, three hours of fieldwork a week for one semester; for 221, six hours of fieldwork a week for one semester; for 321, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines research coordinator, may be repeated once for credit. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator.
- 321S. Connecting Internship Experience: Service-Learning.** Restricted to students in the Bridging Disciplines Programs. Supervised internship experience related to the interdisciplinary themes of a Bridging Disciplines Program and including an academic service-learning component. Internships must be unpaid and may include work with nonprofit organizations or other organized community service entities. Ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines research coordinator, may be repeated once for credit. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator.
- 322. Team-Based Research Experience.** Collaborative or team-based research or creative project, under the supervision of a faculty member. Topics are related to the interdisciplinary themes of the Bridging Disciplines Programs. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator. Additional prerequisites may vary with the topic.
- 126, 226, 326. Advanced Forum Seminar Series.** Discussion of contemporary issues related to the topics of a Bridging Disciplines Program, with an emphasis on interdisciplinary perspectives and critical discourse. For 126, two lecture hours a week for eight weeks; for 226, two lecture hours a week for one semester; for 326, three lecture hours a week for one semester. Some topics may require additional hours or lab hours; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Some topics are offered on the letter-grade basis only; these are identified in the *Course Schedule*. Bridging Disciplines 126, 226, 326 and Connexus 128C, 228C, 328C may not both be counted unless the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- 129, 229, 329. Specialized Advanced Forum Seminar Series.** Discussion of contemporary issues related to the topics of a Bridging Disciplines Program, with an emphasis on interdisciplinary perspectives, research, and critical discourse. For 129, two lecture hours a week for eight weeks; for 229, two lecture hours a week for one semester; for 329, three lecture hours a week for one semester. Some topics may require additional hours or laboratory hours; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Some topics are offered on the letter-grade basis only; these are identified in the *Course Schedule*. Bridging Disciplines 129, 229, 329 and Connexus 128C, 228C, 328C may not both be counted unless the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.

DEVELOPMENTAL STUDIES: DEV

- 000M. Basic Mathematics and Algebra Skills.** Developmental mathematics instruction. Emphasis on fundamental mathematics, including computation skills, graphing, and solving word problems, and on algebraic graphing, equations, operations, and quadratics. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.
- 000R, 300R. Basic Reading Skills.** Developmental reading instruction, with emphasis on strategies for improving vocabulary, reading comprehension, and reading study skills. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.
- 000W, 300W. Basic Writing Skills.** Developmental writing instruction, with emphasis on the elements of composition, sentence structure, and standard English usage and mechanics. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.

- 301M. Developmental Mathematics I.** The first of a two-course sequence. Combines arithmetic skills, including operations with whole numbers, fractions, and decimals, and ratios, proportions, and percents; with beginning algebra, including variables, straight-line graphs, setting up and solving word problems, and relating simple algebraic concepts to geometry. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.
- 302M. Developmental Mathematics II.** Continuation of Developmental Studies 301M. Includes linear equations, systems of equations, integers, exponents and scientific notation, factoring polynomials, rational expressions and equations, radical expressions, and geometric problems. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.
- 303M. Basic Mathematics and Algebra Skills Review.** Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.

UNDERGRADUATE STUDIES: UGS

LOWER-DIVISION COURSES

- 001. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various interdisciplinary fields of study. One lecture hour a week for one semester.
- 302. First-Year Signature Course.** Restricted to first-year students. Seminar class focusing on a contemporary issue. Designed to introduce undergraduates to scholarly analysis from an interdisciplinary perspective. Includes an introduction to University resources, such as research facilities, museums, and attendance at University lectures or performances as assigned. Multiple sections may be offered in the fall and spring with various topics and instructors. Three lecture hours a week for one semester. Some sections may require additional meeting times; these are identified in the *Course Schedule*. Only one of the following may be counted: Tutorial Course 301, 302, Undergraduate Studies 302, 303.
- 303. First-Year Signature Course.** Restricted to first-year students. Large-group lecture and discussion class focusing on a contemporary issue. Designed to introduce undergraduates to scholarly analysis from an interdisciplinary perspective. Includes an introduction to University resources, such as research facilities, museums, and attendance at University lectures or performances as assigned. Multiple sections may be offered in the fall and spring with various topics and instructors. Three lecture hours a week for one semester. Some sections may require additional meeting times; these are identified in the *Course Schedule*. Only one of the following may be counted: Tutorial Course 301, 302, Undergraduate Studies 302, 303.

- 309. Analytical Reading and Writing.** Examination of fundamental concepts in analytical reading from different disciplinary perspectives, with an emphasis on sociocultural influences on comprehension and writing styles. Three lecture hours a week for one semester. Connexus 318 (Topic: *Analytical Reading and Writing*) and Undergraduate Studies 309 may not both be counted. Prerequisite: Consent of the Texas Success Initiative coordinator.
- 110, 210, 310. Undergraduate Research Experience.** Restricted to freshmen and sophomores. Supervised research with a faculty member. Research may consist of an individual project or assisting a faculty research project. Individual instruction. With consent of the undergraduate studies research coordinator, may be repeated for credit. Prerequisite: Consent of the undergraduate studies research coordinator.
- 111, 211, 311. Undergraduate Internship Experience.** Supervised internship experience. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 111, three hours of fieldwork a week for one semester; for 211, six hours of fieldwork a week for one semester; for 311, ten hours of fieldwork a week for one semester. With consent of the undergraduate studies research coordinator, may be repeated once for credit. Prerequisite: Consent of the undergraduate studies research coordinator.
- 119. International Learning Seminar.** Restricted to students registered in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of studying abroad in particular locations. Two lecture hours a week for eight weeks, or as required by the topic. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

UPPER-DIVISION COURSES

- 120, 220, 320. Undergraduate Research Experience.** Supervised research with a faculty member. Research may consist of an individual project or assisting a faculty research project. Individual instruction. With consent of the undergraduate studies research coordinator, may be repeated for credit. Prerequisite: Upper-division standing and consent of the undergraduate studies research coordinator.
- 121, 221, 321. Undergraduate Internship Experience.** Supervised internship experience. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 121, three hours of fieldwork a week for one semester; for 221, six hours of fieldwork a week for one semester; for 321, ten hours of fieldwork a week for one semester. With consent of the undergraduate studies research coordinator, may be repeated once for credit. Prerequisite: Upper-division standing and consent of the undergraduate studies research coordinator.
- 122. DemTex.** Student-facilitated research and discussion-based course, under the supervision of a faculty adviser. One lecture hour a week for one semester. Offered on the pass/fail basis only. With the consent of the research coordinator in the School of Undergraduate Studies, may be repeated for credit when the topics vary. May not be counted toward any degree. Prerequisite: Upper-division standing and consent of the research coordinator in the School of Undergraduate Studies.

3. School of Architecture

Frederick R. Steiner, PhD, *Dean*
 Kevin S. Alter, MArch, *Associate Dean, Graduate Programs*
 Kent Butler, PhD, *Associate Dean, Research and Operations*
 Nichole Wiedemann, MArch, *Associate Dean, Undergraduate Programs*
<http://soa.utexas.edu/>

GENERAL INFORMATION

The School of Architecture is a member of the Association of Collegiate Schools of Architecture and the Association of Collegiate Schools of Planning. The Bachelor of Architecture and Master of Architecture are accredited by the National Architectural Accrediting Board and satisfy the registration requirements of the Texas Board of Architectural Examiners. The Bachelor of Science in Interior Design satisfies the interior design registration requirements of the Texas Board of Architectural Examiners; it is accredited by the Council for Interior Design Accreditation and the National Association of Schools of Art and Design. The Master of Science in Community and Regional Planning is accredited by the American Planning Association.

PURPOSE

The School of Architecture seeks to assist those who wish to develop knowledge, sensitivity, and skill in design, planning, and construction, so that as architects, interior designers, and planners they may improve the human environment. The curriculum offers opportunities for a broad education in professional subjects and in the arts and the humanities. Through avenues that stress solving actual and theoretical problems, the school seeks to enhance the knowledge and skill necessary to link understanding to experience, theory to practice, and art to science in ways that respond to human needs, aspirations, and sensibilities. Through

its consortium of architects, interior designers, and planners, and educators and scholars in these fields, the school provides a service to society and to the architecture, interior design, and planning professions by advancing the state of the art in design and technology.

HISTORY

The University began offering professional degrees in architecture in 1910 within the Department of Engineering. The School of Architecture was established in 1948 as a division of the College of Engineering and became an autonomous school of the University in September 1951. Graduate study in architecture began at the University in 1912. More than five thousand undergraduate and graduate degrees in architecture and planning have been conferred.

Education in community and regional planning was first offered as an undergraduate study option in the School of Architecture from 1948 to 1957. The Master of Science in Community and Regional Planning was formally approved in October 1959; the Doctor of Philosophy, in April 1995.

Education in interior design was first offered in 1939 within the degree of Bachelor of Science in Home Economics. In 1992 the College of Natural Sciences created the Bachelor of Science in Interior Design degree program; in the fall of 1998 this program was revised and transferred to the School of Architecture. The first interior design degrees were conferred by the school in May 2001.

FACILITIES FOR STUDY AND RESEARCH

The School of Architecture is centrally located on campus in four adjacent buildings: the historically significant Battle Hall (1911); Sutton Hall (1918, renovated in 1982), designed by distinguished American architect Cass Gilbert; Goldsmith Hall (1933, expanded and renovated in 1988), designed by noted architect Paul Philippe Cret, one of the primary planners of the forty-acre campus; and the West Mall Office Building (1961).

The Architecture and Planning Library, a branch of the University Libraries, maintains more than 50,000 volumes, including bound periodicals; several thousand professional reports; all major architecture, interior design, and planning journals; and the Alexander Architectural Archive of more than 120,000 drawings and photographs. The Harry Ransom Humanities Research Center, one of the world's foremost institutions for literary and cultural research, houses a large collection of rare architecture books, including the classics of architectural literature. The Teresa Lozano Long Institute of Latin American Studies and the Benson Latin American Collection provide exceptional opportunities for the study of Latin American architecture.

The Visual Resources Collection (VRC) comprises more than 60,000 digital images and about 240,000 35 mm slides documenting the built environment. The VRC circulates analog photography equipment as well as slide projectors. For a nominal fee, students enrolled in the School of Architecture may join the Photo Union, a fully equipped black-and-white darkroom maintained by the VRC.

The University Co-op Materials Resource Center provides architecture and interior design students with state-of-the-art laboratories for research and experimentation with materials, lighting, and preservation technology.

The Center for American Architecture and Design, established in the School of Architecture in 1982, provides support and resources for the scholarly study of American architecture, particularly that of the Southwest. Through lectures, exhibitions, seminars, symposia, fellowship support, and the collection of research materials, the center encourages a community of architecture scholarship.

Computer-aided design and research opportunities are provided in the design studios and by the school's computer laboratory, which maintains desktop computers and terminals interfaced with the University's extensive academic computing facilities.

STUDY ABROAD

The School of Architecture offers several opportunities to study architecture, interior design, planning, and urban design in settings very different from those familiar to United States residents. Students may participate in these programs after completing the third year of their degree programs. The school offers a broad range of scholarships to help students take advantage of these programs.

Regular summer study abroad programs take place in Oxford and other locations within the United Kingdom. Recent programs have also been conducted in Bosnia, Turkey, Morocco, and India. Regular fall semester programs allow students to travel to Europe, Italy's Santa Chiara Study Center near Florence, or Japan; in the spring, students may study in Mexico.

More information on these programs is available in the undergraduate dean's office.

STUDENT ORGANIZATIONS

The Undergraduate Architecture Student Council represents the student body. All students are automatically members. The council's elected executive committee includes the school's representative to the American Institute of Architecture Students (AIAS) and the student representatives to the American Society of Interior Designers (ASID), the International Interior Design Association (IIDA), and the National Organization of Minority Architecture Students (NOMAS).

Tau Sigma Delta is the national honorary society for architecture students. Alpha Rho Chi is the national architecture fraternity for men and women.

HONORS

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for gradu-

ation with University Honors are given in *General Information*.

SCHOOL OF ARCHITECTURE RECOGNITION AWARDS

Award: Alpha Rho Chi Medal

Donor: Alpha Rho Chi, professional architectural fraternity

Eligibility: Graduating student who has shown an ability for leadership, has performed willing service to the school, and gives promise of professional merit through attitude and personality

Award: American Institute of Architects' Medal

Donor: American Institute of Architects

Eligibility: Graduating student, in recognition of scholastic achievement, character, and promise of professional ability

FINANCIAL ASSISTANCE AVAILABLE THROUGH THE SCHOOL

Scholarship funds established by individuals, foundations, and the University are available to current undergraduates in the School of Architecture. These include the Marvin E. and Anne Price Beck Endowed Scholarship; the Carl O. Bergquist Endowed Scholarship; the Hal Box Scholarship Fund; the John Buck Company and First Chicago Investment Advisors for Fund F Endowed Scholarship in Architecture; the John S. Chase Endowed Presidential Scholarship; the Fred Winfield Day Jr. Endowed Scholarship in Architecture; the Jorge Luis Divino Centennial Scholarship in Architecture; the William H. Emis III Traveling Scholarship in Architecture; the Ted Freedman Endowed Scholarship; the Lily Rush Walker and Coulter Hoppess Scholarship in Architecture; the Wolf E. Jessen Endowed Fund; the Henrietta Chamberlain King Endowed Scholarship; the Lake/Flato Endowed Scholarship; the Mike and Maxine Mebane Endowed Traveling Scholarship in Architecture; the Jack H. Morgan Scholarship; the Oglesby Prize Endowment; the Alma Piner Scholarship in Architecture; the Brandon Shaw Memorial Endowed Scholarship; the Debbie Ann Rock Scholarship in Interior Design; the School of Architecture Scholarship Awards; the Louis F. Southerland Endowed Scholarship; the Robert Leon White Memorial Fund—Architecture; the Roxanne Williamson Endowed Scholarship; and several scholarships provided by the American Institute of Architects, the American Architectural Foundation, the Texas Society of Architects, the Texas American Planning Association,

and the Texas Architectural Foundation. Additional information is available in the Office of the Dean.

Incoming students may wish to contact local chapters of the American Institute of Architects, the American Society of Interior Designers, the International Interior Design Association, and the University's Texas Exes, as well as other civic organizations, for information about locally sponsored scholarships. Students are also encouraged to contact the University's Office of Student Financial Services for information about other merit- and need-based scholarships.

ADMISSION AND REGISTRATION

ADMISSION

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

Students who are not admitted to the School of Architecture may not pursue any degree offered by the school. Information about admission is published by the school at <http://soa.utexas.edu/>.

FRESHMAN ADMISSION

Texas-resident high school students have priority over nonresidents in admission decisions. All applicants are considered on the basis of their SAT Reasoning Test or American College Testing Program score, their high school class rank, the required essays, and the information provided on the admission application. All applicants must fulfill the high school unit requirements given in *General Information*.

To be considered for admission to the School of Architecture, applicants should select the appropriate degree program on the ApplyTexas application (architecture, interior design, the architecture/architectural engineering dual degree program, the architecture/Plan II dual degree program, architectural studies, or architectural studies with an emphasis on architectural history). All application materials must be submitted to the Office of Admissions by the deadline to apply for admission to the University for the fall semester; this date is given in *General Information*. Applicants to the dual degree program offered with the Plan II Honors Program must submit an additional application; more information about Plan II is given on pages 343–346.

STUDENTS IN OTHER COLLEGES OF THE UNIVERSITY

Students currently or formerly enrolled in other University degree programs who wish to enroll in a degree program in the School of Architecture must submit a Change-of-Major Application to the undergraduate dean's office, School of Architecture, by March 1 to be considered for admission for the following fall semester. To be considered for change-of-major admission, the student must have completed at least twenty-four semester hours of University coursework, must attend one of the school's information sessions, and should have a University grade point average of at least 3.25. Frequently, a higher grade point average is required for admission, because the number of applicants exceeds the number of spaces available. Admission decisions are made after the end of the spring semester.

TRANSFER ADMISSION

Students applying to transfer from another university to the School of Architecture should select the appropriate degree program on the ApplyTexas application. All application materials must be submitted to the Office of Admissions by the deadline to apply for admission to the University for the fall semester; this date is given in *General Information*. To be considered for transfer admission to the School of Architecture, the applicant must have completed at least thirty semester hours of transferable college coursework and must submit a portfolio; information about the portfolio is given on the school's transfer admission Web site, <http://soa.utexas.edu/admissions/transferfaq/>. All admission decisions are made before the end of the spring semester; the Office of Admissions cannot consider spring coursework in progress.

Transfer admission to the School of Architecture is quite competitive. Applicants are strongly encouraged to indicate a second choice of major so that, if they are not admitted to the School of Architecture as transfer students, they will be eligible for change-of-major admission the following fall. Additional information is given in the section "Students in Other Colleges of the University," above.

TRANSFER CREDIT

Transfer students with design studio credit from another school must submit samples of their design work to the associate dean for undergraduate programs

before they may register for a design studio. On the basis of this work, the associate dean determines the level at which the student enters the design sequence and assigns credit toward the degree if appropriate. Transfer students must also meet all requirements prescribed for the degree, including those described in the sections "Registration for Advanced Design Courses" and "Third-Year Portfolio Requirement" on the following page. Additional information is available from the School of Architecture.

DURATION OF PROGRAMS

Bachelor of Architecture. This degree program is structured around a core of ten semesters of design coursework and normally requires five years of study. The dual degree program with architectural engineering normally requires six years; the dual degree program with the Plan II Honors Program normally requires five years, including three summer sessions. Only one studio may be taken at a time, and few are offered in the summer. In general, architectural design studios are open only to students accepted into an architecture degree program. To complete the Bachelor of Architecture degree, students without transfer credit in architectural design should plan to be in residence ten semesters from the time they are admitted and enrolled in Architecture 310K.

Bachelor of Science in Architectural Studies. This degree program normally requires four years of study. Since the program includes five semesters of architectural design coursework, students without transfer credit in architectural design should plan to spend at least five semesters in residence.

Bachelor of Science in Interior Design. This degree program normally requires four years of study. Since the program includes eight semesters of design coursework, students without transfer credit in interior design should plan to spend at least eight semesters in residence.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the

times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

Students should carefully verify that they have completed all course prerequisites, should consult the undergraduate dean's office, and should be sure to include in each semester's work the courses that are prerequisites for those to be taken in later semesters.

MINIMUM NUMBER OF HOURS IN THE LONG SESSION

Students must register each semester for at least twelve semester hours of coursework prescribed for the degree. Registration for fewer hours must be approved by the undergraduate dean's office.

REGISTRATION FOR ADVANCED DESIGN COURSES

To register for advanced design courses, a student seeking the Bachelor of Architecture degree must have completed all of the work prescribed for the preceding years, with the exception of electives, and must satisfy the third-year portfolio requirement.

THIRD-YEAR PORTFOLIO REQUIREMENT

All students, whether continuing in or transferring to the School of Architecture, must pass the third-year portfolio review. The portfolio should summarize the student's work completed in design and visual communication courses. Supplementary material that will provide useful information to the reviewing committee in evaluating the student's progress toward the degree may also be included. The portfolio is submitted by continuing students on the first class day of the second semester of the third year, and by transfer students before they register for any design studio beyond Architecture 310K. Guidelines for submission of the portfolio, including the submission deadline, are available from the undergraduate dean's office.

The reviewing committee, at its discretion, may require a student to take additional coursework before being permitted to register for advanced design courses or may require the student to undertake specific courses in the remaining years.

ADVISING

In the School of Architecture, the undergraduate dean's office, located in Goldsmith Hall 2.116, and the academic adviser's office, located in Goldsmith Hall 2.118, are responsible for providing information and advice to undergraduate students. An important aspect of the advising system is the third-year portfolio requirement described above. The student should also consult the sections "The Degree Audit" and "Sequence of Work" later in this chapter.

ACADEMIC POLICIES AND PROCEDURES

EQUIPMENT AND SUPPLIES

Students are required to furnish their own drawing equipment and supplies. All students are required to have their own computers by the time they begin Architecture 320K. More information is available at <http://www.soa.utexas.edu/it/scp/>. Instructors will provide information about necessary supplies at the beginning of each semester. The School of Architecture provides studio space for design and drawing courses, and certain technical and audiovisual equipment is available for loan to students for classroom use. Valid student identification is required. Students are liable for damage or loss of equipment on loan to them and for delay in its return.

OWNERSHIP OF STUDENT WORK

All student work is the property of the School of Architecture. Work not retained is usually returned to the student after it has been reviewed.

STANDARD OF WORK REQUIRED

Bachelor of Architecture. To progress in the BArch degree program and to qualify for graduation, a student must earn a grade of C or better in each of the following courses: (1) all design courses: Architecture 310K, 310L, 320K, 520L, 520M, 530T, 560R (three sections), 560T; (2) all construction courses: Architecture 415K, 415L, 435K, 435L, 335M; (3) all visual communication courses: Architecture 311K, 311L, 221K, 361T; (4) environmental controls courses: Architectural Interior Design 324K, Architecture 334L; and (5) the professional practice course, Architecture 362.

Bachelor of Science in Architectural Studies. To progress in the BSArchStds degree program and to qualify for graduation, a student must earn a grade of C or better in each of the following courses: (1) all design courses: Architecture 310K, 310L, 320K, 520L, 520M; (2) all construction courses: Architecture 415K, 415L, 435K; (3) all visual communication courses: Architecture 311K, 311L, 221K; and (4) the environmental controls course: Architectural Interior Design 324K.

Bachelor of Science in Interior Design. To progress in the BSID degree program and to qualify for graduation, a student must earn a grade of C or better in all architectural interior design and architecture courses.

EMPLOYED STUDENTS

Before registering, students should consult the undergraduate dean's office about their plans for employment in addition to their scholastic work. Students should keep the dean's office informed of subsequent changes in the number of hours required by their employment. If a student is employed by the University, the number of hours of work required by the student's employment must comply with the quantity of work rule given in *General Information*.

GRADUATION

All students must fulfill the general requirements for graduation given in chapter 1. Students in the School of Architecture must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. In the School of Architecture, thirty of these sixty hours must be in the major or in a field closely related to the major as approved by the dean.
2. A candidate for a degree must be registered at the University either in residence or in absentia the semester or summer session the degree is to be awarded and must file an application for the degree in the undergraduate dean's office. Students are encouraged to file the application at the beginning of the semester or summer session of graduation; they must file it by the deadline given in the official academic calendar.

THE DEGREE AUDIT

The undergraduate dean's office prepares a degree audit for each currently enrolled student each semester. The degree audit lists the courses the student has taken, the degree requirements he or she has fulfilled, and the requirements that remain to be met. The student may also use the University's interactive degree audit system, IDA, at any time. IDA is available at <http://registrar.utexas.edu/students/degrees/ida/>. It is the student's responsibility to know the requirements for the degree as stated in a catalog under which he or she is eligible to graduate and to register so as to fulfill those requirements.

DEGREES

DEGREES OFFERED

Five undergraduate degree programs are offered by the School of Architecture. Each degree program satisfies the University's basic education requirements.

Bachelor of Architecture. The Bachelor of Architecture, the culmination of a five-year program of study, is accredited by the National Architectural Accrediting Board as a first professional degree.

Bachelor of Architecture/Bachelor of Science in Architectural Engineering. This dual degree option, a six-year program of study, leads to the degrees of Bachelor of Architecture and Bachelor of Science in Architectural Engineering, accredited as first professional degrees in architecture and in engineering. Students in this program must fulfill admission and degree requirements of the School of Architecture and the Cockrell School of Engineering and must follow the procedures of both schools.

Bachelor of Architecture/Bachelor of Arts, Plan II. This dual degree option provides the opportunity for honors students to pursue a professional degree in architecture and the Bachelor of Arts, Plan II, simultaneously. Students in this program must fulfill admission and degree requirements of the School of Architecture and of the College of Liberal Arts and must follow the procedures of both divisions.

Bachelor of Science in Architectural Studies. The Bachelor of Science in Architectural Studies is the culmination of a four-year preprofessional program of

study. This degree program prepares students for several opportunities, including pursuit of a professional Master of Architecture degree. Students may choose to pursue this degree program with an emphasis on architectural history. More information is available from the undergraduate dean's office.

Bachelor of Science in Interior Design. The Bachelor of Science in Interior Design program is grounded in study of the history of art, architecture, and interiors. It is accredited by the Council for Interior Design Accreditation and the National Association of Schools of Art and Design. The program is designed to give students a sound theoretical base that allows them to integrate creative problem-solving skills with an understanding of the aesthetic, technological, and behavioral aspects of design.

SEQUENCE OF WORK

The student should complete the School of Architecture courses required for the degree in the order set forth in the plan for that degree, whether beginning work in the summer or in the fall. In arranging a program of work for any semester or summer session, the student should include any architecture or architectural interior design coursework recommended for the preceding semester or summer session that he or she did not complete.

It is entirely the student's responsibility to register for courses that will fulfill degree requirements, including the basic education requirements. Students are advised to seek assistance in curriculum planning from the undergraduate dean's office.

APPLICABILITY OF CERTAIN COURSES

CORRESPONDENCE AND EXTENSION COURSES

In very special circumstances, a student in residence may be allowed to take coursework by extension or correspondence. Credit that the student in residence earns by extension or correspondence will not be counted toward the degree unless it was approved in advance by the undergraduate dean's office. No more than 30 percent of the semester hours required for any degree may be taken by correspondence.

COURSES TAKEN ON THE PASS/FAIL BASIS

An undergraduate may count toward the degree up to fifteen hours of coursework in electives completed on the pass/fail basis. Credit earned by examination is not counted toward the fifteen hours that the student may take on this basis. If a student chooses to major in a subject in which he or she has taken a course pass/fail, the major department decides whether the course may be counted toward the student's major requirements. Complete rules on registration on the pass/fail basis are given in *General Information*.

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They may not be counted toward the number of hours required for a degree in the School of Architecture. However, they are counted among courses for which the student is enrolled, and the grades are included in the grade point average.

ROTC COURSES

No more than six semester hours of air force science, military science, or naval science coursework may be counted toward any degree in the School of Architecture. These courses may be used only as lower-division electives (in degree programs that have such electives) and only by students who complete the third and fourth years of the ROTC program.

ADMISSION DEFICIENCIES

Students admitted to the University with deficiencies in high school units must remove them as specified in *General Information*. Course credit used to remove deficiencies may not be counted toward the student's degree.

BACHELOR OF ARCHITECTURE

CURRICULUM

A total of at least 167 hours of coursework is required for the Bachelor of Architecture.

All students must complete the University's core curriculum, described in chapter 2, as well as the courses listed in the following table. In some cases, a course that is required for the BArch may also be counted toward the core curriculum; these courses are identified below.

COURSES	SEM HRS
Major Sequence Courses	
▶ <i>Design</i> : Architecture 310K, 310L, 320K, 520L, 520M, 530T, 560R (taken three times), 560T	104
▶ <i>Visual communication</i> : Architecture 311K, 311L, 221K, 361T	
▶ <i>Professional practice</i> : Architecture 362	
▶ <i>Site design</i> : Architecture 333	
▶ <i>Environmental controls</i> : Architectural Interior Design 324K, Architecture 334L	
▶ <i>Construction</i> : Architecture 415K, 415L, 435K, 435L, 335M	
▶ <i>History</i> : Architecture 308, ¹ 318K, 318L, 368R (taken three times)	
Community and Regional Planning 369K	3
Other Required Courses	
Mathematics 408C ²	4
Physics 302K, 302L, 102M, 102N ³	8
Upper-division humanities elective in literature, foreign language, philosophy, or another field approved by the undergraduate dean's office	3
Electives approved by the undergraduate dean's office	9
Open electives	9
Core Curriculum	
Additional coursework to satisfy the core curriculum	27
TOTAL 167	

Electives. Twenty-one semester hours of electives are required for the completion of the BArch degree program. These electives consist of three hours of upper-division coursework in humanities; nine approved elective hours, generally taken outside the School of Architecture; and nine semester hours of open electives that must be completed outside the School of Architecture.

Many courses that fulfill the elective requirement have prerequisite courses that are not part of the BArch degree program. Before planning to use a course as an elective, the student should be sure that he or she has fulfilled the prerequisite.

Writing requirement. In addition to core curriculum requirements Rhetoric and Writing 306 and English 316K, each student must complete two courses with a substantial writing component or a writing flag. One course must be upper-division. Courses that fulfill this requirement are identified in the *Course Schedule*. Courses used to fulfill the writing requirement may also be counted toward other requirements for the degree. The Bachelor of Architecture degree program includes two architecture courses that normally fulfill this requirement.

Professional residency program. A seven-month period of varied architectural experience with selected architectural firms is available to qualified second-semester fourth-year and first-semester fifth-year architecture students. The student must have completed at least one semester of advanced design before beginning the professional residency program and should have at least one semester of advanced design remaining toward a degree after completion of the residency program.

For information on requirements for participation in the residency program and on the courses for which participants register during the residency, consult the program's director or the undergraduate dean's office. Students must pay fees associated with the residency program.

A participant in the professional residency program may receive up to fifteen semester hours of credit.

1. Architecture 308 also meets the visual and performing arts requirement of the core curriculum.
 2. Mathematics 408C also meets the mathematics requirement of the core curriculum.
 3. The physics sequence also meets part I of the science and technology requirement of the core curriculum.

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS	COURSES	SEM HRS	COURSES	SEM HRS
FIRST YEAR		THIRD YEAR		FIFTH YEAR	
FALL		FALL		FALL	
ARC 310K, <i>Design I</i>	3	ARC 520M, <i>Design V</i>	5	ARC 560R, <i>Advanced Design</i>	5
ARC 311K, <i>Visual Communication I</i>	3	ARC 435K, <i>Construction III</i>	4	ARC 368R, <i>Topics in the History of Architecture</i>	3
ARC 308, <i>Architecture and Society</i>	3	ARI 324K, <i>Environmental Controls I</i>	3	Approved elective	3
M 408C, <i>Differential and Integral Calculus</i>	4	HIS 315K, <i>The United States, 1492–1865</i>	3	Open elective	3
RHE 306, <i>Rhetoric and Writing</i>	3	Social and behavioral sciences core course	3	Open elective	3
TOTAL 16		TOTAL 18		TOTAL 17	
SPRING		SPRING		SPRING	
ARC 310L, <i>Design II</i>	3	ARC 530T, <i>Design VI</i>	5	ARC 560R, <i>Advanced Design</i>	5
ARC 311L, <i>Visual Communication II</i>	3	ARC 334L, <i>Environmental Controls II</i>	3	ARC 362, <i>Professional Practice</i>	3
ARC 318K, <i>World Architecture: Origins to 1750</i>	3	ARC 435L, <i>Construction IV</i>	4	ARC 368R, <i>Topics in the History of Architecture</i>	3
PHY 302K, <i>General Physics—Technical Course: Mechanics, Heat, and Sound</i>	3	Approved elective	3	Approved elective	3
PHY 102M, <i>Laboratory for Physics 302K</i>	1	TOTAL 15		Open elective	3
UGS 302 or 303, <i>First-Year Signature Course</i>	3	FOURTH YEAR		TOTAL 17	
TOTAL 16		FALL			
SECOND YEAR		ARC 560R, <i>Advanced Design</i>		5	
FALL		GOV 310L, <i>American Government</i>		3	
ARC 320K, <i>Design III</i>	3	HIS 315L, <i>The United States since 1865</i>		3	
ARC 221K, <i>Visual Communication III</i>	2	Upper-division humanities elective		3	
ARC 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3	Science and technology, part II, core course		3	
ARC 415K, <i>Construction I</i>	4	TOTAL 17			
PHY 302L, <i>General Physics—Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3	SPRING			
PHY 102N, <i>Laboratory for Physics 302L</i>	1	ARC 560T, <i>Advanced Design</i>		5	
TOTAL 16		ARC 335M, <i>Construction V</i>		3	
SPRING		ARC 361T, <i>Technical Communication</i>		3	
ARC 520L, <i>Design IV</i>	5	CRP 369K, <i>Principles of Physical Planning</i>		3	
ARC 415L, <i>Construction II</i>	4	GOV 312L, <i>Issues and Policies in American Government</i>		3	
ARC 333, <i>Site Design</i>	3	TOTAL 17			
ARC 368R, <i>Topics in the History of Architecture</i>	3				
E 316K, <i>Masterworks of Literature</i>	3				
TOTAL 18					

BACHELOR OF ARCHITECTURE/ BACHELOR OF SCIENCE IN ARCHITECTURAL ENGINEERING DUAL DEGREE PROGRAM

Students may elect to enter a six-year dual degree program offered jointly by the School of Architecture and the Department of Civil, Architectural, and Environmental Engineering in the Cockrell School of Engineering. The dual degree program combines the areas of common interest in the two programs and allows the student to pursue the two degrees simultaneously.

For admission to the dual degree program, a student must meet the admission requirements of the School of Architecture given in this chapter and the requirements given on pages 161–162 for admission to a major sequence in the Cockrell School. Students are advised to contact both the School of Architecture and the Cockrell School for specific information about the dual degree program.

Students in the dual degree program complete the requirements of the Bachelor of Architecture and the Bachelor of Science in Architectural Engineering degrees. A description of the five-year Bachelor of Architecture program begins on page 32; a description of the Bachelor of Science in Architectural Engineering is given on pages 175–178.

The following outline of courses is the suggested method for completing the requirements for both degrees simultaneously. Dual degree students must also consult chapter 7 for additional requirements of the Bachelor of Science in Architectural Engineering degree. Dual degree students are responsible for fulfilling the requirements of both degrees.

A student who follows the suggested arrangement of courses below completes all requirements for both degrees at the end of the spring semester of the sixth year.

CURRICULUM

A total of at least 197 hours of coursework is required for this dual degree program.

All students must complete the University's core curriculum, described in chapter 2, as well as the courses listed in the following table. In some cases, a course that is required for the dual degree program may also be counted toward the core curriculum; these courses are identified below.

COURSES	SEM HRS
Architecture	77
▶ <i>Design</i> : Architecture 310K, 310L, 320K, 520L, 520M, 530T, 560R (taken twice), 560T	
▶ <i>Visual communication</i> : Architecture 311K, 311L, 221K, 361T	
▶ <i>Professional practice</i> : Architecture 362	
▶ <i>Site design</i> : Architecture 333	
▶ <i>Construction</i> : Architecture 335M	
▶ <i>History</i> : Architecture 308, ⁴ 318K, 318L, 368R (taken three times)	
Community and Regional Planning 369K	3
Architectural Engineering 102, 217, 323K, 335, 346N, 465, 366	19
Chemistry 301 ⁵	3
Civil Engineering 311K, 311S, 314K, 319F, 329, 331 or 335, 333T, 357	24
Engineering Mechanics 306, 319	6
Geological Sciences 303	3
Mathematics 408C, ⁶ 408D, 427K	12
Mechanical Engineering 320	3
Physics 303K, 303L, 103M, 103N ⁷	8
Approved mathematics or science elective	3
Approved technical electives	15
Additional coursework to satisfy the core curriculum	21
TOTAL	197

4. Architecture 308 also meets the visual and performing arts requirement of the core curriculum.
5. Chemistry 301 also meets part II of the science and technology requirement of the core curriculum.
6. Mathematics 408C also meets the mathematics requirement of the core curriculum.
7. The physics sequence also meets part I of the science and technology requirement of the core curriculum.

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS	COURSES	SEM HRS	COURSES	SEM HRS
FIRST YEAR		THIRD YEAR		FIFTH YEAR	
FALL		FALL		FALL	
ARC 310K, <i>Design I</i>	3	ARC 520M, <i>Design V</i>	5	ARC 560R, <i>Advanced Design</i>	5
ARC 311K, <i>Visual Communication I</i>	3	C E 311S, <i>Probability and Statistics for Civil Engineers</i>	3	C E 333T, <i>Engineering Communication</i>	3
ARC 308, <i>Architecture and Society</i>	3	C E 329, <i>Structural Analysis</i>	3	HIS 315K, <i>The United States, 1492–1865</i>	3
ARE 102, <i>Introduction to Architectural Engineering</i>	1	C E 314K, <i>Properties and Behavior of Engineering Materials</i>	3	Approved technical electives	6
M 408C, <i>Differential and Integral Calculus</i>	4	M E 320, <i>Applied Thermodynamics</i>	3	TOTAL 17	
UGS 302 or 303, <i>First-Year Signature Course</i>	3	TOTAL 17		SPRING	
TOTAL 17		SPRING		ARC 335M, <i>Construction V</i>	3
SPRING		ARC 530T, <i>Design VI</i>	5	ARE 366, <i>Contracts, Liability, and Ethics</i>	3
ARC 310L, <i>Design II</i>	3	ARE 217, <i>Computer-Aided Design and Graphics</i>	2	ARE 465, <i>Integrated Design Project</i>	4
ARC 311L, <i>Visual Communication II</i>	3	ARE 335, <i>Materials and Methods of Building Construction</i>	3	Approved technical electives	6
ARC 318K, <i>World Architecture: Origins to 1750</i>	3	ARE 346N, <i>Building Environmental Systems</i>	3	TOTAL 16	
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4	M 427K, <i>Advanced Calculus for Applications</i>	4	SIXTH YEAR	
PHY 303K, <i>Engineering Physics I</i>	3	TOTAL 17		FALL	
PHY 103M, <i>Laboratory for Physics 303K</i>	1	FOURTH YEAR		ARC 560T, <i>Advanced Design</i>	5
TOTAL 17		FALL		ARC 361T, <i>Technical Communication</i>	3
SECOND YEAR		ARC 368R, <i>Topics in the History of Architecture</i>	3	ARC 368R, <i>Topics in the History of Architecture</i>	3
FALL		C E 319F, <i>Elementary Mechanics of Fluids</i>	3	HIS 315L, <i>The United States since 1865</i>	3
ARC 320K, <i>Design III</i>	3	E 316K, <i>Masterworks of Literature</i>	3	GEO 303, <i>Introduction to Geology</i>	3
ARC 221K, <i>Visual Communication III</i>	2	Approved mathematics or science elective	3	TOTAL 17	
ARC 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3	Social and behavioral sciences core course	3	SPRING	
E M 306, <i>Statics</i>	3	TOTAL 15		ARC 560R, <i>Advanced Design</i>	5
PHY 303L, <i>Engineering Physics II</i>	3	SPRING		ARC 362, <i>Professional Practice</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1	ARE 323K, <i>Project Management and Economics</i>	3	ARC 368R, <i>Topics in the History of Architecture</i>	3
RHE 306, <i>Rhetoric and Writing</i>	3	C E 331, <i>Reinforced Concrete Design, or CE 335, Elements of Steel Design</i>	3	GOV 312L, <i>Issues and Policies in American Government</i>	3
TOTAL 18		C E 357, <i>Geotechnical Engineering</i>	3	TOTAL 14	
SPRING		CRP 369K, <i>Principles of Physical Planning</i>	3		
ARC 520L, <i>Design IV</i>	5	GOV 310L, <i>American Government</i>	3		
ARC 333, <i>Site Design</i>	3	TOTAL 15			
C E 311K, <i>Introduction to Computer Models</i>	3				
CH 301, <i>Principles of Chemistry I</i>	3				
E M 319, <i>Mechanics of Solids</i>	3				
TOTAL 17					

BACHELOR OF ARCHITECTURE/ BACHELOR OF ARTS, PLAN II, DUAL DEGREE PROGRAM

A limited number of students whose high school class standing and SAT Reasoning Test or ACT scores indicate strong academic potential and motivation may pursue the Bachelor of Architecture and the Bachelor of Arts, Plan II, simultaneously.

This dual degree option, offered jointly by the School of Architecture and the Plan II Honors Program of the College of Liberal Arts, gives students the flexibility they need to take challenging liberal arts courses while pursuing a professional degree in architecture. Admission to both the School of Architecture and the Plan II Honors Program is required.

Students interested in this program should consult pages 343–346 for a more detailed description of the Plan II program.

The following outline of courses is a suggested method to complete the requirements for both degrees simultaneously. Students should consult advisers and both this chapter and chapter 11 of this catalog to ensure that their degree programs fulfill all requirements of both degrees.

CURRICULUM

A total of at least 192 hours of coursework is required for this dual degree program.

All students must complete the University's core curriculum, described in chapter 2, as well as the courses listed in the following table. In some cases, a course that is required for the dual degree program may also be counted toward the core curriculum; these courses are identified below.

COURSES	SEM HRS
Architecture	104
▶ <i>Design</i> : Architecture 310K, 310L, 320K, 520L, 520M, 530T, 560R (taken three times), 560T	
▶ <i>Visual communication</i> : Architecture 311K, 311L, 221K, 361T	
▶ <i>Professional practice</i> : Architecture 362	
▶ <i>Site design</i> : Architecture 333	
▶ <i>Environmental controls</i> : Architectural Interior Design 324K, Architecture 334L	
▶ <i>Construction</i> : Architecture 415K, 415L, 435K, 435L, 335M	
▶ <i>History</i> : Architecture 308, ⁸ 318K, 318L, 368R (taken three times)	
Community and Regional Planning 369K	3
English 603 or Tutorial Course 603 ⁹	6
Foreign language 506, 507, 312K, and 312L, or an equivalent sequence	16
Mathematics 408C ¹⁰	4
Philosophy 610Q	6
Physics 302K, 302L, 102M, 102N (or 303K, 303L, 103M, 103N) ¹¹	8
Social Science 301 ¹²	3
Tutorial Course 302, 357 (taken twice), 359T ¹³	12
Approved upper-division humanities elective in literature, foreign language, philosophy, or another field approved by the undergraduate dean's office	3
Biology 301E ¹⁴	3
Natural science elective	3
Electives in the College of Liberal Arts prescribed by the Plan II Committee ¹⁵	9
Additional coursework to satisfy the core curriculum	12
TOTAL	192

8. Architecture 308 also meets the visual and performing arts requirement of the core curriculum.

9. This two-semester course also meets the English composition and humanities requirements of the core curriculum.

10. Mathematics 408C also meets the mathematics requirement of the core curriculum.

11. The physics sequence also meets part I of the science and technology requirement of the core curriculum.

12. Social Science 301 also meets the social and behavioral sciences requirement of the core curriculum.

13. Tutorial Course 302 also meets the first-year signature course requirement of the core curriculum.

14. Biology 301E also counts toward part II of the science and technology requirement of the core curriculum.

15. A student must complete at least 191 semester hours (24 hours beyond the total of 167 required for the Bachelor of Architecture degree) to earn both degrees. Those who fulfill the foreign language requirement by completing fewer than sixteen semester hours must take additional elective coursework to achieve the minimum required total.

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS	COURSES	SEM HRS	COURSES	SEM HRS
FIRST YEAR		SECOND YEAR		FOURTH YEAR	
FALL		FALL		FALL	
ARC 310K, <i>Design I</i>	3	ARC 320K, <i>Design III</i>	3	ARC 560R, <i>Advanced Design</i>	5
ARC 311K, <i>Visual Communication I</i>	3	ARC 221K, <i>Visual Communication III</i>	2	PHL 610QA, <i>Problems of Knowledge and Valuation</i>	3
ARC 308, <i>Architecture and Society</i>	3	ARC 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3	T C 357, <i>The Junior Seminar</i>	3
E 603A or T C 603A, <i>Composition and Reading in World Literature</i>	3	ARC 415K, <i>Construction I</i>	4	HIS 315L, <i>The United States since 1865</i>	3
T C 302, <i>First-Year Signature Course: Plan II</i>	3	HIS 315K, <i>The United States, 1492–1865</i>	3		
	TOTAL 15		TOTAL 15		TOTAL 14
SPRING		SPRING		SPRING	
ARC 310L, <i>Design II</i>	3	ARC 520L, <i>Design IV</i>	5	ARC 560T, <i>Advanced Design</i>	5
ARC 311L, <i>Visual Communication II</i>	3	ARC 368R, <i>Topics in the History of Architecture</i>	3	ARC 361T, <i>Technical Communication</i>	3
ARC 318K, <i>World Architecture: Origins to 1750</i>	3	ARC 415L, <i>Construction II</i>	4	PHL 610QB, <i>Problems of Knowledge and Valuation</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4	ARC 333, <i>Site Design</i>	3	T C 357, <i>The Junior Seminar</i>	3
E 603B or T C 603B, <i>Composition and Reading in World Literature</i>	3	Science course prescribed by the Plan II Committee	3	Elective prescribed by the Plan II Committee	3
	TOTAL 16		TOTAL 18		TOTAL 17
SUMMER		SUMMER		FIFTH YEAR	
PHY 302K, <i>General Physics—Technical Course: Mechanics, Heat, and Sound</i>	3	Foreign language 506 (or 406)	5	FALL	
PHY 102M, <i>Laboratory for Physics 302K</i>	1	Foreign language 507 (or 407)	5	ARC 560R, <i>Advanced Design</i>	5
PHY 302L, <i>General Physics—Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3		TOTAL 10	ARC 368R, <i>Topics in the History of Architecture</i>	3
PHY 102N, <i>Laboratory for Physics 302L</i>	1	THIRD YEAR		ARC 335M, <i>Construction V</i>	3
	TOTAL 8	FALL		T C 359T, <i>Essay Course</i>	3
		ARC 520M, <i>Design V</i>	5	Approved upper-division humanities elective	3
		ARC 435K, <i>Construction III</i>	4		TOTAL 17
		ARI 324K, <i>Environmental Controls I</i>	3	SPRING	
		S S 301, <i>Honors Social Science</i>	3	ARC 560R, <i>Advanced Design</i>	5
		Science course prescribed by the Plan II Committee	3	ARC 362, <i>Professional Practice</i>	3
			TOTAL 18	ARC 368R, <i>Topics in the History of Architecture</i>	3
		SPRING		CRP 369K, <i>Principles of Physical Planning</i>	3
		ARC 530T, <i>Design VI</i>	5	Elective prescribed by the Plan II Committee	3
		ARC 334L, <i>Environmental Controls II</i>	3		TOTAL 17
		ARC 435L, <i>Construction IV</i>	4		
		Elective prescribed by the Plan II Committee	3		
			TOTAL 15		
		SUMMER			
		GOV 310L, <i>American Government</i>	3		
		GOV 312L, <i>Issues and Policies in American Government</i>	3		
		Foreign language 312K	3		
		Foreign language 312L	3		
			TOTAL 12		

BACHELOR OF SCIENCE IN ARCHITECTURAL STUDIES

The four-year Bachelor of Science in Architectural Studies degree program combines architecture with arts and sciences. Students transferring from other disciplines may find that more of their coursework is applicable toward this degree than toward the Bachelor of Architecture.

Applicants for admission to this program must fulfill the requirements for admission to the School of Architecture given on page 27.

The Bachelor of Science in Architectural Studies alone does not fulfill the educational requirements for registration as an architect. Students interested in earning the Master of Architecture as a professional degree in addition to the Bachelor of Science in Architectural Studies, requiring a minimum of six years of study in total, should consult the undergraduate dean's office.

CURRICULUM

A total of at least 125 hours of coursework is required for the Bachelor of Science in Architectural Studies.

All students must complete the University's core curriculum, described in chapter 2, as well as the courses listed in the following table. In some cases, a course that is required for the BSArchStds may also be counted toward the core curriculum; these courses are identified below.

COURSES	SEM HRS
Architecture	60
▶ <i>Design</i> : Architecture 310K, 310L, 320K, 520L, 520M	
▶ <i>Visual communication</i> : Architecture 311K, 311L, 221K	
▶ <i>Design theory</i> : Architecture 350R	
▶ <i>Site design</i> : Architecture 333	
▶ <i>Environmental controls</i> : Architectural Interior Design 324K	
▶ <i>Construction</i> : Architecture 415K, 415L, 435K	
▶ <i>History</i> : Architecture 308, ¹⁶ 318K, 318L, 368R	
Mathematics 408C ¹⁷	4
Physics 302K, 302L, 102M, 102N (or 303K, 303L, 103M, 103N) ¹⁸	8
Upper-division humanities elective in literature, foreign language, philosophy, or another field approved by the undergraduate dean's office	3
Philosophy elective	3
Electives ¹⁹	20
Additional coursework to satisfy the core curriculum	27
TOTAL	125

16. Architecture 308 also meets the visual and performing arts requirement of the core curriculum.

17. Mathematics 408C also meets the mathematics requirement of the core curriculum.

18. The physics sequence also meets part I of the science and technology requirement of the core curriculum.

19. Foreign language courses that are used to remove an admission deficiency may not be used to fulfill this requirement and may not be counted toward the degree.

Electives. Twenty-six semester hours of electives are required for the completion of the Bachelor of Science in Architectural Studies degree program. These electives consist of three hours of upper-division coursework in humanities, three hours in philosophy, and twenty additional elective hours, generally completed outside the School of Architecture.

Writing requirement. In addition to core curriculum requirements Rhetoric and Writing 306 and English 316K, each student must complete two courses with a substantial writing component or a writing flag. One course must be upper-division. Courses that fulfill this requirement are identified in the *Course Schedule*. Courses used to fulfill the writing requirement may also be counted toward other requirements for the degree.

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS	COURSES	SEM HRS	COURSES	SEM HRS
FIRST YEAR		SECOND YEAR		THIRD YEAR	
FALL		FALL		FALL	
ARC 310K, <i>Design I</i>	3	ARC 320K, <i>Design III</i>	3	ARC 520M, <i>Design V</i>	5
ARC 311K, <i>Visual Communication I</i>	3	ARC 221K, <i>Visual Communication III</i>	2	ARC 435K, <i>Construction III</i>	4
ARC 308, <i>Architecture and Society</i>	3	ARC 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3	ARI 324K, <i>Environmental Controls I</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4	ARC 415K, <i>Construction I</i>	4	E 316K, <i>Masterworks of Literature</i>	3
RHE 306, <i>Rhetoric and Writing</i>	3	PHY 302L, <i>General Physics—Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3	HIS 315K, <i>The United States, 1492–1865</i>	3
	TOTAL 16				TOTAL 18
SPRING		SPRING		SPRING	
ARC 310L, <i>Design II</i>	3	PHY 102N, <i>Laboratory for Physics 302L</i>	1	ARC 350R, <i>Topics in Design Theory</i>	3
ARC 311L, <i>Visual Communication II</i>	3		TOTAL 16	Electives	12
ARC 318K, <i>World Architecture: Origins to 1750</i>	3				TOTAL 15
PHY 302K, <i>General Physics—Technical Course: Mechanics, Heat, and Sound</i>	3	ARC 520L, <i>Design IV</i>	5	FOURTH YEAR	
PHY 102M, <i>Laboratory for Physics 302K</i>	1	ARC 415L, <i>Construction II</i>	4	FALL	
UGS 302 or 303, <i>First-Year Signature Course</i>	3	ARC 368R, <i>Topics in the History of Architecture</i>	3	GOV 310L, <i>American Government</i>	3
	TOTAL 16	ARC 333, <i>Site Design</i>	3	Science and technology, part II, core course	3
			TOTAL 15	Philosophy elective	3
				Social and behavioral sciences core course	3
				HIS 315L, <i>The United States since 1865</i>	3
					TOTAL 15
				SPRING	
				GOV 312L, <i>Issues and Policies in American Government</i>	3
				Approved upper-division humanities elective	3
				Electives	8
					TOTAL 14

BACHELOR OF SCIENCE IN INTERIOR DESIGN

The first year of this degree program is designed to give the student conceptual knowledge and skills, especially in critical thinking. The second year is intended to lay a foundation of knowledge in design, history, structure, technology, and environmental controls, on which the student builds in the third year. The final year emphasizes synthesis, specialization, and the challenge of creating interiors that improve the quality of life.

CURRICULUM

A total of at least 126 hours of coursework is required for the Bachelor of Science in Interior Design.

All students must complete the University's core curriculum, described in chapter 2, as well as the courses listed in the following table. In some cases, a course that is required for the BSID may also be counted toward the core curriculum; these courses are identified below.

COURSES	SEM HRS
Architectural Interior Design, Architecture	78
▶ <i>Design</i> : Architectural Interior Design 310K, 310L, 320K, 520L, 530K, 530T, 560R (taken twice)	
▶ <i>Visual communication</i> : Architectural Interior Design 311K, 311L, 221K	
▶ <i>Design theory</i> : Architectural Interior Design 350R	
▶ <i>Interior building systems and construction</i> : Architecture 415K, Architectural Interior Design 434K	
▶ <i>Professional practice</i> : Architectural Interior Design 362	
▶ <i>History</i> : Architectural Interior Design 318K, 318M, 368R, Architecture 368R	
▶ <i>Environmental controls</i> : Architectural Interior Design 324K, Architecture 334L	
▶ <i>Human behavior</i> : Architectural Interior Design 338	
▶ <i>Professional internship</i> : Architectural Interior Design 130	
Mathematics 408C ²⁰	4
Physics 302K, 302L, 102M, 102N ²¹	8
Psychology 301 ²²	3
Architecture 318K, 318L ²³	6
Upper-division course in art history	3
Additional coursework to satisfy the core curriculum	24
	TOTAL 126

Writing requirement. In addition to core curriculum requirements Rhetoric and Writing 306 and English 316K, each student must complete two courses with a substantial writing component or a writing flag. One course must be upper-division. Courses that fulfill this requirement are identified in the *Course Schedule*. Courses used to fulfill the writing requirement may also be counted toward other requirements for the degree.

20. Mathematics 408C also meets the mathematics requirement of the core curriculum.

21. The physics sequence also meets part I of the science and technology requirement of the core curriculum.

22. Psychology 301 also meets the social and behavioral sciences requirement of the core curriculum.

23. Architecture 318K also meets the visual and performing arts requirement of the core curriculum.

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS	COURSES	SEM HRS	COURSES	SEM HRS
FIRST YEAR					
FALL					
ARI 310K, <i>Design I</i>	3	ARI 324K, <i>Environmental Controls I</i>	3	ARI 560R, <i>Advanced Interior Design</i>	5
ARI 311K, <i>Visual Communication I</i>	3	ARI 530K, <i>Design V—Interiors</i>	5	ARI 338, <i>Designing for Human Behavior</i>	3
ARI 318K, <i>Interiors and Society</i>	3	ARI 368R, <i>Interior Design History II</i>	3	ARI 350R, <i>Topics in Interior Design Theory</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4	HIS 315K, <i>The United States, 1492–1865</i>	3	GOV 310L, <i>American Government</i>	3
PHY 302K, <i>General Physics—Technical Course: Mechanics, Heat, and Sound</i>	3	PSY 301, <i>Introduction to Psychology</i>	3		
PHY 102M, <i>Laboratory for Physics 302K</i>	1				
	TOTAL 17		TOTAL 17		TOTAL 14
SPRING					
ARC 318K, <i>World Architecture: Origins to 1750</i>	3	ARC 334L, <i>Environmental Controls II</i>	3	ARI 560R, <i>Advanced Interior Design</i>	5
ARI 310L, <i>Design II</i>	3	ARI 530T, <i>Design VI—Interiors</i>	5	GOV 312L, <i>Issues and Policies in American Government</i>	3
ARI 311L, <i>Visual Communication II</i>	3	ARI 362, <i>Interior Design Practice</i>	3	HIS 315L, <i>The United States since 1865</i>	3
RHE 306, <i>Rhetoric and Writing</i>	3	E 316K, <i>Masterworks of Literature</i>	3	Science and technology, part II, core course	3
UGS 302 or 303, <i>First-Year Signature Course</i>	3	Upper-division art history elective	3		
	TOTAL 15		TOTAL 17		TOTAL 14
THIRD YEAR					
FALL					
SPRING					
SUMMER					
TOTAL 1					
FOURTH YEAR					
FALL					
SPRING					
TOTAL 14					
SECOND YEAR					
FALL					
ARC 415K, <i>Construction I</i>	4	ARC 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3	ARI 320K, <i>Design III—Interiors</i>	3
ARC 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3	ARI 221K, <i>Visual Communication III</i>	2	PHY 302L, <i>General Physics—Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3
ARI 320K, <i>Design III—Interiors</i>	3	PHY 102N, <i>Laboratory for Physics 302L</i>	1		
ARI 221K, <i>Visual Communication III</i>	2				
PHY 302L, <i>General Physics—Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3				
PHY 102N, <i>Laboratory for Physics 302L</i>	1				
	TOTAL 16				
SPRING					
ARC 368R, <i>Topics in the History of Architecture</i>	3	ARI 520L, <i>Design IV—Interiors</i>	5		
ARI 520L, <i>Design IV—Interiors</i>	5	ARI 318M, <i>Interior Design History</i>	3		
ARI 318M, <i>Interior Design History</i>	3	ARI 434K, <i>Construction II—Interior Materials and Assemblies</i>	4		
ARI 434K, <i>Construction II—Interior Materials and Assemblies</i>	4				
	TOTAL 15				

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog. For current information, students should consult the schedule posted in the School of Architecture.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ARCHITECTURAL INTERIOR DESIGN: ARI

LOWER-DIVISION COURSES

- 310K. Design I.** Restricted to students in the School of Architecture. Introduction to studio design, with an emphasis on foundations in form, space, scale, human aspects of design, movement, structure, and place-making. Nine hours of lecture and studio a week for one semester. Prerequisite: Concurrent enrollment in Architectural Interior Design 311K.
- 310L. Design II.** Restricted to students in the School of Architecture. Application of foundation elements, such as light, color, and texture. Introduction of concerns for program and activity accommodation within interior environments. Nine hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310K and 311K, or Architecture 310K and 311K, with a grade of at least C in each.
- 311K. Visual Communication I.** Restricted to students in the School of Architecture. Introduction to freehand drawing and the fundamentals of two- and three-dimensional visual design. Includes exercises in color theory and application, formal and spatial studies, life drawing and building sketching, and the principles of linear perspective. Employs a variety of media. Six hours of lecture and studio a week for one semester. Prerequisite: Concurrent enrollment in Architectural Interior Design 310K.
- 311L. Visual Communication II.** Restricted to students in the School of Architecture. Study and application of drawing and other communication skills for designers. Six hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310K and 311K, or Architecture 310K and 311K, with a grade of at least C in each.
- 318K. Interiors and Society.** Concepts, principles, and elements of interior design, presented in artistic, philosophical, and professional contexts. Includes a basic historical overview of the development of interior design. Three lecture hours a week for one semester. Prerequisite: For students in the School of Architecture, none; for others, consent of instructor.
- 318M. Interior Design History.** Survey of interior design from antiquity through the eighteenth century, including theoretical, social, technical, and environmental forces. Three lecture hours a week for one semester. Prerequisite: Architectural Interior Design 318K with a grade of at least C.

UPPER-DIVISION COURSES

- 320K. Design III—Interiors.** Restricted to students in the School of Architecture. Focus on the physical and psychological needs of the inhabitants of interior space. Emphasis on conceptual process and diagrammatic techniques. Projects deal with real building situations and introduce implications of fenestration, structure, and materials. Nine hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310L and 311L, or Architecture 310L and 311L, with a grade of at least C in each.
- 520L. Design IV—Interiors.** Restricted to students in the School of Architecture. Explores linkages between multiple interior spaces and the study of spatial thresholds. Investigates individual spaces in relation to the body and the surrounding environment, utilizing a clearly defined program. Fifteen hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 320K, Architecture 415K, and Architectural Interior Design 221K or Architecture 221K, with a grade of at least C in each.
- 221K. Visual Communication III.** Restricted to students in the School of Architecture. Introduction to digital tools for communicating design, with an emphasis on integrating digital image, CAD, and 3-D software processes with hand drawing and modeling techniques. Topics include manipulation of digital images, combination of text and image, rendered perspectives, measured drawings, and an introduction to 3-D modeling. Use of advanced visual language. Some projects are based on work done in the student's design studios. Six hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310L and 311L (or 211L), or Architecture 310L and 311L, with a grade of at least C in each.
- 324K. Environmental Controls I.** Restricted to students in the School of Architecture. A survey of acoustics, color, light, illumination, and electrical and information systems in architectural interiors. Includes techniques of documentation. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Architectural Interior Design 520L or Architecture 520L with a grade of at least C.

- 130. Interior Design Internship.** Practical application of design procedures in a professional design office. At least 250 hours of work in one semester. Prerequisite: Architectural Interior Design 530T.
- 530K. Design V—Interiors.** Examination of the elements of interior space and scale, including specific human factors. Particular emphasis on the design, documentation, production, and placement of objects in interiors. Fifteen hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 520L (or 320L and 221L) and 434K with a grade of at least C in each.
- 530T. Design VI—Interiors.** Capstone studio with projects that are specific design situations from current markets. Application of code issues, regulatory restraints, fire safety, and regulations for accessibility in interiors. Fifteen hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 324K and 530K with a grade of at least C in each.
- 434K. Construction II—Interior Materials and Assemblies.** Restricted to students in the School of Architecture. Core concepts in interior materials, assemblies, and systems. Includes material properties, environmental and sustainable issues, attachment, detailing, and product specifications. Projects encourage manipulation and assembly of various material systems. Case studies using material samples, and field trips to sites of fabrication. Six hours of lecture and laboratory a week for one semester. Prerequisite: Architecture 415K with a grade of at least C.
- 338. Designing for Human Behavior.** Issues of mood, privacy, perception, proxemics, and preferences applied to the design of interiors. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 350R. Topics in Interior Design Theory.** Seminar in a variety of topics. Designed to broaden the student's knowledge of interior design and to encourage critical and theoretical thinking in the discipline. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- 560R. Advanced Interior Design.** Synthesis of components covered in other interior design courses, such as human aspects, place-making, the interior envelope, transitional spaces, and conceptual processes. These components form a basis for addressing specific topics related to interiors. Fifteen hours of lecture and studio a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Architectural Interior Design 530T with a grade of at least C and satisfactory completion of a third-year portfolio review.
- 362. Interior Design Practice.** Restricted to students in the School of Architecture. Business procedures, professional practice, design project control and management, and professional ethics. Documents procedures for interior design. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 368R. Interior Design History II.** Study of function and aesthetics, and decoration and use, emphasizing interiors from the nineteenth century to the present. Three lecture hours a week for one semester. Prerequisite: Architectural Interior Design 318M with a grade of at least C.
- 279, 379. Interior Design Research.** Investigation of problems selected by the student with approval of the supervising instructor. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Upper-division standing and consent of instructor and the dean.

ARCHITECTURE: ARC

LOWER-DIVISION COURSES

- 301D. Connecting Research Experience.** Restricted to freshmen and sophomores. Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Admission to the Connexus Bridging Disciplines Program.
- 001F. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various School of Architecture disciplines. One lecture hour a week for one semester.
- 308. Architecture and Society.** Introduction to the social contexts, potential, and consequences of architecture and interior design. Three lecture hours and one laboratory hour a week for one semester.
- 310K. Design I.** Restricted to students in the School of Architecture. Introduction to forms and methods of architectural design. Taught in a studio format by faculty members under the direction of a faculty coordinator. Nine hours of lecture and studio a week for one semester. Prerequisite: Concurrent enrollment in Architecture 311K.
- 310L. Design II.** Restricted to students in the School of Architecture. Introduction to forms and methods of architectural design. Taught in a studio format by faculty members under the direction of a faculty coordinator. Nine hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310K and 311K, or Architecture 310K and 311K, with a grade of at least C in each.
- 311K. Visual Communication I.** Restricted to students in the School of Architecture. Study and application of drawing and other communication skills for architects. Six hours of lecture and studio a week for one semester. Prerequisite: Concurrent enrollment in Architecture 310K.
- 311L. Visual Communication II.** Restricted to students in the School of Architecture. Study and application of drawing and other communication skills for designers. Six hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310K and 311K, or Architecture 310K and 311K, with a grade of at least C in each.
- 415K. Construction I.** Restricted to students in the School of Architecture. Introduction to building construction, materials, and structures. Three lecture hours and three laboratory hours a week for one semester.

- 415L. Construction II.** Restricted to students in the School of Architecture. Analysis of building assemblies, envelope design, and structures. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Architecture 415K with a grade of at least C; Mathematics 408C, or 408K and 408L; and Physics 302K and 102M, or 303K and 103M.
- 318K. (TCCN: ARCH 1301).** World Architecture: Origins to 1750. Comparative study of the architecture of the ancient world, including Asia, Africa, the Americas, and Europe. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Architecture 308 with a grade of at least C.
- 318L (TCCN: ARCH 1302).** World Architecture: The Industrial Revolution to the Present. Three lecture hours a week for one semester. Prerequisite: Architecture 318K with a grade of at least C.

UPPER-DIVISION COURSES

- 320C. Connecting Research Experience.** Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Upper-division standing and admission to the Connexus Bridging Disciplines Program.
- 320K. Design III.** Restricted to students in the School of Architecture. Intermediate-level studio addressing spatial, tectonic, environmental, social, and theoretical issues in architectural design. Taught in a studio format by faculty members under the direction of a faculty coordinator. Nine hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310L and 311L, or Architecture 310L and 311L, with a grade of at least C in each.
- 520L. Design IV.** Restricted to students in the School of Architecture. Intermediate-level studio addressing urban design and building design. Taught in a studio format by faculty members under the direction of a faculty coordinator. Fifteen studio hours a week for one semester. Prerequisite: Architecture 415K, 320K, and Architectural Interior Design 221K or Architecture 221K, with a grade of at least C in each.
- 520M. Design V.** Restricted to students in the School of Architecture. Intermediate-level studio with an emphasis on theory and research. Taught in a studio format by faculty members under the direction of a faculty coordinator. Fifteen studio hours a week for one semester. Prerequisite: Architecture 415L and 520L with a grade of at least C in each.
- 221K. Visual Communication III.** Restricted to students in the School of Architecture. Introduction to digital tools for communicating design, with an emphasis on integrating digital image, CAD, and 3-D software processes with hand drawing and modeling techniques. Topics include manipulation of digital images, combination of text and image, rendered perspectives, measured drawings, and an introduction to 3-D modeling. Use of advanced visual language. Some projects are based on work done in the student's design studios. Six hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310L and 311L, or Architecture 310L and 311L, with a grade of at least C in each.
- 128C, 228C, 328C. Advanced Connexus Forum Seminar Series.** Discussion of contemporary issues related to the topics of a Bridging Disciplines Program, with an emphasis on multidisciplinary perspectives, research, and critical discourse. For 128C, two lecture hours a week for eight weeks; for 228C, two lecture hours a week for one semester; for 328C, three lecture hours or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- 530T. Design VI.** Restricted to students in the School of Architecture. Intermediate-level studio addressing the requirements of sound buildings—their programmatic, spatial, and tectonic resolution and their relationships to the physical and social context of the site. Taught in a studio format by faculty members under the direction of a faculty coordinator. Fifteen studio hours a week for one semester. Prerequisite: Architectural Interior Design 324K, and Architecture 520M and 435K, with a grade of at least C in each.
- 333. Site Design.** Restricted to students in the School of Architecture. History, theory, and technique of landscape design, with emphasis on the relationship of a building to its landscape. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 334L. Environmental Controls II.** Restricted to students in the School of Architecture. A survey of heating, ventilating, air conditioning, vertical transportation, and wiring and plumbing systems in buildings, including techniques of documentation. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Architectural Interior Design 324K with a grade of at least C.
- 435K. Construction III.** Restricted to students in the School of Architecture. Theories of building construction and materials; structural component analysis and design. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Architecture 415L with a grade of at least C, and Physics 302L and 102N.
- 435L. Construction IV.** Restricted to students in the School of Architecture. Theories of building behavior and materials; structural system analysis and design. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Architecture 435K with a grade of at least C.

- 335M. Construction V.** Restricted to students in the School of Architecture. Advanced analysis of building envelope, assemblies, detailing, and specifications. Three lecture hours a week for one semester. Prerequisite: Architecture 435L with a grade of at least C.
- 350R. Topics in Design Theory.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: The Modern American City.** Same as Geography 337 and Urban Studies 352 (Topic 1: *The Modern American City*). Issues facing residents of United States cities, such as transportation and housing, poverty and crime, metropolitan finance, environmental and architectural design; historical/comparative urban evolution. Prerequisite: Upper-division standing.
- Topic 2: Housing America.** Same as Urban Studies 352 (Topic 2: *Housing America*).
- Topic 3: Urban Design Practice.** Same as Urban Studies 352 (Topic 3: *Urban Design Practice*).
- Topic 4: Economy/Value/Quality of Life.** Same as Urban Studies 352 (Topic 4: *Economy/Value/Quality of Life*).
- 351R. Visual Communication.** Advanced problems for the refinement of visual communication skills and architectural presentation methods, including drawing, photography, and computer-aided graphics. Three lecture hours or six studio hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Architecture 520L.
- Topic 1: Computer Applications in Design.** Six studio hours a week for one semester.
- Topic 2: Introduction to Computer Applications.** Six studio hours a week for one semester.
- Topic 4: Composition, Presentation, and Portfolio.** Three lecture hours a week for one semester.
- Topic 5: Descriptive Geometry.** Three lecture hours a week for one semester.
- Topic 6: Drawing Clinic.** Three lecture hours a week for one semester.
- Topic 7: Introduction to Computer Imaging.** Three lecture hours a week for one semester.
- Topic 8: Seeing Things: General Drawing.** Three lecture hours a week for one semester.
- Topic 9: Solid Geometry Drawing.** Three lecture hours a week for one semester.
- Topic 10: Visual Communication Exercises.** Three lecture hours a week for one semester.
- Topic 11: Wood Design.** Three lecture hours a week for one semester.
- 560R. Advanced Design.** Restricted to students in the School of Architecture. Advanced problems in architectural design. Fifteen hours of lecture and studio a week for one semester. May be repeated for credit when the topics and instructors vary. Prerequisite: Architecture 530T with a grade of at least C and satisfactory completion of third-year portfolio review.
- 560T, 660T. Advanced Design.** Restricted to students in the School of Architecture. Comprehensive studio to develop the student's ability to combine the elements that create a thorough building design. For 560T, fifteen studio hours a week for one semester; for 660T, eighteen studio hours a week for one semester. Prerequisite: Architecture 560R with a grade of at least C.
- 361T. Technical Communication.** Restricted to students in the School of Architecture. Studio to produce construction documents for buildings designed in Architecture 560T. Six studio hours a week for one semester. Prerequisite: Architecture 560R with a grade of at least C.
- 362. Professional Practice.** Restricted to students in the School of Architecture. Ethical, legal, and administrative responsibilities of the architect; organizations, processes, and roles in architecture. Three lecture hours a week for one semester. Prerequisite: Architecture 560R with a grade of at least C.
- 368R. Topics in the History of Architecture.** Restricted to students in the School of Architecture. Seminars and lecture/seminars on advanced topics in the history of architecture. Topics address medieval, Renaissance, Latin American, Asian, and nineteenth- and twentieth-century history of architecture, and historiography of architecture. Three lecture/seminar hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Architecture 318L.
- 279, 379, 479, 579. Architectural Research.** Investigation of problems selected by the student with approval of the supervising instructor. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. A grade of at least C is required for degree credit.

COMMUNITY AND REGIONAL PLANNING: CRP

UPPER-DIVISION COURSE

- 369K. Principles of Physical Planning.** Introductory course in the physical dimension of urban planning. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or six semester hours of upper-division coursework.

4. Red McCombs School of Business

Thomas W. Gilligan, PhD, *Dean*
 Janet M. Dukerich, PhD, *Senior Associate Dean, Academic Affairs*
 Paula C. Murray, JD, *Associate Dean, Undergraduate Program*
 Arthur T. Allert, BA, BSEd, *Assistant Dean, Undergraduate Program*
 Lise G. Burson, BA, *Assistant Dean, Undergraduate Program*
<http://www.mcombs.utexas.edu/>

GENERAL INFORMATION

OBJECTIVES

The undergraduate program of the Red McCombs School of Business seeks to transform the lives of its students through a well-rounded professional education. The challenging curriculum is designed to provide a balanced perspective of business disciplines and a foundation for the lifelong development of an appreciation of the social, technological, and global economic forces shaping the future; the ability to recognize and promote ethical behavior; interpersonal and leadership skills; and the quantitative and analytical skills necessary for professional progress and advanced study.

HISTORY AND FACILITIES

The School of Business Administration was created in 1922, the outgrowth of the work in business administration first offered in the College of Arts and Sciences in the fall of 1912. In 1945, the school was reorganized as a college; in 2000, the college was renamed in honor of University alumnus and benefactor Red McCombs. The degree of Bachelor of Business Administration was first offered in 1916–1917. The Bureau of Business Research, organized in 1926 as one of the Extramural Divisions of the University, became the research division of the school in September, 1945. In addition to the Bureau of Business Research, the school includes the Departments of Accounting; Finance; Information, Risk, and Operations Management; Management; and Marketing. Coursework in business may lead to the degree of Bachelor of Busi-

ness Administration and to several advanced degrees, described in the *Graduate Catalog*.

The McCombs School is housed in the George Kozmetsky Center for Business Education. This three-building complex includes modern classrooms and offices, lecture rooms with sophisticated multimedia equipment, and conference and study rooms, as well as lounges for informal student and teacher interaction. Computer and computer-access facilities are also available to students, faculty members, and staff members.

FINANCIAL ASSISTANCE AVAILABLE THROUGH THE SCHOOL

Students who are enrolled in the McCombs School of Business are eligible for scholarships and awards funded by industry, foundations, and individuals. Some of these awards are available school-wide, while others are restricted to students in one department. Since funds are limited, students selected to receive an award must demonstrate outstanding academic aptitude and a firm commitment to a business education.

Most scholarships for continuing students are reserved for students who have declared a business major. Generally, one hundred to two hundred school scholarships are awarded annually, in amounts of \$500 to \$2,500; some are renewable. Criteria for awarding scholarships vary to meet the wishes of the donors but often include financial need, academic performance, major area of study, and hometown. Descriptions of school scholarships and applications for them are available on the Undergraduate Program Office Web site in February of each year. The deadline for submission is

the end of February for scholarships for the following academic year. Recipients are selected by the Undergraduate Program Office of the school and are usually notified during the summer.

Departmental scholarships are generally reserved for juniors and seniors majoring in a program of the department. Because departmental scholarships are normally funded by annual contributions, the number of scholarships and the amounts awarded vary among departments and over time. Criteria for departmental awards are specified by the donors and include the same kinds of characteristics as those established for school-wide awards; deadlines and other elements of the selection process also vary among departments. Interested students should contact the major department for further information.

STUDENT SERVICES AND ACADEMIC ADVISING

The Undergraduate Program Office provides administrative support and student services for the school. Student services include maintenance of student academic records, academic counseling by appointment, development of official degree audits for students, and graduation certification.

In addition, every undergraduate student enrolled in the McCombs School of Business is assigned to a professional academic adviser. Academic advisers in the Undergraduate Program Office are available to assist all students with questions about scholastic progress, degree requirements, rules and regulations, and other available campus services such as career and personal counseling. Faculty advisers are also available in each department to help students explore their educational and career goals.

Students who are advised must still be familiar with the information given in the section called “Student Responsibility” on page 11 of this catalog.

SELF-ADVISING

Although all students are encouraged to meet regularly with their assigned advisers, those who have been enrolled in the McCombs School of Business for at least one semester are permitted to self-advise and therefore to register without consulting an academic adviser. To be eligible to self-advise, the student must have a University grade point average of at least 2.00. Like all other students, those who self-advise are responsible for knowing the requirements of the degree program they have chosen, for enrolling in courses appropriate

to that degree program, for meeting the prerequisites of the courses selected, and for taking courses in the proper sequence to ensure orderly and timely progress toward the degree.

BBA CAREER SERVICES

BBA Career Services offers job search assistance to business students. The purpose of the office is to help students determine their career goals, develop a plan for achieving these goals, and select and obtain employment commensurate with their goals, interests, and training. To help students prepare for their career search, the office presents workshops on résumé writing, interviewing, conducting a job search, evaluating offers, and other career interest areas.

In addition to the career-related workshops, the BBA Career Advising team also teaches the required courses Business Administration 101S and 101T to freshmen and transfer students. The purpose of these courses is to assist business students with planning, implementing, and evaluating their careers. These courses are designed to provide students with the foundations for executing a successful job search and focus on career management as a lifelong process. After completing these courses, students can implement job search strategies and interviewing techniques in pursuing internship and full-time employment opportunities.

Most students obtain their internship, which is a required part of the undergraduate business curriculum, at the end of their junior year. However, BBA Career Services encourages freshmen and sophomores to attend its recruiting activities and events, which can help them obtain various internships prior to the required internship. These experiences can help students develop their résumés and job search skills.

The office maintains a career resource library of company literature, employment information, and general business publications for students’ use. About fourteen thousand individual interviews for internships and full-time opportunities are arranged annually with employers in business, industry, government, and not-for-profit organizations. Several hundred firms conduct on-campus interviews at the McCombs School each year.

To assist employers, the office provides résumé searches among graduating seniors seeking full-time positions and among juniors seeking internships; these are sent to organizations nationwide that request them. The office also coordinates about three hundred receptions and information sessions each year.

Another resource for employers, students, and alumni

is the online *McCombs Job Board*. The *Job Board* helps recruiters reach business alumni and current students. It complements the on-campus recruiting program by allowing companies to recruit candidates for a wide variety of roles in their organizations throughout the calendar year.

More information about BBA Career Services is provided by the McCombs School at <http://www.mcombs.utexas.edu/career/>.

As a complement to the assistance available from the school, the Sanger Learning and Career Center provides comprehensive career services to all University students. The center offers professional assistance to students in choosing or changing their majors or careers, seeking an internship, and planning for the job search or for graduate study.

The University makes no promise to secure employment for each graduate, but rather provides the tools and resources to ensure that students have access to employment opportunities.

STUDENT ORGANIZATIONS

Student organizations play a vital role in the educational experience offered by the University. Students who become involved in organizations gain experience in leadership, teamwork, networking, time management, and other practical areas. This experience, when combined with the theoretical knowledge gained in the classroom, helps students develop a well-rounded set of skills for use academically, professionally, and personally.

The Undergraduate Business Council (UBC) is the governing student body in the school. It is made up of representatives from each McCombs affiliated student organization, an executive board, representatives elected by the student body, and members appointed by the executive board. The UBC acts as a representative of all undergraduate business students and sponsors such programs as Family Day, the VIP Lecture Series, and the Faculty Honor Roll.

Business student organizations sponsor professional activities such as guest lectures, field trips, and faculty chats; many offer social activities as well. The McCombs affiliated student organizations are American Marketing Association, Asian Business Students Association, International Association of Students in Economics and Commerce (AIESEC), Association of Latino Professionals in Finance and Accounting, Alpha Kappa Psi, BBA Energy Finance, Beta Alpha Psi, Black

Business Student Association, Business Healthcare Association, Business International Student Association, Business Transfer Student Association, Delta Sigma Pi, Diversity and Inclusion Student Council, Engineering Route to Business Leadership Council, Freshmen Business Association, Global Business Brigades, Global Investment Group, Honors Business Association, Hispanic Business Students Association, Jewish Organization at the Business School, Management Information Systems Association, National Association of Black Accountants, Net Impact, Phi Beta Chi, Phi Chi Theta, Student Consulting Initiative, Return on Investment, Texas Analyst Association, Supply Chain Management Student Organization, Tech Connects, Undergraduate Real Estate Society, University Accounting Association, University Finance Association, and Women in Business Association.

LEADERSHIP DEVELOPMENT PROGRAM

The Leadership Development Program (LDP) gives students access to unique leadership development programs and activities. All business majors who are not in the Business Honors Program and are freshmen, sophomores, or transfer students may apply. The LDP requires a four-year commitment from freshmen and a three-year commitment from sophomores and transfer students. The primary goal of the LDP is to enhance student learning and development as it relates to self-knowledge and leadership competence, and to expand the student's leadership portfolio during his or her time at the McCombs School of Business.

Admission to the LDP is limited to a small number of students who are chosen on a competitive basis each year. More information and an online application form are available at <http://www.mcombs.utexas.edu/bba/leadership-program/>.

BBA INTERNATIONAL PROGRAMS

The BBA International Programs office offers McCombs School of Business students the opportunity to study abroad in exchange programs at twenty-seven business schools in twenty-two countries. The exchange programs enable students to take classes that count toward their University degree requirements while gaining valuable intercultural experiences. More information is available at <http://www.mcombs.utexas.edu/udean/ip/>.

ADMISSION AND REGISTRATION

REQUIREMENTS FOR ADMISSION TO THE MCCOMBS SCHOOL OF BUSINESS

Admission and readmission of undergraduate students to the University is the responsibility of the University director of admissions. Information about admission to the University is given in *General Information*.

Each year there are more qualified applicants to the McCombs School than can adequately be instructed by the faculty or accommodated within existing facilities. To provide students with the best educational experience possible, the school must limit undergraduate admission. Therefore, admission to the school is extremely competitive and admission requirements are more stringent than those of the University. As a result, a student may be admitted to the University but denied admission to the school. The student must be admitted to the school to pursue a degree program described in this chapter.

Admission to the school is granted for the fall semester only. Admitted students are expected to attend Orientation the summer before they enter the school.

FRESHMAN ADMISSION REQUIREMENTS FOR TEXAS RESIDENTS

To be considered for admission to the school, Texas-resident high school students must be granted regular admission to the University. However, because enrollment is limited by the availability of instructional resources, admission requirements for business degree programs are more restrictive than those of the University. High school rank, SAT Reasoning Test or American College Testing Program (ACT) scores, extracurricular activities, and essays are among the factors used in making admission decisions. A student who is admitted to the University but denied admission to the school may seek admission to another academic program at the University.

FRESHMAN ADMISSION REQUIREMENTS FOR NONRESIDENTS

Because of enrollment restrictions dictated by the availability of faculty and facilities in the school and limitations on nonresident enrollment imposed by the Board of Regents, nonresident applicants may find the admission process extremely competitive.

APPLICATION PROCEDURES FOR FRESHMAN ADMISSION

Students may apply for admission through the Office of Admissions Web site, <http://bealonghorn.utexas.edu>. To be considered for admission to the McCombs School of Business, the student should specify business as his or her intended major. All application materials must be submitted to the Office of Admissions by the deadline to apply for admission to the University for the fall semester; this date is given in *General Information*.

STUDENTS IN OTHER DIVISIONS OF THE UNIVERSITY

Students enrolled in other degree programs at the University who wish to enter a degree program described in this chapter must submit an application for a change of major to the Undergraduate Program Office by the end of May to be considered for admission in the following fall semester. The following minimum requirements for consideration are in addition to the requirements to transfer from one division to another that are given in *General Information*.

1. Completion of twenty-four semester hours of coursework in residence on the letter-grade basis by the end of the preceding spring semester.
2. Completion of Mathematics 408K and 408L, or Mathematics 408C and 408D, or the equivalent.
3. Completion of Economics 304K and 304L.
4. Completion of the foreign language proficiency requirement of two years of a single foreign language in high school or one year of a single foreign language in college.

Admission is granted on a space-available basis and may not be possible if instructional resources are not compatible with enrollment demands. A student with a grade point average of less than 3.30 is unlikely to be admitted to the school.

TRANSFER ADMISSION

A student seeking to transfer to the McCombs School of Business from another university should list business as his or her intended major on the admission application. Because students are not admitted to the school for the spring or summer, application materials must be submitted to the Office of Admissions by the appropriate deadline for the student to be considered for admission in the following fall semester. The fol-

lowing minimum requirements for consideration are in addition to the requirements for transfer admission that are given in *General Information*.

1. Completion of Mathematics 408K and 408L, or Mathematics 408C and 408D, or the equivalent.
2. Completion of Economics 304K and 304L.
3. Completion of the foreign language proficiency requirement of two years of a single foreign language in high school or one year of a single foreign language in college.
4. A grade point average of at least 3.00 on transferable college credit.

Because of enrollment restrictions dictated by the availability of faculty and facilities in the school and limitations on nonresident enrollment imposed by the Board of Regents, an applicant may be denied admission to the McCombs School even though he or she meets University transfer requirements. Such an applicant may seek admission to another academic program at the University. A student with a grade point average of less than 3.50 is unlikely to be admitted to the McCombs School.

CLAIMING A MAJOR

Each student is admitted to the McCombs School as an unspecified major. The student may claim a specific business major when he or she has completed thirty semester hours of coursework, including Business Administration 101H, 101S, or 101T, Economics 304K and 304L, Mathematics 408C or 408K, and Mathematics 408D or 408L; has registered with BBA Career Services; and has fulfilled the foreign language requirement for the BBA degree. All students are required to claim a major before completing seventy-five semester hours. Students may claim their majors online at <https://utdirect.utexas.edu/business/bba/>. A student seeking admission to the integrated MPA or the Business Honors Program must complete a separate application; requirements for admission to these programs are given in this chapter in the section “Degrees.”

ADMISSION WITH DEFICIENCIES

Students who were admitted to the University with deficiencies in high school units must remove them by the means prescribed in *General Information*. Credit used to remove a deficiency may not be counted toward the degree. It may be earned on the pass/fail basis. Students may not claim a major until high school unit deficiencies have been removed.

FOREIGN LANGUAGE PROFICIENCY

Each student must provide evidence that he or she has fulfilled the foreign language proficiency requirement for the Bachelor of Business Administration degree. Students may not claim a major until the foreign language proficiency requirement has been met.

ADMISSION-TO-MAJOR REQUIREMENTS FOR STUDENTS PREVIOUSLY ENROLLED IN THE SCHOOL

A former student who was most recently enrolled in the McCombs School of Business and who is readmitted to the University reenters the major in which he or she was last enrolled. However, a former business student who has earned a BBA degree at the University is readmitted with the classification “degree holder but nondegree seeker.”

A former student who was most recently classified as a prebusiness student will be readmitted to the transitional student classification. The student may then apply for admission to a business major according to the procedures given in the section “Students in Other Divisions of the University” on page 49.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar’s Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

ACADEMIC POLICIES AND PROCEDURES

HONORS

BUSINESS HONORS PROGRAM

The Business Honors Program is available to outstanding students who have distinguished themselves inside the classroom and out by superior performance during

high school or in their first year at the University. The program is described on pages 57–58

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

THE MINOR

While a minor is not required as part of the BBA degree program, the student may choose to complete a minor in either a second business field or a field outside the school. A student may complete only one minor. The minor consists of at least twelve semester hours in a single field, including at least nine hours of upper-division coursework.¹ Six of the required hours must be completed in residence. A course used to fulfill the requirements of a minor may not be taken on the pass/fail basis unless the course is offered only on that basis. Only one business core course or one course counted toward the Bachelor of Business Administration degree requirements on pages 54–55 may also be counted toward the minor. The internship course may not be counted toward the minor.

The McCombs School allows the student to minor in any field in which the University offers a major. However, prerequisites and other enrollment restrictions may prevent the student from minoring in some fields. Before planning to take specific courses to fulfill the minor requirement, the student should consult the department that offers those courses.

THE BUSINESS FOUNDATIONS PROGRAM

The Business Foundations Program (BFP) is designed to provide a foundation in business concepts and practice for students in other majors. Any nonbusi-

ness student with a University grade point average of at least 2.00 may take any BFP courses for which he or she meets the prerequisite. No admission process is required.

BUSINESS FOUNDATIONS CERTIFICATE

Nonbusiness students who wish to build a business course concentration may pursue the Business Foundations Certificate. Undergraduates who complete certificate requirements in conjunction with their degree requirements or within one year after earning the degree receive recognition on the University transcript; students in integrated undergraduate/graduate programs must complete certificate requirements within one year after they complete their undergraduate degree requirements. A maximum of nine semester hours of the certificate coursework may be taken after the student has earned the undergraduate degree. At least half of the required certificate coursework must be completed in residence at the University.

A student may not earn any transcript-recognized certificate in the same field as his or her major, and at least one certificate course must be outside the requirements of the major. However, certificate courses outside the major may be counted toward other degree requirements.

Students should apply for the certificate when they apply for graduation or when they complete the certificate program, whichever is later. Transcript recognition is awarded at the end of that semester or summer session. Students who complete the certificate requirements in either the general track or the global track may also submit a request to the BFP director for a certificate and a letter verifying completion of the program.

The certificate program requires eighteen semester hours of coursework as described below; students must also complete the following prerequisite courses: Economics 304K or 304L or the equivalent, and an introductory statistics course chosen from the list of approved courses available from the business Undergraduate Program Office.

GENERAL TRACK

The certification requirements are

1. The following courses completed in residence:
 - a. Accounting 310F; or both Accounting 311 and 312.
 - b. Management Information Systems 302F; or

1. Students who minor in management information systems may count six hours of lower-division and six hours of upper-division coursework. Students who minor in any area of finance must take Finance 367 as three of the required twelve hours.

- either Management Information Systems 301 or 310.
2. Finance 320F.
 3. Three of the following four courses: International Business 320F, Legal Environment of Business 320F, Management 320F, Marketing 320F.
 4. Two of the four courses taken to fulfill requirements 2 and 3 above, with the exception of Legal Environment of Business 320F, may be taken in an approved study abroad program. A list of approved programs is available in the business Undergraduate Program Office.
 5. The student must complete the prerequisite courses and the courses used to fulfill requirements 1 through 3 on the letter-grade basis. He or she must earn a grade point average of at least 2.00 in these courses.
 6. The student must complete at least two long-session semesters in residence.

GLOBAL TRACK

The certification requirements are

1. Proficiency in a modern foreign language, demonstrated by earning nine semester hours of credit beyond course 507 or the equivalent in the language. Three of these hours must be in an upper-division course in grammar and composition.
2. Completion of at least one semester in an approved study abroad program. A list of approved programs is available in the business Undergraduate Program Office.
3. The following courses, completed in residence:
 - a. Accounting 310F; or both Accounting 311 and 312.
 - b. Management Information Systems 302F; or either Management Information Systems 301 or 310.
4. International Business 320F. This course must be completed in an approved study abroad program. A list of approved programs is available in the business Undergraduate Program Office.
5. Finance 320F.
6. Two of the following three courses: Legal Environment of Business 320F, Management 320F, Marketing 320F.
7. Two of the three courses taken to fulfill requirements 5 and 6 above, with the exception of Legal Environment of Business 320F, may be taken in an approved study abroad program. A list of

approved programs is available in the business Undergraduate Program Office.

8. The student must complete the prerequisite courses and the courses listed in requirements 1, 3, 4, 5, and 6 on the letter-grade basis. He or she must earn a grade point average of at least 2.00 in these courses.
9. The student must complete at least two long-session semesters in residence.

GRADUATION

SPECIAL REQUIREMENTS OF THE MCCOMBS SCHOOL OF BUSINESS

All students must fulfill the general requirements for graduation given on pages 12–13. Business students must also fulfill the following requirements.

1. All University students must have a grade point average of at least 2.00 to graduate. Business students must also have a grade point average in business courses of at least 2.00. Students in the Business Honors Program must have a University grade point average and a grade point average in business courses of at least 3.25. Students in the integrated MPA program must have a grade point average of at least 3.00 in all coursework taken as part of the minimum thirty-six-hour graduate program; they must also have a grade point average of at least 3.00 in graduate accounting coursework.
2. The University requires that at least six semester hours of advanced coursework in the major field of study be completed in residence. For additional requirements, see “BBA Degree Requirements” on pages 54–55.
3. A candidate for a degree must be registered in the McCombs School of Business either in residence or in absentia the semester or summer session the degree is to be awarded and must apply to the dean for the degree no later than the date specified in the official academic calendar.

THE DEGREE AUDIT AND GRADUATION APPLICATION

The student may request a degree audit in the Undergraduate Program Office when he or she enters a business major. The degree audit is prepared by comparing the degree requirements of the student’s major with

the student's University record, including transferred work. It shows the coursework required for the major, the courses completed that fulfill requirements, the hours of designated coursework that are still needed, grade point averages, and the residency requirements that have been fulfilled. In preparing the degree audit, every effort is made to avoid errors, but it is the student's responsibility to be aware of and to fulfill all graduation requirements.

A degree candidate must apply for the degree no later than the date given in the official academic calendar. No degree will be conferred unless the diploma application form has been properly filed. The graduation application is available at <https://www.mcombs.utexas.edu/udean/advising/graduation/index.asp>.

DEGREES

Degree requirements are listed in "BBA Degree Requirements" on pages 54–55 and in "Program Degree Requirements" beginning on page 55. For a complete list of requirements for a degree, the student should combine the requirements in these two sections with the University-wide graduation requirements on pages 12–13 and the school graduation requirements beginning on page 52.

APPLICABILITY OF CERTAIN COURSES

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They may not be counted toward the Bachelor of Business Administration degree. However, they are counted among courses for which the student is enrolled, and the grades are included in the grade point average.

ROTC COURSES

No more than twelve semester hours of air force science, military science, or naval science coursework may be counted toward the Bachelor of Business Administration degree. ROTC courses may be used only as nonbusiness electives and may be counted toward the degree only by students who complete the third and fourth years of the ROTC program and accept a commission in the service.

COURSES TAKEN ON THE PASS/FAIL BASIS

A business student may count toward the degree up to four one-semester courses in elective subjects outside the major taken on the pass/fail basis; only electives, nonbusiness electives, and upper-division nonbusiness electives may be taken on the pass/fail basis. Credit earned by examination is not counted toward the total of four courses that the student may take pass/fail.

If a student decides to major in a subject in which he or she has taken a course on the pass/fail basis, it is generally the prerogative of the major department to decide whether the course will be counted toward degree requirements; in the McCombs School of Business, such courses may not be counted toward the major. Complete rules on registration on the pass/fail basis are given in *General Information*.

CORRESPONDENCE AND EXTENSION COURSES

Students planning to take correspondence or extension courses should consult with the Undergraduate Program Office before doing so to ensure compliance with the following restrictions.

1. Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere will not be counted toward a business degree unless it is specifically approved in advance by the dean. A student may not be enrolled concurrently for correspondence courses from the University or for correspondence or extension courses from another institution during his or her last semester.
2. Correspondence instruction in the required business core courses may not be counted toward the degree unless specifically approved in advance by the dean.
3. No more than 30 percent of the semester hours required for any degree may be completed by correspondence, extension, or a combination of the two methods.
4. With regard to registration on the pass/fail basis, correspondence and extension courses are subject to the same restrictions as courses taken in residence; these restrictions are given in the section "Courses Taken on the Pass/Fail Basis" on page 53.

CONCURRENT ENROLLMENT

A student must have the approval of the dean before registering concurrently at another institution, either for resident coursework or for a distance education course, and before enrolling in correspondence or extension coursework at the University. A student may not be enrolled concurrently during his or her last semester in any course to be counted toward the degree.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2, and the following specific requirements for the BBA, including the requirements of a major. In some cases, a course that is required for the BBA or for a major may also be counted toward the core curriculum; these courses are identified below.

BBA DEGREE REQUIREMENTS

1. A grade point average of at least 2.00 is required on all work undertaken at the University for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded. In addition, a grade point average of at least 2.00 in business courses is required.

The official grade in a course is the last one made; however, if a student repeats a course and has two or more grades, all grades and all semester hours are used to calculate the University grade point average and to determine the student's scholastic eligibility to remain in the University and his or her academic standing in the McCombs School of Business.

A student may not repeat for credit or grade points any course in which he or she has earned a grade of *C* or higher (or the symbol *CR*, if the course was taken on the pass/fail basis).

2. A candidate for the Bachelor of Business Administration degree must be enrolled in the McCombs School in the semester or summer session in which the degree is awarded.
3. Each student is expected to complete the courses required for his or her major and to meet the curriculum requirements described in items 4 through 7 below in the year specified.
4. During their freshman and sophomore years, students must complete the University's core curriculum, described in chapter 2.
5. Students must complete the following BBA de-

gree requirements during the freshman year:

- a. Mathematics 408C and 408D, or 408K and 408L, or the equivalent. This coursework may also be used to fulfill the mathematics requirement of the core curriculum.
 - b. Economics 304K and 304L. Economics 304K may also be used to fulfill the social and behavioral sciences requirement of the core curriculum.
 - c. Management Information Systems 301.
 - d. Three hours of coursework in anthropology, psychology, or sociology, chosen from approved courses; courses dealing primarily with statistics or data processing may not be used to fulfill this requirement.
 - e. One of the following:
 1. Three additional hours of coursework in anthropology, psychology, or sociology, chosen from the list of courses that may be counted toward requirement 5d above.
 2. Three additional hours of coursework in fine arts, chosen from the courses that may be counted toward the core curriculum visual and performing arts requirement.
 3. Three hours of upper-division coursework completed in an approved study abroad program. A list of approved programs is available in the Undergraduate Program Office.
 - f. Business Administration 101H, 101S, or 101T. Entering freshmen take Business Administration 101S, entering transfer students take Business Administration 101T, and entering business honors students take Business Administration 101H. Because each course is offered only once a year, failure to take the course in the proper semester will prevent the student from declaring a major and progressing toward the degree.
6. Students must complete the following BBA degree requirements during the sophomore year:
 - a. Accounting 311 and 312.
 - b. Statistics 309.
 - c. Three hours of coursework in public speaking, with an emphasis (at least 50 percent of the course content) on the preparation and presentation of professional speeches, using computer technology when appropriate.
 - d. Business Administration 324.
 7. Eighteen semester hours beyond the first two years are specified as follows:²

2. The following are the "business core courses": Accounting 311 and 312, Business Administration 324, Finance 357, Legal Environment of Business 323, Management 336 or Operations Management 335, Management Information Systems 301, Marketing 337, and Statistics 309 and 371G.

- a. Legal Environment of Business 323.
 - b. Finance 357.
 - c. Marketing 337.
 - d. Operations Management 335 or Management 336.
 - e. A professional, business-related internship or practicum course chosen from the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P. Only one internship course may be counted toward the degree.
 - f. Statistics 371G. Finance majors pursuing the quantitative finance track will take Statistics 375 or 375H to fulfill this requirement.
8. The following requirements apply in addition to those in items 4 through 7 above:
- a. Additional coursework to provide a total of at least sixty semester hours outside the McCombs School. At least six of these hours must be at the upper-division level. Students should consult the requirements of their major department for additional information about coursework to be taken outside the school.
 - b. Completion of the requirements of one of the majors listed in the section “Program Degree Requirements” that begins on this page. In no event is a degree of Bachelor of Business Administration awarded to a student with fewer than forty-eight semester hours in business, at least twenty-four of which have been completed in residence on the letter-grade basis at the University. At least twelve semester hours of upper-division coursework in the major must be completed in residence at the University on the letter-grade basis.³ For additional residence requirements, see the general requirements for graduation on pages 12–13.
9. Proficiency in a foreign language equivalent to that shown by the completion of the first two semesters taught at the University. This requirement may be fulfilled either by completion of the two high school units in a single foreign language that are required for admission to the University as a freshman or by the demonstration of proficiency at the second-semester level. Credit earned at the college level to achieve the proficiency may not be counted toward the degree. It may be earned on the pass/fail basis.
 10. Any two courses with a substantial writing component or a writing flag; one of these courses must be upper-division. Courses that fulfill this requirement are identified in the *Course Schedule*. They must be taken on the letter-grade basis. They may be used simultaneously to fulfill other requirements.

PROGRAM DEGREE REQUIREMENTS

ACCOUNTING

Two programs are available to students who wish to study accounting at the University. The first is the four-year major in accounting leading to the Bachelor of Business Administration degree. The second is the five-year integrated approach to the Master in Professional Accounting degree, which leads to the simultaneous award of the BBA and the Master in Professional Accounting degrees. The objective of the BBA accounting curriculum is to provide students with a broad overall education, solid grounding in the common body of knowledge of business administration, and exposure to accounting in sufficient depth to help them achieve entry-level competence for pursuit of a career in industry. The integrated approach is designed for students who wish to concentrate in accounting and obtain education in an accounting specialization.

-
3. These are the courses that may be counted toward this requirement for each major:
- ▶ Accounting (BBA): Accounting 326, 327, 329, 362, and 364.
 - ▶ Business Honors Program: Business Administration 324H, Finance 357H, Legal Environment of Business 323H, Management 336H and 374H, Marketing 337H, Operations Management 335H, and Statistics 371H.
 - ▶ Engineering route to the BBA: Management 374, Operations Management 337 (Topic 5: *Project Management*), and the student's upper-division business block option courses.
 - ▶ Finance: Finance 357, 367, 370, and the courses required for the student's track.
 - ▶ International business: International Business 350 and 378, and the courses specified in requirements 4 and 6 of the major.
 - ▶ Management (consulting and change management track): Management 325, 328, 336, 337, and 374, and Operations Management 335 and 337 (Topic 1: *Total Quality Management*).
 - ▶ Management (general management track): Management 325, 336, 337, and 374, Mechanical Engineering 366L, and Operations Management 335, 337, 367, and 368.
 - ▶ Management information systems: Management Information Systems 325, 333K, 365, 374, and 375.
 - ▶ Marketing: International Business 350 and Marketing 338, 460, 363, 370, 370K, and 372.
 - ▶ Supply chain management: Management 336 and 337 (Topic 21: *The Art and Science of Negotiation*), and Operations Management 335, 337 (Topics 1: *Total Quality Management*, 2: *Supply Chain Modeling and Optimization*, 3: *Procurement and Supplier Management*, 4: *Information Systems for Operations*, and 5: *Project Management*), 367, and 368.

BACHELOR OF BUSINESS ADMINISTRATION

The requirements of this program are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
2. Twenty-one semester hours of accounting: Accounting 311, 312, 326, 327, 329, 362, and 364.
3. Economics 420K.
4. Operations Management 335 and Management 336 and 374.
5. Additional elective coursework, if necessary, to provide a total of at least 121 semester hours.

BBA/MPA: INTEGRATED APPROACH

The integrated approach to the Master in Professional Accounting is a five-year program of undergraduate and graduate coursework that allows the student to earn the BBA and the Master in Professional Accounting (MPA) degrees at the same time. The professional curriculum, which usually begins in the student's junior year, includes specially designed accounting courses taught in relatively small classes by full-time faculty members.

The accounting faculty has designed three concentrations within this program: auditing/financial reporting, managerial accounting/control, and taxation. Each concentration is a sequence of courses that offers strong preparation for a particular career path. In addition, the student may choose a generalist curriculum.

Because MPA graduates are expected to become leaders in the accounting profession, highly motivated students with the personal qualities and intellectual capacity to establish successful careers in public accounting, industry, not-for-profit organizations, and higher education are encouraged to apply.

Admission

Students are admitted to the integrated approach according to the following requirements. Admission is granted only for the fall semester; June 1 is the application deadline for those who wish to begin the program the following fall. Students interested in this program must have met the following requirements by the June 1 deadline: the foreign language requirement for the BBA degree; and completion of at least sixty semester hours of coursework, including Accounting 311 and 312, Business Administration 101H, 101S, or 101T, Economics 304K and 304L, Mathematics 408C or 408K, and Mathematics 408D or 408L.

Admission is based on the applicant's University

grade point average and SAT Reasoning Test or ACT scores, as well as other relevant examples of academic ability and leadership. An applicant with a University grade point average of less than 3.00 is unlikely to be admitted to this program. Admission may be restricted by the availability of instructional resources. Application materials and information about deadlines are available at <http://www.mcombs.utexas.edu/mpa/integrated/>.

Before beginning the fifth year, integrated approach students must be admitted to the MPA program. Students must complete at least two long-session semesters in residence in the MPA program. Application forms must be submitted by February 1 of the student's fourth year. Students must have completed the following BBA degree requirements before the application deadline: Rhetoric and Writing 306, English 316K, and three hours of coursework in public speaking. They must also earn an acceptable score on the Graduate Management Admission Test (GMAT) and have their test scores sent to the University's Office of Admissions. Students usually take the GMAT in the fall or winter of their fourth year.

Satisfactory Progress

Students are expected to make continuous progress toward the degree by completing required accounting coursework each semester. Students who fail to take required accounting coursework two long-session semesters in a row will be removed from the program and placed in the unspecified business major. Students will be notified before this action is taken; they must meet with their academic adviser upon being notified.

Probation

A student is placed on probation if his or her grade point average in core undergraduate accounting courses falls below 3.00. Except with the consent of the MPA Program Office, a student on probation may not take graduate accounting courses.

Dismissal

The student is dismissed from the integrated approach if (1) he or she fails to improve his or her academic performance significantly while on probation, or (2) he or she will not achieve a grade point average of 3.00 even by earning grades of A in all remaining core undergraduate accounting courses.

Graduation

To receive an MPA degree, a student must have a grade

point average of at least 3.00 in all coursework taken as part of the minimum thirty-six-hour MPA degree. He or she must also have a grade point average in graduate accounting coursework of at least 3.00.

Degree Requirements

The requirements of this program are

1. Undergraduate coursework
 - a. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55. Because the integrated approach includes a graduate-level internship course, students may forgo the undergraduate internship course described in requirement 7e of the BBA degree requirements.
 - b. Economics 420K.
 - c. Operations Management 335 and Management 336 and 374.
 - d. The following courses: Accounting 152 or 153, 254, 355, 356, 358C, and 359.
 - e. For students in the auditing/financial reporting, managerial accounting/control, or generalist concentration, Finance 367 and a business elective; for students in the taxation concentration, Finance 367 and three semester hours of coursework in legal environment of business approved by the student's academic adviser.
 - f. Additional elective work, if necessary, to provide a total of at least 121 semester hours of undergraduate coursework.
2. Graduate coursework
 - a. Accounting 380K (Topic 1: *Financial Accounting Standards and Analysis I*) and 380K (Topic 13: *Information Technology for Accounting and Control*).
 - b. Thirty additional semester hours of graduate coursework, including at least twelve hours in accounting and no more than six hours outside business. The student's academic adviser must approve coursework in the student's concentration in advance.

BUSINESS HONORS PROGRAM

The Business Honors Program is designed to provide an intellectual challenge for students who have distinguished themselves academically and in leadership roles outside the classroom. The student may choose a general program of study or one of the major programs in business or both. Business Honors Program stu-

dents take twelve business courses in special sections open only to them. At least two and one-half years are required to complete the Business Honors Program sequence of courses. Additional information is available from the Business Honors Program Office.

ADMISSION

Admission to the Business Honors Program is limited to a small number of exceptional students who are chosen on a competitive basis. Admission decisions are made by the Business Honors Program Committee. Most students enter the program as freshmen, but some are admitted as sophomores.

Students entering the University and the McCombs School of Business as freshmen may apply to the Business Honors Program by completing a separate application form available from the Business Honors Program Office. The Business Honors Program Committee considers the student's SAT Reasoning Test or ACT scores, high school class rank, preparatory courses, extracurricular activities, evidence of leadership ability, and other objective criteria.

Students may also seek admission to the Business Honors Program during the spring semester of their freshman year. To be considered for admission, the student must have completed in the fall and spring semesters of the freshman year at least twenty-four semester hours of college-level coursework; this coursework must include Economics 304K and 304L, Mathematics 408C or 408K, and Mathematics 408D or 408L. The student must also have fulfilled the foreign language requirement for the BBA degree. In addition to the criteria listed above for freshman applicants, the Business Honors Program Committee considers the student's grade point average in courses taken in residence at the University and the number, type, and rigor of the courses the student has taken at the University. No student will be admitted to the Business Honors Program who has received credit for Management Information Systems 301 and more than one of the other business core courses listed below in a regular (nonhonors) section.

Application materials and information about deadlines are available at <http://www.mcombs.utexas.edu/programs/bhp/>.

CONTINUANCE

A student who enters the Business Honors Program as a freshman must have a grade point average of at

least 3.50 on the courses taken in residence during the fall and spring semesters of the first year to continue in the program. The student must complete at least twelve semester hours in residence on the letter-grade basis during each of those two semesters. After the freshman year, each student, whether admitted as a freshman or as a sophomore, is dismissed from the program if his or her overall or business grade point average drops below 3.25. Exceptions are granted only by the Business Honors Program Committee.

GRADUATION

To graduate under the Business Honors Program, the student must earn a University grade point average of at least 3.25 and a grade point average of at least 3.25 in business courses.

DEGREE REQUIREMENTS

Business Honors Program students may choose a general program of study, one of the major subject degree plans, or both. Requirements for the general program of study are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
2. Completion of the following business core courses and other business courses in special Honors Program sections: Accounting 311H, 312H, Business Administration 324H and 151H, Finance 357H, Legal Environment of Business 323H, Management 336H and 374H, Management Information Systems 301H, Marketing 337H, Operations Management 335H, and Statistics 309H and 371H.
3. Nine semester hours of upper-division business electives.
4. Additional elective coursework, if necessary, to provide a total of at least 121 semester hours.

ENGINEERING ROUTE TO THE BBA

The program of study for the engineering route to the BBA provides a sound foundation in mathematics, in science, and in business, qualifying the student for more advanced study in the management of technological, engineering, and scientific enterprises. In addition to specific required business and engineering courses, the program contains two block options. Students choose an engineering block option consisting of four

courses and a business block option consisting of three courses. The block option program is designed to help students develop greater competence in particular aspects of engineering and business. Students are advised in the Department of Information, Risk, and Operations Management.

All students must take the courses listed below, with a minimum of forty-eight semester hours in the McCombs School of Business. In addition, a block option may include courses that have prerequisite courses that are not part of the engineering route degree requirements. Students should plan their schedules carefully to ensure that the prerequisites of all block option courses are met. Prerequisites for all courses are given in this catalog. Other requirements of the Cockrell School of Engineering must also be fulfilled.

The requirements of this program are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55, with the following modifications:
 - a. Students in this program must complete Mathematics 408C and 408D or Mathematics 408K, 408L, and 408M.
 - b. Operations Management 335 is required as the upper-division business core course in management.
2. The following business courses: Operations Management 337 (*Topic 5: Project Management*) and Management 374.
3. The following nonbusiness courses: Chemistry 301, Mechanical Engineering 210, and Physics 303K, 303L, 103M, and 103N. The physics sequence also meets part I of the core curriculum science and technology requirement. Chemistry 301 also fulfills part II of the core curriculum science and technology requirement.
4. Mathematics 427K or Philosophy 313K.
5. Twelve semester hours of coursework, at least six of which must be upper-division, chosen from one of the engineering block options below.
6. Nine semester hours of coursework, at least six of which must be upper-division, chosen from one of the business block options below.
7. Additional elective coursework, if necessary, to provide a total of at least 124 semester hours.

ENGINEERING BLOCK OPTIONS

Chemical Engineering

CHE 317, *Introduction to Chemical Engineering Analysis*

CHE 322, *Thermodynamics*
 CHE 348, *Numerical Methods in Chemical Engineering and Problem Solving*
 CHE 350, *Chemical Engineering Materials*
 CHE 353, *Transport Phenomena*

Computer Engineering

C S 307, *Foundations of Computer Science*
 C S 315, *Algorithms and Data Structures*
 C S 336, *Analysis of Programs*
 E E 306, *Introduction to Computing*
 E E 312, *Introduction to Programming; or C S 310, Computer Organization and Programming*
 E E 313, *Linear Systems and Signals*
 E E 316, *Digital Logic Design*
 E E 319K, *Introduction to Embedded Systems*
 E E 360C, *Algorithms*
 E E 360F, *Introduction to Software Engineering*
 E E 460N, *Computer Architecture*

Electrical Engineering

E E 302, *Introduction to Electrical Engineering*
 E E 411, *Circuit Theory*
 E E 313, *Linear Systems and Signals*
 E E 331, *Electrical Circuits, Electronics, and Machinery*
 E E 438, *Electronic Circuits I*
 E E 339, *Solid-State Electronic Devices*

Mechanical Systems

E M 306, *Statics*
 M E 311, *Materials Engineering*
 M E 320, *Applied Thermodynamics*
 M E 326, *Thermodynamics*
 M E 330, *Fluid Mechanics*
 M E 338, *Machine Elements*
 M E 365L, *Industrial Design for Production*
 M E 368J, *Computer-Aided Design*

Operations Engineering

M E 218, *Engineering Computational Methods*
 M E 366L, *Operations Research Models*
 M E 367S, *Simulation Modeling*
 M E 373K, *Basic Industrial Engineering*
 M E 375K, *Production Engineering Management*

Petroleum and Energy Engineering

CHE 311, *Engineering Sustainable Technologies*
 GEO 416M, *Sedimentary Rocks*
 GEO 330K, *Petroleum Geology: Basin and Trend Analysis*
 PGE 301, *Engineering, Energy, and the Environment—required*

PGE 310, *Formulation and Solution of Geosystems Engineering Problems*
 PGE 323K, *Reservoir Engineering I: Primary Recovery*
 PGE 424, *Petrophysics*
 PGE 430, *Drilling and Well Completions*
 PGE 334, *Reservoir Geomechanics*
 PGE 365, *Resource Economics and Valuation*

BUSINESS BLOCK OPTIONS

Accounting/Finance

ACC 326, *Financial Accounting—Intermediate*
 ACC 327, *Financial Statement Analysis*
 ACC 329, *Managerial Accounting and Control*
 ACC 362, *Auditing and Control*
 ACC 364, *Fundamentals of Taxation*
 FIN 367, *Investment Management*
 FIN 370, *Integrative Finance*
 FIN 371M, *Money and Capital Markets*
 FIN 374C, *Financial Planning and Policy for Large Corporations*
 FIN 374S, *Entrepreneurial Finance*
 FIN 376, *International Finance*
 FIN 377, *Advanced Investment Analysis*

Quantitative Finance

FIN 367Q, *Investment Management—Quantitative*
 FIN 374C, *Financial Planning and Policy for Large Corporations*
 FIN 377, *Topic 2: Financial Risk Management*
 FIN 377, *Topic 5: Energy Financial Risk Management*
 STA 375, *Statistics and Modeling for Quantitative Finance; or STA 375H, Statistics and Modeling for Quantitative Finance: Honors*

Management Information Systems

MIS 304, *Introduction to Problem Solving and Programming*
 MIS 325, *Database Management*
 MIS 333K, *Web Application Development*
 MIS 373, *Topics in Management Information Systems*
 MIS 374, *Business System Development*

Marketing

I B 350, *International Trade*
 MKT 338, *Promotional Policies*
 MKT 460, *Information and Analysis*
 MKT 363, *Professional Selling and Sales Management*
 MKT 370, *Marketing Policies*
 MKT 370K, *Retail Merchandising*
 MKT 372, *Marketing Seminar*

Supply Chain Management

- O M 337, Topic 1: *Total Quality Management*
- O M 337, Topic 2: *Supply Chain Modeling and Optimization*
- O M 337, Topic 3: *Procurement and Supplier Management*
- O M 337, Topic 4: *Supply Chain Design, Management, and Control*
- O M 368, *Logistics and Inventory Management*—required

FINANCE

Finance is the study of resource allocation—the process, markets, institutions, and instruments that provide for the transfer of money and wealth. The finance degree program offers students an opportunity to study the finance function in the business firm, the financial services firm, and the financial system.

The finance major presents students with the theoretical framework and analytical tools and techniques to handle a variety of finance and business functions. Students may choose one of six tracks: corporate finance and investment banking, energy finance, investment management, financial markets/banking, quantitative finance, or real estate; students who do not wish to specialize may choose the general finance program.

Corporate finance and investment banking courses are designed to prepare students for careers as associates of corporate treasury departments, as corporate financial analysts, and as management consultants. Energy finance courses are designed to prepare students for positions in project financing, valuation, and risk management in the energy sector. Investment management courses are designed to give students a background suitable for starting positions as financial analysts with investment funds, investment banks, and other financial institutions. Financial markets/banking courses are designed to prepare students for a variety of financial institution–related careers, such as lending officer and financial analyst. Quantitative finance courses are designed to prepare students for financial analyst positions in research departments of financial institutions and for graduate study in finance. Real estate courses are designed to give students a broad background in valuing and managing real estate; the track is intended to prepare students for positions in real estate commercial brokerage and appraisal, mortgage banking, loan underwriting, real estate development and investment, and property management.

Finance majors may specialize further by completing the Financial Analyst Program (FAP). This one and one-half year program allows competitively selected business students to work closely with finance faculty members and industry professionals to develop their skills and experience as analysts. The program may be combined with any of the finance options. Information about the FAP is available in the Department of Finance and at <http://www.mcombs.utexas.edu/aimcenter/fap/>.

The requirements of this program are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
2. Finance 367 and 370. Students pursuing the quantitative finance track will take Finance 367Q to fulfill this requirement.
3. One of the following:
 - a. *Corporate Finance and Investment Banking*
 1. Accounting 326 and Finance 374C.
 2. One of the following courses: Accounting 327, 329, 362, or 364.
 3. Two of the following courses: Finance 366P, 371M, 372, 373, 374C, 374S, 375F, 376, 377 (Topic 1: *Portfolio Analysis and Management*), either 377 (Topic 2: *Financial Risk Management*) or 377 (Topic 5: *Energy Financial Risk Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).⁴
 - b. *Energy Finance*
 1. Accounting 326, Finance 374C, and Finance 377 (Topic 5: *Energy Financial Risk Management*).
 2. Two of the following courses: Finance 366P, 371M, 372, 373, 374S, 375F, 376, 377 (Topic 1: *Portfolio Analysis and Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).⁴
 - c. *Investment Management*
 1. Accounting 326 and Finance 377 (Topic 1: *Portfolio Analysis and Management*).
 2. Three of the following courses: Finance 366P, 371M, 372, 373, 374C, 374S, 375F, 376, either 377 (Topic 2: *Financial Risk Management*) or 377 (Topic 5: *Energy Financial Risk Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).⁴
 - d. *Financial Markets/Banking*
 1. Accounting 326, and Finance 354 or 371M.
 2. Three of the following courses: Finance

4. Only students in the Financial Analyst Program may register for Finance 366P and Finance 377 (Topic 3: *Security Analysis*).

- 354 or 371M (whichever is not used to fulfill requirement 1), 366P, 372, 373, 374C, 374S, 375F, 376, 377 (Topic 1: *Portfolio Analysis and Management*), either 377 (Topic 2: *Financial Risk Management*) or 377 (Topic 5: *Energy Financial Risk Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).⁴
- e. *General Finance*
- Accounting 326.
 - Twelve semester hours of upper-division coursework in finance or real estate. The following courses may not be used to fulfill this requirement: Finance 353, 357, 367, and 370. Finance 377 (Topic 2: *Financial Risk Management*) and 377 (Topic 5: *Energy Financial Risk Management*) may not both be used. Finance 377 (Topic 3: *Security Analysis*) and 377 (Topic 4: *Financial Analysis*) may not both be used; topic 3 is open only to students in the Financial Analyst Program.
 - Only one independent study course may be counted toward the general finance option.
- f. *Quantitative Finance*
- Statistics 375 or 375H. Completing this requirement will also fulfill the requirement for the statistics course listed in item 7f of the BBA degree requirements given on pages 54–55.
 - Finance 367Q. Completing this requirement will also fulfill the requirement listed in item 2 of the finance program requirements given above.
 - Accounting 326 and Finance 374C.
 - Finance 377 (Topic 2: *Financial Risk Management*) or 377 (Topic 5: *Energy Financial Risk Management*).
 - One of the following courses: Finance 366P, 371M, 372, 373, 376, 377 (Topic 1: *Portfolio Analysis and Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).⁴
 - One of the following courses: Statistics 372 (Topic 5: *Financial and Econometric Time Series Modeling*), 372 (Topic 6: *Optimization Methods in Finance*), 372 (Topic 7: *Computational Finance*), Management Information Systems 373 (Topic 17: *Data Mining for Business Intelligence*).
- g. *Real Estate*
- Finance 354 or 371M.
 - Finance 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).⁴
 - Accounting 326.
 - Six semester hours of coursework in real estate.
 - Only one independent study course may be counted toward the real estate option.
4. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

INTERNATIONAL BUSINESS

Recognizing the role of the United States in world affairs and the importance of international operations to American business enterprise, this major offers a combination of basic business knowledge with an interdisciplinary study of international policies and practices. The curriculum is designed to help prepare students for positions in global business operations, government, or international agencies in the fields of economic development and international trade.

The requirements of this program are

- The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
- Twelve semester hours of coursework beyond the freshman level in a foreign language associated with the area studies specialization used to fulfill requirement 6 below. Six of the twelve required hours must be at the upper-division level.
- International Business 350 and 378.
- Six semester hours chosen from the following courses: Finance 376, International Business 372, and Marketing 372 (Topic 4: *Global Marketing*).
- Three semester hours of business electives.
- Nine semester hours of upper-division coursework focused on a specific geographic region. These courses must be approved by the international business faculty adviser. Examples of acceptable fields of study are Latin American studies; Middle Eastern studies; Asian studies; and Russian, East European, and Eurasian studies.
- All international business majors must study abroad for at least one semester or summer session. Students should study in a country or region associated with their foreign language and area studies specialization. Ideally, the study abroad experience should be in an immersion program that includes courses taken with local students.

The international business faculty adviser must approve all study abroad programs in

4. Only students in the Financial Analyst Program may register for Finance 366P and Finance 377 (Topic 3: *Security Analysis*).

advance. Any McCombs School program is acceptable if it takes place in a country in which English is not the dominant language. (The CIBER Summer Study Abroad programs will not fulfill this requirement.) In addition, most affiliated study abroad programs available through the University's Study Abroad Office are acceptable, depending on the course of study.

Students must complete the equivalent of at least six semester hours during their study abroad period. Credit earned abroad may be used to fulfill other degree requirements if appropriate.

8. Additional elective coursework, if necessary, to provide a total of at least 123 semester hours.

MANAGEMENT

The Department of Management offers courses in such areas as consulting, change management, human capital management, and entrepreneurship. Students may either choose from the available courses to customize a major in general management or follow the focused curriculum in consulting and change management.

The major objective of the general management track is to train broadly competent administrators for service in a wide variety of organizations—public or private, product- or service-oriented, profit or not-for-profit. To accomplish this basic objective, the program offers the student the opportunity to acquire knowledge about the management of human and physical resources and to acquire skills useful in the management of any organization.

The consulting and change management track is designed to prepare students to become leaders in consulting firms, firms that require consulting advice, and firms implementing important changes. At times, every organization must renew its ability to compete; many firms use external advisers to assist in the renewal process. The consulting process often involves extensive analysis of the firm's competitive position, capabilities, organizational processes, and culture. Once a new direction is developed, the implementation of change must be managed. Such changes include introduction of new competitive thrusts, revision of organizational structures, incorporation of new technologies, and expansion into new geographic markets.

The requirements of the general management track are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
2. The following courses: Management 336, 374, and Operations Management 335.
3. Twelve semester hours chosen from the following courses: Management 325, 337, Mechanical Engineering 366L, and Operations Management 337, 367, and 368.
4. Six semester hours of upper-division coursework in social science.
5. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

The requirements of the consulting and change management track are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
2. The following courses: Management 328, 336, 374, and Operations Management 335.
3. Nine semester hours chosen from the following courses: Accounting 329, Management 325, 337, and Operations Management 337 (Topic 1: *Total Quality Management*). The following topics of Management 337 are recommended: *Business Process Improvement, Groups and Teams, International Strategic Management, Leadership, Negotiation, and Project Management*.
4. Six semester hours of upper-division coursework in social science.
5. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

MANAGEMENT INFORMATION SYSTEMS

There is a great demand for individuals with knowledge about both business and computer applications. Through a series of business core courses and business computer courses, the program in management information systems is intended to prepare a professional who can fully appreciate the complexity of information system design. The graduate is expected to have both the technical and the managerial knowledge to solve fundamental business problems in inventory control, production, forecasting, finance, cost accounting, and other areas. Courses are designed to provide a foundation in the integration of hardware, software, networking, and business functional analysis for business systems.

The requirements of this program are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
2. The following courses: Management Information Systems 304, 325, 333K, 365, 374, and 375.
3. Three additional semester hours of upper-division coursework in management information systems.
4. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

MARKETING

Marketers provide the link between businesses that have goods and services to sell and customers who want to purchase them. The marketing process involves a variety of activities, including research, strategic planning, product development, sales management, and marketing communications. Because the opportunities in the profession are diverse, the marketing degree program allows students to specialize in areas in which they have the strongest interest, while offering them a solid background in the concepts of marketing and business. A marketing degree can lead to a career in such areas as sales management, retail merchandising and management, marketing management, marketing research, and promotional strategy and management.

The requirements of this program are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
2. International Business 350 and Marketing 460 and 370.
3. Nine semester hours chosen from Marketing 338, 363, 370K, and 372.

4. Additional elective coursework, if necessary, to provide a total of at least 121 semester hours.

SUPPLY CHAIN MANAGEMENT

The supply chain management major is designed to prepare students to become leaders in supply chain management, a total systems approach taken by companies, suppliers, and partners to deliver manufactured products and services to the end customer. Information technology is used to integrate all elements of the supply chain from sourcing parts to coordination of retailers; this integration gives the enterprise a competitive advantage that is not available in traditional logistics systems. Entry-level positions in supply chain management include buyer, materials manager, risk management analyst, logistics planner, and staff consultant. Students are advised in the Department of Information, Risk, and Operations Management.

The requirements of this program are

1. The core curriculum requirements described in chapter 2 and the BBA degree requirements on pages 54–55.
2. Management 336.
3. Operations Management 335, 337 (Topic 3: *Procurement and Supplier Management*), 367, and 368.
4. Six semester hours chosen from the following topics of Operations Management 337: Topic 1: *Total Quality Management*; Topic 2: *Supply Chain Modeling and Optimization*; Topic 4: *Supply Chain Design, Management, and Control*; Topic 5: *Project Management*; and Management 337 (Topic 21: *The Art and Science of Negotiation*).
5. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION: B A

LOWER-DIVISION COURSES

- 001F. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various McCombs School of Business disciplines. One lecture hour a week for one semester.
- 101H. Professional Development and Career Planning: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Professional development issues including self-assessment, identification of personal life goals, identification of business majors and exploration of potential career fields for each major, and analysis and discussion of the academic planning process and how it relates to professional development and career planning. One lecture hour a week for one semester. Offered on the letter-grade basis only. Only one of the following may be counted: Business Administration 101, 101H, 101S, 101T, 102, 102H.
- 101S. Career Planning: Freshman.** Restricted to students in the McCombs School of Business. Discussion of issues surrounding career planning, implementation, and evaluation in order to establish career goals. Strategies for executing a successful job search, including interviewing techniques, résumés, networking, and job search ethics. Focus on career management as a lifelong process. One lecture hour a week for one semester. Offered on the letter-grade basis only. Only one of the following may be counted: Business Administration 101, 101H, 101S, 101T, 102, 102H.

- 101T. Career Planning Strategies.** Restricted to students in the McCombs School of Business. Discussion of issues surrounding career planning, implementation, and evaluation. One lecture hour a week for one semester. Offered on the letter-grade basis only. Only one of the following may be counted: Business Administration 101, 101H, 101S, 101T, 102, 102H.
- 102F. Career Planning.** Discussion of issues surrounding career planning, implementation, and evaluation in order to establish career goals. Studies strategies for executing a successful job search, including interviewing techniques, résumés, networking, and job search ethics. Focuses on career management as a lifelong process. One lecture hour a week for one semester. Offered on the letter-grade basis only. May not be counted toward the Bachelor of Business Administration degree.
- 118C, 218C, 318C. Forum Seminar Series.** Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320F. Foundations of Entrepreneurship.** Introduction to the mechanics and strategies for starting a business. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.
- 321L. Contemporary Leadership Issues.** Focuses on leadership topics such as ethics, diversity, and sustainability. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and consent of the dean.
- 324. Business Communication: Oral and Written.** Restricted to students in the McCombs School of Business. Theory and practice of effective communication, using models from business situations. Students practice what they learn with a variety of in-class activities, written assignments, and oral presentations. Teamwork and use of interpersonal skills are included. Three lecture hours a week for one semester. Business Administration 324 and 324H may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, 309K, or Tutorial Course 603A, and credit or registration for Business Administration 101H (or 102H), 101S, or 101T.
- 324H. Business Communication: Oral and Written: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Theory and practice of effective communication, using models from business situations. Students practice what they learn with a variety of in-class activities, written assignments, and oral presentations. Teamwork and use of interpersonal skills are included. Three lecture hours a week for one semester. Business Administration 324 and 324H may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, 309K, or Tutorial Course 603A; and Business Administration 101H or 101S, or credit or registration for Business Administration 101T.

- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Business Administration.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the director of the Business Foundations Program. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary. May not be counted toward the Bachelor of Business Administration degree.
- 151H. Honors Lyceum in Business Administration.** Restricted to students admitted to the McCombs School of Business Honors Program. Presentations by professionals from various fields of business. One lecture hour a week for one semester. May be repeated for credit. Prerequisite: Business Administration 101H or 101S, or credit or registration for Business Administration 101T.
- 352F. Internship in Business Administration.** Focuses on students' career goals through academic discussion and evaluations, while students are working in professional internships with public and private enterprises. Internship to be arranged by the student and approved by the director of the Business Foundations Program. At least eight to ten internship hours a week for one semester. Offered on the pass/fail basis only. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Completion of at least forty-five semester hours of coursework, Accounting 310F with a grade of at least C, and consent of the director of the Business Foundations Program.
- 353H. Internship in Business Administration—Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Three lecture hours a week for one semester. Offered on the pass/fail basis only. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.
- 366F. Business Administration Practicum.** Students apply skills related to the Business Foundations certificate program curriculum and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing and completion of at least forty-five semester hours of coursework.
- 179F, 379F. Problems in Business Administration.** Conference course. May be repeated for credit when the topics vary. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing and Accounting 310F with a grade of at least C; a student registering for this course must have written approval from the director of the Business Foundations Program, on forms provided for that purpose, before the first meeting of the course.

DEPARTMENT OF ACCOUNTING

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ACCOUNTING: ACC

LOWER-DIVISION COURSES

- 310F. Foundations of Accounting.** An introduction to financial and managerial accounting, with emphasis on the content, interpretation, and uses of accounting reports. Discussion of the determination and reporting of net income and financial position, and the theories underlying business financial statements; consideration of managerial accounting topics designed to extend the student's knowledge to the planning and controlling of the operations of the firm. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree.
- 311 (TCCN: ACCT 2301). Fundamentals of Financial Accounting.** Restricted to students in the McCombs School of Business. Concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements. Three lecture hours a week for one semester. Accounting 311 and 311H may not both be counted. Prerequisite: Twenty-four semester hours of college credit.
- 311H. Fundamentals of Financial Accounting: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements. Three lecture hours a week for one semester. Accounting 311 and 311H may not both be counted. Prerequisite: Twenty-four semester hours of college credit; Management Information Systems 310 or a score of at least 79 on the Computer Proficiency Test; and credit or registration for Business Administration 324 or 324H.
- 312 (TCCN: ACCT 2302). Fundamentals of Managerial Accounting.** Restricted to students in the McCombs School of Business. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing. Three lecture hours a week for one semester. Accounting 312 and 312H may not both be counted. Prerequisite: Accounting 311 or 311H.

312H. Fundamentals of Managerial Accounting: Honors. Restricted to students admitted to the McCombs School of Business Honors Program. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing. Three lecture hours a week for one semester. Accounting 312 and 312H may not both be counted. Prerequisite: Accounting 311 or 311H, and credit or registration for Business Administration 151H.

UPPER-DIVISION COURSES

- 326. Financial Accounting—Intermediate.** Restricted to students in a business major. Theoretical foundation, concepts, and principles underlying financial statements; current assets; current liabilities; property, plant, and equipment; short-term investments; present value analysis. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Accounting 326 and 380K (Topic 1: *Financial Accounting Standards and Analysis I*) may not both be counted. Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each.
- 327. Financial Statement Analysis.** Restricted to students in a business major. Study of financial statements and their related footnotes; tools and procedures common to financial statement analysis; the relationships among business transactions, environmental forces (political, economic, and social), and reported financial information; and how financial statement information can help solve certain business problems. Three lecture hours a week for one semester. Prerequisite: Accounting 326 with a grade of at least C-.
- 329. Managerial Accounting and Control.** Restricted to students in a business major. The origination, processing, reporting, and use in business operations of accounting information for management purposes. Three lecture hours a week for one semester. Only one of the following may be counted: Business Administration 380E, 382T, Accounting 329, 359, 387 (Topic 1: *Introduction to Managerial Accounting*), 287 (Topic 5: *Performance Management and Control*). Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each.
- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Accounting.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Accounting. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 151. Accounting Careers Exploration.** Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Presentations by professional accountants and managers. One and one-half lecture hours a week for one semester. Offered on the letter-grade basis only.
- 152. MPA Distinguished Speaker Lyceum.** Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Discussion of current issues confronting the accounting profession. The equivalent of two lecture hours a week for one semester. Offered on the pass/fail basis only.
- 153. MPA Lyceum—Fifth Year.** Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Discussion of current issues confronting the accounting profession. The equivalent of two lecture hours a week for one semester. Offered on the pass/fail basis only.
- 353J. Internship in Accounting.** Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.
- 254. Accounting Careers Exploration.** Presentations by professional accountants, managers, and career specialists. One and one-half lecture hours a week for two semesters. Offered on the letter-grade basis only. Prerequisite: For Accounting 254A, admission to the integrated approach to the Master in Professional Accounting; for 254B, Accounting 254A.
- 355. Introduction to Taxation.** Restricted to students admitted to the integrated approach to the Master in Professional Accounting. The role of taxes in contemporary society and their impact on individuals and business. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Only one of the following may be counted: Accounting 355, 364, 380K (Topic 11: *Introduction to Taxation*).
- 356. Financial Accounting Concepts and Research.** Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Conceptual framework of financial accounting; research methods in financial reporting; and financial reporting institutions and regulations. Three lecture hours a week for one semester. Offered on the letter-grade basis only.
- 457. Financial Accounting Standards and Analysis I.** Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Theoretical concepts, standards, and procedures underlying financial statements. Four lecture hours a week for one semester.

- 358C. Introduction to Assurance Services.** Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Information quality assurance, auditing, and control, considered from the perspective of a business manager who must decide the type and amount of assurance to acquire. Offered on the letter-grade basis only. Only one of the following may be counted: Accounting 358C, 362, 380K (Topic 4: *Introduction to Assurance Services*). Prerequisite: Accounting 356 or the equivalent.
- 458K. Financial Accounting Standards and Analysis II.** Restricted to students admitted to the Professional Program in Accounting. Further study of the concepts, standards, and procedures underlying financial statements, including those of consolidated enterprises and foreign entities. Four lecture hours a week for one semester. Prerequisite: Accounting 457 with a grade of at least C-.
- 359. Managerial/Cost Accounting.** Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Analysis of manufacturing costs, development of cost estimates, and preparation of relevant information for management decision making. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Only one of the following may be counted: Business Administration 380E, 382T, Accounting 329, 359, 387 (Topic 1: *Introduction to Managerial Accounting*), 287 (Topic 5: *Performance Management and Control*).
- 360. Financial Accounting—Advanced.** Restricted to students in a business major. Accounting problems in respect to multiple ownership; consolidated financial statements and partnership accounts; foreign currency translation; segmental reporting; other special topics. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Accounting 360 and 380K (Topic 2: *Financial Accounting Standards and Analysis II*) may not both be counted. Prerequisite: Accounting 327 with a grade of at least C-.
- 361. Governmental and Institutional Accounting.** Restricted to students in a business major. Budgeting, accounting, auditing, and financial reporting principles and practices for government and other nonprofit entities. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Accounting 361 and 380K (Topic 6: *Issues in Accounting and Control for Nonprofit Organizations*) may not both be counted. Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each.
- 362. Auditing and Control.** Restricted to students in a business major. Professional practice standards and procedures of auditing: ethics, legal liability, sampling methods, control systems, control design, and control evaluation. Three lecture hours a week for one semester. Only one of the following may be counted: Accounting 358C, 362, 380K (Topic 4: *Introduction to Auditing*). Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each; and credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P.
- 364. Fundamentals of Taxation.** Restricted to students in a business major. Introduction to the role of taxes in contemporary society and their impact on individuals and business entities; emphasis on federal income taxation. Three lecture hours a week for one semester. Only one of the following may be counted: Accounting 355, 364, 380K (Topic 11: *Introduction to Taxation*). Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each.
- 365. Fundamentals of Financial and Administrative Information Systems.** Restricted to students in a business major. Accounting information systems of organizations. Topics include selected hardware and software concepts, fundamentals of accounting information systems analysis, design, implementation, and control. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Accounting 365 and 382K (Topic 1: *Principles of Systems Analysis*) may not both be counted. Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each; and Management Information Systems 301 or 310.
- 366P. Accounting Practicum.** Restricted to business majors. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Accounting 366P and 384 (Topic: *Tax Practicum*) may not both be counted. Prerequisite: Forty-five semester hours of college coursework.
- 378. Contemporary Accounting Topics.** Restricted to students in a business major. In-depth study of selected accounting topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each. Some topics have additional prerequisites; these are given in the *Course Schedule*.
- Topic 1: Hardware, Software, and Telecommunications.**
- 179C, 379C. Problems in Accounting.** Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

DEPARTMENT OF FINANCE

FINANCE: FIN

UPPER-DIVISION COURSES

- 320F. Foundations of Finance.** Principles of effective financial management, including planning, organization, and control; financial intermediaries; securities markets; evaluating alternative assets, debt, and capital structures. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing; Accounting 310F or 311 (or 311H), and 312 (or 312H); Economics 304K or 304L; and one of the following: Biology 318M, Biomedical Engineering 335, Chemical Engineering 253K, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Geography 360L, 460C, Government 339L, 350K, Health Education 343, Mathematics 303D, 316, 362K, Mechanical Engineering 335, Nutrition 366L, Petroleum and Geosystems Engineering 337, Physics 362K, 369, Psychology 418, Social Work 318, Sociology 317L, Statistics and Scientific Computation 304, 305, 306, 318M.
- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Finance.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Finance. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 353. Internship in Finance.** Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.
- 354. Money, Banking, and Economic Conditions.** Restricted to students in a business major. The monetary system, financial markets, national income components, and their relationship to business activity. Three lecture hours a week for one semester. Only one of the following may be counted: Economics 322, Finance 354, 354H. Prerequisite: Accounting 311 or 311H; Economics 304K and 304L; and credit or registration for Business Administration 324 or 324H.
- 354H. Money, Banking, and Economic Conditions: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. The monetary system, financial markets, national income components, and their relationship to business activity. Three lecture hours a week for one semester. Only one of the following may be counted: Economics 322, Finance 354, 354H. Prerequisite: Forty-five semester hours of college coursework, Accounting 311 or 311H, credit or registration for Business Administration 324 or 324H, Economics 304K and 304L, and Mathematics 408K and 408L.
- 357. Business Finance.** Restricted to students in a business major. Principles of finance, with application to all aspects of the business firm; particular attention to cost of capital, investment decisions, management of assets, and procurement of funds. Three lecture hours a week for one semester. Finance 357 and 357H may not both be counted. Prerequisite: Accounting 311 or 311H, 312 or 312H, Economics 304K and 304L, and Statistics 309 or 309H; and credit or registration for Business Administration 324 or 324H.
- 357H. Business Finance: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Principles of finance, with application to all aspects of the business firm; particular attention to cost of capital, investment decisions, management of assets, and procurement of funds. Three lecture hours a week for one semester. Finance 357 and 357H may not both be counted. Prerequisite: Forty-five semester hours of college coursework, Accounting 311 or 311H, 312 or 312H, Economics 304K, Statistics 309 or 309H, credit or registration for Business Administration 324 or 324H, and credit or registration for Economics 304L.
- 366P. Finance Practicum.** Restricted to finance majors. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Prerequisite: Forty-five semester hours of college coursework and consent of instructor.
- 367. Investment Management.** Restricted to students in a business major. Investment theory, alternatives, and decision making under differing uncertainties and constraints; formulation of objectives and strategies; development of conceptual managerial perspectives and philosophies for investment environments. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H, and Statistics 371G or 371H.
- 367Q. Investment Management—Quantitative.** Restricted to students in a business major. Quantitative approach to investments; decision making under differing uncertainties and constraints; portfolio theory and applications; formulation of investment strategies; introduction to option pricing; Monte Carlo simulation; and development of conceptual managerial perspectives and philosophies for investment environments. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H, and Statistics 375 or 375H.

- 370. Integrative Finance.** Restricted to students in a business major. Integrates financial decision making in functional areas of finance; utilizes various concepts to promulgate strategies, policies, and procedures in managing funds to achieve objectives. Three lecture hours a week for one semester. Prerequisite: Ninety semester hours of college coursework; Finance 357 or 357H, and 367; credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P; and three additional semester hours of coursework in finance or real estate.
- 371M. Money and Capital Markets.** Restricted to students in a business major. Development of modern financial markets, with emphasis on the factors that determine interest rates; institutional characteristics and pricing mechanisms of various interest-sensitive securities. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.
- 372. Advanced Topics in Finance.** Restricted to students in a business major. Advanced topics in finance with emphasis on theoretical and quantitative analysis. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Finance 357 or 357H.
- 373. Research Topics in Finance.** Restricted to students in a business major. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Finance 357 or 357H, and consent of instructor.
- Topic 1: Advanced Studies in International Finance.** Students work in small research groups to write academic papers on topics in international finance and business. Designed to develop critical thinking skills, writing skills, sophisticated use of technology, and experience working across different cultures.
- 374C. Financial Planning and Policy for Large Corporations.** Restricted to students in a business major. An in-depth study of theory and practice of corporate financial management in establishing major financial and investment policies; techniques for analysis, evaluation, and control. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.
- 374S. Entrepreneurial Finance.** Restricted to students in a business major. Development, implementation, and control of financial plans, strategies, and policies by owner-managers of small and medium-sized firms; analysis of alternatives and decision making. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.
- 375F. Banking and Financial Intermediation.** Restricted to students in a business major. Theory of financial intermediation, regulatory environment, interest rates, and asset/liability management with a focus on commercial banking; depository and contractual intermediation. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.
- 376. International Finance.** Restricted to students in a business major. The international financial environment, with emphasis on the factors affecting exchange rates and how exchange rate changes affect the firm. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.
- 377. Advanced Investment Analysis.** Second course in investments, with emphasis on quantitative applications and the underlying theory in the analysis and management of securities and portfolios. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: Portfolio Analysis and Management.** Restricted to students in a business major. Additional prerequisite: Finance 367.
- Topic 2: Financial Risk Management.** Restricted to students in a business major. Finance 377 (Topic 2) and 377 (Topic 5) may not both be counted. Additional prerequisite: Credit or registration for Finance 367; and Mathematics 408D or 408L.
- Topic 3: Security Analysis.** For finance majors only. Finance 377 (Topic 3) and 377 (Topic 4) may not both be counted. Additional prerequisite: Credit or registration for Finance 367 and consent of instructor.
- Topic 4: Financial Analysis.** Restricted to students in a business major. Application of fundamental analysis and valuation techniques. Finance 377 (Topic 3) and 377 (Topic 4) may not both be counted. Additional prerequisite: Credit or registration for Finance 367.
- Topic 5: Energy Financial Risk Management.** Restricted to students in a business major. Finance 377 (Topic 2) and 377 (Topic 5) may not both be counted. Additional prerequisite: Finance 367.
- 377L. Portfolio Analysis and Management.** Restricted to students in a business major. Quantitative applications and the underlying theory in the analysis and management of securities and portfolios; designed for students with career goals in investment. Three lecture hours a week for one semester. Prerequisite: Finance 367.
- 179C, 379C. Problems in Finance.** Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Finance 357 or 357H with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

REAL ESTATE: R E

UPPER-DIVISION COURSES

- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Real Estate.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Finance. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 358. Introduction to Real Estate and Urban Land Development.** Restricted to students in a business major. Principles of real estate and urban land economics, including an examination of investment, valuation, financing, and public policy in real estate and mortgage markets. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and credit or registration for Finance 357 or 357H.
- 360. Special Topics in Real Estate.** Restricted to students in a business major. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Real Estate 358.
- 376G. Real Estate Investment.** Restricted to students in a business major. Study of the setting and measurement of property values in real estate markets and an analysis of real estate assets as investments. Three lecture hours a week for one semester. Prerequisite: Real Estate 358.
- 378K. Real Estate Finance and Syndication.** Restricted to students in a business major. Debt and equity financing of residential and commercial properties; mortgage markets and instruments; lender and investor decisions in real estate financing. Three lecture hours a week for one semester. Prerequisite: Real Estate 358.
- 179C, 379C. Problems in Real Estate.** Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Real Estate 358 with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

DEPARTMENT OF INFORMATION, RISK, AND OPERATIONS MANAGEMENT

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

LEGAL ENVIRONMENT OF BUSINESS: LEB

UPPER-DIVISION COURSES

- 320F. Foundations of the Legal Environment of Business.** Not open to law students. Introduction to the legal problems confronting businesses in the global environment. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.
- 323. Business Law and Ethics.** Restricted to students in a business major. Role of law in society; introduction to legal reasoning, dispute resolution, judicial process, constitutional law, agency, torts, government regulations; business ethics; study of contracts. Three lecture hours a week for one semester. Legal Environment of Business 323 and 323H may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H.
- 323H. Business Law and Ethics: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Role of law in society; introduction to legal reasoning, dispute resolution, judicial process, constitutional law, agency, torts, government regulations; business ethics; study of contracts. Three lecture hours a week for one semester. Legal Environment of Business 323 and 323H may not both be counted. Prerequisite: Ninety semester hours of college coursework, Accounting 312 or 312H, and credit or registration for Business Administration 324 or 324H.
- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in the Legal Environment of Business.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or by the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 361. Law of Business Organizations.** Restricted to students in a business major. Study of basic legal principles of business organizations and operations, including practical comparison and assessment of advantages and disadvantages of different types of organization. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H.

- 363. Real Estate Law.** Restricted to students in a business major. Law pertaining to estates and interests in land, conveyances and mortgages, brokers, easements, contracts, default and foreclosure. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H, or consent of instructor.
- 366. Commercial Transactions.** Restricted to students in a business major. Applied business transactions, with emphasis on the Uniform Commercial Code; emphasis on bailments, sales of goods, commercial paper, bank-customer relationships, creditor security devices, and bankruptcy. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H.
- 370. Topics in the Legal Environment of Business.** Restricted to students in a business major. Selected topics on legal constraints affecting managerial decision making and business behavior. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Legal Environment of Business 323 or 323H with a grade of at least C-. Some topics may have additional prerequisites; these are given in the *Course Schedule*.
- Topic 1: Antitrust Law.**
- Topic 2: Environmental Law.**
- Topic 3: Employer-Employee Relations.**
- Topic 4: Social and Ethical Responsibilities of Business.**
- Topic 5: The Law and the Multinational Corporation.**
- Topic 6: Law of the Entertainment Business.**
- Topic 7: Business Torts.**
- Topic 8: Constitutional Issues in Business.**
- Topic 9: Business Dispute Resolution.**
- Topic 10: Intellectual Property.**
- Topic 11: Sports, Sports Management, and Entertainment Law.** Survey of the law as it relates to amateur and professional sports and sports management. Includes an entertainment law component that examines the legal aspects of the film industry.
- Topic 12: Law of the European Union.** Introduction to the rapidly evolving law of the European Union, with particular emphasis on business applications and comparisons to American law.
- 179, 379. Problems in the Legal Environment of Business.** Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Legal Environment of Business 323 or 323H with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

MANAGEMENT INFORMATION SYSTEMS: MIS

LOWER-DIVISION COURSES

- 301. Introduction to Information Technology Management.** Restricted to students in the McCombs School of Business. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. Management Information Systems 301 and 301H may not both be counted.
- 301H. Introduction to Information Technology Management: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. Management Information Systems 301 and 301H may not both be counted.
- 302F. Introduction to Information Technology Management.** Open only to nonbusiness majors. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Management Information Systems 302F and 311F may not both be counted.
- 304. Introduction to Problem Solving and Programming.** Restricted to students in the McCombs School of Business. Programming skills for creating easy-to-maintain systems for business applications. Object-oriented and structured methodologies with Visual Basic. Three lecture hours a week for one semester. Offered on the letter-grade basis only.
- 310 (TCCN: BCIS 1305). Introduction to Management Information Systems.** Basic computer terminology, hardware and software, communications technology, graphics, systems analysis and design, and issues arising out of the rapidly evolving field of information systems. Students are expected to achieve a working knowledge of personal computer software, including operating system software and environments, as well as spreadsheets, analytical graphics, databases, and presentation software. Hands-on experience with the Internet and use of electronic mail. Three lecture hours a week for one semester.

- 325. Database Management.** Restricted to students in the McCombs School of Business. Beginning and intermediate topics in data modeling for relational database management systems. Three lecture hours a week for one semester. Offered on the letter-grade basis only.
- 333K. Web Application Development.** Restricted to students in a business major. Concepts and practices of information systems. Advanced programming techniques used to generate menu-driven applications. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 304 and 325.
- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Management Information Systems.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 353. Internship in Management Information Systems.** Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not count toward the student's major requirement. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.
- 365. Business Data Communications and Networking.** Restricted to students in a business major. Introduces the foundations of data communications and information security in a networked economy. Provides tools for analyzing strategic, economic, organizational, and social implications of emerging data communications technologies. Explores the use of data communications technologies to increase returns and decrease risks of organizations. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 304 and 325.
- 366P. Management Information Systems Practicum.** Restricted to students in a business major. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Prerequisite: Forty-five semester hours of college coursework and consent of instructor.
- 373. Topics in Management Information Systems.** Restricted to students in a business major. Provides in-depth treatment of business data processing concerns such as database management, telecommunications, and development of commercial systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 6: Advanced Application of Software Development.** Prerequisite: Management Information Systems 333K and consent of instructor.
- Topic 8: Advanced Data Communication Systems.** Development issues for intranet- and internet-based systems. Prerequisite: Management Information Systems 365.
- Topic 9: Health Care Management.** Prerequisite: Management Information Systems 325.
- Topic 12: Technical Consulting.** Prerequisite: Management Information Systems 304 and consent of instructor.
- Topic 13: Supply-Chain Management.** Prerequisite: Management Information Systems 325 with a grade of at least C-.
- Topic 14: Web Systems Development.** Concepts underlying Web development tools, page and site design, and building Web-based business sites. Prerequisite: Management Information Systems 304 and 325.
- Topic 15: Systems Analysis for E-Business.** Applications of technology for creating e-business systems and process redesign. Prerequisite: Management Information Systems 325.
- Topic 16: Information Technology Security, Privacy, and Survivability.** Prerequisite: For business majors, Management Information Systems 333K or the equivalent; for others, consent of instructor.
- Topic 17: Data Mining for Business Intelligence.** Introduces the data mining process and primary data mining techniques employed to extract intelligence from data and evaluates the strengths and weaknesses of data mining techniques applied to challenges in various business domains. Prerequisite: Statistics 309 or 309H.
- Topic 18: Business Process Excellence.** Provides in-depth coverage of business process change and management with information technology (IT) in today's organizations. Prerequisite: Upper-division standing.
- Topic 19: Service-Oriented Architecture.** Prerequisite: Management Information Systems 333K.
- Topic 20: Managing the Future.** Addresses the management of uncertainty. Introduces managerial concepts and methods for structuring decisions about the uncertainties in the future of industries, products, markets, and technologies. Includes scenario analysis, technology roadmaps, and dynamic innovation models. Students work in teams and undertake hands-on exercises aimed at developing a set of alternative futures for industries and technologies. Prerequisite: Upper-division standing.

- 374. Business System Development.** Restricted to students in a business major. Provides background in business system analysis, evaluations, design, and implementation, using basic business knowledge and computer skills. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 333K and credit or registration for Management Information Systems 365.
- 375. Strategic Information Technology Management.** Restricted to students with a major in business. Designed to develop an understanding and appreciation for the role of information technology in the context of a firm's strategy. Explores the impact of information technology on the economy and business performance, the emergence of electronic business applications and organizational and market transformation, and the nature of technology-driven business models and strategies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 179, 379. Problems in Management Information Systems.** Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Management Information Systems 304 and 325 with a grade of at least B- in each, and consent of instructor. A student registering for this course must have written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.
- 337. Special Topics in Operations Management.** Restricted to students in a business major. Analysis of contemporary management problems. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the letter-grade basis only; these are identified in the *Course Schedule*. Only one of the following may be counted unless the topics vary: Management 337, Management Science 337, Operations Management 337. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Total Quality Management.** Three lecture hours a week for one semester. Prerequisite: For business majors, Operations Management 335 (or Management 335 or Management Science 335) or Operations Management 335H (or Management 335H or Management Science 335H) with a grade of at least C-; for others, admission to an appropriate major sequence in engineering.
- Topic 2: Supply Chain Modeling and Optimization.** Formulating models of decision-making situations, the appropriate use of quantitative techniques, and finding solutions to the models that optimize objective measures of merit using readily available computer software. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Operations Management 335 (or credit for Management 335 or Management Science 335) or Operations Management 335H (or credit for Management 335H or Management Science 335H).
- Topic 3: Procurement and Supplier Management.** Strategic issues in procurement and supplier management; review of competitive analysis and benchmarking; the purchasing role in fulfilling a firm's operational and competitive strategies; supplier evaluation, development, and relationship management; negotiating with suppliers for results; and commodity planning. Three lecture hours a week for one semester. Prerequisite: Operations Management 335 (or Management 335 or Management Science 335) or Operations Management 335H (or Management 335H or Management Science 335H) with a grade of at least C-.
- Topic 4: Supply Chain Design, Planning, and Control.** The different planning systems used in an integrated supply chain, such as manufacturing resource planning, distribution resource planning, and sales and operations planning. Includes the latest trends in supply chain management, such as demand management and sustainable supply chains, and the information technology systems used to support an integrated business framework. Three lecture hours a week for one semester. Prerequisite: Operations Management 335 (or Management 335 or Management Science 335) or Operations Management 335H (or Management 335H or Management Science 335H) with a grade of at least C-.

OPERATIONS MANAGEMENT: O M

UPPER-DIVISION COURSES

- 335. Operations Management.** Restricted to students in a business major. The operations or production function and the skills required for analyzing and solving related problems. Three lecture hours a week for one semester. Only one of the following may be counted: Management 335, 335H, Management Science 335, 335H, Operations Management 335, 335H. Prerequisite: Credit or registration for Business Administration 324 or 324H and credit or registration for Statistics 309 or 309H.
- 335H. Operations Management: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. The operations or production function and the skills required for analyzing and solving related problems. Three lecture hours a week for one semester. Only one of the following may be counted: Management 335, 335H, Management Science 335, 335H, Operations Management 335, 335H. Prerequisite: Credit or registration for Business Administration 324 or 324H, and credit or registration for Statistics 309 or 309H.

Topic 5: Project Management. Prerequisite: Operations Management 335 (or Management 335 or Management Science 335) or Operations Management 335H (or Management 335H or Management Science 335H) with a grade of at least C.

- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Operations Management.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 353. Internship in Operations Management.** Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.
- 366P. Operations Management Practicum.** Restricted to students in a business major. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Only one of the following may be counted: Management 366P, Management Science 366P, Operations Management 366P. Prerequisite: Operations Management 335 or 335H, forty-five semester hours of college coursework, and consent of instructor.
- 367. Strategic Supply Chain Management.** Restricted to students in a business major. Management of manufacturing process technology in international competition. Three lecture hours a week for one semester. Only one of the following may be counted: Management 367, Management Science 367, Operations Management 367. Prerequisite: Operations Management 335 (or Management 335 or Management Science 335) or Operations Management 335H (or Management 335H or Management Science 335H).
- 368. Logistics and Inventory Management.** Restricted to students in a business major. Analysis of the entire flow of information, materials, and services from suppliers through factories and warehouses to the end customer. Includes logistics, supplier selection, and inventory management, using case studies, optimization, and simulation. Three lecture hours a week for one semester. Only one of the following may be counted: Management 368, Management Science 368, Operations Management 368. Prerequisite: Operations Management 335 (or Management 335 or Management Science 335) or Operations Management 335H (or Management 335H or Management Science 335H).
- 179, 379. Problems in Operations Management.** Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Management 336, 336H, Operations Management 335, or 335H with a grade of at least C-; and consent of instructor. A student registering for this course must have written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

RISK MANAGEMENT: R M

UPPER-DIVISION COURSES

- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Risk Management.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 357E. Introduction to Risk Management.** Principles of risk management for individuals and organizations, financial aspects of insurance companies and markets, industry structure, managerial aspects of underwriting and pricing, and public policy issues. Three lecture hours a week for one semester.
- 369K. Managing Employee Risks and Benefits.** Risk management issues involving financial consequences of life and health contingencies, health care finance, company management, pension planning, economics of industry structure, and public policy issues. Three lecture hours a week for one semester.

- 377. Property-Liability Risk Management and Planning.** Analysis of property-liability risks of businesses, risk management tools, risk financing, and insurance contracts for financial planning purposes; investment and underwriting operations, market structures, and insurance regulation. Three lecture hours a week for one semester.
- 179, 379. Problems in Risk Management.** Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

STATISTICS: STA

LOWER-DIVISION COURSES

- 309. Elementary Business Statistics.** Restricted to students in the McCombs School of Business. Training in the use of data to gain insight into business problems; describing distributions (center, spread, change, and relationships), producing data (experiments and sampling), probability and inference (means, proportions, differences, regression and correlation). Three lecture hours a week for one semester. Only one of the following may be counted: Economics 329, Statistics 309, 309H. Prerequisite: Mathematics 408C or 408K and Mathematics 408D or 408L.
- 309H. Elementary Business Statistics: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Training in the use of data to gain insight into business problems; describing distributions (center, spread, change, and relationships), producing data (experiments and sampling), probability and inference (means, proportions, differences, regression and correlation). Three lecture hours a week for one semester. Only one of the following may be counted: Economics 329, Statistics 309, 309H. Prerequisite: Mathematics 408C or 408K, and Mathematics 408D or 408L.

UPPER-DIVISION COURSES

- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Statistics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 371G. Statistics and Modeling.** Restricted to students admitted to the McCombs School of Business. Optimization techniques for deterministic models (linear and integer programming) and stochastic models (queueing, simulation, Markov chains). Three lecture hours a week for one semester. Only one of the following may be counted: Management Science 371H, Statistics 371G, 371H, 375, 375H. Prerequisite: Business Administration 324 or 324H; Management Information Systems 301 or 310; Mathematics 408D, 408L, or 408M; and Statistics 309 or 309H.
- 371H. Statistics and Modeling: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Focuses on methods used to model and analyze data. Explores multiple regression models and their application in the functional areas of business, regression-based time series models, decision analysis and the value of information, and simulation-based methods. Three lecture hours a week for one semester. Only one of the following may be counted: Management Science 371H, Statistics 371G, 371H, 375, 375H. Prerequisite: Business Administration 324 or 324H; Management Information Systems 301 or 310; Mathematics 408D, 408L, or 408M; and Statistics 309 or 309H.
- 372. Topics in Statistics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Statistics 309 with a grade of at least C-.

Topic 1: Statistical Computer Packages.

Topic 2: Sampling.

Topic 3: Statistical Decision Making for Business.

Topic 4: Multivariate Statistical Analysis.

Topic 5: Financial and Econometric Time Series Modeling. Applied skills course that focuses on statistical forecasting methods used in business. Subjects may include Box-Jenkins models; exponential smoothing models; ARCH/GARCH models for varying volatility in financial returns; seasonal adjustment of time series; tests for nonstationarity of time series; and modeling multiple time series. Each subject is illustrated with real data using series such as interest rates and stock returns. Additional prerequisite: Statistics 371G, 371H, 375, or 375H.

Topic 6: Optimization Methods in Finance. Focuses on deterministic and stochastic optimization methods used to analyze problems in finance, including linear, nonlinear, quadratic, and integer programming, and dynamic and stochastic programming. Additional prerequisite: Mathematics 408D, 408L, or 408M.

Topic 7: Computational Finance. A systematic introduction to the analysis and implementation of numerical methods used in finance. Covers numerical techniques used in derivative pricing and optimal asset allocation, such as Monte Carlo and quasi-Monte Carlo simulation, methods for solving partial differential equations, and dynamic programming. Additional prerequisite: Mathematics 408D, 408L, or 408M.

- 375. Statistics and Modeling for Quantitative Finance.** Restricted to students admitted to the McCombs School of Business. Methods used to model and analyze data, especially as applied to problems related to finance. Explores regression models, time-series models, and simulation-based methods. Three lecture hours a week for one semester. Only one of the following may be counted: Management Science 371H, Statistics 371G, 371H, 375, 375H. Prerequisite: Business Administration 324 or 324H; Management Information Systems 301 or 310; Mathematics 408D, 408L, or 408M; and Statistics 309 or 309H.
- 375H. Statistics and Modeling for Quantitative Finance: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Methods used to model and analyze data, especially as applied to problems related to finance. Explores regression models, time-series models, and simulation-based methods. Three lecture hours a week for one semester. Only one of the following may be counted: Management Science 371H, Statistics 371G, 371H, 375, 375H. Prerequisite: Business Administration 324 or 324H; Management Information Systems 301 or 310; Mathematics 408D, 408L, or 408M; and Statistics 309 or 309H.
- 376. Intermediate Statistics.** Restricted to students in a business major. Analysis of forecasting techniques and theory; macroeconomic models; long-range and short-term forecasting; forecasting for the firm, using case material. Three lecture hours a week for one semester. Prerequisite: Statistics 309 or 309H.
- 328. Consulting and Change Management.** Restricted to students in a business major. Designed to develop the fundamental change knowledge and consulting skills of students who plan to work with organizations as change agents, whether internally as managerial employees or externally as outside consultants. Three lecture hours a week for one semester. Prerequisite: Management 336 or 336H with a grade of at least C-.
- 336. Organizational Behavior.** Restricted to students in a business major. The process of managing organizations and the behavior of individuals and groups within the organizational setting. Three lecture hours a week for one semester. Management 336 and 336H may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H; and credit or registration for three semester hours of coursework in anthropology, psychology, or sociology.
- 336H. Organizational Behavior: Honors.** Restricted to students admitted to the McCombs School of Business Program. The process of managing organizations and the behavior of individuals and groups within the organizational setting. Three lecture hours a week for one semester. Management 336 and 336H may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H; and thirty semester hours of college coursework, including credit or registration for three semester hours of coursework in anthropology, psychology, or sociology.
- 337. Special Topics in Management.** Analysis of contemporary management problems. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the letter-grade basis only; these are identified in the *Course Schedule*. Only one of the following may be counted unless the topics vary: Management 337, Management Science 337, Operations Management 337. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

DEPARTMENT OF MANAGEMENT

MANAGEMENT: MAN

UPPER-DIVISION COURSES

- 320F. Foundations of Organizational Behavior and Administration.** An introduction to the management of organizations. Issues are addressed from the perspectives of strategy and planning, organizational behavior, and operations management. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.
- 325. Strategic Human Resources Management.** Restricted to students in a business major. Overview of the personnel function, covering recruitment, compensation, equal employment, job analysis, training, benefits, employee discipline, collective bargaining, safety, and health. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Management 336 or 336H.
- Topic 9: Leadership Issues.** Restricted to students in a business major. Three lecture hours a week for one semester. Prerequisite: Management 336 or 336H with a grade of at least C-.
- Topic 11: Management of Cultural Differences.** Restricted to students in a business major. Three lecture hours a week for one semester. Management 337 (Topic 11) and Middle Eastern Studies 322K (Topic 6: *Management of Cultural Differences*) may not both be counted. Prerequisite: Management 336, 336H, Operations Management 335, or 335H with a grade of at least C-.
- Topic 15: Government in the Business Environment.** Three lecture hours a week for one semester. Government 370L (Topic 4: *Government in the Business Environment*) and Management 337 (Topic 15) may not both be counted. Prerequisite: Management 336, 336H, Operations Management 335, or 335H with a grade of at least C-.

- Topic 16: Sociology of Entrepreneurship.** Same as African and African American Studies 358C and Sociology 358C. Three lecture hours a week for one semester. Only one of the following may be counted: African and African American Studies 374 (Topic: *Sociology of Entrepreneurship*), Management 337 (Topic 16), Sociology 321K (Topic: *Sociology of Entrepreneurship*). Prerequisite: For management majors, one of the following courses with a grade of at least C-, or two of the following courses with a grade of at least C- in each: Management 336, 336H, Operations Management 335 (or Management 335), Operations Management 335H (or Management 335H); for others, sixty semester hours of college coursework.
- Topic 20: Entrepreneurial Management.** Restricted to students in a business major. Covers the life cycle of an entrepreneurial business, including evaluating the attractiveness of an idea, launching the business, growing the business, and harvesting the profits. Three lecture hours a week for one semester. Prerequisite: Accounting 311; Management 336, 336H, Operations Management 335, or 335H with a grade of at least C-; and credit or registration for Finance 357 or 357H.
- Topic 21: The Art and Science of Negotiation.** Restricted to students in a business major. Designed to help students develop a broad array of negotiation skills and to understand negotiations in useful analytical frameworks. Emphasis is placed on simulations, role-playing, and cases. Three lecture hours a week for one semester. Prerequisite: Management 336 or 336H with a grade of at least C-.
- Topic 22: Women in Management.**
- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Management.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 353. Internship in Management.** Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.
- 366P. Management Practicum.** Restricted to business majors. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Only one of the following may be counted: Management 366P, Management Science 366P, Operations Management 366P. Prerequisite: Forty-five semester hours of college coursework and consent of instructor.
- 374. General Management and Strategy.** Restricted to students in a business major. Designed to enable students to analyze business situations from the point of view of the practicing general manager. Addresses key tasks involved in general management, including strategic decisions that insure the long-term health of the entire firm or a major division. Three lecture hours a week for one semester. Management 374 and 374H may not both be counted. Prerequisite: Seventy-five semester hours of college coursework, including one of the following: Management 336, 336H, Operations Management 335, 335H; credit or registration for Finance 357 or 357H, and Marketing 337 or 337H; and credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P.
- 374H. General Management and Strategy: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Designed to enable students to analyze business situations from the point of view of the practicing general manager. Addresses key tasks involved in general management, including strategic decisions that insure the long-term health of the entire firm or a major division. Three lecture hours a week for one semester. Management 374 and 374H may not both be counted. Prerequisite: Ninety semester hours of college coursework; Finance 357 or 357H; Management 336, 336H, Operations Management 335, or 335H; Marketing 337 or 337H; and credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P.
- 179C, 379C. Problems in Management.** Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; and Management 336 with a grade of at least C-.

DEPARTMENT OF MARKETING

INTERNATIONAL BUSINESS: I B

UPPER-DIVISION COURSES

320F. Foundations of International Business. Fundamentals of international trade and the international economy; international dimensions of several functional areas of business, including management, marketing, finance, and human resource management; theoretical, institutional, and functional foundations of international business. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.

140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in International Business. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Marketing. University credit is awarded for work in an exchange program; it may be counted a course-work taken in residence. May be repeated for credit when the topics vary.

350. International Trade. Restricted to students in a business major. Study of the principles, policies, and problems of the international exchange of goods and investments. Three lecture hours a week for one semester. Economics 339K and International Business 350 may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H.

372. Seminar in International Business. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites vary with the topic and are given in the *Course Schedule*.

Topic 1: International Marketing.

Topic 2: Business in Emerging Markets. Same as Latin American Studies 322 (Topic 9: *Business in Emerging Markets*) and Middle Eastern Studies 322K (Topic 4: *Business in Emerging Markets*). Only one of the following may be counted: International Business 372 (Topic 2), 372 (Topic: *Business in Developing Countries*), Latin American Studies 322 (Topic: *Business in Developing Countries*), Middle Eastern Studies 322K (Topic: *Business in Developing Countries*).

Topic 3: Managing the Global Corporation.

Topic 4: Competing with the Japanese.

Topic 5: Business in Latin America.

Topic 6: Business German. German 356W and International Business 372 (Topic 6) may not both be counted. Additional prerequisite: German 312K or 312V with a grade of at least C-, or appropriate score on the placement test.

Topic 7: Advanced Business German. Designed for students who have taken German 328. Taught in German. Normally meets with German 336W, 356V, International Business 372 (Topic 7). May be counted toward the international business elective requirement. Additional prerequisite: Three courses beyond German 506, or equivalent credit on the placement test.

Topic 8: Business Spanish. Only one of the following may be counted: International Business 372 (Topic 8), Mexican American Studies 350, Spanish 327. Additional prerequisite: Spanish 327G (or 327).

Topic 9: Business French. Taught in French. Additional prerequisite: French 320E and one additional upper-division French course, or consent of instructor.

378. International Business Operations. Restricted to students in a business major. Establishment and conduct of international business operations: trade, investments, branch and subsidiary management, intermediary functions; case studies in international enterprise. Three lecture hours a week for one semester. Prerequisite: Economics 339K or International Business 350, and credit or registration for one of the following: Accounting 353J, 366P, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P.

179C, 379C. Problems in International Business. Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; International Business 350 with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

MARKETING: MKT

UPPER-DIVISION COURSES

320F. Foundations of Marketing. Introduction to basic concepts and terminology in marketing: the process of developing marketing strategy, the role of marketing activities within the firm, external influences that affect the development of marketing strategy, and basic analytical tools appropriate to marketing decision making. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.

- 337. Principles of Marketing.** Restricted to students in a business major. Designed to expand the student's understanding of the marketing system and basic marketing activities and to provide a framework for marketing strategy development and implementation of marketing tools and tactics. Three lecture hours a week for one semester. Marketing 337 and 337H may not both be counted. Prerequisite: Credit or registration for Accounting 312 or 312H, Business Administration 324 or 324H, and Statistics 309 or 309H.
- 337H. Principles of Marketing: Honors.** Restricted to students admitted to the McCombs School of Business Honors Program. Designed to expand the student's understanding of the marketing system and basic marketing activities and to provide a framework for marketing strategy development and implementation of marketing tools and tactics. Three lecture hours a week for one semester. Marketing 337 and 337H may not both be counted. Prerequisite: Accounting 312H and credit or registration for Business Administration 324H.
- 338. Promotional Policies.** Restricted to students in a business major. Analysis of the use of promotional methods in marketing: advertising, personal selling, sales promotion, and indirect promotion; their social and economic consequences; their coordination and relationship to other business functions. Three lecture hours a week for one semester. Prerequisite: Marketing 337 or 337H.
- 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Marketing.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Marketing. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.
- 353. Internship in Marketing and International Business.** Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.
- 460. Information and Analysis.** Restricted to students in a business major. The development and analysis of information for marketing management sources. Three lecture hours and one recitation hour a week for one semester. Prerequisite: Marketing 337 or 337H, and Statistics 309 or 309H.
- 363. Professional Selling and Sales Management.** Restricted to students in a business major. Policies, operation, coordination, and control of personal selling activities in marketing organizations. Three lecture hours a week for one semester. Prerequisite: Marketing 337 or 337H.
- 366P. Special Projects in Marketing Practicum.** Restricted to business majors. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Prerequisite: Forty-five semester hours of college coursework, Marketing 337 or 337H, and consent of instructor.
- 370. Marketing Policies.** Restricted to students in a business major. A capstone course focusing on case studies of advanced marketing problems, including analysis of markets, promotional planning, pricing, and distribution coordination. Designed to help the student develop a comprehensive understanding of marketing policy and strategy formulation. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H, and Marketing 460; credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P; and six additional semester hours of coursework in marketing.
- 370K. Retail Merchandising.** Restricted to students in a business major. Designed to familiarize the student with all the activities associated with the sale of goods and services for final consumption and to provide an overview of the decisions involved in merchandising and management, including factors that influence and determine those decisions. Three lecture hours a week for one semester. Prerequisite: Marketing 337 or 337H.
- 372. Marketing Seminar.** Restricted to students in a business major. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Marketing 337 or 337H. Additional prerequisites may be required for some topics; these are given in the *Course Schedule*.
- Topic 1: Market Area Decisions.**
- Topic 2: Consumer Behavior.**
- Topic 3: Implementing Marketing Concepts.** Implementation of marketing concepts in a real-world setting through participation in marketing projects with area companies. Additional prerequisite: Consent of instructor.
- Topic 4: Global Marketing.** May be used in place of International Business 372 in fulfilling the requirements of the major in international business.

179C, 379C. Problems in Marketing. Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Marketing 337 or 337H with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

5. College of Communication

Roderick Hart, PhD, *Dean*
 Mark Bernstein, EdD, *Associate Dean, Student Affairs*
 Stephen Reese, PhD, *Associate Dean, Academic Affairs*
 Janice M. Daman, MBA, *Assistant Dean*
 Darrell D. Rocha, BA, *Assistant Dean*
<http://communication.utexas.edu/>

GENERAL INFORMATION

In an increasingly crowded and complex world, communication plays many roles. Accurate communication from person to person and from individual to public is essential to understanding, and understanding is basic to intelligent agreement or disagreement. The swift exchange of information permits business to grow, stimulates public taste, and brings about change while helping individuals and institutions to adapt to change. Decreasing the time between the discovery of new knowledge by scientist, scholar, or industrial experimenter and the comprehension of this knowledge by large segments of the public counteracts inertia and spreads the benefits of such discoveries. Communication makes possible the marshaling of public opinion and increases the effectiveness of forces for political progress.

The academic discipline of communication combines the characteristics of an art and of a science. Those who study communication as an art seek to improve in themselves and in others the oral, written, and visual skills of exchanging information. As a science, communication emphasizes the objective study and investigation of this fundamental aspect of human behavior.

The degree programs of the College of Communication do not represent all of the academic disciplines concerned with the process of communication or the effects of communication on the individual and society. Engineering and physics shape and design the instruments by which communication is transmit-

ted, and in the process become involved with human desires and reactions. Linguistics investigates the symbols by which human beings convey messages to each other. All language study bears on the process of communication. Art, drama, music, and literature are forms of communication. Psychology studies the relationship of communication to the individual, and sociology examines the impact of communication on society. Education relies heavily on effective communication. Thus the student who majors in the College of Communication should find relationships between the major and every course in the program. The major should give focus to the student's educational experience at the University. Those who minor in one of the communication fields should find means of increasing their personal effectiveness through developing skill in writing and speaking and in discerning the role of the mass media in the communication process in society.

FACILITIES

In addition to the extensive library and computer resources of the University, certain special resources provide support for work in communication. Chief among them is the Jesse H. Jones Communication Center. Communication Building A (CMA) is a six-level building housing classrooms, offices, and sophisticated multimedia facilities. All of the instructional and office spaces are equipped with Ethernet. Communication Building B (CMB), a nine-level production building, houses Austin's public television station, KLRU, and the National Public Radio station KUT-FM. Also

housed in Communication Building B are teaching and production facilities for the School of Journalism and the Department of Radio-Television-Film.

These facilities provide opportunities for academic programs that cross disciplinary lines, interrelate print and electronic media, and otherwise combine the resources of the college in ways not feasible within any one of the component units.

Although students have access to the college's computer writing laboratory, they are encouraged to purchase personal computers for their own use.

FINANCIAL ASSISTANCE AVAILABLE THROUGH THE COLLEGE

The College of Communication and each academic unit have a large number of scholarships that are awarded annually. Students interested in receiving one of these scholarships should apply online early in the spring semester for scholarships to be awarded the following academic year. More information about college scholarships is available at <http://communication.utexas.edu/students/scholarships/> and from the Office of Student Affairs.

ACADEMIC ADVISING

The Office of Student Affairs, CMA A4.140, in collaboration with the academic units, oversees all advising in the college. To allow in-depth advising on specific programs of study, courses, and career choices in the major, each student is assigned an adviser. Students should meet with their advisers to select courses appropriate to the degree and to ensure that all degree requirements are met.

Some academic units require that the student be advised before registering to ensure that he or she takes courses in sequential order. Students in these units must see the academic adviser or a specific faculty member for approval to register for courses in the major. Finally, students should consult their advisers for assistance in preparing for graduation.

COMMUNICATION CAREER SERVICES

Communication Career Services (CCS) provides a variety of career development and job/internship search assistance programs for students and alumni. The office's online systems link clients to the CCS job and

internship databases and on-campus interviewing and résumé referral programs. Communication job and internship fairs, on-campus interviews, and a wide range of job search workshops and career exploration programs provide networking opportunities and allow students to explore their career options, gain experience, and build their career management skills. Individual career counseling, prelaw advising, and an extensive library and Web site offer additional resources to help candidates research and prepare for the job market in a wide variety of media, communication, and related industries.

As a complement to the assistance available from the college, the University's Sanger Learning and Career Center provides career counseling services to all students. The center offers professional career counseling, skill and interest inventories and tests, and assistance to students in choosing or changing their majors and considering graduate study.

The University makes no promise to secure employment for each graduate.

STUDENT ORGANIZATIONS

Student organizations provide an opportunity for students to meet fellow students within their major, learn about a major or career, hear from professionals in the field, and gain hands-on experience in club administration and leadership. One organization students may join is the Communication Council, the governing body for student activities in the college. The Communication Council acts as a representative of all undergraduate communication students and sponsors college-wide programs such as Communication Week and Senior Celebration as well as other events throughout the year. A complete list of student organizations in the college is available at <http://communication.utexas.edu/>.

ADMISSION AND REGISTRATION

ADMISSION TO THE UNIVERSITY

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*. Admission to a major may be restricted by the availability of instructional resources.

ADMISSION POLICIES OF THE COLLEGE

Students admitted to the University with deficiencies in high school units must remove them by the means prescribed in *General Information*. Course credit used to remove deficiencies may not be counted toward the student's degree.

A few students who already have a bachelor's degree and who are not candidates for an advanced degree are admitted to the college each year as nondegree students. Such students are admitted only with the approval of the appropriate academic unit head and the dean.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

Enrollment in upper-division courses in the College of Communication may be restricted because of limitations on instructional resources.

ACADEMIC POLICIES AND PROCEDURES

HONORS

SENIOR FELLOWS PROGRAM

The Senior Fellows Program is a college-wide honors program providing a broad, interdisciplinary supplement to the student's major. The program is designed for students with the talent and interest to go beyond the usual undergraduate experience. Participants who complete four honors courses in communication with a grade of at least *B* in each course earn the distinction of Senior Fellow. The coursework is undertaken in conjunction with the student's degree requirements. Students with a grade point average of at least 3.30 are invited to apply to participate during their junior and/or senior years. Requirements for admission include completion of the formal application process, which

includes a written statement of purpose indicating why the student wishes to be part of the program, and an interview with members of the faculty committee that oversees the program. Twenty-five to thirty students are selected for the program each year.

DEPARTMENTAL HONORS PROGRAMS

Each academic unit in the College of Communication offers an honors program to students majoring in the unit. Requirements for the programs vary, but all include (1) minimum grade point averages for admission to and continuance in the program; (2) three to six semester hours of honors coursework; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Each academic unit encourages eligible students to apply for admission to the honors program. Students who complete the program receive a certificate indicating "Special Honors in (name of field)." This notation also appears on the student's academic record.

ADVERTISING HONORS PROGRAM

Students who plan to seek special honors in advertising should apply to the department undergraduate adviser for admission to the honors program upon completion of sixty semester hours of coursework; they must apply no later than upon completion of ninety semester hours. A University grade point average of at least 3.50 and a grade point average in advertising of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Advertising 373H, *Integrated Communications Campaigns: Honors*, and 379H, *Honors Tutorial Course*, with a grade of at least *B* in each; (2) a University grade point average of at least 3.50 and a grade point average in advertising of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Advertising.

COMMUNICATION SCIENCES AND DISORDERS HONORS PROGRAM

Students who plan to seek special honors in communication sciences and disorders should apply to the department undergraduate adviser for admission to the honors program upon completion of ninety semester hours of coursework. A University grade point average of at least 3.00 and a grade point average in communication sciences and disorders of at least 3.50

are required for admission. The requirements for graduation with special honors are (1) Communication Sciences and Disorders 359H, *Honors Tutorial Course: Reading*, with a grade of at least *B*-; (2) Communication Sciences and Disorders 379H, *Honors Tutorial Course: Special Project*, with a grade of at least *B*-; (3) a University grade point average of at least 3.00 and a grade point average in communication sciences and disorders of at least 3.50; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Communication Sciences and Disorders.

COMMUNICATION STUDIES HONORS PROGRAM

Students who plan to seek special honors in communication studies should consult the communication studies undergraduate adviser upon completion of seventy-five semester hours of coursework. A University grade point average of at least 3.00 and a grade point average in communication studies of at least 3.50 are required for admission to the honors program. The requirements for graduation with special honors are (1) a major in communication studies; (2) Communication Studies 359H, *Honors Tutorial Course: Reading*, with a grade of at least *B*-; (3) Communication Studies 379H, *Honors Tutorial Course: Special Project*, with a grade of at least *B*-; (4) a University grade point average of at least 3.00 and a grade point average in communication studies of at least 3.50; and (5) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Communication Studies.

JOURNALISM HONORS PROGRAM

Students who plan to seek special honors in journalism should apply to the School of Journalism adviser for admission to the honors program upon completion of sixty semester hours of coursework; they must apply no later than upon completion of ninety semester hours. A University grade point average of at least 3.50 and a grade point average in journalism of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Journalism 379H, *Honors Tutorial Course*, with a grade of at least *B*; (2) a University grade point average of at least 3.50 and a grade point average in journalism of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Journalism.

PUBLIC RELATIONS HONORS PROGRAM

Students who plan to seek special honors in public relations should apply to the public relations adviser for admission to the honors program upon completion of sixty semester hours of coursework; they must apply no later than upon completion of ninety semester hours. A University grade point average of at least 3.50 and a grade point average in public relations of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Public Relations 377H, *Integrated Communications Campaigns: Honors*, and 379H, *Honors Tutorial Course*, with a grade of at least *B* in each; (2) a University grade point average of at least 3.50 and a grade point average in public relations of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Public Relations.

RADIO-TELEVISION-FILM HONORS PROGRAM

Students who plan to seek special honors in radio-television-film should apply to the department chair for admission to the honors program upon completion of seventy-five semester hours of coursework; they must apply no later than upon completion of ninety semester hours. A University grade point average of at least 3.00 and a grade point average in radio-television-film of at least 3.50 are required for admission to and continuation in the honors program. The requirements for graduation with special honors are (1) two semesters of Radio-Television-Film 378H, *Honors Tutorial Course*, with a grade of at least *B*- each semester; (2) a University grade point average of at least 3.00 and a grade point average in radio-television-film of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Radio-Television-Film.

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

COMMUNICATION AND SOCIETY CONCENTRATION

This concentration is designed for consumers and creators of messages in public contexts. It is open only to students in majors outside the College of Communication; any noncommunication student may enroll in any of these courses for which he or she meets the prerequisite. In addition to fulfilling the prerequisite, the student must have a University grade point average of at least 2.25 to enroll in any upper-division course in the College of Communication.

The communication and society concentration requires eighteen semester hours of coursework, consisting of two required courses and twelve hours of electives; nine hours of the elective work must be in upper-division courses. Of the eighteen semester hours required for the concentration, at least twelve must be completed in residence. At any time after enrolling in his or her last concentration course, the student should fill out a concentration completion form in the Office of Student Affairs. The form must be submitted by the deadline to apply for graduation in the student's final semester. Students who complete the concentration will receive verification.

A student who wishes to use the concentration to fulfill minor requirements should make certain these courses meet the requirements of his or her college.

CONCENTRATION COURSES

REQUIRED COURSES

COM 309, *Communication Technology and Society*
RTF 305, *Introduction to Media Studies*

ELECTIVES

ADV 315, *History and Development of Advertising*
COM 316M, *Race, Ethnicity, and the Media*
CMS 306M, *Professional Communication Skills*
CMS 332K, *Theories of Persuasion*
CMS 342K, *Political Communication*
J 360, *Media Law and Ethics*
J 364E, *The Mass Media and Society*

US LATINO AND LATIN AMERICAN MEDIA STUDIES CONCENTRATION

This concentration is designed to introduce students to United States Latino and Latin American issues in communication and the media and to give them the opportunity to prepare for professional work related to these areas. Completion of the concentration requires twelve semester hours of coursework, consisting of one required course and nine hours of elective work in upper-division courses. Any College of Communication student may enroll in any of the concentration courses for which he or she meets the prerequisite. The student must have a University grade point average of at least 2.25 to enroll in any upper-division course in the college.

The student must submit an application form online to the Office of Student Affairs in order to enroll in the US Latino and Latin American media studies concentration. Certain course prerequisites may be waived once the student completes the concentration application form.

Each degree program in the college imposes a limit on the number of hours in the college that may be counted toward the degree; each also imposes limits on the number of hours in the major that may be counted. For students who complete the US Latino and Latin American media studies concentration, these limits may be modified with the approval of the Office of Student Affairs.

Students should consult the Office of Student Affairs for additional information about the program and the coursework that meets concentration requirements. The courses that may be counted toward this concentration include, but are not limited to, the following.

CONCENTRATION COURSES

REQUIRED COURSE

COM 316M, *Race, Ethnicity, and the Media*; or RTF 316M, *Race, Ethnicity, and the Media*

ELECTIVES

ADV 334, *International Advertising*
ADV 378, Topic 2: *Advanced Issues in Multicultural Markets*
J 340C, Topic 1: *Mass Media and Minorities*
J 349T, Topic 4: *International Reporting*
J 367E, *Journalism in Latin America*
RTF 359S, Topic: *Brazilian Media and Culture*
RTF 365, Topic: *Race, Class, and Media*

COURSES FOR TEACHER PREPARATION

The college does not currently offer a teaching certification program for any of its degrees. Students who wish to pursue teacher certification should consult the teacher certification officer in the College of Education.

GRADUATION

SPECIAL REQUIREMENTS OF THE COLLEGE

All students must fulfill the general requirements for graduation given in chapter 1. Students in the College of Communication must also fulfill the following requirements.

1. All University students must have a grade point average of at least 2.00 to graduate. In the College of Communication, a student who fails to achieve this grade point average in the normal 120 hours required for a degree may register for up to forty additional hours in order to do so.
2. All communication majors must have a grade of at least *C* in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol *CR*.
3. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. In the College of Communication, these sixty hours must include at least eighteen hours of upper-division coursework and at least six hours of upper-division coursework in the major.
4. A candidate for a degree must be registered in the College of Communication either in residence or in absentia the semester or summer session the degree is to be awarded and must apply to the dean for the degree no later than the date specified in the official academic calendar. Information about applying for graduation is given below.
5. An Air Force, Army, or Naval Reserve Officer Training Corps student who elects the basic and/or advanced program in air force science, military science, or naval science will not be approved for graduation until the student's government contract is completed or the student is released from the ROTC.
6. Each degree program is arranged to provide for

the orderly progress of the student's coursework. A beginning student (including a transfer student with fewer than forty-eight semester hours of transferable credit) who registers for twelve semester hours or more must take at least nine semester hours, in at least three courses, of the coursework listed as prescribed work for one of the degrees in the College of Communication. The student must continue to take at least nine semester hours of the prescribed work each long-session semester until he or she has completed forty-eight semester hours of credit. The dean may adjust this rule in exceptional circumstances, or when the student has earned credit by examination, or when the student registers for fewer than twelve hours in a long-session semester.

7. No student in the College of Communication may repeat for credit a course in which he or she has earned a grade of *C* or better.

THE DEGREE AUDIT

Students should verify the coursework they have completed and the coursework still needed for the degree by reviewing a degree audit at least once each semester with an adviser in the Office of Student Affairs. The degree audit is a computer-generated report of the student's progress in completing degree requirements. He or she may also create, print, and review an audit online through IDA, the Interactive Degree Audit system; information about IDA is available at <http://registrar.utexas.edu/students/degrees/ida/>.

Although the degree audit normally provides an accurate statement of requirements, the student is responsible for knowing the requirements for the degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill those requirements. Because the student is responsible for registering for the courses needed to fulfill degree requirements, he or she should seek an official ruling in the Office of Student Affairs before registering if in doubt about any requirement.

APPLYING FOR GRADUATION

To graduate, a student must be registered in the College of Communication and must file a graduation application with the Office of Student Affairs. A student who is enrolled in residence must submit the application online at <http://communication.utexas.edu/>. A student who is not currently enrolled

should contact the Office of Student Affairs about the process to graduate in absentia.

The graduation application should be filed at the beginning of the student's last semester; it must be filed no later than the deadline given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

DEGREES

DEGREES OFFERED

In the College of Communication, six undergraduate degrees are offered: Bachelor of Science in Advertising, Bachelor of Science in Communication Sciences and Disorders, Bachelor of Science in Communication Studies, Bachelor of Journalism, Bachelor of Science in Public Relations, and Bachelor of Science in Radio-Television-Film. In addition to the core curriculum, the requirements of each degree consist of special requirements, prescribed work, and major requirements; these are given later in this chapter under the heading for the degree. In addition, the student must fulfill the University-wide graduation requirements given on pages 12–13 and the special requirements of the College of Communication given on page 86.

A student may not earn more than two undergraduate degrees from the College of Communication. A student may not earn both the Bachelor of Science in Advertising and the Bachelor of Science in Public Relations.

THE MINOR

While a minor is not required as part of any communication degree program, the student may choose to complete a minor in a field outside the College of Communication. A student may complete only one minor. The minor consists of at least fifteen semester hours in a single field of study, including at least nine hours of upper-division coursework. Nine of the fifteen hours must be completed in residence. A course to be counted toward the minor may not be taken on the pass/fail basis unless the course is offered only on that basis. Only one course counted toward the core curriculum, prescribed work, and major requirements for the student's degree may also be counted toward the minor.

If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the fifteen hours may be lower-division but must include at least nine hours beyond course 507 or the equivalent.

All minors must be approved by the student's academic adviser.

The College of Communication allows the student to minor in any field outside the college in which the University offers a major. However, prerequisites and other enrollment restrictions may prevent the student from pursuing a minor in some fields. Before planning to use specific courses to make up the minor, the student should consult the department that offers those courses.

WRITING REQUIREMENT

As part of the prescribed work for all degrees in the college, students must complete two courses with a substantial writing component or a writing flag. If the writing requirement is not fulfilled by courses specified for the degree, the student must complete writing courses as electives or in addition to the number of hours required for the degree. Courses with a substantial writing component or writing flag are identified in the *Course Schedule*.

COMMUNICATION AND CULTURE REQUIREMENT

As part of the prescribed work for all degrees, students must complete three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses used to fulfill this requirement may also be used to fulfill the cultural diversity in the United States flag requirement and other degree requirements. Multicultural courses include, but are not limited to, the following; all courses that fulfill this requirement are identified in the *Course Schedule*.

ADV 316, *Creativity and American Culture*

ADV 371J, *Media Law and Ethics*

ADV 378, Topic 2: *Advanced Issues in Multicultural Markets*

ADV 378, Topic: *African Americans and the Media*

COM 316M, *Race, Ethnicity, and the Media*

CMS 314L, *Language, Communication, and Culture*

CMS 340K, *Communication and Social Change*

CMS 355K, *Intercultural Communication*

CMS 365K, *Male-Female Communication*

CMS 367, Topic: *Language and Culture*

CSD 308K, *Perspectives on Deafness*

CSD 314L, *Sociocultural Bases of Communication*

CSD 360M, *Communication and Deaf People*

J 335, *Narrative Journalism*

J 340C, Topic 1: *Mass Media and Minorities*

J 340C, Topic 2: *African Americans and the Media*

J 340C, Topic 3: *Journalism and Religion*

J 340C, Topic 4: *Leadership, Management, and the Media*

J 340C, Topic 5: *Women and the News*

J 340C, Topic 6: *African American Athletes and the Media*

RTF 331K, Topic 1: *Cult Movies and Gender Issues*

RTF 331K, Topic 2: *Television and Theories of Gender*

RTF 359S, Topic 1: *Hispanic Images and Counterimages*

RTF 365, Topic 4: *History of United States Latino Media*

RTF 365, Topic 6: *Latinos and Media*

RTF 370, Topic: *Women and Film*

APPLICABILITY OF CERTAIN COURSES

INTERNSHIP CREDIT

Some communication degree programs require an internship; in other programs, students may elect to complete an internship. In either case, the student must be a communication major and must meet the prerequisite for the internship course. Up to but no more than four semester hours of credit in internship courses may be counted toward the student's degree.

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They are counted among courses for which a student is enrolled, and the grades are included in the grade point average. However, these courses may not be counted toward a degree in the College of Communication.

ROTC COURSES

No more than nine semester hours of credit for air force science, military science, or naval science courses may be counted toward any degree in the College of Communication. Such coursework may be counted only as lower-division electives in degree programs that have room for such electives, and only by students who have completed the third and fourth years of the ROTC program. ROTC courses may not be substituted for any specific required course.

CONCURRENT ENROLLMENT AND CORRESPONDENCE AND EXTENSION COURSES

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree in the College of Communication unless specifically approved in advance by the dean. Requests to take communication courses by correspondence or extension are normally disapproved. A student in his or her final semester may not enroll concurrently at another institution in any course that is to be counted toward the degree. No more than 30 percent of the semester hours required for any degree offered in the College of Communication may be taken by correspondence.

COURSES TAKEN ON THE PASS/FAIL BASIS

A student in the College of Communication may count toward the degree up to fifteen semester hours of coursework in elective subjects outside the College of Communication taken on the pass/fail basis. No course required for the degree and taken in residence may be taken pass/fail, unless the course is offered only on that basis. The student may also take examinations for credit in elective subjects on the pass/fail basis; credit earned by examination is not counted toward the total of five courses that the student may take on this basis. If a student chooses to major in a subject in which he or she has taken a course pass/fail, the academic unit that offers the major determines whether the course may be counted toward the student's major requirements. Complete rules on registration on the pass/fail basis are given in *General Information*.

BIBLE COURSES

No more than twelve semester hours of Bible courses may be counted toward a degree.

BACHELOR OF SCIENCE IN ADVERTISING

To be awarded the degree of Bachelor of Science in Advertising, the candidate must complete 120 semester hours of coursework and must fulfill the University-wide graduation requirements on pages 12–13, the college graduation requirements on page 86, and the special requirements, core curriculum, prescribed work, and major requirements on page 91.

AREAS OF STUDY

Students majoring in advertising specialize in one of three programs: Texas Account Planning, Texas Creative, or Texas Media. Admission to the Texas Creative and Texas Media programs is by an application process; students who are not interested in or accepted into either of these programs will complete the Texas Account Planning program. All advertising majors must complete the requirements of their specialization, as well as the requirements listed in the preceding paragraph.

TEXAS ACCOUNT PLANNING PROGRAM

This program is designed for students interested in a variety of professional careers, including account planning and advertising management positions in a wide range of advertising, sales promotion, direct response, promotional products, and related agencies. Students planning to work for advertisers, such as manufacturing or service companies, rather than for agencies, may also meet their goals through the Texas Account Planning program. The program focuses on an integrated approach in which communication problems are addressed with a variety of tools, including advertising, public relations, sales promotion, and direct response. Students must complete Advertising 378 (Topic 20: *Account Planning*) and nine additional hours of coursework in advertising. It is recommended that students include an additional account planning course in these nine hours.

TEXAS CREATIVE PROGRAM

This program is designed to mold talented students into skilled advertising copywriters and art directors. To achieve that goal, it focuses on the creative and strategic thinking required to make the highest quality advertising messages. The program consists of Advertising 343K, *Portfolio I*; 468K, *Portfolio II*; and 468L, *Portfolio III*. In these three courses, students are expected to learn conceptual and critical thinking skills, computer design and page layout skills, and copywriting. The sequence also helps students develop the portfolio of creative work that is required of those seeking jobs in advertising.

Students who complete Advertising 325 with a grade of at least *B* may apply for admission to the Texas Creative program. Applications are generally distributed during the last week of class, and decisions are posted the following week. Students who are accepted into the

program may enroll in Advertising 343K the following semester; those who are not accepted may apply again the following semester, but students may apply only twice. Student work is reviewed each semester, and advancement through the program is contingent upon the quality of portfolio development.

TEXAS MEDIA PROGRAM

This program is designed to help students develop the characteristics that define success in advertising media planning, buying, sales, and new media development. Because advertising media is a broad and quickly evolving industry, the program offers a variety of courses, allowing students to focus their training and allowing the program itself to adapt to industry developments.

Students who complete Advertising 345J with a grade of at least *B* may apply for admission to the Texas Media program. Applications are accepted each semester during the consent period. Admission decisions are made at the end of the semester and students admitted to the program are notified by a Secure Academic Note prior to the next add/drop registration period. Those who are not admitted may apply again the following semester, but students may apply only twice.

Texas Media students complete three upper-division courses, which may be counted as upper-division advertising electives. All students in the program complete Advertising 377 (Topic 1: *Advanced Media Strategies*), a seminar and hands-on, project-based course. For their other two courses, students choose from topics of Advertising 377 and from approved topics of Advertising 378. Courses in the program may be taken concurrently. Most students complete the program in two semesters.

THE CONSENT PROCEDURE

Part of the prerequisite for some advertising courses is consent of the instructor received prior to registering. To be able to register for such a course, a student must first ask for and receive the instructor's consent. The student may be invited to an interview with the instructor or may be asked to provide supporting materials, such as an application or an essay. The student is responsible for knowing the deadline to apply. Consent forms are available from the student's adviser and in the Department of Advertising.

SPECIAL REQUIREMENTS

To enroll in upper-division advertising courses, a student must have completed Advertising 318J in residence with a grade of at least *B*, and must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill these requirements will be dropped from upper-division advertising courses, normally before the twelfth class day. The grade point average requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average. Students may enroll in Advertising 318J no more than twice.

In addition, advertising majors must have a grade of at least *C* in each course taken in the College of Communication that is counted toward the degree and a grade of at least *C* in each course counted toward the major requirements; if the course is offered on the pass/fail basis only, the student must have the symbol *CR*.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2, as well as the prescribed work for the Bachelor of Science in Advertising that is listed below. In some cases, a course required for the BSAdv may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.
2. Two courses with a writing flag or a substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given on pages 87–88; a complete list is available in the college's Office of Student Affairs before registration for each

semester and summer session. The courses are also identified in the *Course Schedule*.

4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis.

Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. Statistics and Scientific Computation 306, completed in residence. This course also meets the core curriculum mathematics requirement.
6. Twelve semester hours of coursework in the McCombs School of Business, preferably three hours in marketing, three hours in accounting, three hours in either legal environment of business or finance, and three hours in management. At least six of the twelve hours must be in upper-division coursework. Marketing 338 may not be used to fulfill this requirement.
7. At least thirty-six semester hours of upper-division coursework.
8. No more than twelve semester hours of transfer credit in advertising may be counted toward the degree.
9. Enough additional coursework to make a total of 120 semester hours. No more than forty-two hours in advertising and no more than thirty-six hours in any other single field may be counted toward the degree.

MAJOR REQUIREMENTS

1. At least thirty-six but no more than forty-two semester hours of advertising, of which at least twenty-four hours must be upper-division. The following courses are required: Advertising 318J, 325, 344K, 345J, 350 or 468L, 370J, 371J or 376, and 373. The student must complete Advertising 318J in residence with a grade of at least *B*.
2. At least six semester hours of coursework must be taken in the College of Communication but outside the department. However, no student may count toward the degree more than forty-eight hours (including transfer credit) in College of Communication coursework.
3. No College of Communication course to be counted toward the degree and no course to be counted toward major requirement 1 above may be taken on the pass/fail basis, unless the course is offered only on that basis.

ORDER AND CHOICE OF WORK

FIRST YEAR

1. The student must take three courses from the following group each semester:
 - a. Rhetoric and Writing 306.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in a foreign language.
2. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

SECOND YEAR

1. The student must take three courses from the following group each semester; four are recommended:
 - a. English 316K and any three-semester-hour course in English or rhetoric and writing.
 - b. Courses to be counted toward the American

history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.

- c. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Advertising 318J.
 3. Statistics and Scientific Computation 306.
 4. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester. Basic courses in accounting, studio art, and computer sciences are especially recommended.

THIRD AND FOURTH YEARS

1. Two courses with a substantial writing component or a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. The remaining courses listed as major requirements.
4. Upper-division electives chosen to support the major. Advertising majors normally emphasize economics, government, history, English, sociology, psychology, marketing, or management.

BACHELOR OF SCIENCE IN COMMUNICATION SCIENCES AND DISORDERS

To be awarded the degree of Bachelor of Science in Communication Sciences and Disorders, the candidate must complete 120 semester hours of coursework and must fulfill the University-wide graduation requirements on pages 12–13, the college graduation requirements on page 86, and the special requirements, core curriculum, prescribed work, and major requirements below.

SPECIAL REQUIREMENTS

To enroll in upper-division communication sciences and disorders courses, a student must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill this requirement will be dropped from upper-division communication sciences and disorders courses, normally before the twelfth class day. This requirement is waived for the transfer student during the first semester of course-

work, while he or she is establishing a University grade point average.

In addition, a student with a major in communication sciences and disorders must have a grade of at least C in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol CR.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2, as well as the prescribed work for the Bachelor of Science in Communication Sciences and Disorders that is listed below. In some cases, a course required for the BSCSD may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.
2. Two courses with a writing flag or a substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given on pages 87–88; a complete list is available in the college's Office of Student Affairs before registration for each semester and summer session. The courses are also identified in the *Course Schedule*.
4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis.

Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some lan-

guages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Coursework in American Sign Language may be used to fulfill this requirement. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. At least thirty-six semester hours of upper-division coursework.
6. No more than twelve semester hours of transfer credit in communication sciences and disorders may be counted toward the degree.
7. Enough additional coursework to make a total of 120 semester hours. No more than thirty-six semester hours in one field of study may be counted toward the degree.

SPECIAL EMPHASES IN COMMUNICATION SCIENCES AND DISORDERS

Students majoring in communication sciences and disorders may specialize in speech/language pathology, audiology, or education of the deaf/hearing-impaired. After completing the necessary undergraduate coursework, they may seek the graduate degrees that are required for professional accreditation by the American Speech-Language-Hearing Association (for those in speech/language pathology and audiology) or the Council on Education of the Deaf (for those in education of the deaf/hearing-impaired). Students in speech/language pathology and audiology who wish to practice in Texas must be licensed by the Texas Department of State Health Services; those in education of the deaf/hearing-impaired must be certified by the Texas State Board for Educator Certification.

MAJOR REQUIREMENTS

1. Students specializing in speech/language pathology must complete at least thirty-four semester hours of coursework in communication sciences

and disorders; those specializing in audiology must complete at least thirty-five hours; those specializing in education of the deaf/hearing-impaired must complete at least thirty-two hours. For students in all three specializations, fifteen hours of this coursework must be upper-division. No more than thirty-five semester hours of coursework in communication sciences and disorders may be counted toward the degree. The following courses are required:

- a. Speech/language pathology: Communication Sciences and Disorders 306K, 311K, 313L, 318K, 118L, 341, 350, 358, 358S, 367K, 371, and 373.
 - b. Audiology: Communication Sciences and Disorders 306K, 311K, 313L, 318K, 118L, 341, 350, 358, 358S, 367K or 371, 373, 378, and 178L.
 - c. Education of the deaf/hearing-impaired: Communication Sciences and Disorders 308K, 311K, 313L, 314L, 318K, 118L, 341, 360M, 367K, 373, and four hours of 175N.
2. At least six semester hours of coursework must be taken in the College of Communication but outside communication sciences and disorders. However, no student may count toward the degree more than forty-four semester hours (including transfer credit) in College of Communication coursework.
 3. No College of Communication course to be counted toward the degree may be taken on the pass/fail basis, unless the course is offered only on that basis.

ORDER AND CHOICE OF WORK

FIRST YEAR

1. The student must take three courses from the following group each semester:
 - a. Rhetoric and Writing 306.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in a foreign language. Students in education of the deaf/hearing-impaired are encouraged to take American Sign Language.
2. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

SECOND YEAR

1. The student must take three courses from the following group each semester; four are recommended:
 - a. English 316K and any three-semester-hour course in English or rhetoric and writing.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Communication Sciences and Disorders 306K (for students in speech/language pathology or audiology) or 308K (for students in education of the deaf/hearing-impaired) and other lower-division courses in communication sciences and disorders recommended by the student's adviser.
3. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester.

THIRD AND FOURTH YEARS

1. Two courses with a substantial writing component or a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. The remaining courses listed as major requirements.
4. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester.

BACHELOR OF SCIENCE IN COMMUNICATION STUDIES

To be awarded the degree of Bachelor of Science in Communication Studies, the candidate must complete 120 semester hours of coursework and fulfill the University-wide graduation requirements on pages 12–13, the college graduation requirements on page 86, and the special requirements, core curriculum, prescribed work, and major requirements below.

SPECIAL REQUIREMENTS

Students may take no more than nine hours of communication studies coursework, including transfer work, before they have declared a major in communication studies. Exceptions may be made for students who have officially declared a communication studies minor with their colleges, and for communication studies courses taken during a summer session. Students minoring in communication studies may take only the number of hours required for the minor.

To enroll in upper-division communication studies courses, a student must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill this requirement will be dropped from upper-division communication studies courses, normally before the twelfth class day. This requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average.

In addition, a student with a major in communication studies must have a grade of at least C in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol CR.

A student majoring in communication studies may not register for more than nine semester hours of communication studies in one semester or summer session.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2, as well as the prescribed work for the Bachelor of Science in Communication Studies that is listed below. In some cases, a course required for the BSCommStds may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.

2. Two courses with a writing flag or a substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given on pages 87–88; a complete list is available in the college's Office of Student Affairs before registration for each semester and summer session. The courses are also identified in the *Course Schedule*.
4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis.

Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. In some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. At least thirty-six semester hours of upper-division coursework.
6. No more than twelve semester hours of transfer credit in communication studies may be counted toward the degree.
7. Enough additional coursework to make a total of 120 semester hours. No more than thirty-six semester hours in one field of study may be counted toward the degree.

MAJOR REQUIREMENTS

1. At least thirty but no more than thirty-six semester hours of coursework in communication studies. At least fifteen hours must be in upper-division coursework. Each student must complete one of the following tracks:
 - a. *Corporate Communication*
 1. Communication Studies 306M, 313M, and 332K.
 2. Six semester hours chosen from the following courses: Communication Studies 310K, 316L, 350M, 370K, and 372K.
 3. Fifteen additional semester hours of coursework in communication studies.
 - b. *Human Relations*
 1. Communication Studies 306M and 332K.
 2. Nine semester hours chosen from the following courses: Communication Studies 314L, 315M, 334K, 344K, 354, 355K, 357, 358, and 371K.
 3. Fifteen additional semester hours of coursework in communication studies.
 - c. *Political Communication*
 1. Communication Studies 306M and 332K.
 2. Nine semester hours chosen from the following courses: Communication Studies 317C, 332, 340K, 342K, and 370K.
 3. Fifteen additional semester hours of coursework in communication studies.
2. At least six semester hours of coursework must be taken in the College of Communication but outside communication studies. However, no student may count toward the degree more than forty-two semester hours (including transfer credit) in College of Communication coursework.
3. No College of Communication course to be counted toward the degree may be taken on the pass/fail basis, unless the course is offered only on that basis.

ORDER AND CHOICE OF WORK

FIRST YEAR

1. The student must take three courses from the following group each semester:
 - a. Rhetoric and Writing 306.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics,

and science and technology requirements of the core curriculum.

- c. Courses in a foreign language.
2. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

SECOND YEAR

1. The student must take three courses from the following group each semester; four are recommended:
 - a. English 316K and any three-semester-hour course in English or rhetoric and writing.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Lower-division communication studies courses recommended by the student's adviser.
3. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester.

THIRD AND FOURTH YEARS

1. Two courses with a substantial writing component or a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. The remaining courses listed as major requirements. Students should note that some upper-division courses have a series of prerequisite courses that takes up to three semesters to complete.
4. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester.

BACHELOR OF JOURNALISM

To be awarded the degree of Bachelor of Journalism, the candidate must complete 120 semester hours of coursework and must fulfill the University-wide

graduation requirements on pages 12–13, the college graduation requirements on page 86, and the special requirements, core curriculum, prescribed work, and major requirements below.

AREAS OF STUDY

Journalism courses are divided broadly into skills and studies courses and more narrowly within these two categories according to their level and probable writing content. Not all courses are offered every semester.

Studies courses (numbered 310–314 and 360–369): Journalism 310, 310K, 360, 361E, 362E, 363, 364E, 366E, 367E

Studies courses that may have a substantial writing component or a writing flag (numbered 340–349): Journalism 340C, 347S, 348S, 349T

Skills courses (numbered 315–319): Journalism 315, 316, 318, 319

Introductory skills courses (numbered 320–329): Journalism 320D, 321C, 322D, 327

Open skills courses (numbered 330–339): Journalism 330, 331, 331K, 131P, 334, 335, 338, 339D. In general, these courses are open to all students who have completed the skills core (Journalism 315 and 321C) and either 320D (print, photojournalism, and multimedia majors) or 322D (broadcast news majors).

Intermediate skills courses (numbered 350–359): Journalism 353D, 355, 359T

Advanced skills courses (numbered 370–379): Journalism 370K, 371K, 372D, 373D, 374D, 375, 376D, 377D, 379, 379P

In addition, courses are divided into the school's four areas of professional concentration: broadcast news, multimedia journalism, photojournalism, and print journalism. The print concentration is divided into three sequences: newspaper reporting and writing, magazine writing and editing, and copy editing and design.

Courses in each concentration have prerequisites appropriate to their skill level; prerequisites may include testing, an interview, or other procedures in conjunction with the school's application process. Information about these additional requirements is available from the School of Journalism adviser.

GRAMMAR, SPELLING AND PUNCTUATION TEST

Journalism majors must earn a passing score of 45 on the College of Communication Grammar, Spelling and Punctuation (GSP) Test. Students who receive transfer credit for Journalism 315 must take and pass the test before enrolling in subsequent courses in the major. All students must pass the test before enrolling in courses for which it is a prerequisite.

Students may take the test up to three times. A student who has not passed the test after three trials may take a GSP review class offered by the School of Journalism; ETWR 1372, *Grammar/Style*, offered by Austin Community College; or a similar grammar and style course at another community college. A student who completes the GSP review class may then take the GSP test a fourth and final time; if the student does not pass the test on the fourth trial, he or she may not enroll in any course for which the test is a prerequisite. If the student chooses to complete ETWR 1372 or a similar course instead of the GSP review class and earns a grade of at least C, then completion of the community college course is substituted for a passing score on the GSP test. ETWR 1372 and similar Workforce Education courses are not transferable to the University and will not be counted toward the student's degree.

Students whose native language is not English may appeal to the School of Journalism to waive the three-trial limit. Information about test dates is available from the Division of Instructional Innovation and Assessment and the School of Journalism.

WORD PROCESSING TEST

A passing score of at least 29 on the School of Journalism Word Processing (WP) Test is required for admission to most journalism courses. All students must pass the test before enrolling in courses for which it is a prerequisite.

Any student who attempts and fails the WP test three times may enroll in POFT 1127, *Introduction to Keyboarding*, at a Texas community college; if the student earns a score of at least 29 words per minute, he or she may substitute this course for a passing WP test score. POFT 1127 is not transferable to the University and will not be counted toward the student's degree.

SPECIAL REQUIREMENTS

Students who seek to study journalism are admitted to the University as prejournalism majors. To continue in the major, each student must be admitted to the concentration in broadcast news, multimedia journalism, or photojournalism, or to one of the three sequences—newspaper reporting and writing, magazine writing and editing, and copy editing and design—within the concentration in print journalism. The student should apply for admission to a concentration or sequence while taking or upon completing Journalism 315. Admission decisions for each concentration or sequence are made by the head of that area.

A student may not take any upper-division journalism course except Journalism 320D unless he or she has been admitted to an area of concentration or a sequence.

To enroll in upper-division journalism courses, a student must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill this requirement will be unable to register for upper-division courses. This requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average.

The student must complete at least eighty semester hours outside journalism. At least sixty-five hours must be in liberal arts and natural sciences.

A student majoring in journalism may not register for more than nine semester hours in journalism in one semester or summer session. The director or associate director may make exceptions to this rule for seniors who need additional journalism courses in order to graduate on time.

Any student enrolled in a journalism course who does not attend the first class meeting or laboratory session may be dropped from that course.

A student with a major in journalism must have a grade of at least C in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol CR.

Additional information about the preceding requirements is available from the School of Journalism at <http://journalism.utexas.edu/> or (512) 471-1845.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2, as well as the prescribed work for the Bachelor of Journalism that is listed below. In some cases, a course required for the BJ may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.
2. Two courses with a writing flag or a substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given on pages 87–88; a complete list is available in the college's Office of Student Affairs before registration for each semester and summer session. The courses are also identified in the *Course Schedule*.
4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis.

Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible

and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. At least thirty-six semester hours of upper-division coursework.
6. No more than twelve semester hours of transfer credit in journalism may be counted toward the degree.
7. Enough additional coursework to make a total of 120 semester hours. No more than thirty-six semester hours in one field of study may be counted toward the degree, except as indicated under "Major Requirements" below. Photojournalism students are encouraged to take a three-semester-hour survey or history course in the visual arts. Such a course may be a prerequisite to photojournalism courses.

MAJOR REQUIREMENTS

1. Broadcast news, multimedia, and print journalism students must complete at least thirty-three but no more than thirty-six semester hours in journalism. Photojournalism students must complete thirty-six semester hours.
2. The studies core, Journalism 310 and 360, and the skills core, Journalism 315 and 321C, are required of all journalism majors. Students must complete the skills core before taking most open, intermediate, and advanced skills courses.
3. At least six semester hours chosen from the following studies courses: Journalism 310K, 340C, 347S, 348S, 349T, 361E, 362E, 363, 364E, 366E, 367E. These courses must be completed in addition to those required for the student's concentration or sequence listed in requirement 4 below.
4. Skills courses required for the student's concentration or sequence:
 - a. Broadcast news: Journalism 322D, 353D, 372D, and a three-hour journalism course with a substantial writing component or a writing flag.
 - b. Multimedia journalism: Journalism 320D, 331, 334, 349T (Topic 22: *Writing for Online Publications*), and an additional three-hour upper-division skills course.
 - c. Photojournalism: Journalism 316, 318, 319, 320D, 355, and either 370K or 371K. Journalism 318 and 319 must be completed in residence.

d. Print journalism:

1. Newspaper reporting and writing sequence: Journalism 320D, 327, 330, and either 373D or 374D.
 2. Magazine writing and editing sequence: Journalism 320D, 327, 330, 347S, and either 373D, 374D, 359T (Topic 3: *Advanced Visual Design*), or 377D.
 3. Copy editing and design sequence: Journalism 319, 320D, 330, and 359T (Topic 3: *Advanced Visual Design*) or 377D.
5. At least six semester hours of coursework must be taken in the College of Communication but outside the School of Journalism. No more than forty-two hours (including transfer credit) in College of Communication coursework may be counted toward the degree.
 6. No College of Communication course to be counted toward the degree may be taken on the pass/fail basis, unless the course is offered only on that basis.

ORDER AND CHOICE OF WORK

FIRST YEAR

1. The student must take three courses from the following group each semester:
 - a. Rhetoric and Writing 306.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum. Students who plan to concentrate in photojournalism are encouraged to take courses in chemistry, physics, and mathematics to fulfill the science and technology areas.
 - c. Courses in a foreign language.
2. Journalism 310.
3. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.
4. Students who plan to concentrate in photojournalism are encouraged to take Journalism 316 in their second semester.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

SECOND YEAR

1. The student must take three courses from the following group each semester; four are recommended:
 - a. English 316K and any three-semester-hour course in English or rhetoric and writing.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Journalism 315 and additional coursework to fulfill the major requirements. Students may take Journalism 320D if they have met the prerequisite.
3. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester. Basic courses in accounting and computer science are especially recommended.

THIRD YEAR

1. Two courses with a substantial writing component or a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. Journalism 321C and 360 and additional coursework to fulfill the major requirements. Students who are required to take Journalism 320D are strongly encouraged to do so as soon as they have been admitted to an area of concentration or a sequence.
4. Upper-division electives chosen to support the major.

FOURTH YEAR

1. Upper-division electives chosen to support the major.
2. Any remaining major requirements. All students must complete at least one advanced skills course.

**BACHELOR OF SCIENCE
IN PUBLIC RELATIONS**

To be awarded the degree of Bachelor of Science in Public Relations, the candidate must complete 120 semester hours of coursework and must fulfill the

University-wide graduation requirements on pages 12–13, the college graduation requirements on page 86, and the special requirements, core curriculum, prescribed work, and major requirements below.

THE CONSENT PROCEDURE

Part of the prerequisite for some advertising and public relations courses is consent of the instructor received prior to registering. To be able to register for such a course, a student must first ask for and receive the instructor's consent. The student may be invited to an interview with the instructor or may be asked to provide supporting materials, such as an application or an essay. The student is responsible for knowing the deadline to apply. Consent forms are available online and in the Department of Advertising.

SPECIAL REQUIREMENTS

To enroll in upper-division public relations courses, a student must have completed Advertising 318J in residence with a grade of at least *B* and must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill these requirements will be dropped from upper-division public relations courses, normally before the twelfth class day. The grade point average requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average. Students may enroll in Advertising 318J no more than twice.

In addition, a student with a major in public relations must have a grade of at least *C* in each course taken in the College of Communication that is counted toward the degree and a grade of at least *C* in each course counted toward the major requirements; if the course is offered on the pass/fail basis only, the student must have the symbol *CR*.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2, as well as the prescribed work for the Bachelor of Science in Public Relations that is listed below. In some cases, a course required for the BSPR may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

1. Rhetoric and Writing 309K, 309S, or 310.
2. Two courses with a writing flag or a substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given on pages 87–88; a complete list is available in the college's Office of Student Affairs before registration for each semester and summer session. The courses are also identified in the *Course Schedule*.

4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis.

Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. Statistics and Scientific Computation 306, completed in residence. This course also meets the core curriculum mathematics requirement.
6. Twelve semester hours of coursework in business, preferably three hours in marketing, three hours in management, three hours in accounting, and three hours in either legal environment

of business or finance. At least six of the twelve hours must be in upper-division coursework. Marketing 338 may not be counted toward this requirement.

7. At least thirty-six semester hours of upper-division coursework.
8. No more than twelve semester hours of transfer credit may be counted toward the major requirements given below.
9. Enough additional coursework to make a total of 120 semester hours. No more than thirty-six semester hours in one field of study may be counted toward the degree.

MAJOR REQUIREMENTS

1. At least thirty-six but no more than forty-two semester hours of coursework, of which at least twenty-four hours must be upper-division. The following courses are required:
 - a. Advertising 318J, 344K, 345J, Public Relations 317, 319 or 331, 348, 350, 352, 367, 371J or 376, and 377K. The student must complete Advertising 318J in residence with a grade of at least B.
 - b. Three additional hours in public relations or advertising.
2. At least six semester hours of coursework must be taken in the College of Communication but outside advertising and public relations. No student may count toward the degree more than forty-eight hours (including transfer credit) in College of Communication coursework.
3. No College of Communication course to be counted toward the degree and no course to be counted toward major requirement 1 above may be taken on the pass/fail basis, unless the course is offered only on that basis.

ORDER AND CHOICE OF WORK

FIRST YEAR

1. The student must take three courses from the following group each semester:
 - a. Rhetoric and Writing 306.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in a foreign language.

2. Advertising 318J and Public Relations 317.
3. Additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

SECOND YEAR

1. The student must take three courses from the following group each semester; four are recommended:
 - a. Rhetoric and Writing 306; English 316K; and Rhetoric and Writing 309K, 309S, or 310.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Public Relations 319.
3. Statistics and Scientific Computation 306.
4. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester. Basic courses in writing are especially recommended.

THIRD YEAR

1. Two courses with a substantial writing component or a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. Public Relations 348, Advertising 344K, 345J, Marketing 320F, and additional coursework to fulfill the major requirements.
4. Upper-division electives chosen to support the major. Public relations majors normally emphasize writing courses, such as those in English, journalism, and liberal arts; public speaking courses, such as those in communication studies; psychology; marketing; and/or management.

FOURTH YEAR

1. The remaining courses listed as major requirements.

2. Upper-division electives chosen to support the major.

BACHELOR OF SCIENCE IN RADIO-TELEVISION-FILM

To be awarded the degree of Bachelor of Science in Radio-Television-Film, the candidate must complete 120 semester hours of coursework and must fulfill the University-wide graduation requirements on pages 12–13, the college graduation requirements on page 86, and the special requirements, core curriculum, prescribed work, and major requirements below.

SPECIAL REQUIREMENTS

To enroll in upper-division radio-television-film courses, a student must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill this requirement will be dropped from upper-division radio-television-film courses, normally before the twelfth class day. The grade point average requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average.

In addition, a student with a major in radio-television-film must have a grade of at least *C* in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol *CR*.

To enroll in some upper-division radio-television-film courses, the student must earn specific grades in prerequisite courses. In addition, enrollment in a few upper-division courses requires the consent of the instructor. The departmental consent process is described on pages 118; complete course prerequisites are given on pages 119–126.

It is not recommended that a student majoring in radio-television-film register for more than nine semester hours in radio-television-film in one long-session semester or more than six semester hours in a summer session.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2, as well as the prescribed work for the Bachelor of Science in Radio-Television-Film that is listed below. In some cases, a course required for the BSRTF may also be counted toward the core cur-

riculum; these courses are identified below.

PRESCRIBED WORK

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.
2. Two courses with a writing flag or a substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given on pages 87–88; a complete list is available from the college's Office of Student Affairs before registration for each semester and summer session. The courses are also identified in the *Course Schedule*.
4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis.

Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. At least thirty-six semester hours of upper-division coursework.
6. No more than twelve semester hours of transfer

credit in radio-television-film may be counted toward the degree.

7. Enough additional coursework to make a total of 120 semester hours. No more than forty-two hours in radio-television-film and no more than thirty-six hours in any other single field may be counted toward the degree.

MAJOR REQUIREMENTS

1. At least thirty but no more than forty-two semester hours of radio-television-film, of which at least eighteen hours must be upper-division. All students must take Radio-Television-Film 305, nine additional hours of lower-division coursework, and two courses chosen from the following: Radio-Television-Film 330K, 331J, 331K, 331M, 331N, 331P, 334, 335, 342, 342T, 345, 347C, 348, 359, 359S, 365, and 370.
2. At least six semester hours of coursework must be taken in the College of Communication but outside the department. However, no student may count toward the degree more than forty-eight hours (including transfer credit) in College of Communication coursework.
3. No College of Communication course to be counted toward the degree may be taken on the pass/fail basis, unless the course is offered only on that basis.

AREAS OF STUDY

The curriculum in radio-television-film is designed to prepare students to be versatile and well-equipped for positions in fields related to media. The program aims to train students to analyze the role of communication media in societies, to write and speak well, and to create media projects and programs. The curriculum is multidisciplinary and includes courses in the history and analysis of media systems, including film, television, and new media; global media; production and screenwriting; digital media; critical and cultural studies; ethnic, gender, and minority studies; and communication technologies and policies. Each student's program of study is planned by the student and an undergraduate adviser to meet the student's academic and professional goals. Because upper-division courses require specific lower-division prerequisites, students should consider their lower-division preparation carefully. For example, many production courses require completion of Radio-Television-Film 317 and 318, while

nonproduction courses require either Radio-Television-Film 314 or 316, or 309. Radio-Television-Film 305 is required of all majors.

Students who plan to take production courses should be aware that these courses may require five to ten hours of independent production or studio time a week in addition to the class meetings listed in the *Course Schedule*. All costs of production, such as the cost of film and film processing, actors' fees, and location fees, are borne by the student. The cost of most equipment is covered by tuition.

ORDER AND CHOICE OF WORK

FIRST YEAR

1. The student must take three courses from the following group each semester:
 - a. Rhetoric and Writing 306.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in a foreign language.
2. Radio-Television-Film 305 and one of the following: Radio-Television-Film 309, 312C, 314, 316, 316M.
3. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

SECOND YEAR

1. The student must take three courses from the following group each semester; four are recommended:
 - a. English 316K and any three-semester-hour course in English or rhetoric and writing.
 - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
 - c. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Two lower-division courses in radio-television-film, including those that are prerequisite to the area(s) in which the student plans to take upper-division courses.
3. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester.

THIRD AND FOURTH YEARS

1. Two courses with a substantial writing component or a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. Two upper-division radio-television-film courses to be counted toward requirement 1 of the major requirements.
4. Twelve to twenty-four semester hours of upper-division coursework in radio-television-film.
5. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

COMMUNICATION

COMMUNICATION: COM

LOWER-DIVISION COURSES

- 301C. Freshman Seminar.** Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.
- 001F. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various College of Communication disciplines. One lecture hour a week for one semester.
- 102D, 202D, 302D. Connecting Internship Experience.** Supervised internship experience related to interdisciplinary themes of a Bridging Disciplines Program. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 102D, three hours of fieldwork a week for one semester; for 202D, six hours of fieldwork a week for one semester; for 302D, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines Program research coordinator, may be repeated once for credit. May not be counted toward any College of Communication degree. Prerequisite: Admission to the Bridging Disciplines Programs.
- 309. Communication Technology and Society.** Same as Radio-Television-Film 309. Study of communication technologies, from writing to the Internet; their uses in interpersonal, group, mass, and international contexts; and the impact of technologies on work. Three lecture hours and one discussion hour a week for one semester. Prerequisite: For radio-television-film majors, Radio-Television-Film 305; for others, none.
- 314. Special Topics in Communication.** Contemporary issues and practices in communication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 115, 215, 315. Topics in Leadership and Communication.** Restricted to students in the College of Communication. Contemporary issues, practices, and skills related to leadership and communication. For 115, two lecture hours a week for eight weeks; for 215, two lecture hours a week for one semester; for 315, three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 316M. Race, Ethnicity, and the Media.** Same as Radio-Television-Film 316M. Critical review of contemporary and historical media images of, and discourses on, race and ethnicity. Introduction to relevant communication research and institutions. Three lecture hours and one discussion hour a week for one semester. Prerequisite: A major in the College of Communication. Additional prerequisite for radio-television-film majors: Radio-Television-Film 305.
- 118C, 218C, 318C. Forum Seminar Series.** Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Communication.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Communication Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 124, 224, 324. Topics and Skills in Communication.** Contemporary issues, practices, and skills related to communication and the entertainment industries, including studies in the business of entertainment, the creative process, and contemporary Hollywood cinema. For each semester hour of credit earned, one lecture hour a week for one semester. Taught in Los Angeles, California. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, Radio-Television-Film 305, admission to the Semester in Los Angeles program, and a University grade point average of at least 2.25.
- 125, 225, 325. Topics in Leadership and Communication.** Restricted to students in the College of Communication. Contemporary issues, practices, and skills related to leadership and communication. For 125, two lecture hours a week for eight weeks; for 225, two lecture hours a week for one semester; for 325, three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Communication.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the appropriate College of Communication department. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 350. Communication Internship.** Restricted to students in the College of Communication with upper-division standing. Practical work experience related to the student's area of interest in the communication field. An average of 10 hours of work a week, for a total of at least 150 hours a semester or summer term. Offered on the pass/fail basis only. May not be taken by students who have credit for any three-semester-hour communication internship course. Prerequisite: Completion of the prerequisite for the three-semester-hour internship course in the student's major department. Applications are available in the college's career services office and must be submitted by the sixth class day in a long-session semester and by the second class day in the summer term.
- 350L. Semester in Los Angeles Internship.** Practical work experience in the entertainment industry in Los Angeles. An average of 10 hours of work a week, for a total of at least 150 hours a semester or summer term. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, Radio-Television-Film 305, admission to the Semester in Los Angeles program, and a University grade point average of at least 2.25.
- 360. Communication Research Design.** An introduction to sampling, measurement, data collection, and analytic procedures as applied to research problems in communication. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 370. Advanced Study in Communication.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, admission to the College of Communication Senior Fellows Program, and consent of instructor.
- 178. Communication Internship.** Restricted to students in the College of Communication with upper-division standing. Practical work experience related to the student's area of interest in the communication field. An average of 10 hours of work a week, for a total of at least 150 hours a semester or summer term. Offered on the pass/fail basis only. May be repeated, but only one hour may be counted toward a degree in the College of Communication. Prerequisite: Completion of a three-hour internship course in the College of Communication. Applications are available in the college's career services office and must be submitted by the sixth class day in a long-session semester and by the second class day in the summer term.

DEPARTMENT OF ADVERTISING

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

To enroll in any upper-division advertising course, an advertising major must have fulfilled the special requirements for the Bachelor of Science in Advertising given on page 90.

ADVERTISING: ADV

LOWER-DIVISION COURSES

- 303. Advertising and Popular Culture.** An introduction to the role advertising plays in American society, and the values and relationships offered in the messages that are delivered. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising degree.
- 304. Advertising on the Internet.** The defining concepts, differences, and current practices of advertising on the Internet. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May not be counted toward the Bachelor of Science in Advertising degree.
- 305. Fundamentals of Advertising.** Fundamentals and practices of advertising in relation to economies, societies, and mass communication. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising degree.
- 314. Social and Ethical Issues.** Designed to prepare students to identify, analyze, and respond to social and ethical issues in advertising and public relations. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising or the Bachelor of Science in Public Relations degrees.
- 315. History and Development of Advertising.** The evolution and development of advertising in the United States in a social, historical, economic, and cultural context. Three lecture hours a week for one semester.
- 316. Creativity and American Culture.** A cross-disciplinary view of the creative process and creative products. The conceptual core of film, fine arts, advertising, architecture, and literature. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising degree.
- 318J. Introduction to Advertising and Integrated Brand Communication.** The functions of advertising; role in marketing/communications mix; economic and social influence; advertising institutions and media; campaigns and appropriations; retail and business-to-business aspects. Three lecture hours and one discussion hour a week for one semester. Students may not enroll in Advertising 318J more than twice.

- 319. Psychology of Advertising.** A review of basic findings of the behavioral sciences dealing with perception, personality, group behavior, psychological appeals, and their application to advertising as persuasive communication. Three lecture hours a week for one semester.

UPPER-DIVISION COURSES

- 325. Introduction to Advertising Creativity.** Restricted to advertising and public relations majors. Development of concepts and problem-solving techniques for print and broadcast advertising design and copywriting. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Advertising 318J with a grade of at least B.
- 334. International Advertising.** Major issues in international advertising and advertising directed at cultural minorities within countries. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 342. Advertising Copywriting.** Copywriting for print and broadcast media. Methods for developing creative advertising concepts, strategies, and executions for print, radio, and television. Emphasis on writing rather than on art direction. Three lecture hours a week for one semester. Prerequisite: Advertising 325 with a grade of at least C, and instructor's approval of the student's previous work in advertising courses.
- 343K. Portfolio I.** Basic advertising art direction and copywriting skills, including indications for graphics, headlines, and body copy. Three lecture hours and three studio hours a week for one semester. Prerequisite: Advertising 325 with a grade of at least B, and admission to the Texas Creative program.
- 344K. Advertising Research.** Introduction to social science research methods as used in advertising and marketing; emphasis on survey research and secondary data. Three lecture hours and one discussion hour a week for one semester. Prerequisite: For advertising majors, upper-division standing, Advertising 318J with a grade of at least B, credit or registration for Advertising 325, and Statistics and Scientific Computation 306 with a grade of at least C; for others, upper-division standing, Advertising 318J with a grade of at least B, and Statistics and Scientific Computation 306 with a grade of at least C.
- 345J. Advertising Media Planning.** Media characteristics and media-market measurements; development of media plans. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: For advertising majors, upper-division standing, Advertising 318J with a grade of at least B, credit or registration for Advertising 325, and Statistics and Scientific Computation 306 with a grade of at least C; for others, upper-division standing, Advertising 318J with a grade of at least B, and Statistics and Scientific Computation 306 with a grade of at least C.
- 447. Computer Imaging Topics.** Introduction to computer graphics with applications to advertising and other disciplines. Students interact with computer systems to produce artwork and design portfolios. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Advertising 318J with a grade of at least B and consent of instructor received prior to registering.
- Topic 1: Advertising Design for Interactive Media.**
- 348. Design of Integrated Communications.** Theory and practice of the graphic arts and production, including conception and design; typography; engraving; preparation of copy, art, and photographs; paper; color psychology; and printing. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 350. Advertising Internship.** Practical work experiences in advertising sales, creative management, and research with advertisers, agencies, media, or auxiliary services. An average of twelve hours of work a week, for a total of 180 hours a semester or summer session. Offered on the pass/fail basis only. Prerequisite: Advertising 344K and 345J with a grade of at least C in each. An internship application and a letter from the employer must be submitted by the twelfth class day in long-session semesters and by the fourth class day in the summer session.
- 151. Advertising Practicum.** Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Advertising 350 or 468K, consent of departmental internship coordinator, and completion of department requirements for enrollment in an internship course.
- 366. Special Topics in Advertising.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward the Bachelor of Science in Advertising degree.
- 368C. Advertising Senior Seminar.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Credit or registration for Advertising 370J and written consent of instructor received prior to registering.
- Topic 1: Agency Practices.**
Topic 2: Affect and Emotion.
Topic 3: Advertising Ethics.
- 468K. Portfolio II.** Intermediate advertising art direction and copywriting; special emphasis on execution skills and concepts. Three lecture hours and three studio hours a week for one semester. Prerequisite: Advertising 343K and consent of the Texas Creative program faculty.
- 468L. Portfolio III.** Advanced advertising art direction and advertising creative concepts. Three lecture hours and three studio hours a week for one semester. With consent of instructor, may be repeated once for credit. Prerequisite: Advertising 468K and consent of the Texas Creative program faculty.
- 370J. Integrated Communications Management.** Cases and problems dealing with the management of advertising and promotional programs; media and creative strategies; consumer, retail, industrial, and public service applications. Three lecture hours a week for one semester. Advertising 370J and Public Relations 367 may not both be counted. Prerequisite: Advertising 344K and 345J with a grade of at least C in each; and Marketing 320F or 337 with a grade of at least C.

- 371J. Media Law and Ethics.** Same as Public Relations 371J. A study of the social, legal, and ethical issues in advertising. Three lecture hours a week for one semester. Prerequisite: Advertising 344K and 345J with a grade of at least C in each, and Marketing 320F or 337.
- 373. Integrated Communications Campaigns.** Concept of media mix; matching product, consumer, media profiles; conception, research, planning, and execution of advertising campaigns; special emphasis on advanced copywriting, layout, and production for print and broadcast media. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 369J, 373, 373H, Public Relations 377H, 377K. Prerequisite: Advertising 370J or Public Relations 367.
- 373H. Integrated Communications Campaigns: Honors.** Restricted to students in the Advertising or Public Relations Honors program. The concept of media mix; matching product, consumer, and media profiles; and the conception, research, planning, and execution of advertising campaigns. Special emphasis on advanced copywriting, layout, and production for print and broadcast media. Students usually participate in major national contests involving brand development in advertising strategies. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Only one of the following may be counted: Advertising 369J, 373, 373H, Public Relations 377H, 377K. Prerequisite: Upper-division standing, Advertising 370J or Public Relations 367, and a University grade point average of at least 3.50.
- 475. Portfolio IV.** Designed to enhance the intellectual and philosophical framework of students in the Texas Creative program. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Advertising 468L and consent of the Texas Creative program faculty.
- 376. Ethics in Advertising and Public Relations.** Same as Public Relations 376. Designed to develop skills in identifying, analyzing, and responding to ethical issues. Three lecture hours a week for one semester. Advertising 376 and 378 (Topic 8: *Ethics in Advertising and Public Relations*) may not both be counted. Prerequisite: Upper-division standing.
- 377. Advertising Media Topics.** Three lecture hours a week for one semester or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Admission to the Texas Media program and consent of instructor. Additional prerequisites vary with the topic and are given in the *Course Schedule*.
- Topic 1: Advanced Media Strategies.** Required for students in the Texas Media program.
- Topic 2: One-to-One Advertising on the Internet.** Additional prerequisite: Experience using HTML. Students may be added to the class on the first class day.
- Topic 3: Digital Media.** Additional prerequisite: Experience using HTML. Students may be added to the class on the first class day.
- Topic 4: Media Alliances.** Focuses on the partnerships and tools used in generating, investigating, and evaluating unique brand contact points such as product placement, sponsorships, and other promotional media activities. Includes co-branding efforts, client-generated media venues, and public relations alliances from a media planning perspective.
- Topic 5: Media Show.** Designed to help students remove the traditional barriers between message development and delivery in their media work. Students have the opportunity to show their work to industry professionals across a variety of venues. Three lecture hours and three studio hours a week for one semester.
- Topic 6: Media Research.**
- 378. Advanced Studies in Advertising.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- Topic 2: Advanced Issues in Multicultural Markets.**
- Topic 4: Direct Marketing.** Additional prerequisite: Marketing 320F.
- Topic 7: Integrated Communication for Sports.**
- Topic 9: Consumer Discrimination in the Marketplace.**
- Topic 10: Copywriting.**
- Topic 11: Leadership and Ethics.**
- Topic 12: Advertising and Black Representation.**
- Topic 13: Advanced Media Research.**
- Topic 14: Advanced Studies in Media Sales.**
- Topic 15: Creative Project: Writing.**
- Topic 16: Digital Metrics.**
- Topic 17: Integrated Communication for Nonprofit Organizations.**
- Topic 18: Nontraditional New Media Concepts.**
- Topic 19: Online Consumer Research.**
- Topic 20: Account Planning.**
- 379H. Honors Tutorial Course.** Conference course of intensive study, planned by the Advertising Honors Committee; research and the writing of a substantial paper on a special advertising topic. Prerequisite: Admission to the Advertising Honors Program.
- 179J, 279J, 379J, 479J. Advertising Problems.** Individual instruction. Some topics may require additional laboratory hours. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor received prior to registering.
- Topic 1: Supervised Individual Special Studies.** Supervised individual special studies for which separate courses are not available.
- Topic 2: Supervised Individual Creative Studies.** Supervised individual creative studies for which separate courses are not available. Additional laboratory hours to be arranged.
- Topic 3: Supervised Individual Media Studies.** Supervised individual media studies for which separate courses are not available. Additional laboratory hours to be arranged. Additional prerequisite: Advertising 345J.

PUBLIC RELATIONS: P R

LOWER-DIVISION COURSES

- 305. Fundamentals of Public Relations.** Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Public Relations degree.

- 317. Writing for Public Relations.** Restricted to public relations majors. Introduction to writing skills for the media, including readability, clarity, verification, and style. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Advertising 318J with a grade of at least B.
- 319. Principles of Public Relations.** Restricted to public relations majors. Principles, theory, history, ethics, and practice of public relations in a variety of organizational settings; elements of strategic management. Three lecture hours a week for one semester. Only one of the following may be counted: Public Relations 319, 331, 333. Prerequisite: Advertising 318J with a grade of at least B.
- 367. Integrated Communications Management.** Public relations as a managerial problem-solving process; strategic management of programs to enhance public-organizational relationships. Three lecture hours a week for one semester. Advertising 370J and Public Relations 367 may not both be counted. Prerequisite: Advertising 344K, Marketing 320F with a grade of at least C, and Public Relations 348.
- 371J. Media Law and Ethics.** Same as Advertising 371J. A study of the social, legal, and ethical issues in advertising. Three lecture hours a week for one semester. Prerequisite: Advertising 344K and 345J with a grade of at least C in each, and Marketing 320F or 337.

UPPER-DIVISION COURSES

- 331. Fundamentals of Media Relations.** Strategic public relations decisions as they relate to media; investigation of ethical principles and norms regulating activity of public relations. Three lecture hours a week for one semester. May not be counted toward the major requirement for the Bachelor of Science in Public Relations degree. Only one of the following may be counted: Public Relations 319, 331, 333.
- 348. Public Relations Techniques.** Analysis and production of print, electronic, and oral messages to achieve organizational objectives; fundamentals of media relations; Internet applications. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Upper-division standing; Public Relations 319 (or 333) or 331; and Journalism 315 or Public Relations 317.
- 350. Public Relations Internship.** Restricted to public relations majors. Internship to be arranged by student and approved by instructor. Internship to be arranged. Offered on the pass/fail basis only. Public Relations 321K and 350 may not both be counted. May be taken only once. Prerequisite: Public Relations 319 (or 333) or 331, and 348, Advertising 344K with a grade of at least C, and consent of instructor. To enroll in this course, students must apply to the department for consent; information about this procedure is available in the departmental office.
- 151. Public Relations Internship.** Designed for students who have completed a three-semester-hour internship in public relations. Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Public Relations 121L and 151 may not both be counted. Prerequisite: Public Relations 350 (or 321K); consent of the public relations internship coordinator; and completion of the major requirements for enrollment in an internship course.
- 352. Strategies in Public Relations.** Restricted to public relations majors. Strategies relating to public relations disciplines, including the management of external, internal, community, nonprofit, and media issues, and public relations marketing programs. Three lecture hours a week for one semester. Public Relations 334 and 352 may not both be counted. Prerequisite: Public Relations 319 (or 333) or 331, and 348.
- 374. Public Relations Publications.** Production of controlled public relations media for internal and external publics; analysis of annual reports, trade magazines, and electronic publishing. Three lecture hours a week for one semester. Prerequisite: Public Relations 319 (or 333) or 331, and 348, or consent of instructor; and Journalism 315 or one of the following courses: Rhetoric and Writing 309K, 309S, 325M, 379C (Topic: *Grammar and Style for Writers*).
- 376. Ethics in Advertising and Public Relations.** Same as Advertising 376. Designed to develop skills in identifying, analyzing, and responding to ethical issues. Three lecture hours a week for one semester. Advertising 378 (Topic 8: *Ethics in Advertising and Public Relations*) and Public Relations 376 may not both be counted. Prerequisite: Upper-division standing.
- 377H. Integrated Communications Campaigns: Honors.** Restricted to students in the Advertising or Public Relations Honors program. The concept of media mix; matching product, consumer, and media profiles; and the conception, research, planning, and execution of advertising campaigns. Special emphasis on advanced copywriting, layout, and production for print and broadcast media. Students usually participate in major national contests involving brand development in advertising strategies. Three lecture hours a week for one semester, with additional hours to be arranged. Offered on the letter-grade basis only. Only one of the following may be counted: Advertising 369J, 373, 373H, Public Relations 377H, 377K. Prerequisite: Upper-division standing, Advertising 370J or Public Relations 367, and a University grade point average of at least 3.50.
- 377K. Integrated Communications Campaigns.** Integration of theory, research methods, and communication techniques for planning, implementing, and evaluating public relations campaigns; client proposal writing and presentation. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 369J, 373, 373H, Public Relations 377H, 377K. Prerequisite: Public Relations 352; and Advertising 370J or Public Relations 367.
- 378. Advanced Studies in Public Relations.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Public Relations 305, 319 (or 333), or 331.
- Topic 1: Ethics in Advertising and Public Relations.**
Topic 2: Advanced Studies in Media Sales.
Topic 3: Black Music and the Media.
Topic 4: Health Communication: Theory and Practice.

Topic 5: Integrated Communication for Nonprofit Organizations.

Topic 6: Public Relations in Entertainment.

179, 279, 379. Public Relations Problems. Individual instruction. Prerequisite: Public Relations 352 (or 334).

379H. Honors Tutorial Course. Conference course of intensive study, planned by the Advertising Honors Committee; research and the writing of a substantial paper on a special public relations topic. Prerequisite: Admission to the Public Relations Honors Program.

DEPARTMENT OF COMMUNICATION SCIENCES AND DISORDERS

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

COMMUNICATION SCIENCES AND DISORDERS: CSD

LOWER-DIVISION COURSES

306K. Introduction to Communication Disorders. Introduction to the study of processes and disorders of speech, language, and hearing; observation in the University Speech and Hearing Center. Three lecture hours a week for one semester.

308K. Perspectives on Deafness. Examination of deafness from a number of perspectives: social and psychological meanings of deafness, the deaf community, education of deaf children, sign languages, and historical trends. Three lecture hours a week for one semester.

311K. Phonetic Description of Speech. Speech production, physiological analysis and description of speech sounds, voice quality, and voice dynamics; notation; phonetic theory; applications of phonetics. Three lecture hours a week for one semester.

313L. Hearing Science. Acoustical, physiological, and psychological bases of normal human hearing; theories of audition; laboratory techniques in hearing science research. Three lecture hours a week for one semester.

314L. Sociocultural Bases of Communication. An introduction to the influences of social and cultural factors, such as ethnicity, socioeconomic status, and geographic region, on communication acquisition and use, with a focus on cross-cultural communication issues in a diverse society. Three lecture hours a week for one semester.

318K. Acquisition of Communicative Abilities in Children. Introduction to assessment procedures and treatment strategies for children with speech and language disorders. Three lecture hours a week for one semester. Communication Sciences and Disorders 318K and 368K may not both be counted. Prerequisite: Communication Sciences and Disorders 306K or 308K with a grade of at least C, and Communication Sciences and Disorders 311K with a grade of at least C.

118L. Acquisition of Communicative Abilities in Children: Laboratory. Clinical laboratory experience in child language. One lecture hour a week for one semester. Communication Sciences and Disorders 118L and 168L may not both be counted. Prerequisite: Communication Sciences and Disorders 306K or 308K with a grade of at least C, and Communication Sciences and Disorders 311K with a grade of at least C.

UPPER-DIVISION COURSES

341. Principles of Audiology. Causes of hearing disorders; diagnostic procedures and treatment. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a University grade point average of at least 2.25, and Communication Sciences and Disorders 313L with a grade of at least C.

350. Language and the Brain. Same as Linguistics 350 (Topic 1: *Language and the Brain*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

358. Anatomy and Physiology of the Speech and Hearing Mechanism. In-depth study of the anatomy and physiology of structures involved in speech, language, hearing, and swallowing. Includes anatomical and physiological mechanisms of respiration, phonation, articulation, and hearing; and the central nervous system and blood supply to the speech and hearing mechanism. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Sciences and Disorders 315S, 358, 393E (Topic 8), Linguistics 315. Prerequisite: Upper-division standing and a University grade point average of at least 2.25.

358S. Fundamentals of Speech Science. Same as Linguistics 358S. Neurophysiological mechanisms underlying the encoding and decoding of speech. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Sciences and Disorders 315S, 358S, 396N, Linguistics 315. Prerequisite: Upper-division standing and a University grade point average of at least 2.25.

359H. Honors Tutorial Course: Reading. Restricted to senior communication sciences and disorders majors. Intensive reading and research as planned by the departmental honors committee. Individual instruction. Prerequisite: Upper-division standing; twenty-four semester hours of coursework in communication sciences and disorders, twelve of which must be upper-division; and admission to the Communication Sciences and Disorders Honors Program.

360M. Communication and Deaf People. Forms of face-to-face communication used with deaf people, including speech/listening, systems of manual communication, and natural sign language. Emphasis is on child development issues and the use of different methods in educational practice. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a University grade point average of at least 2.25, and Communication Sciences and Disorders 308K with a grade of at least C.

- 367. Topics in Communication Sciences and Disorders.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- 367C. Communication, Culture, and Disability.** Through examination of historical trends, current law and practices, and family and ethical issues, explores how societies have interacted with people who are disabled. Emphasis placed on alternative methods of communication. Three lecture hours a week for one semester. Communication Sciences and Disorders 367 (Topic: *Communication, Culture, and the Disabled*) and 367C may not both be counted. Fulfills the communication and culture requirement. Prerequisite: Upper-division standing and a University grade point average of at least 2.25.
- 367K. Introduction to Speech and Language Disorders Assessment and Treatment in Children.** Restricted to senior communication sciences and disorders majors. Introduction to assessment procedures and treatment strategies for children with speech and language disorders. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a University grade point average of at least 2.25, and the following coursework with a grade of at least C in each course: Communication Sciences and Disorders 306K or 308K; 311K and 313L; 318K and 118L (or 368K and 168L); 358 and 358S (or 315S).
- 167M. Clinical Practicum.** Supervised clinical practicum in speech/language pathology, audiology, and education of the deaf. One lecture hour and two hours of clinical teaching a week for one semester. Offered on the pass/fail basis only. May not be counted toward a degree. Prerequisite: Communication Sciences and Disorders 367K, 371, or 378; and consent of instructor.
- 371. Introduction to Speech and Language Disorders Assessment and Treatment in Adults.** Restricted to senior communication sciences and disorders majors. Introduction to assessment procedures and treatment strategies for adults with speech and language disorders. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a University grade point average of at least 2.25, and the following coursework with a grade of at least C in each course: Communication Sciences and Disorders 306K or 308K; 311K, 313L, and 350; and 358 and 358S (or 315S).
- 373. Principles of Aural Rehabilitation.** Rationale, methods, materials, procedures, and criteria for aural rehabilitation for hearing-impaired persons. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a University grade point average of at least 2.25, and the following coursework with a grade of at least C in each course: Communication Sciences and Disorders 306K or 308K; 311K, 313L, and 341; and 358 and 358S (or 315S).
- 175N. Deaf Education Seminar.** Discussion of selected topics in social, political, and educational aspects of deafness. One lecture hour a week for one semester. May be repeated for credit. Communication sciences and disorders majors specializing in education of the deaf/hearing-impaired may count no more than four semester hours in this course toward the degree; communication sciences and disorders majors specializing in audiology or specializing in speech/language pathology may count no more than two semester hours in this course toward the degree; other students with majors in the College of Communication may count no more than one semester hour in this course toward the degree. Prerequisite: Upper-division standing.
- 378. Clinical Audiology.** Differential diagnostic procedures for evaluation of auditory disorders—theoretical concepts and clinical applications. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Communication Sciences and Disorders 341, and concurrent enrollment in Communication Sciences and Disorders 178L.
- 178K, 378K. Studies in Communication Sciences and Disorders.** Restricted to communication sciences and disorders majors. Supervised individual research. With consent of the department chair, may be repeated, but only three hours may count toward a degree in the College of Communication. No more than three semester hours may be taken on the letter-grade basis. Prerequisite: Upper-division standing; eighteen semester hours of coursework in communication sciences and disorders, including at least six hours of upper-division coursework; a University grade point average of at least 2.50; a grade point average in all College of Communication coursework of at least 3.00; and approval of a project in advance of registration.
- 178L. Clinical Audiology Laboratory.** Clinical laboratory experience in audiology. One lecture hour a week for one semester. Prerequisite: Upper-division standing and concurrent enrollment in Communication Sciences and Disorders 378.
- 379H. Honors Tutorial Course: Special Project.** Restricted to senior communication sciences and disorders majors. The writing of a thesis or the presentation of a creative project; final comprehensive examination. Individual instruction. Prerequisite: Communication Sciences and Disorders 359H.

DEPARTMENT OF COMMUNICATION STUDIES

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

COMMUNICATION STUDIES: CMS

LOWER-DIVISION COURSES

- 306M (TCCN: SPCH 1321). Professional Communication Skills.** Designed to help students develop skills in one-on-one interactions, small group communication, and presentation skills. Basic communication theories as they relate to skill development are explored. Three lecture hours a week for one semester.
- 210. Forensics Workshop.** Open to all University students. Training for participation in extracurricular speech activities, including intercollegiate debate. Two lecture hours and eight laboratory hours a week for one semester. Communication Studies 210 may be taken three times for credit.
- 310K (TCCN: SPCH 2333). Team-Based Communication.** Analysis of small-group communication: cohesiveness, social climate, role structure, leadership, conformity, dynamics of interaction; participation in small-group communication situations. Three lecture hours a week for one semester.
- 313M. Organizational Communication.** Communication processes within government, private, and volunteer organizations. Three lecture hours a week for one semester. Communication Studies 313M and 350K may not both be counted.
- 314L. Language, Communication, and Culture.** The role of language in communication. Analysis of the complexity of human languages, languages in contact, language modality, and communication interaction. Three lecture hours a week for one semester.
- 315M (TCCN: SPCH 1318). Interpersonal Communication Theory.** Introduction to the study of communication in relationships; topics include self-disclosure, conflict, long-distance relationships, stereotyping, and persuasion. Three lecture hours a week for one semester.
- 316L. Interviewing Principles and Practices.** Introduction to interviewing theory, emphasizing the acquisition and application of interviewing skills. Three lecture hours a week for one semester.
- 317C. Speechmaking and Society.** The impact of public discourse on the ideas and issues of culture and history in the United States. Three lecture hours a week for one semester.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Communication Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the appropriate College of Communication department. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. Advanced Presentation Skills.** Designed to help students develop skills in delivering informative and persuasive presentations and speeches. Study of major theories related to oral presentations. Focus on audience analysis and adaptation, building strong arguments, speech organization, and use of new technologies. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Studies 312C, 317M, 320, 367 (Topic: *Advanced Presentation Skills*). Prerequisite: Upper-division standing and Communication Studies 306M with a grade of at least C.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Communication Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Communication Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330. Interpersonal Health Communication.** The fundamental interpersonal communication processes that are involved in managing physical and mental health. Includes stigma and illness identity, social support, patient-provider communication, end-of-life care, and health education. Three lecture hours a week for one semester. Communication Studies 330 and 367 (Topic: *Interpersonal Health Communication*) may not both be counted. Prerequisite: Upper-division standing.
- 331K. Speech Writing and Criticism.** Composition and analysis of oral messages; emphasis on creating and arranging ideas, style, delivery, critical method. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Communication Studies 306M or the equivalent, or consent of instructor.
- 332. Argumentation and Advocacy.** Nature of argumentative controversy; variables of form, method, and ethics; analysis of argumentative rhetorical works. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 332K. Theories of Persuasion.** A study of motivational factors involved in persuasive speaking to secure belief and action. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 333. Case Studies in Argumentation.** Study of argumentation theories. Includes analysis of case studies taken from areas of law, public policy, popular culture, and history. Three lecture hours a week for one semester. Communication Studies 333 and 367 (Topic: *Case Studies in Argumentation*) may not both be counted. Prerequisite: Upper-division standing.
- 334K. Nonverbal Communication.** Survey of the effects of space, physical appearance, movement, eye behavior, and vocal behavior on interpersonal communication. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 335. Strategic Sales and Event Planning.** Theory and practice related to the preparation of large-scale sales events and conferences. Designed to develop communication skills and planning techniques. May include client research, investigation of potential venues, telephone-based information interviews, individual or group sales presentations, and event overviews. Three lecture hours a week for one semester. Communication Studies 335 and 367 (Topic: *Strategic Sales and Event Planning*) may not both be counted. Prerequisite: Upper-division standing.
- 337. Building Sales Relationships.** Explores the theoretical and practical role of communication in the development of long-term client relationships. Explores the consultative sales process, including prospecting, assessing needs, handling objections, presenting, closing, and following up with clients. Focuses on how technology can help or hinder communication. Three lecture hours a week for one semester. Communication Studies 337 and 367 (Topic: *Communication to Build Sales Relationships*) may not both be counted. Prerequisite: Upper-division standing.
- 338. Leadership Stories.** Uses fictional and nonfictional stories, as well as examples taken from virtual reality, to explore the meaning of leadership. Designed to help students develop a conceptual, practical, and personal understanding of the meaning of leadership. Three lecture hours a week for one semester. Communication Studies 338 and 367 (Topic: *Stories of Leadership*) may not both be counted. Prerequisite: Upper-division standing.
- 340K. Communication and Social Change.** Analysis of how persuasion is used in mass movements: civil rights, consumerism, feminism, pacifism, religious sects. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 341. Computer-Mediated Communication.** Uses principles related to communication and social psychology to explore online interactions. May include the study of impression formation and management, group communication, trust and deception, Internet dating, online video gaming, social support, Internet addiction, and impacts of new communication technology. Three lecture hours a week for one semester. Communication Studies 341 and 367 (Topic: *Computer-Mediated Communication*) may not both be counted. Prerequisite: Upper-division standing.
- 342K. Political Communication.** A study of the role of symbols in political communication and the techniques and strategies employed by politicians; special attention is given to recent election campaigns. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 344K. Lying and Deception.** Examines lying and deception as civil, strategic, and manipulative behavior. Secrets, privacy, disclosures, and confidentiality are examined in a variety of familiar contexts. Three lecture hours a week for one semester. Communication Studies 344K and 367 (Topic: *Lying and Deception*) may not both be counted. Prerequisite: Upper-division standing.
- 345. Media Effects and Politics.** The theoretical models and research methods used to study media effects. Emphasis on the political implications of media-effects research and on how media-effects theories can help clarify political issues. May include television violence, the political impact of the news, and the use of media for educational purposes. Three lecture hours a week for one semester. Communication Studies 345 and 367 (Topic: *Media Effects and Politics*) may not both be counted. Prerequisite: Upper-division standing.
- 345K. Perspectives on Rhetoric.** Four different meanings of rhetoric; how these meanings contribute to the current understanding of communication studies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 346. Using Communication Technology at Work.** Examines how communication technologies affect workplace communication. Considers case studies involving the use of social networking, handheld devices, and e-mail by for-profit and nonprofit organizations. Three lecture hours a week for one semester. Communication Studies 346 and 367 (Topic: *Using Communication Technology at Work*) may not both be counted. Prerequisite: Upper-division standing.
- 347K. Rhetoric of Popular Culture.** The ways that film, television, music, fashion, the Internet, and other discourses of popular culture influence public attitudes, perceptions, and social relations. Three lecture hours a week for one semester. Communication Studies 347K and 367 (Topic: *Rhetoric of Popular Culture*) may not both be counted. Prerequisite: Upper-division standing.
- 348. Communication Research Methods.** A practical introduction to research methods, focusing on designing a study, conducting research, analyzing data, and presenting results. Studies survey design, interviews, focus groups, and experiments. Three lecture hours a week for one semester. Communication Studies 348 and 367 (Topic: *Communication Research Methods*) may not both be counted. Prerequisite: Upper-division standing.
- 348K. Visual Media and Interaction.** The role of visual resources and symbols in social interaction and public life; the representation of interaction and human relationships in visual media (photography, advertising, fine arts, and film). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 349M. Advanced Analysis of Popular Culture.** Advanced critique and analysis of rhetorical dimensions in texts of popular culture. Readings in theory and methods for understanding persuasive influence in television, film, music videos, and the Internet. Web-based instruction; no class meetings. Prerequisite: Communication Studies 347K.
- 350M. Field Study in Organizational Communication.** Students acquire information through interviews and observation, devise appropriate coding schemes, and compose synoptic reports of their findings and recommendations. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 351. Communication for Cooperation and Competition.** Theoretical perspectives and experiential learning on the ways people reconcile the need to be individualistic (competitive) with the need to be community members (cooperative). Individual aggression and submission; the rewards of competition and cooperation; and organizational structures that lead to cooperation and competition. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 354. Conflict Resolution.** Systematic analysis of conflict and communication to examine some of the effects of communication on conflict and of conflict on communication. Readings, analysis of conflicts, and practice with and evaluation of communication behaviors thought to be effective in conflict talk. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 355K. Intercultural Communication.** Theories of speech and language that concern interaction between persons from different cultures who speak different languages or dialects. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 357. Family Communication.** Some of the common issues that face those who live in, counsel, and conduct research with families. The development of traditional families in the United States, different family structures that make up modern society, current issues that affect families, and the impact of communication on family experiences. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 358. Communication and Personal Relationships.** The nature of human interaction in various types of relationships (friends, dates, spouses, roommates), the nature of communication at different stages in a relationship, and the nature of communication at different life stages. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 359. Language, Culture, and Communication of Hip-Hop.** Uses hip-hop music as a model for understanding a speech community. Focuses on language innovation and the creation of new social networks, forms of communication, and cultural meaning and values. Three lecture hours a week for one semester. Communication Studies 359 and 367 (Topic: *Language, Culture, and Communication in the Hip-Hop Nation*) may not both be counted. Prerequisite: Upper-division standing.
- 359H. Honors Tutorial Course: Reading.** Intensive reading and research as planned by the departmental honors committee. Individual instruction. Prerequisite: Upper-division standing and admission to the Communication Studies Honors Program.
- 360. Analyzing Social Interaction.** Introduction to concepts and research methods related to the study of how verbal and nonverbal communication is used in everyday situations. Includes collecting and analyzing sound and video data. Designed to help students develop skills in interpreting human social interactions. Three lecture hours a week for one semester. Communication Studies 360 and 367 (Topic: *Language and the Body in Social Interaction*) may not both be counted. Prerequisite: Upper-division standing.
- 364K. Gender and Communication.** Focuses on how communication influences ideas about sex, gender, and identity, from interpersonal relationships to the mass media, and from legislative debates to social movements. Three lecture hours a week for one semester. Communication Studies 364K and 367 (Topic: *Gender and Communication*) may not both be counted. Prerequisite: Upper-division standing.
- 164M, 264M, 364M. Communication Studies Mentorship.** Directed study of one or more areas of an academic discipline. Individual instruction. With consent of the department chair, may be repeated for credit, but no more than three hours may be taken. Prerequisite: Upper-division standing.
- 365K. Male-Female Communication.** Same as Women's and Gender Studies 345 (Topic 21: *Male-Female Communication*). Studies of speech patterns related to the concepts of male and female, including sexism in speaking, patterns of male and female speaking, patterns of listening to males and females, speech in courtship and family, speech and sexual discrimination in careers. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 365L. Communication, Controversy, and Citizenship.** Designed to help students develop the listening, speaking, and argumentation skills used to deliberate over controversial and sensitive subjects. Deliberations focus primarily on the meaning of citizenship. Three lecture hours a week for one semester. Communication Studies 365L and 367 (Topic: *Communication, Controversy, and Citizenship*) may not both be counted. Prerequisite: Upper-division standing.
- 367. Topics in Communication Studies.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- 370K. Internship in Communication Studies.** Restricted to senior communication studies majors. Focuses on career goals of students through classroom discussions and places students in communication positions with public and private organizations. The equivalent of three lecture hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Twelve semester hours of communication studies (or speech), including at least three hours of upper-division coursework; a University grade point average of at least 2.50; a grade point average in communication studies of at least 3.00; and consent of instructor.
- 371K. Practicum in Conflict Mediation.** Two lecture hours and three discussion hours a week for one semester. Students must also attend one weekend workshop at the beginning of the semester. Offered on the pass/fail basis only. With consent of instructor, may be repeated once for credit.
- 171M. Communication Studies Internship.** Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Communication Studies 370K; consent of departmental internship coordinator; and completion of departmental requirements for enrollment in an internship course.

- 372K. Advanced Organizational Communication.** In-depth discussion and treatment of advanced organizational communication topics, including socialization and role development, workplace attachments, organizational culture, ethics, structure, conflict, power, decision making and empowerment, technology, and various forms of external communication with relevant organizational stakeholders. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Communication Studies 313M.
- 177K, 377K, 477K. Faculty-Initiated Research.** Supervised research on a project designed by a faculty member. No more than six semester hours in the following courses may be counted: Communication Studies 177K, 377K, 477K, 178K, 278K, 378K, 478K, 578K, 678K. Prerequisite: Upper-division standing, twelve semester hours of coursework in communication studies, a University grade point average of at least 2.50, and consent of instructor and the department.
- 178K, 278K, 378K, 478K, 578K, 678K. Student-Initiated Research.** Supervised independent research on a project initiated, designed, and implemented by the student. Student secures consent of a faculty member willing to supervise the project prior to registering. No more than six semester hours in the following courses may be counted: Communication Studies 177K, 377K, 477K, 178K, 278K, 378K, 478K, 578K, 678K. Prerequisite: Upper-division standing, twelve semester hours of coursework in communication studies, a University grade point average of at least 2.50, and consent of instructor and the department; Communication Studies 177K, 377K, 477K is recommended.
- 379H. Honors Tutorial Course: Special Project.** The writing of a thesis or the presentation of a creative project; final comprehensive examination. Individual instruction. Prerequisite: Communication Studies 359H.

SCHOOL OF JOURNALISM

Journalism majors may not register for more than nine semester hours in journalism in one semester or summer session. The director or associate director may make exceptions to this rule for seniors who need additional journalism courses in order to graduate on time.

Any student enrolled in a journalism course who does not attend the first class meeting or laboratory session may be dropped from that course.

In addition to the prerequisites given below, several policies described in this catalog affect registration in journalism courses. These include the Grammar, Spelling and Punctuation Test requirement described on page 96 and the policies described in the section "Special Requirements" on page 97.

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact

semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

JOURNALISM: J

LOWER-DIVISION COURSES

- 310 (TCCN: COMM 2302). Critical Issues in Journalism.** Introduction to major issues facing the news media in a democratic society, including ethics, institutions, effects, and standards of press performance. Three lecture hours a week for one semester.
- 310K. Visual Literacy.** Introduction to the visual concerns of message design and interpretation, including their bases in theories of visual perception, semiotics, and media practice. Three lecture hours a week for one semester.
- 315 (TCCN: COMM 2311). News Media Writing and Editing.** Restricted to prejournalism and pre-public relations majors. Introduction to fundamental journalistic writing skills for the media and to fundamental copyediting, including selection, processing, and display of news and other information; studies in news audience interests; readability, clarity, verification, and style. Two lecture hours and three to four and one-half laboratory hours a week, as required, for one semester. Prerequisite: Journalism 310 with a grade of at least C; a score of at least 45 on the College of Communication Grammar, Spelling and Punctuation Test; and a score of at least 29 on the School of Journalism Word Processing Test.
- 316 (TCCN: COMM 1316). Photographic Communication.** Introduction to photographic technique and recent trends, evaluation, visual design, and use of images in the media. Students must provide their own 35-mm single-lens reflex or digital camera that can be operated under manual mode and with off-camera flash. Three lecture hours and one and one-half laboratory hours a week for one semester.
- 318. Photography I.** Intensive training in basic digital and black-and-white photography; darkroom techniques; and fundamental approaches to producing images. Three lecture hours and four laboratory hours a week for one semester. Journalism 318 and 325 may not both be counted. Prerequisite: Journalism 316 with grade of at least a C, and a major in the College of Communication or consent of instructor.
- 319. Principles of Graphic Design.** The history, design, and production of media materials. Subjects may include design principles, visual perception, typography, manipulation of images and photographs, and page design for various mediums. Three lecture hours and two laboratory hours a week for one semester. Journalism 319 and 336 may not both be counted. Prerequisite: A major in the College of Communication or consent of instructor.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Journalism.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Journalism. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320D. Intermediate Reporting.** Restricted to journalism majors. Information-gathering and information-retrieval skills, reporting and editing techniques, and interviewing. Introduction to electronic resources for journalists. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Journalism 310 and 315 with a grade of at least C in each; a score of at least 45 on the College of Communication Grammar, Spelling and Punctuation Test; a score of at least 29 on the School of Journalism Word Processing Test; and acceptance into the major in journalism.
- 321C. Fundamentals of Multimedia Journalism.** Focuses on new forms of journalism based on the Internet and other digital platforms. Examines the digital revolution and the creation of a global information society, with a special focus on the effects upon journalism, such as computer-assisted reporting in the area of news gathering, and media convergence in news dissemination. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Journalism 310 and 315 with a grade of at least C in each, and admission to a journalism area of concentration.
- 322D. Broadcast Newswriting and Radio Reporting.** Examination and practice of writing news for broadcast and of basic broadcast reporting skills. Students write, report, edit, and produce a radio news program on deadline. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Admission to the broadcast news area of concentration.
- 327. Feature Writing.** Practice in researching, reporting, writing, structuring, and editing feature stories and news features for the print media. Identifying and contacting appropriate freelance markets regarding queries and stories. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 327, Latin American Studies 322 (Topic 4: *Feature Writing*), Mexican American Studies 374 (Topic 6: *Feature Writing*). Prerequisite: Journalism 320D with a grade of at least C, and admission to a journalism area of concentration.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Journalism.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Journalism. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330. News Editing.** Advanced editing for news media. Emphasis on news judgment, language use, and print editing, as well as skills necessary for the collaborative production of multimedia news. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Journalism 320D with a grade of at least C, and admission to a journalism area of concentration.
- 331. Web Publishing.** Advanced skills in Web design and in publishing multimedia content. Emphasis on collaborative work in creating an ongoing Web information product. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Journalism 320D and 321C with a grade of at least C in each, and admission to a journalism area of concentration.
- 331K. Projects in Professional Experience.** Internships to be arranged by student and approved by instructor. Offered on the pass/fail basis only. May be taken only once. Prerequisite: Journalism 320D with a grade of at least C, and admission to a journalism area of concentration. Each student must also have earned a grade of at least C in the following course or courses appropriate to his or her area of concentration: broadcast news: Journalism 322D; print journalism: Journalism 320D; photojournalism: Journalism 318 (or 325); or, for students with approval to complete a multimedia internship: Journalism 320D and 321C.
- 331P. Internship.** Internship and discussion hours to be arranged. Offered on the pass/fail basis only. May be repeated for credit, but only one hour may be counted toward a degree in the College of Communication. Prerequisite: Journalism 331K, admission to a journalism area of concentration, and consent of the undergraduate adviser.
- 334. Multimedia Journalism.** Review of online reporting techniques, advanced multimedia skills, and current issues in new media. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Journalism 320D and 321C with a grade of at least C in each, and admission to a journalism area of concentration.
- 335. Narrative Journalism.** Students develop and produce a publication, focusing particularly on underrepresented groups and issues. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 335, Latin American Studies 322 (Topic 11: *Latino Community Journalism*), 322 (Topic 11: *Narrative Journalism*), Mexican American Studies 374 (Topic 4: *Latino Community Journalism*), 374 (Topic 4: *Narrative Journalism*). Prerequisite: Journalism 320D with a grade of at least C, admission to a journalism area of concentration, and consent of instructor.
- 338. Computer-Assisted Reporting.** Study of computer-assisted journalism, including electronic document retrieval and manipulation, spreadsheet and database management, and Internet skills. Collaborative work on major investigative projects. Three lecture hours a week for one semester. Prerequisite: Journalism 320D with a grade of at least C, admission to a journalism area of concentration, and consent of instructor.
- 339D. News Documentaries and Public Affairs.** Study and practice of researching, writing, and producing short-form and magazine documentaries for television. Three lecture hours a week for one semester. Prerequisite: Journalism 320D with a grade of at least C, and admission to a journalism area of concentration.

- 340C. Topics in Journalism, Communication, and Culture.** Issues concerning minority or nondominant groups within the United States. Three lecture hours a week for one semester. Some topics may require additional laboratory hours. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Mass Media and Minorities.** Survey of minority communication problems: alienation, fragmentation, media access; criticism and feedback for minority groups based on racial/ethnic background, age, sex, disability, social or economic class, and sexual orientation. Only one of the following may be counted: Journalism 340C (Topic 1), Latin American Studies 322 (Topic 10: *Mass Media and Minorities*), Mexican American Studies 374 (Topic 22: *Mass Media and Minorities*). Prerequisite: Admission to a journalism area of concentration.
- Topic 2: African Americans and the Media.** Same as African and African American Studies 374D (Topic 4: *African Americans and the Media*). African and African American Studies 374 (Topic 23: *African Americans and the Media*) and Journalism 340C (Topic 2) may not both be counted. Prerequisite: Upper-division standing.
- Topic 3: Journalism and Religion.** How journalists from different faiths view the news and how religion-based organizations may be understood and covered. Prerequisite: Admission to a journalism area of concentration.
- Topic 4: Leadership, Management, and the Media.** Prerequisite: Admission to a journalism area of concentration.
- Topic 5: Women and the News.** Prerequisite: Admission to a journalism area of concentration.
- 347S. Magazine Management.** Study of the business of launching and maintaining successful publications. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Journalism 320D and 327 with a grade of at least C in each, and admission to a journalism area of concentration.
- 348S. Media Management.** Print and broadcast management and planning in operations, personnel, content, marketing, finance, technology, and regulation. Three lecture hours a week for one semester. Prerequisite: Admission to a journalism area of concentration.
- 349T. Topics in Journalism.** Contemporary social, professional, and intellectual concerns in the practice of journalism. Three lecture hours a week for one semester. Some topics may require additional laboratory hours. May be repeated for credit when the topics vary. Prerequisite: Admission to a journalism area of concentration.
- Topic 1: Senior Seminar.** Capstone experience in analysis of current journalism issues. Students complete a major research project. Additional prerequisite: Consent of instructor.
- Topic 2: Business Journalism.** Practical training and experience in business and financial reporting and writing.
- Topic 4: International Reporting.** Designed to provide students with skills in foreign reporting and a better understanding of international news production processes, with special emphasis on Latin America. Additional prerequisite: Journalism 320D with a grade of at least C.
- Topic 5: Broadcast News Practices and Analysis.**
- Topic 7: Oral History as Journalism.** Study of oral history archives, including similarities and differences between oral history and journalistic interviews and possible problems with oral histories in journalism. Journalism 349T (Topic 7) and 395 (Topic 20: *Oral History as Journalism*) may not both be counted.
- Topic 8: Alternative Media.** Journalism 349T (Topic 8) and 395 (Topic 22: *Alternative Media*) may not both be counted.
- Topic 9: Covering Technology and Innovation.**
- Topic 10: Covering the Latino Community in the United States.**
- Topic 11: Editorial Column Writing.**
- Topic 12: Ethics in Journalism.** Journalism 349T (Topic 12) and 395 (Topic 23: *Ethics in Journalism*) may not both be counted.
- Topic 13: Journalism, Society, and the Citizen Journalist.**
- Topic 14: Latino Policy Issues.**
- Topic 15: Magazine Production.** Journalism 349T (Topic 15) and 359T (Topic 2: *Magazine Production*) may not both be counted.
- Topic 16: Politics and the Press.**
- Topic 17: Reporting Asia.** Journalism 349T (Topic 17) and 395 (Topic 17: *Reporting Asia*) may not both be counted.
- Topic 18: Reporting China.**
- Topic 19: Reporting the World.**
- Topic 20: Video Journalism for the Web.**
- Topic 21: Writing for Magazines and Specialty Publications.**
- Topic 22: Writing for Online Publications.**
- 353D. Television Reporting.** Basic television news gathering skills, including shooting and editing videotape, planning and executing visual storytelling, and writing and producing news packages. Students assist in the production of a television news program. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Admission to the broadcast news area of concentration.
- 355. Photography II.** Advanced techniques for newspaper and magazine photography. Concentrates on photojournalism principles; deadline shooting in color for general news, spot news, sports, and features; printing and electronic image reproduction; and selecting images for content, aesthetic values, and technical quality. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Journalism 318 (or 325) with a grade of at least C; credit with a grade of at least C or registration for Journalism 319 (or credit with a grade of at least C for 336); and admission to the photojournalism area of concentration or consent of instructor.

- 359T. Topics in Journalism, Skills, and Techniques.** Contemporary professional skills and techniques in the practices of journalism. Three lecture hours and two to four laboratory hours a week for one semester, as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Admission to a journalism area of concentration.
- Topic 1: Sports Journalism.** Coverage of sports and athletics, including interviewing coaches and athletes, investigative reporting, the business side of sports, ethical issues for sports journalists, and writing sidebars and color stories. Three lecture hours and three laboratory hours a week for one semester. Journalism 340C (Topic: *Sports Journalism*) and 359T (Topic 1: *Sports Journalism*) may not both be counted. Additional prerequisite: Journalism 320D or 322D with a grade of at least C.
- Topic 2: Magazine Production.** Study of the revenue and production aspects of launching and maintaining successful magazines; advertising, production, printing, and the business sides of the industry. Students produce *Orange* magazine. Three lecture hours and two laboratory hours a week for one semester. Journalism 349T (Topic 15: *Magazine Production*) and 359T (Topic 2) may not both be counted. Additional prerequisite: Journalism 320D and 347S with a grade of at least C in each.
- Topic 3: Advanced Visual Design.** Advanced exploration of principles and processes of visual design, including design principles, visual perception, typography, image-making, uses of color, printing techniques, and publication design. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 349T (Topic: *Advanced Visual Design*), 359T (Topic 3: *Advanced Visual Design*), 383P, 395 (Topic 5: *Advanced Visual Design*). Additional prerequisite: Journalism 319 (or 336) and 320D with a grade of at least C in each.
- Topic 4: Advanced News Editing.**
- Topic 5: Investigative Reporting.**
- Topic 6: Narrative Storytelling.**
- Topic 7: Podcasting.**
- 360. Media Law and Ethics.** Social and ethical responsibilities; legal rights and restrictions, including Constitutional guarantees, libel, invasion of privacy, and contempt of court. Three lecture hours a week for one semester.
- 361E. International News.** Survey of international news flow patterns; barriers to free news flow; comparative studies of the foreign press; the role of foreign correspondents and international news agencies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and a major in journalism, or consent of instructor.
- 362E. History of Photography.** Development of photojournalism and commercial, documentary, amateur, and art photography: historical processes, the evolution of stylistic trends, and the careers of major photographers. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 362E, 387P, 395 (Topic: *History of Photography*). Prerequisite: Admission to a journalism area of concentration, or consent of instructor.
- 363. Theories of Mass Communication.** Comparative survey of perspectives, research, and theories on communication through the mass media; theories on media effects and the construction of social reality, especially regarding the news media. Three lecture hours a week for one semester.
- 364E. The Mass Media and Society.** Readings, lectures, films, guest speakers, and panel discussions on the function, role, and responsibility of the mass media in modern society. Three lecture hours a week for one semester. Prerequisite: Admission to a journalism area of concentration, or consent of instructor.
- 366E. History of Journalism.** Development of the mass media; social, economic, and political factors that have contributed to changes in the press. Three lecture hours a week for one semester. Prerequisite: Admission to a journalism area of concentration, or consent of instructor.
- 367E. Journalism in Latin America.** Same as Latin American Studies 322 (Topic 14: *Journalism in Latin America*). Study of the practice of journalism in Latin America. Survey of the region, including historical, political, economic, cultural, ethnic, and geographical aspects. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and a major in journalism, or consent of instructor.
- 370K. Advanced Photojournalism.** Explores intensive photographic reportage and documentation using the camera as a tool of investigation and interaction. Emphasis on creation of photo stories, photo essays, and feature stories, with editing and page layout. Three lecture hours and four laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Journalism 355 with a grade of at least C, and acceptance into the photojournalism area of concentration; or consent of instructor.
- Topic 1: Advanced Photo Editing and Design.** Taught abroad; location may vary by semester. Only one of the following may be counted: Journalism 370K (Topic 1), 370K (Topic: *Advanced Photojournalism in Czechoslovakia*), 395 (Topic 2: *Advanced Photo Editing and Design*).
- Topic 2: Documentary Video.**
- Topic 3: Picture Editing.**
- 371K. Photographic Illustration.** Principles of studio lighting, theory and practice of contemporary color, location lighting, and the production of portfolio-quality work, as applied to advertising, photographic illustration, and photojournalism. Three lecture hours and four laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Journalism 355 with a grade of at least C, and acceptance into the photojournalism area of concentration; or consent of instructor.
- Topic 1: Location Lighting.**
- Topic 2: Studio Photography.**

- 372D. Television Producing.** Restricted to journalism majors. Philosophy and execution of producing television news programs. Advanced writing and reporting skills. Students are responsible for collaborative production of television news programs on deadline. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: A score of at least 45 on the College of Communication Grammar, Spelling and Punctuation Test; a score of at least 29 on the School of Journalism Word Processing Test; admission to the broadcast news area of concentration; and Journalism 322D and 353D with a grade of at least C in each.
- 373D. Advanced News Reporting.** Study of community and institutional news sources; reporting on courts and city, county, and state governments; emphasis on fact-finding and skill in writing; in-depth reporting of significant events. Three lecture hours and six hours of laboratory reporting a week for one semester. Prerequisite: Journalism 320D with a grade of at least C, and admission to a journalism area of concentration.
- 374D. Advanced Feature Writing.** Study of researching, reporting, writing, and structuring advanced feature stories for consumer/trade publications and newspapers, with a concentration on identifying and contacting appropriate freelance markets regarding queries and stories. Three lecture hours a week for one semester. Prerequisite: Journalism 320D and 327 with a grade of at least C in each, and admission to a journalism area of concentration.
- 375. Magazine Editing and Publishing.** Restricted to journalism majors. Advanced magazine design and layout; critical analysis of the magazine in society. Three lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Journalism 349T (Topic 6: *Print Design*), 375, 376D, 377D. Prerequisite: Journalism 330 and 319 (or 336) with a grade of at least C in each.
- 376D. Newspaper Editing and Layout.** Restricted to journalism majors. Advanced newspaper typography, layout, and editing. Graphics techniques and production processes; planning content and format of newspapers; copydesk management. Three lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Journalism 349T (Topic 6: *Print Design*), 375, 376D, 377D. Prerequisite: Journalism 330 and 319 (or 336) with a grade of at least C in each.
- 377D. Print Design.** Advanced print design and layout. Graphics techniques and production processes; planning content and format of newspapers and magazines. Three lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Journalism 349T (Topic 6: *Print Design*), 375, 376D, 377D. Prerequisite: Journalism 319 (or 336) with a grade of at least C, credit with a grade of at least C or registration for Journalism 330, and admission to a journalism area of concentration.
- 379. Journalism Research Projects.** Restricted to journalism majors. Designed to give students the opportunity to pursue special studies for which separate courses have not been organized. The equivalent of nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to a journalism area of concentration and consent of the director of the school.
- 379H. Honors Tutorial Course.** Restricted to journalism majors. Conference course of intensive study, planned by Journalism Honors Committee; research and the writing of a substantial paper on a special journalism topic. Individual instruction. May be repeated for credit. Prerequisite: Admission to the Journalism Honors Program and consent of the director of the school.
- 379P. Photojournalism Research Projects.** Restricted to journalism majors. Designed to give photojournalism students the opportunity to pursue special studies for which separate courses have not been organized. The equivalent of nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to a journalism area of concentration and consent of the director of the school.

DEPARTMENT OF RADIO-TELEVISION-FILM

Most upper-division radio-television-film courses are restricted to radio-television-film majors. At any time, a nonmajor may ask the instructor for consent to register for the instructor's course. However, faculty members often do not give nonmajors consent to enroll until demand for the course can be determined on the first class day. For Radio-Television-Film 317 and 318, the department restricts enrollment during the first registration period to radio-television-film majors. During later registration periods, courses in which space is available may be opened to nonmajors.

Attendance is required at the first class meeting of Radio-Television-Film 317 and 318 and all upper-division radio-television-film courses. At the discretion of the instructor, students who do not attend the first class meeting may be dropped from the course, even if they have registered and paid their tuition.

The Department of Radio-Television-Film reserves the right to retain and to use for noncommercial purposes copies of all work completed by students as part of departmental course assignments.

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

RADIO-TELEVISION-FILM: RTF

LOWER-DIVISION COURSES

- 301N. Introductory Topics in Radio-Television-Film.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 305 (TCCN: COMM 1307). Introduction to Media Studies.** Introduction to historical, cultural, political, economic, and international characteristics of film, television, and other media in society. Two lecture hours, one discussion hour, and one two-hour film screening a week for one semester. Required of all radio-television-film majors.
- 309. Communication Technology and Society.** Same as Communication 309. Study of communication technologies, from writing to the Internet; their uses in interpersonal, group, mass, and international contexts; and the impact of technologies on work. Three lecture hours and one discussion hour a week for one semester. Prerequisite: For radio-television-film majors, Radio-Television-Film 305; for others, none.
- 312C. Introduction to Global Media.** A world perspective on information, news, and entertainment communication systems; politics, technology, economics, and culture. Three lecture hours a week for one semester. Prerequisite: Radio-Television-Film 305.
- 314. The Development of the Motion Picture.** Survey of significant movements and schools of filmmaking through viewings and discussions of representative motion pictures; critical approaches to performance, sociological impact, visual aesthetics, and industry structure. Three lecture hours and one two-hour film screening a week for one semester. A one-hour discussion section may also be required.
- 316 (TCCN: COMM 1335). History of US Radio and Television.** Survey of history, technology, regulation, audience, and economics of radio, television, and related electronic media. Three lecture hours a week for one semester, with one screening of up to two hours a week as required.
- 316M. Race, Ethnicity, and the Media.** Same as Communication 316M. Critical review of contemporary and historical media images of, and discourses on, race and ethnicity. Introduction to relevant communication research and institutions. Three lecture hours and one discussion hour a week for one semester. Prerequisite: A major in the College of Communication. Additional prerequisite for radio-television-film majors, Radio-Television-Film 305.
- 317. Narrative Strategies.** Study of the way meaning is structured and perceived in the screen image; introduction to basic narrative techniques. Includes viewing and analysis of narrative examples. Three lecture hours and one two-hour film screening a week for one semester. A one-hour discussion section may also be required. Required of all students in the production area. Students may not enroll in this course more than twice. Prerequisite: Radio-Television-Film 305.

- 318. Introduction to Image and Sound.** Restricted to radio-television-film majors. Exploration of fundamental production concepts and techniques through lectures, projects, and laboratory work. Three lecture hours and three laboratory hours a week for one semester. Students may not enroll in this course more than twice. Prerequisite: Radio-Television-Film 305.
- 319. Introduction to Digital Media.** Basic information, skills, and theories of digital media. Includes the study of computer-based image construction, Web-based tools for research and production, and theories of interactivity. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Radio-Television-Film 305.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Radio-Television-Film.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Radio-Television-Film. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321F. Media Analysis and Criticism.** Restricted to radio-television-film majors. A foundational course devoted to the critical analysis of media in a variety of contexts. Three lecture hours a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and twelve semester hours of lower-division coursework in radio-television-film.
- 323F. Media Research.** Restricted to radio-television-film majors. A foundational course examining how to analyze audiences, media systems and industries, and media markets. Three lecture hours a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and twelve semester hours of lower-division coursework in radio-television-film.
- 324F. Social Theories of Media.** Restricted to radio-television-film majors. A foundational course exploring social theories of media. Three lecture hours a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and twelve semester hours of lower-division coursework in radio-television-film.

- 124L, 224L, 324L. Topics in the Entertainment Professions.** Restricted to radio-television-film majors. Contemporary issues, practices, and skills related to communication and the entertainment industries, including studies in the business of entertainment, the entertainment professions, the creative process, and contemporary Hollywood cinema. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, Radio-Television-Film 305, a University grade point average of at least 2.25, and admission to the Semester in Los Angeles program.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Radio-Television-Film.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Radio-Television-Film. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330G. Topics in Media Research.** Restricted to radio-television-film majors. Applied research investigating specific media topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of lower-division coursework in radio-television-film with a grade of at least C.
- 330K. Introduction to Research Methods.** Restricted to radio-television-film majors. Introduction to applied media research and research criticism; fundamentals of audience analysis, survey design, experimental and field research, content analysis. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.
- 330L. Internship in Film and Electronic Media.** Restricted to radio-television-film majors. Position availability depends on qualifications of student and number of internships open at time of enrollment. Practical work experience related to the study of film, television, radio, or other media. Students must make their own arrangements to secure relevant internships. Internship listings are available in the college's career services office. At least ten hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Radio-Television-Film 330L and 330M may not both be counted. Prerequisite: The following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; and consent of the internship coordinator.
- 330M. Internship in Digital Media.** Restricted to radio-television-film majors. Position availability depends on qualifications of student and number of internships open at time of enrollment. Practical work experience in digital media and postproduction media. One and one-half lecture hours and at least ten hours of fieldwork a week for one semester. Radio-Television-Film 330L and 330M may not both be counted. Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, nine additional semester hours of lower-division coursework in radio-television-film with a grade of at least C, and consent of instructor.
- 331J. Policy Issues in New Communication Technologies.** Restricted to radio-television-film majors. Overview of policy and regulation of communication systems in the United States, with emphasis on contemporary technologies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.
- 331K. Film, Video, and Television Theory.** Restricted to radio-television-film majors. Survey of basic theories that seek to explain the relationships between film, video, television, and their respective audiences. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film.
- Topic 1: Cult Movies and Gender Issues.**
- Topic 2: Television and Theories of Gender.**
- Topic 4: Feminist Media Theory.** Survey of basic feminist media theory.
- Topic 5: Screen Theory.** Survey of basic screen theory.
- 331L. Corporate and Instructional Video.** Restricted to radio-television-film majors. Study, design, production, use, and evaluation of corporate and instructional video materials. Three lecture hours a week for one semester, with studio hours to be arranged. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B in each.
- 331M. New Communication Technologies.** Restricted to radio-television-film majors. Survey of history of new communication technologies. Analysis of regulation, policy, economics, and programming of new communication technologies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.

- 331N. The Information Society.** Restricted to radio-television-film majors. Introduction to information technologies such as the Internet, telephones, and computers and their relation to existing media; includes history, policy, economics, and social impact. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.
- 331P. Topics in New Communication Technologies.** Restricted to radio-television-film majors. Applications and potential effects of new telecommunications and information technologies in the home and the workplace, and for education and social services. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.
- 331Q. Topics in Digital Media.** Laboratory explorations of the spatial and narrative dimensions of the digital environment. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, the following coursework with a grade of at least C in each course: Radio-Television-Film 305, 318 or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319; for others, upper-division standing.
- 331R. Topics in New Media.** Students produce projects in either film, video, computer animation, collage, sculpture, assemblage, soundscape, or performance. Prior experience in one or more media is helpful but not necessary. Three lecture hours and one and one-half studio hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, the following coursework with a grade of at least C in each course: Radio-Television-Film 305, 318 or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319; for others, upper-division standing.
- 331T. Topics in Digital Media: Audio.** Explorations of the auditory dimensions of the digital environment. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, the following coursework with a grade of at least C in each course: Radio-Television-Film 305, 318 or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319; for others, upper-division standing.
- 333. Introduction to Screenwriting.** Restricted to radio-television-film majors. An introduction to screenwriting for features, short films, documentaries, and television. Lectures explore the basic theory of story, character, and structure. Students write original screenplays during workshop hours. One and one-half lecture hours and two workshop hours a week for one semester. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film.
- 334. Programming and Audience Effects.** Restricted to radio-television-film majors. Study of media programming and its cognitive and behavioral impact on audiences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.
- 335. Television Analysis and Criticism.** Restricted to radio-television-film majors. Analysis of critical methods, selected television programs, and selected critics. Practice in written criticism required of all students. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film.
- 336. Special Projects in Radio-Television-Film.** Restricted to radio-television-film majors. Comprehensive research or creative projects in areas of special interest developed and executed by the student under faculty supervision. Individual instruction. May be repeated once for credit. Prerequisite: Upper-division standing; the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; and consent of instructor and the chair of the department.
- 337. Radio Fundamentals.** Restricted to radio-television-film majors. Fundamentals of audio program production. Students create either brief or long audio programs. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

- 337P. Multitrack Audio Production.** Restricted to radio-television-film majors. Principles and practice of multitrack audio production. Three lecture hours a week for one semester, with studio hours to be arranged. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.
- 340. Studio Production.** Restricted to radio-television-film majors. Introduction to production of television programs, including the multicamera format. Three lecture hours and six laboratory hours a week for one semester. May be repeated for credit when the topics vary. May not be taken concurrently with Radio-Television-Film 366 or 366K. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.
- Topic 1: Drama/Music Production.**
Topic 2: Public Affairs Production.
- 341. Audio Production: Sound for Picture.** Restricted to radio-television-film majors. Theory and practice of producing quality audio for television, film, and other picture media. Includes basic editing on a digital audio workstation. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.
- 341C. Advanced Audio: Sound Design and Postproduction.** Restricted to radio-television-film majors. Sound design and editing, and fundamentals of postproduction audio mixing. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 337, 337P, or 341.
- 342. Topics in Global Media.** Restricted to radio-television-film majors. Study of political, social, cultural, and economic factors affecting the use and impact of communication systems in an international context. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.
- Topic 1: National Media Systems.**
Topic 2: Comparative Media Systems.
Topic 3: Third World Issues. Same as Latin American Studies 322 (Topic 7: *International Communication: Third World Issues*) and Mexican American Studies 374 (Topic 17: *International Communication: Third World Issues*).
Topic 4: Participatory Media.
- Topic 6: Development Communication.** Same as Middle Eastern Studies 322K (Topic 14: *Development Communication*). Asian Studies 361 (Topic 17: *Development Communication*) and Radio-Television-Film 342 (Topic 6) may not both be counted.
- Topic 7: Global Media Systems.**
- 342T. International Telecommunications.** Restricted to radio-television-film majors. Overview of issues and history of international telecommunication systems, focusing on the roles of business and government. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.
- 343. Advanced Video Production.** Restricted to radio-television-film majors. Advanced study in film, television, and media production. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 340, 366, or 366K.
- Topic 1: Advanced Narrative Production.** Individual and group production of short films using high-definition video.
Topic 2: Advanced Documentary Production. Individual and group production of a documentary, from research and preproduction to completion.
Topic 3: Advanced Soundstage Production. Group production of short films using the Hollywood soundstage as the primary model.
- 343M. Master Class.** Restricted to radio-television-film majors. Incorporates a guest speaker series, focused on a particular topic for the semester. Students conduct research, coordinate and attend the speaker series, and pursue creative projects related to the semester's topic. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and twelve semester hours of lower-division coursework in radio-television-film.
- 343S. Soundstage Production for Television and Film.** Restricted to radio-television-film majors. Study of the skills and aesthetics related to professional-level productions in the soundstage format. Three lecture hours and three laboratory hours a week for one semester. Radio-Television-Film 343 (Topic: *Soundstage Production for Television and Film*) and 343S may not both be counted. Prerequisite: Radio-Television-Film 340 or 366K with a grade of at least C.
- 344. Special Applications of Media Production.** Restricted to radio-television-film majors. Special problems involved in audio, film, and video production. Three lecture hours a week for one semester, with studio hours to be arranged if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each. Additional prerequisites vary with the topic.

- 344M. Special Applications of Digital Media Production.** Special topics in digital media theory, design, or development. May include visual effects and motion graphics or digital media and digital art. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, the following coursework with a grade of at least C in each course: Radio-Television-Film 305, 318 or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319; for others, upper-division standing and consent of instructor.
- 345. Studies in Film History.** Restricted to radio-television-film majors. Critical assessment of major genres, periods, movements, and personalities in United States and international film history. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film.
- Topic 1: Third World Cinema: Asia and the Middle East.**
Topic 2: Israeli Cinema and Television. Only one of the following may be counted: Jewish Studies 361 (Topic 6: *Israeli Cinema and Television*), 363 (Topic 16: *Israeli Cinema and Television*), Middle Eastern Languages and Cultures 372 (Topic 15: *Israeli Cinema and Television*), Middle Eastern Studies 325 (Topic 2: *Israeli Cinema and Television*), Radio-Television-Film 345 (Topic 2).
Topic 3: History of Mexican Cinema.
Topic 4: Latin American Cinema.
Topic 5: Third World Cinema: Africa and the Americas.
Topic 6: Experimental Film and Video. Critical assessment of the history and current trends in experimental film and video. Radio-Television-Film 331K (Topic: *Experimental Film and Video*) and 345 (Topic 6) may not both be counted.
- 346. Introduction to Editing.** Restricted to radio-television-film majors. Theory and practice of video and film editing techniques. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.
- 346C. Intermediate Editing.** Restricted to radio-television-film majors. Advanced theory and practice of video and film editing techniques. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 346.
- 346E. Advanced Editing.** Restricted to radio-television-film majors. Designed to simulate a professional experience in which students act as editors for a specific creative project. Emphasizes organizational, technical, and stylistic issues relevant to each particular project. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit when the topics vary. Radio-Television-Film 344 (Topic: *Advanced Editing*) and 346E may not both be counted. Prerequisite: Upper-division standing and Radio-Television-Film 346C.
- 347C. The Business of Media.** Restricted to radio-television-film majors. Survey of business practices in film, television, and music industries: development, production, distribution, and exhibition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.
- 348. Studies in Media Industries.** Restricted to radio-television-film majors. Examination of the economics and the production, research, management, and distribution practices of the film and electronic media industries. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.
- 351C. Introduction to Digital Animation and Graphics.** Restricted to radio-television-film majors. Theory and practice of digital graphics and animation techniques. Three lecture hours a week for one semester, with studio hours to be arranged. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 318, or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319.
- 351D. Two-Dimensional Animation and Motion Graphics.** Restricted to radio-television-film majors. In-depth study of two-dimensional animation techniques and an introduction to stop-motion animation, green screen techniques, and postproduction effects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Only one of the following may be counted: Radio-Television-Film 344M (Topic: *Advanced Digital Animation*), 344M (Topic: *Two-Dimensional Animation and Motion Graphics*), 351D. Prerequisite: Radio-Television-Film 351C.

351T. Three-Dimensional Animation. Restricted to radio-television-film majors. Introduction to the art of three-dimensional animation using lectures, workshops, screenings, and labs. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Radio-Television-Film 344M (Topic: *Three-Dimensional Animation*) and 351T may not both be counted. Prerequisite: Radio-Television-Film 351D.

359. Studies in Media and Culture. Restricted to radio-television-film majors. Special topics related to the critical analysis of media in cultural contexts. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Radio-Television-Film 359 and 359S may not both be counted unless the topics vary. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, prerequisites vary with the topic and are given in the *Course Schedule*.

Topic 2: Race and Popular American Culture. Same as African and African American Studies 321M and Sociology 321M. The intersection of African American racial politics and the changing popular media industry, especially film, music, and television. Only one of the following may be counted: African and African American Studies 320 (Topic: *Race and Popular American Culture*), Radio-Television-Film 359 (Topic 2), Sociology 321K (Topic: *Race and Popular American Culture*). Prerequisite for non-radio-television-film majors: Upper-division standing.

359S. Studies in Media and Culture. Restricted to radio-television-film majors. Special topics related to the critical analysis of media in cultural contexts. Three lecture hours and one two-hour film screening a week for one semester. May be repeated for credit when the topics vary. Radio-Television-Film 359 and 359S may not both be counted unless the topics vary. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, prerequisites vary with the topic and are given in the *Course Schedule*.

Topic 1: Hispanic Images and Counterimages. Same as Latin American Studies 322 (Topic 1: *Hispanic Images and Counterimages*) and Mexican American Studies 374 (Topic 9: *Hispanic Images and Counterimages*). The critical analysis of Hispanic images in media. Prerequisite: For non-radio-television-film majors: Upper-division standing and consent of instructor.

Topic 2: Women and Media Culture. Critical analysis of media and its interrelation with issues of gender. Radio-Television-Film 359 (Topic: *Women and Media Culture*) and 359S (Topic 2) may not both be counted.

Topic 3: Gender and Rock Culture. Critical analysis of issues relating to media, gender, and rock culture. Radio-Television-Film 331K (Topic: *Gender, Sexuality, and Rock Culture*) and 359S (Topic 3) may not both be counted.

Topic 4: Media, Memory, and History. Critical analysis of the relationship between historical events and media.

365. Topical Studies in Mass Communication. Restricted to radio-television-film majors. Advanced problems in international communication, mass communication studies, and communication technologies, with extensive treatment of specific research methods. Three lecture hours a week for one semester, with additional hours to be arranged if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 2: Latino Audiences. Same as Latin American Studies 322 (Topic 2: *Latino Audiences*) and Mexican American Studies 374 (Topic 10: *Latino Audiences*). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 3: Mass Media and Ethnic Groups. Same as Latin American Studies 322 (Topic 3: *Mass Media and Ethnic Groups*) and Mexican American Studies 374 (Topic 11: *Mass Media and Ethnic Groups*). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 4: History of United States Latino Media. Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of coursework in radio-television-film.

Topic 5: Latin American Media. Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of lower-division coursework in radio-television-film.

Topic 6: Latinos and Media. Same as Latin American Studies 322 (Topic 12: *Latinos and Media*) and Mexican American Studies 374 (Topic 24: *Latinos and Media*). Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 7: Narrowcasting. Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of lower-division coursework in radio-television-film.

Topic 8: Migration and Media. Advanced study of global media issues, including traditional and digital media use, social inclusion, and migration to the United States from Latin America, Asia, and elsewhere. Students conduct research on the relationships between media and migration. Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of coursework in radio-television-film.

366. Introduction to Field and Studio Production. Restricted to radio-television-film majors. Basic theory and techniques in single-camera video production; individual and collective production assignments, with emphasis on technical proficiency, examination of the entire production process, visualization of ideas, and critical evaluation of the visual text. Three lecture hours and six laboratory hours a week for one semester. May not be taken concurrently with Radio-Television-Film 340 or 366K. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B in each.

366D. Directing Workshop. Restricted to radio-television-film majors. Explores the role of the director, focusing on the director-actor relationship, narrative structure, and visual language. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Radio-Television-Film 344 (Topic: *Directing Workshop*) and 366D may not both be counted. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; Radio-Television-Film 317 and 318 with a grade of at least B- in each; and a University grade point average of at least 2.25. Concurrent enrollment in Radio-Television-Film 366K (Topic 2: *Narrative Production*) is recommended.

366K. Introductory Production. Restricted to radio-television-film majors. Workshops in narrative and documentary production. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. May not be taken concurrently with Radio-Television-Film 340 or 366. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

Topic 2: Narrative Production. A workshop in visual storytelling and making non-dialogue films. Additional prerequisite: Concurrent enrollment in Radio-Television-Film 366D is recommended.

Topic 3: Documentary Production. Workshop in contemporary documentary practice, including directing, producing, cinematography, editing, sound recording, and distribution.

Topic 4: East Austin Stories. Students work in small production groups and make documentaries in and about East Austin for public screening at the end of the semester and for Webcasting.

367K. Producing Film and Television. Restricted to radio-television-film majors. Comprehensive consideration of the production process from the producer's standpoint regarding fiscal and creative management. Includes development and preproduction and production planning using computer budgeting and scheduling. Three lecture hours a week for one semester, with computer laboratory hours to be arranged. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

367L. Narrative Filmmaking: 16-mm. Restricted to radio-television-film majors. Theory and techniques in 16-mm film synchronous sound production; individual and collective production assignments, with emphasis on technical proficiency, examination of entire production process, visualization of ideas, and critical evaluation of the visual text. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Radio-Television-Film 366K.

367P. Advanced Producing. Restricted to radio-television-film majors. Advanced practical application of the business and creative skills used to produce and distribute media projects in the marketplace. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Radio-Television-Film 344 (Topic: *Advanced Producing*) and 367P may not both be counted. Prerequisite: Radio-Television-Film 367K.

368. Advanced Production Topics. Restricted to radio-television-film majors. Advanced study of production crafts in film, television, and other digital media. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 343 or 367L.

Topic 2: Cinematography.

Topic 3: Advanced Production.

Topic 4: Advanced Directing.

368S. Undergraduate Thesis. Restricted to radio-television-film majors. Advanced film production or media studies research. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 343, 367L, or 368; and consent of instructor.

Topic 1: Film Production. Intensive production workshop, designed for students who wish to produce a film for a portfolio.

Topic 2: Media Studies.

- 369. Advanced Screenwriting.** Restricted to radio-television-film majors. Students develop and write original screenplays. Includes advanced study of screenplay structure, critical analysis of student and professional work, and intensive writing each week toward a completed script. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 333.
- Topic 1: Feature Films.**
- Topic 2: Television.**
- 370. Film Analysis and Criticism.** Restricted to radio-television-film majors. Analysis of critical methods, selected films, and selected critics. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film.
- 178. Radio-Television-Film Internship.** Restricted to radio-television-film majors. Practical work experience related to the study of film, television, radio, or other media. Students must make their own arrangements to secure relevant internships. Internship listings are available in the college's career services office. The equivalent of ten class hours a week for one semester. Offered on the pass/fail basis only. May be repeated once for credit. Prerequisite: Radio-Television-Film 330L and consent of the internship coordinator.
- 378H. Honors Tutorial Course.** Intensive reading, research, and/or production project. Individual instruction. May be repeated once for credit. Prerequisite: Upper-division standing; the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; consent of instructor; a University grade point average of at least 3.00 and a grade point average in radio-television-film of at least 3.50; and consent of the department chair.

6. College of Education

Manuel J. Justiz, PhD, *Dean*
 Marilyn C. Kameen, EdD, *Senior Associate Dean*
 Sherry L. Field, PhD, *Associate Dean*
<http://www.edb.utexas.edu/education/>

GENERAL INFORMATION

MISSION AND FUNCTIONS

The University of Texas at Austin, through the College of Education, is committed to the preparation of teachers and other educators who are dedicated to the employment and advancement of education for all people. In pursuing this mission, the College of Education performs several functions.

It is a professional school offering two teacher certification degrees. The first degree, the Bachelor of Science in Applied Learning and Development, allows students to pursue early childhood through grade six generalist or bilingual generalist teacher certification or generic special education certification for early childhood through grade twelve. The second degree, the Bachelor of Science in Kinesiology and Health, offers a major that leads to all-level physical education certification.

The college provides the professional sequence of education courses and serves as the certification agent for all University students pursuing certification to teach in Texas, whether they are enrolled in the College of Education or in another division of the University. Accountability information for the teacher preparation program is given in *General Information*.

The college also offers degree programs that do not lead to teacher certification. These programs, in youth and community studies, athletic training, exercise science, health promotion, sport management, and physical culture and sports, are designed to meet the professional needs of public and private educational and community service agencies and to

prepare students for advanced study.

As a unit of the Graduate School, the College of Education offers courses and curricula leading to advanced professional certificates and to master's and doctoral degrees in education. It also provides in-service training and consulting services for those engaged in the educational professions.

Departments in the college offer courses in general education as well as in various specialties suitable for students pursuing vocational objectives other than teaching.

The college is also a center for research, experimentation, and a wide variety of direct services to school systems and other educational and public service enterprises.

FACILITIES

The instructional and research programs of the College of Education are carried out in five buildings. The primary facility, the George I. Sánchez Building, contains classrooms, extensive computer facilities, electronic media resources, observation rooms, a learning technology center, a distance learning classroom, and faculty offices. Belmont Hall, the primary facility for the Department of Kinesiology and Health Education, houses classrooms, research and computer laboratories, gymnasium and locker facilities, racquet sport courts, and faculty offices. College of Education faculty members and programs are also housed in Anna Hiss Gymnasium, Gregory Gymnasium, and the Lee and Joe Jamail Texas Swimming Center.

FINANCIAL ASSISTANCE AVAILABLE THROUGH THE COLLEGE

Scholarships as well as graduate fellowships and assistantships are available to students in the College of Education. Application for all undergraduate awards and some graduate awards should be made to the Office of the Dean, George I. Sánchez Building 216; graduate students should also inquire in their departmental offices. Generally, applications are accepted online in May for the following academic year.

STUDENT SERVICES

The Office of the Dean of the College of Education provides a variety of student services, including maintenance of student records, academic counseling, certification counseling, and official evaluations of the student's academic standing and progress toward a degree. Students are encouraged to contact the office whenever they have questions about degree requirements, academic standing, teacher certification, general University regulations, or registration. The office is also a good source of general information and referral that students are urged to use when they have questions or problems of any nature.

ACADEMIC ADVISING

The College of Education encourages all students to see their advisers during the registration period and at least once a semester outside the registration period for a more comprehensive discussion of their programs. Academic advisers are available in George I. Sánchez Building 216 and Belmont Hall 1005.

STUDENT ORGANIZATIONS

The Education Council is the official channel for student participation in policy formulation and evaluation and in development of student activities in the college. Voluntary organizations in the college include the Bilingual Education Student Organization, the Kinesiology Club, Minorities in Education, the Student Council for Exceptional Children, and Teachers of Tomorrow. Pi Lambda Theta, Phi Delta Kappa, and Kappa Delta Pi are honorary organizations for men and women.

EDUCATION CAREER SERVICES

The College of Education offers career services to assist University students in making informed career choices. Education Career Services makes job search materials, events, and counseling accessible to students on a regular basis. Information about these services is available at <http://www.edb.utexas.edu/education/edServices/career/>.

As a complement to the assistance available from the college, the Sanger Learning and Career Center provides comprehensive career services to all students. The center offers professional assistance to all University students in choosing or changing their majors or careers, seeking an internship, and planning for the job search or for graduate study.

ADMISSION AND REGISTRATION

ADMISSION

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

Information about admission to teacher preparation programs is available in the Office of the Dean, George I. Sánchez Building 216. Information about admission to majors in the Department of Kinesiology and Health is available in the Kinesiology Advising Center, Belmont Hall 1005.

Admission to majors in kinesiology is restricted. Students should see an adviser in the Kinesiology Advising Center for information.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

ADMISSION TO THE PROFESSIONAL DEVELOPMENT SEQUENCE

All students seeking teacher certification must complete a sequence of professional development courses. Admission to the Professional Development Sequence is restricted. Space availability may be a factor in the admission decision, as well as academic performance, completion of prerequisite courses, documented evidence of proficiency in reading and in oral and written communication, and the number of hours the student needs, at the time of application, to complete the program.

For students seeking early childhood through grade six, all-level generic special education, or all-level physical education certification, admission to the Professional Development Sequence requires a University grade point average of at least 2.50 and a grade of at least C in each prerequisite course and in each course in the major. To progress within the sequence, and to complete the sequence, the student must maintain a University grade point average of at least 2.50 and must earn a grade of at least C in each course in the sequence. In addition, when they enter the Professional Development Sequence, students seeking early childhood through grade six and all-level generic special education certification may lack no more than twelve semester hours of coursework outside the sequence. Additional information about these requirements is available in the Office of the Dean, George I. Sánchez Building 216.

For students in other teacher certification programs, requirements for admission to and continuation in the Professional Development Sequence are set by the college in which the student majors.

ACADEMIC POLICIES AND PROCEDURES

HONORS

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

GRADUATION

SPECIAL REQUIREMENTS OF THE COLLEGE

All students must fulfill the general requirements for graduation given in chapter 1. In addition, students in the College of Education must be registered in the college either in residence or in absentia the semester or summer session the degree is to be awarded and must apply to the dean for the degree no later than the date specified in the official academic calendar. The student must have an official degree audit on file prior to applying for the degree.

APPLYING FOR A DEGREE

Each student seeking a degree from the College of Education should apply for an official degree audit in the Student Dean's Office, George I. Sánchez Building 216. The degree audit is essential to ensure that the student meets all the degree requirements given in a catalog under which he or she is eligible to graduate.

In the final semester or summer session, a candidate for graduation must apply for the degree by the deadline given in the official academic calendar, and must have had a degree audit.

DEGREES

GENERAL REQUIREMENTS

1. All College of Education students seeking teacher certification must complete the entire Professional Development Sequence of coursework in residence. Residence credit includes only courses taken at the University; it does not include credit by examination, courses taken by extension or correspondence, or courses taken at another institution.
2. Students seeking teacher certification must adhere to current state requirements, even if they differ from the degree requirements described in

this catalog.

3. Except as otherwise indicated, credit by examination is treated like any other earned credit in meeting degree requirements.
4. With the exception of credit earned by examination, each course counted toward the degree or toward certification requirements must be taken on the letter-grade basis, unless the course is offered only on the pass/fail basis.
5. To graduate, all students must have a University grade point average of at least 2.00.
6. A student may not earn both the Bachelor of Science in Kinesiology and the Bachelor of Arts with an intercollege major in kinesiology and health.

APPLICABILITY OF CERTAIN COURSES

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. Although physical instruction is not a degree requirement in the College of Education, students are encouraged to take physical activity courses, particularly in activities that can be pursued throughout a lifetime. Up to three semester hours of physical activity coursework may be counted as electives toward any College of Education degree. All physical activity courses are counted among courses for which the student is enrolled, and the grades are included in the grade point average.

ROTC COURSES

A maximum of nine semester hours of credit in air force science, military science, or naval science may be used as free electives in any degree plan of the College of Education.

CORRESPONDENCE AND EXTENSION COURSES

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree in the College of Education unless specifically approved in advance by the dean. In the semester they plan to graduate, students may not take any course to be counted toward the degree at another institution or by correspondence; students who plan to graduate at the end of the summer session may request approval to take transfer work only in the first summer term.

BACHELOR OF SCIENCE IN APPLIED LEARNING AND DEVELOPMENT

The curriculum for the degree has four components: (a) the University-wide core curriculum; (b) prescribed work for the BSALD; (c) major requirements; and (d) electives. Students choose one of three majors: early childhood through grade six generalist, which can lead to early childhood through grade six generalist certification or early childhood through grade six bilingual generalist certification; all-level generic special education, which can lead to all-level generic special education certification; or youth and community studies, which does not lead to teacher certification.

The youth and community studies major requires 120 hours of coursework; the early childhood through grade six generalist major requires 124 hours of coursework; the early childhood through grade six generalist major with bilingual generalist certification requires 125 hours of coursework; and the all-level generic special education major requires 127 hours of coursework. Students in all majors must complete at least 36 hours of upper-division coursework.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2. In some cases, a course that is required for the BSALD may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

All students must complete the following requirements. The youth and community studies major requires modifications to the prescribed work; these are described in the section for the major below.

1. Two courses with a substantial writing component or a writing flag. Courses that meet this requirement are identified in the *Course Schedule*.
2. Information Studies 322T.
3. Psychology 301. This course may also be used to fulfill the social and behavioral sciences requirement of the core curriculum.
4. Natural Sciences 306J, 306K, and 306L. These courses may also be used to fulfill parts I and II of the science and technology requirement of the core curriculum. In addition, students must complete a three-semester-hour natural science or computer science course.
5. Mathematics 316K and 316L.

6. Foreign language: Students must demonstrate proficiency in a single foreign language equivalent to that shown by completion of the second college semester in the language; proficiency is usually shown by earning credit for language courses 506 and 507 or the equivalent. Prospective Texas teachers are strongly encouraged to take Spanish to fulfill the language requirement.

Although the foreign language requirement is the attainment of a certain proficiency, rather than the completion of a specified number of hours, the courses taken to gain this proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

Students who completed two years of a single foreign language in high school and who are not pursuing teacher certification may substitute nine semester hours in specific multicultural and language/communication courses for the foreign language requirement. A list of the acceptable substitute is available in the Student Dean's Office, George I. Sánchez Building 216, and in the Kinesiology Advising Center, Belmont Hall 1005.

7. Three semester hours of coursework dealing with at least one minority or nondominant group in the United States. A list of acceptable courses is available in the Student Dean's Office, George I. Sánchez Building 216, and in the Kinesiology Advising Center, Belmont Hall 1005.

MAJOR REQUIREMENTS

EARLY CHILDHOOD THROUGH GRADE SIX GENERALIST

Students who have completed the early childhood through grade six generalist major are eligible to teach prekindergarten through grade six after meeting additional state requirements. By choosing appropriate options within this program, students may also become qualified for certification in bilingual education.

For this major, students must complete the following:

1. Coursework in applied learning and development:
 - a. Three semester hours in cognition and learning chosen from Applied Learning and Development 320 and 321.
 - b. Applied Learning and Development 322.
 - c. Applied Learning and Development 327.

- d. Applied Learning and Development 328.
- e. Applied Learning and Development 329.
- f. Applied Learning and Development 330.
- g. Health Education 329K.
- h. Kinesiology 314.
2. A curricular specialization consisting of Curriculum and Instruction 670E (Topic 19: *Reading/Language Arts*) and 370E (Topic 20: *Teaching English as a Second Language*), and either Special Education 378T (Topic: *Reading Difficulties*) or Curriculum and Instruction 371R.
3. The Professional Development Sequence described below. Students seeking bilingual education certification must take a special sequence of these professional development courses with an appropriate emphasis. Admission to the Professional Development Sequence is restricted; admission requirements are given on page 129.
 - a. Methods courses: Curriculum and Instruction 370E (Topic 3: *Science*), 370E (Topic 4: *Social Studies*), and 370E (Topic 5: *Mathematics*).
 - b. Curriculum and Instruction 331E.
 - c. Curriculum and Instruction 371G.
 - d. Curriculum and Instruction 370E.

ALL-LEVEL GENERIC SPECIAL EDUCATION

Students who have completed the all-level generic special education major are eligible to teach in special education classrooms from prekindergarten through grade twelve after meeting additional state requirements.

For this major, students must complete the following:

1. Coursework in applied learning and development and related areas:
 - a. Three semester hours in human development chosen from Human Development and Family Sciences 313 and Psychology 304.
 - b. Three semester hours in cognition and learning chosen from Applied Learning and Development 320 and 321.
 - c. Applied Learning and Development 322, 326, 327, and 328.
2. Prescribed work in special education: Special Education 332, 337, 372, 375C, 376, 378D, 378E, 378R, and 378S.
3. The Professional Development Sequence described below. Admission to the Professional Development Sequence is restricted; admission requirements are given on page 129.
 - a. Curriculum and Instruction 370E (Topic 5:

Mathematics) and 670E (Topic 19: *Reading/Language Arts*).

- b. Curriculum and Instruction 331E.
- c. Special Education 960.

YOUTH AND COMMUNITY STUDIES

Completion of a major in youth and community studies does not entitle the student to receive a teaching certificate.

1. The prescribed work described on pages 130–131, with the following modifications:
 - a. A course in English or rhetoric and writing may be counted in place of Information Studies 322T. The course used to fulfill the humanities requirement of the core curriculum may not also be counted toward this requirement.
 - b. Students must complete a three-semester-hour course in anthropology, economics, geography, linguistics, or sociology in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum.
 - c. Students are not required to take Natural Sciences 306J, 306K, 306L, and an additional natural sciences or computer science course. However, they must complete the science and technology, part I and part II, requirements of the core curriculum.
 - d. Mathematics 316K and 316L are not required.
 - e. Students must take a three-semester-hour computer applications course.
 - f. In place of coursework dealing with a minority or nondominant group in the United States, students may complete three hours in humanities, philosophy (excluding courses in logic), or any field of study in the School of Architecture, the College of Fine Arts, or the Department of Classics. (This requirement is in addition to the visual and performing arts requirement of the core curriculum.)
2. Coursework in applied learning and development and related fields:
 - a. Applied Learning and Development 320, 322, 324 or 325, and 327.
 - b. Applied Learning and Development 321 or Educational Psychology 363M.
 - c. Health Education 329K.
 - d. Three semester hours of coursework in kinesiology or health education.
3. A minor of at least fifteen semester hours, six of which must be upper-division, in any approved

field of study in the University outside of the College of Education. At least six of the required fifteen hours must be completed in residence. No more than six hours in the minor may also be counted toward other degree requirements. Information about approved areas of study and specific courses that may be used is available in the Student Dean's Office, George I. Sánchez Building 216.

4. Professional concentration: Fifteen semester hours selected from one of the following four concentrations: Early Childhood, Special Populations, Coaching, and Youth and Social Services. A list of courses in each concentration is available in the Student Dean's Office, George I. Sánchez Building 216, and in the Kinesiology Advising Center, Belmont Hall 1005.

ELECTIVES

Additional elective coursework may be needed to provide the total number of semester hours required for the student's major. Students in all majors must complete at least thirty-six hours of upper-division coursework.

BACHELOR OF SCIENCE IN ATHLETIC TRAINING

Students who plan to major in athletic training must be admitted to the Athletic Training Education Program (ATEP). Admission is based on a competitive application process. The student's grade point average and completion of prescribed coursework are factors in the admission decision. Applicants must also participate in the Directed Observation Program, meet a set of technical standards, pass a health assessment/physical examination, provide proof of immunizations and vaccinations, submit letters of recommendation, and submit additional application documents. More information about the admission process and requirements is available from an academic adviser and at <http://www.edb.utexas.edu/atep/main.htm>.

In addition to completing the coursework associated with the athletic training major, students in the ATEP must participate in clinical rotations and become adept in a set of educational competencies and clinical proficiencies. Students who plan to take the Board of Certification (BOC) examination or the state licensure examination for athletic trainers must complete the ATEP.

The curriculum for the degree has four components: (a) the University-wide core curriculum; (b) prescribed

work; (c) major requirements; and (d) electives. A total of at least 120 semester hours of coursework is required; at least thirty-six hours must be in upper-division courses.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2. In some cases, a course that is required for the Bachelor of Science in Athletic Training may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

1. *Writing*: Two courses with a substantial writing component or a writing flag. These courses are identified in the *Course Schedule*.
2. *Social science*
 - a. Psychology 301.
 - b. Three hours of coursework in anthropology, economics, geography, linguistics, or sociology.
Psychology 301 and several social science courses that fulfill requirement b may also be counted toward the social and behavioral sciences requirement of the core curriculum.
3. *Mathematics*: Mathematics 305G or coursework in calculus. Mathematics 305G and several calculus courses may also be counted toward the mathematics requirement of the core curriculum.
4. *Natural science*
 - a. Biology 301L and 309D, or 309D and 311C.
 - b. Six hours of coursework in chemistry.
 - c. Three hours of coursework in astronomy, biology, chemistry, computer applications, computer science, geological sciences, mathematics, physical science, physics, experimental psychology, physical anthropology, physical geography, history of science, or philosophy of science.
Many courses that fulfill this natural science requirement may also be counted toward the science and technology requirements of the core curriculum.
5. Classical Civilization 306M.
6. Communication Studies 306M.
7. *Foreign language*: Students must demonstrate proficiency in a single foreign language equivalent to that shown by completion of the second college semester in the language; proficiency is usually shown by earning credit for language

courses 506 and 507 or the equivalent. Prospective Texas teachers are strongly encouraged to take Spanish to fulfill the language requirement.

Although the foreign language requirement is the attainment of a certain proficiency rather than the completion of a specified number of hours, the courses taken to gain this proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

Students who completed two years of a single foreign language in high school and who are not pursuing teacher certification may substitute nine semester hours in specific multicultural and language/communication courses for the foreign language requirement. A list of acceptable substitute courses is available in the Student Dean's Office, George I. Sánchez Building 216, or in the Kinesiology Advising Center, Belmont Hall 1005.

MAJOR REQUIREMENTS

1. The following courses:
 - a. Kinesiology 312, Topic 2: *Care and Prevention of Athletic Injuries*.
 - b. Kinesiology 119, Topic 10: *Conditioning*.
 - c. Kinesiology 219K, Topic 3: *Introduction to Athletic Training*.
 - d. Kinesiology 324K, *Applied Human Anatomy*.
 - e. Kinesiology 325K, *Physiology of Exercise*.
 - f. Kinesiology 320, *Applied Biomechanics of Human Movement*; or Kinesiology 326K, *Kinesiology: Biomechanical Analysis of Movement*.
 - g. Kinesiology 330E, *Sport Nutrition*; or Nutrition 306, *Fundamentals of Nutrition*.
 - h. Kinesiology 341, *Therapeutic Modalities in Athletic Training*.
 - i. Kinesiology 342, *Clinical Evaluation of Athletic Injuries in the Lower Body*.
 - j. Kinesiology 343, *Clinical Evaluation of Athletic Injuries in the Upper Body*.
 - k. Kinesiology 344, *Therapeutic Exercise and Rehabilitation Techniques*.
 - l. Kinesiology 345, *Topics in Athletic Training*.
 - m. Kinesiology 346, *Athletic Training Program Administration*.
2. Students enrolled in the Athletic Training Education Program must complete a practicum course, determined by the faculty adviser, for each semester

- of their clinical rotations.
3. Three additional hours of coursework in kinesiology or health education.

ELECTIVES

Additional elective coursework may be required to provide the 120 semester hours required for the degree. Up to six hours of fieldwork may be counted toward the degree as electives. Up to three hours in physical education activity coursework (PED) may be counted as electives.

BACHELOR OF SCIENCE IN KINESIOLOGY AND HEALTH

The field of kinesiology consists of biomechanical, physiological, psychological, managerial, epidemiological, rehabilitative, and sociocultural approaches to the study of human movement and personal and public health. The Bachelor of Science in Kinesiology and Health degree program offers five majors: exercise science, physical culture and sports, health promotion, sport management, and applied movement science.

The applied movement science program is designed for students interested in studying human movement as a background for teacher certification in physical education; students who have completed the program may be entitled to teach in prekindergarten through grade twelve. The exercise science program is appropriate preparation for further study in sport and exercise sciences or in movement-related areas such as physical therapy and sport medicine. The health promotion major is designed to prepare graduates for a number of professions involving wellness, fitness, rehabilitation, public health, and disease prevention. The sport management major is designed for students who are interested in the organization, marketing, and management of sports programs. The physical culture and sports major is designed to prepare students for graduate school and/or careers related to a social science approach to sport and exercise.

The curriculum for the degree has four components: (a) the University-wide core curriculum; (b) prescribed work for the BSKin&Health; (c) major requirements, which include a minor or specialization; and (d) electives. More information, including a list of specializations and minors, is available from the College of Education Student Dean's Office, George I. Sánchez Building 216, and the Kinesiology Advising Center, Belmont Hall 1005.

A total of at least 126 semester hours of coursework is required for the BSKin&Health with a major in ap-

plied movement science; the other majors require at least 120 hours of coursework. For all majors, at least thirty-six hours must be in upper-division coursework.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2. In many cases, a course that is required for the BSKin&Health may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

All students must complete the following requirements. Some majors require modifications to the prescribed work; these are described in the section for each major below.

1. *Writing*: Two courses with a substantial writing component or a writing flag. These courses are identified in the *Course Schedule*.
2. *Social science*
 - a. Psychology 301.
 - b. Three hours of coursework in anthropology, economics, geography, linguistics, or sociology.

Psychology 301 and several social science courses that fulfill requirement b may also be counted toward the social and behavioral sciences requirement of the core curriculum.

3. *Mathematics*: Three hours of coursework in mathematics. Several courses that fulfill this requirement may also be counted toward the mathematics requirement of the core curriculum.
4. *Natural science*
 - a. Biology 301L or 311C.
 - b. Six hours of coursework in chemistry.
 - c. Six additional hours chosen from astronomy, biology, chemistry, computer applications, computer science, geological sciences, mathematics, physical science, physics, experimental psychology, physical anthropology, physical geography, history of science, and philosophy of science.

Many courses that fulfill this natural science requirement may also be counted toward the science and technology requirements of the core curriculum.

5. *Fine arts*: Three hours chosen from the following fields of study: architecture; art history, design, studio art, visual art studies; classical civilization, Greek, Latin; fine arts; music, instru-

ments, ensemble; philosophy (excluding courses in logic); and theatre and dance. Communication Studies 306M may also be used to fulfill this requirement.

This requirement is in addition to the visual and performing arts requirement of the core curriculum.

6. *Foreign language:* Students must demonstrate proficiency in a single foreign language equivalent to that shown by completion of the second college semester in the language; proficiency is usually shown by earning credit for language courses 506 and 507 or the equivalent. Prospective Texas teachers are strongly encouraged to take Spanish to fulfill the language requirement.

Although the foreign language requirement is the attainment of a certain proficiency rather than the completion of a specified number of hours, the courses taken to gain this proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

Students who completed two years of a single foreign language in high school and are not pursuing teacher certification may substitute nine semester hours in specific multicultural and language/communication courses for the foreign language requirement. A list of acceptable substitute courses is available in the Student Dean's Office, George I. Sánchez Building 216, and in the Kinesiology Advising Center, Bellmont Hall 1005.

MAJOR REQUIREMENTS

All students seeking the Bachelor of Science in Kinesiology and Health must complete the following eighteen-semester-hour core, so that they are exposed to all aspects of the fields of kinesiology and health. Each student then takes a set of courses, called the cognate, that is unique to the major; and either a specialization in the Department of Kinesiology and Health or a minor in another department.

1. Health Education 329K, *Child, Adolescent, and Adult Health*.
2. Kinesiology 310, *Physiological Basis of Conditioning*.
3. Kinesiology 312M, *Management of Physical Activity and Sport Programs*.
4. Kinesiology 315, *Motor Learning*.
5. Three semester hours in Kinesiology 119 or physical education courses. The courses must require substantial physical activity.

6. Kinesiology 347, *Historical and Ethical Issues in Physical Culture and Sports*.

EXERCISE SCIENCE

Exercise science majors must complete the following:

1. The prescribed work described above, with the following modifications:
 - a. To fulfill the mathematics requirement, exercise science majors must complete Mathematics 408C or 408K. Either course may also be counted toward the mathematics requirement of the core curriculum.
 - b. To fulfill the natural science requirement, exercise science majors must complete Biology 311C, Chemistry 301 and 302, and Physics 302K and 302L. Biology 311C may also be counted toward part I of the science and technology requirement of the core curriculum; either the chemistry or the physics coursework may also be counted toward part II of that requirement.
2. Eighteen semester hours in the cognate in exercise science:
 - a. Kinesiology 321M, *Motor Development and Performance*.
 - b. Kinesiology 322, *Diagnosis and Evaluation of Fitness*; or Kinesiology 336, *Neuromuscular Control*.
 - c. Kinesiology 324K, *Applied Human Anatomy*.
 - d. Kinesiology 325K, *Physiology of Exercise*.
 - e. Kinesiology 326K, *Kinesiology: Biomechanical Analysis of Movement*.
 - f. Three additional semester hours in kinesiology or health education. The following are recommended for those going on to a medical career or graduate school: Health Education 373, *Evaluation and Research Design*; Kinesiology 322, *Diagnosis and Evaluation of Fitness*; Kinesiology 330E, *Sport Nutrition*; Kinesiology 336, *Neuromuscular Control*. (Kinesiology 322 and 336 may not be counted toward both requirement 2b and this requirement.)
3. Either a specialization in the Department of Kinesiology and Health Education or a minor outside the department; minors consist of fifteen hours of coursework, six of which must be upper-division.

Students planning to attend medical school, physical therapy school, or graduate school in exercise physiology are encouraged to complete the

pre–health sciences specialization, to ensure that they complete the science coursework required for admission to those programs.

HEALTH PROMOTION

Health promotion majors must complete the following:

1. Eighteen semester hours in the cognate in health promotion:
 - a. Health Education 343, *Epidemiology in Health Promotion*.
 - b. Health Education 370K, Topic 1: *Foundations of Health Promotion I*.
 - c. Health Education 371K, *Foundations of Health Promotion II*.
 - d. Health Education 373, *Evaluation and Research Design*.
 - e. Kinesiology 324K, *Applied Human Anatomy*.
 - f. Kinesiology 325K, *Physiology of Exercise*.
2. Either a specialization in the Department of Kinesiology and Health Education or a minor outside the department; minors consist of fifteen hours of coursework, six of which must be upper-division.

A student planning a career as a physician, physical therapist, physician assistant, chiropractor, or other health professional is encouraged to complete the pre–health sciences specialization, to ensure that he or she completes the science coursework required for admission to those programs.

PHYSICAL CULTURE AND SPORTS

Physical culture and sports majors must complete the following:

1. The prescribed work described on pages 134–135, with the following modification to the natural science requirement:
 - a. In place of Biology 301L or 311C: Three hours in one of the fields of study that may be counted toward the science and technology, part II, requirement of the core curriculum (page 17).
 - b. In place of six hours of coursework in chemistry: Six hours in one of the fields of study that may be counted toward the science and technology, part I, requirement of the core curriculum (page 17). The same field of study may not be used to fulfill both requirement a and requirement b.
 - c. In place of six additional hours of natural science (prescribed work requirement 4c): Three hours of coursework in computer applications.

2. Eighteen semester hours in the cognate in physical culture and sports:
 - a. Kinesiology 311K, *Sport Psychology*.
 - b. Kinesiology 348, *Psychological Aspects of Exercise*.
 - c. Kinesiology 350, *Sociological Aspects of Sport and Physical Activity*.
 - d. Kinesiology 351, *Philosophy of Sport and Physical Activity*.
 - e. Kinesiology 360, *Programming for People with Disabilities*.
 - f. An additional upper-division course in kinesiology or health education.
3. Either a specialization in the Department of Kinesiology and Health Education or a minor outside the department; minors consist of fifteen hours of coursework, six of which must be upper-division.

SPORT MANAGEMENT

Students who plan to major in sport management must apply for admission to the program. The student's grade point average, volunteer and work experiences, and completion of prescribed prerequisite coursework are factors in the admission decision. Information about admission requirements is available from an academic adviser.

Sport management majors must complete the following:

1. The prescribed work described on pages 134–135, with the following modifications:
 - a. Sport management majors must complete an economics course to fulfill the second part of the social science requirement.
 - b. In fulfilling the natural science requirement, the student must complete the following:
 - i. In place of Biology 301L or 311C: Three hours in one of the fields of study that may be counted toward the science and technology, part II, requirement of the core curriculum (page 17).
 - ii. In place of six hours of chemistry: Six hours in one of the fields of study that may be counted toward the science and technology, part I, requirement of the core curriculum (page 17). The same field of study may not be used to fulfill both requirement i and requirement ii.
 - iii. In place of six additional hours of natural science (prescribed work 4c): Three hours in computer applications.
2. Twenty-seven semester hours in the cognate in

sport management:

- a. Kinesiology 316, *Structure and Organization of Sport Programs*.
 - b. Kinesiology 628, *Fieldwork in Sport Management*.
 - c. Kinesiology 350, *Sociological Aspects of Sport and Physical Activity*.
 - d. Kinesiology 353, *Sport Law*.
 - e. Kinesiology 354, *Sport and Event Promotion*.
 - f. Kinesiology 355, *Media and Public Relations in Sport*.
 - g. Kinesiology 356, *Revenue and Budgeting in Sport*.
 - h. Kinesiology 357, *Management of Sport and Health Promotion Programs*.
3. Either a specialization in the Department of Kinesiology and Health Education or a minor outside the department; minors consist of fifteen hours of coursework, six of which must be upper-division.
 - c. Kinesiology 320, *Applied Biomechanics of Human Movement*.
 - d. Kinesiology 321M, *Motor Development and Performance*; or Kinesiology 334, *Children's Exercise and Physical Activity*.
 - e. Kinesiology 322, *Diagnosis and Evaluation of Fitness*.
 - f. Kinesiology 324K, *Applied Human Anatomy*.
 - g. Kinesiology 127L, *Fieldwork*.
 - h. Kinesiology 360, *Programming for People with Disabilities*.
 4. Twenty-four hours in the minor in curriculum and instruction. The minor provides the coursework required for all-level physical education teacher certification in Texas.
 - a. Applied Learning and Development 327, *Sociocultural Influences on Learning*. This course is required for admission to the Professional Development Sequence.
 - b. Curriculum and Instruction 950W, *All-Level Teaching Practicum*.
 - c. Curriculum and Instruction 370E, Topic 21: *Kinesiology*. This course is required for admission to the Professional Development Sequence.
 - d. Curriculum and Instruction 370S, Topic 12: *Kinesiology*.
 - e. Curriculum and Instruction 345, *Curriculum Issues in Physical Education*.
 - f. One of the following courses: Psychology 304, *Introduction to Child Psychology*; Educational Psychology 363M, Topic 3: *Adolescent Development*; Human Development and Family Sciences 313, *Child Development*.

APPLIED MOVEMENT SCIENCE

Students who plan to major in applied movement science must apply for admission to the program. The student's grade point average and completion of prescribed prerequisite coursework are factors in the admission decision. Students should see an academic adviser during the first year of coursework to ensure that they understand the application process and the requirements for teacher certification.

Applied movement science majors must complete the following:

1. The prescribed work described on pages 134–135, with the following modifications:
 - a. To fulfill the mathematics requirement, applied movement science majors must complete Mathematics 305G or a calculus course. Mathematics 305G and some calculus courses may also be counted toward the mathematics requirement of the core curriculum.
 - b. Some of the courses required for the applied movement science major should also be used to meet prescribed work requirements for the BSALD; information about these courses is available in the advising offices in George I. Sánchez Building 216 and Belmont Hall 1005.
2. Twenty-one semester hours in the cognate in applied movement science:
 - a. Three of the following topics of Kinesiology 119: Topic 11: *Rhythmic Activities*; Topic 12: *Gymnastics*; Topic 14: *Tennis*; Topic 15: *Volleyball*; Topic 16: *Ballroom Dance*; Topic 17: *Basketball*; Topic 18: *Adventure Activities*.
 - b. Kinesiology 219T, *Movement Analysis: Team Activities*.

ELECTIVES

Additional electives may be required to provide the total number of semester hours required for the student's major. No more than twelve semester hours in Kinesiology 127L, 227L, 327L, and 627L may be counted toward the degree.

MIDDLE GRADES, SECONDARY, AND ALL-LEVEL TEACHER CERTIFICATION

All middle grades (grades four through eight), secondary (grades eight through twelve), and all-level (prekindergarten through grade twelve) teacher certification programs are based on degrees with academic majors in the student's chosen teaching field. Certification requirements for students seeking middle grades, secondary, and all-level teacher certification include all the courses required for the student's major in the College of Education, Fine Arts, Liberal Arts, or Natural Sciences, or the Jackson School of Geosciences, as well as the preprofessional and professional education courses.

Students pursuing middle grades or secondary teacher certification in mathematics, computer science, or science must follow the curriculum prescribed by the UTeach-Natural Sciences program, a collaborative partnership between the College of Education and the College of Natural Sciences. Program advising is housed in the College of Natural Sciences. Information is available at <http://www.utexas.edu/col/nsc/uteach/> and from the College of Natural Sciences Office of Special Projects.

Students pursuing middle grades or secondary teacher certification in English language arts and reading, history, languages other than English, or social studies must follow the curriculum prescribed by the UTeach-Liberal Arts program, a collaborative partnership between the College of Education and the College of Liberal Arts. Program advising is housed in the College of Liberal Arts. Information is available at <http://www.utexas.edu/cola/progs/uteach/> and from the UTeach-Liberal Arts advising office.

Program advising for students seeking all-level certification in art, music, and theatre arts is provided in the College of Fine Arts and in the College of Education.

CERTIFICATION REQUIREMENTS

Information about legal requirements for certification to teach is available from the teacher certification officer, George I. Sánchez Building 216, or from the State Board for Educator Certification. Application for the certificate should be made at the Certification Office, George I. Sánchez Building 216. State of Texas teacher certification requirements are governed by the State Board for Educator Certification and are subject to change. Students must adhere to current certification requirements, even if they differ from those listed in a University catalog.

In accordance with state law, the commissioner of education may suspend or revoke a teaching certificate

or refuse to issue a teaching certificate for a person who has been convicted of a felony or misdemeanor for a crime that directly relates to the duties and responsibilities of the teaching profession.

Students who have completed all necessary academic requirements for certification must also achieve a passing level of performance on the required state certification examinations. In addition, students seeking bilingual education certification or certification to teach French or Spanish in elementary or secondary school must earn a passing score at the advanced level on the Texas Oral Proficiency Test (TOPT) in the appropriate language.

MINIMUM SCHOLASTIC REQUIREMENTS

In addition to meeting the minimum coursework and scholastic requirements for the degree, students seeking middle grades, secondary, and all-level certification must meet other requirements to take the prescribed work in professional development. Admission to the Professional Development Sequence is restricted; information about admission requirements is available in the Office of the Dean, George I. Sánchez Building 216.

TEACHING FIELDS

All candidates for middle grades, secondary, and all-level teaching certificates must earn a degree in their primary teaching field by meeting all of the requirements for the appropriate major. While completing these requirements, the certification student must take a core set of courses in the major that fulfill certification requirements. This certification core includes at least twenty-four semester hours in a single teaching field or forty-eight semester hours in a composite teaching field, and incorporates the state-specified essential knowledge and skills needed for successful teaching in the field. Often, the student's major department requires more than these twenty-four semester hours, but the certification core in the major field must be taken.

Students seeking middle grades certification may choose from the following teaching fields: English language arts and reading, social studies, mathematics, and science. Students seeking secondary certification may choose from the following teaching fields: science, social studies, computer science, English language arts and reading, history, and mathematics. Students seeking all-level teacher certification may choose from the following teaching fields: art, physical education, languages other than English (Arabic, Chinese, French, German, Japanese, Latin, Russian, or Spanish), music, special education, and theatre arts.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

APPLIED LEARNING AND DEVELOPMENT

APPLIED LEARNING AND DEVELOPMENT: ALD

LOWER-DIVISION COURSES

- 001. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various applied learning and development disciplines. One lecture hour a week for one semester.
- 301C. Freshman Seminar.** Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.
- 301D. Connecting Research Experience.** Restricted to freshmen and sophomores. Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Admission to the Connexus Bridging Disciplines Program.
- 118C, 218C, 318C. Forum Seminar Series.** Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. Cognition, Human Learning, and Motivation.** Current and classical theories concerning conditioning paradigms, learning and remembering, attention, knowledge representation and retrieval, comprehension and production of language, problem solving, and the ways emotion influences learning. Three lecture hours a week for one semester. Prerequisite: Three semester hours of coursework in psychology.
- 320C. Connecting Research Experience.** Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Upper-division standing and admission to the Connexus Bridging Disciplines Program.
- 321. Play in Early Childhood Development.** Theoretical and empirical bases for observing children in play; cognitive, social, and communicative stages related to developmental theory; children's adjustment related to social and emotional theories; motivational value of play. Three lecture hours a week for one semester, with fieldwork to be arranged. Required for the academic specialization in childhood studies. Prerequisite: Three semester hours of coursework in psychology.
- 322. Individual Differences.** Introduction to individual differences among people through the life span. Examines areas of exceptionality within the context of typical development: current research trends; theoretical and legal considerations; and practice-related issues, including family involvement, cultural and linguistic diversity, and educational perspectives. Orientation to assistive technology. Three lecture hours a week for one semester, with fieldwork to be arranged. Required for certification in generic special education. Prerequisite: Three semester hours of coursework in psychology.
- 323. Language Acquisition.** Language structure; sequence, process, cognitive and social aspects of language acquisition and use; language variation. Three lecture hours a week for one semester. Required for certification in early childhood education. Prerequisite: Three semester hours of coursework in psychology.
- 324. Literacy Acquisition.** Processes of becoming literate; cognitive insights that move a child to literacy; relationships between reading and writing and among individual characteristics, social factors, and literacy growth. Three lecture hours a week for one semester. This course or Psychology 338K is required for the reading specialization. Prerequisite: Three semester hours of coursework in psychology.
- 325. Second Language Acquisition.** Acquisition by children or adults of English as a second language. Simultaneous acquisition of two languages, adding a second language, language processing, order of acquisition, role of the first language. Three lecture hours a week for one semester. Required for certification in bilingual education. Prerequisite: Three semester hours of coursework in psychology.

- 326. Language of Children with and without Disabilities.** Restricted to special education majors. Physiological, prelinguistic, and linguistic components of language; theoretical framework of communication and language development in monolingual and bilingual populations; problems of language development in special populations; language assessment tools. Technological skills component. Three lecture hours a week for one semester. Required for certification in generic special education.
- 327. Sociocultural Influences on Learning.** Human learning in multisocial, multilingual, and multicultural contexts; realities of society and their impact on learning; social concerns such as prejudice, stereotyping, cross-cultural attitudes, bilingual issues, parent and community involvement. Three lecture hours and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Three semester hours of coursework in psychology.
- 328. Applied Human Learning.** Development, cognition, language, and sociocultural influences in learning contexts; child assessment, identification of learning styles, and tests and measurements. Fieldwork to provide a theoretical basis for professional assessment, referral, and placement. Three lecture hours a week for one semester, with fieldwork to be arranged. Prerequisite: Admission to the professional development sequence of the Bachelor of Science in Applied Learning and Development degree program.
- 329. Acquisition of Languages and Literacies.** Topics include initial language and literacy acquisition theory; second language acquisition theory; relations among first and additional languages in literacy and language acquisition; home, school, and learners' perspectives; and current issues in literacy and multilingual classrooms. Three lecture hours a week for one semester. Additional fieldwork hours may be required. Required for students seeking certification in early childhood through grade six generalist. Prerequisite: Psychology 301 and completion of at least thirty-six semester hours of coursework.
- 330. Language in Education.** Theoretical and practical perspectives on the nature of language in education, with a focus on implications for English language learners in classroom settings; linguistic structures and functions; discourse, phonology, morphology, syntax, and semantics across languages and throughout development; and language varieties. Three lecture hours a week for one semester. Additional fieldwork hours may be required. Applied Learning and Development 330 and Curriculum and Instruction 371 (Topic 13: *Applied Linguistics and Methods in English as a Second Language*) may not both be counted. Prerequisite: Psychology 301 and completion of at least thirty-six semester hours of coursework.

DEPARTMENT OF CURRICULUM AND INSTRUCTION

Admission to the Professional Development Sequence of upper-division courses for teacher certification requires formal acceptance. Information about admission requirements is available from the Office of the Dean, George I. Sánchez Building 216.

CURRICULUM AND INSTRUCTION: EDC

LOWER-DIVISION COURSES

- 101E. Orientation to Teaching in the Elementary School.** Open to all University students. Discussion sessions and assignments in public schools; designed to help students make teaching career decisions. One discussion hour and three hours of fieldwork a week for one semester. May be repeated for credit.
- 101S. Orientation to Teaching in the Secondary School.** Open to all University students. Discussion sessions and assignments in public schools; designed to help students make teaching career decisions. One discussion hour and three hours of fieldwork a week for one semester. May be repeated for credit.

UPPER-DIVISION COURSES

- 331E. School Organization and Classroom Management in Elementary Schools.** Administrative structure of elementary schools; concepts, principles, and strategies for establishing an orderly classroom environment, preventing inappropriate behavior, and promoting student involvement in academic work. Three lecture hours a week for one semester, and sixteen to twenty hours of fieldwork a week in an elementary school. Curriculum and Instruction 331C (Topic 1: *School Organization and Classroom Management in Elementary Schools*) and 331E may not both be counted. Prerequisite: Admission to the professional development sequence of courses, completion of seventy-two semester hours of coursework, and a University grade point average of at least 2.50.
- 331S. School Organization and Classroom Management in Secondary Schools.** Administrative structure of secondary schools; concepts, principles, and strategies for establishing an orderly classroom environment, preventing inappropriate behavior, and promoting student involvement in academic work. Three lecture hours a week for one semester, with at least sixty hours of fieldwork in a secondary school. Curriculum and Instruction 331C (Topic 2: *School Organization and Classroom Management in Secondary Schools*) and 331S may not both be counted. Prerequisite: Admission to the professional development sequence of courses, completion of seventy-two semester hours of coursework, and a University grade point average of at least 2.50.

- 332S. Designs for Instruction.** One of the beginning courses in the professional development sequence for approved programs in secondary education. Three lecture hours a week for one semester, with a single seven-hour media competency evaluation to be arranged. Prerequisite: Admission to the professional development sequence of courses, completion of seventy-two semester hours of coursework, a University grade point average of at least 2.50, and concurrent enrollment in Curriculum and Instruction 331S.
- 333W. Introduction to Teaching.** Open to all upper-division students. Overview of the objectives, organization, and operation of schools; the teaching process; teaching as a professional career. Two lecture hours and two hours of fieldwork a week for one semester. Prerequisite: Upper-division standing.
- 339C. Community Literacy.** Three lecture hours a week for one semester. Curriculum and Instruction 339C and 371 (Topic 1: *Community Literacy*) may not both be counted. Prerequisite: Admission to the professional development sequence of courses.
- 339D. Reading Assessment and Development.** Three lecture hours a week for one semester. Curriculum and Instruction 339D and 371 (Topic 2: *Reading Assessment and Development*) may not both be counted. Prerequisite: Admission to the professional development sequence of courses.
- 339E. Secondary School Literacy across the Disciplines.** Restricted to students in a UTeach program. Three lecture hours a week for one semester. Curriculum and Instruction 339E and 371 (Topic 10: *Secondary School Reading in the Content Subjects*) may not both be counted.
- 339F. Adolescent Literacy.** Restricted to students in the UTeach-Liberal Arts program. Social, political, cultural, emotional, and personal perspectives on adolescent literacy. Subjects may include adolescent literacy practices in and out of school; literacy in relation to identity, peer communities, meaning, communication, and social engagement; curricula that emphasize the social and civic purposes of literacy; and motivation, fulfillment, and democratic participation as educational outcomes. Three lecture hours a week for one semester. Curriculum and Instruction 339F and 371 (Topic 25: *Adolescent Literacy*) may not both be counted.
- 339G. Literacy Seminar.** Three lecture hours a week for one semester. Curriculum and Instruction 339G and 371 (Topic: *Literacy Seminar*) may not both be counted. Prerequisite: Admission to the professional development sequence of courses.
- 340C. Spanish Language Methods for the Bilingual Classroom Teacher I.** Restricted to students seeking certification in bilingual generalist. Study of oral Spanish language skills. Three lecture hours a week for one semester. Curriculum and Instruction 340C and 371 (Topic 4: *Spanish Language and Methods for the Bilingual Classroom Teacher I*) may not both be counted. Prerequisite: Credit or registration for Spanish 611D or 312L.
- 340D. Spanish Language Methods for the Bilingual Classroom Teacher II.** Study of written Spanish language skills. Three lecture hours a week for one semester. Curriculum and Instruction 340D and 371 (Topic 6: *Spanish Language and Methods for the Bilingual Classroom Teacher II*) may not both be counted. Prerequisite: Curriculum and Instruction 340C, Spanish 611D or 312L, and admission to the professional development sequence of courses.
- 340E. Latino Children's Literature for Bilingual Teachers.** Restricted to students seeking certification in bilingual generalist. Covers the use of oral and written literature for children in bilingual programs while examining the history and development of Spanish-language children's literature from social, cultural, and political perspectives. Subjects may include foundational books, authors, and illustrators of Latina/o children's literature; criteria for evaluating culturally authentic children's literature; multimedia and online resources related to bilingual children's literature; and the literary response process. Three lecture hours a week for one semester. Additional hours may be required. Prerequisite: Knowledge of Spanish and completion of at least thirty-six semester hours of coursework.
- 340F. Foundations of Bilingual Education.** Restricted to students seeking certification in bilingual generalist. Three lecture hours a week for one semester. Curriculum and Instruction 340F and 371 (Topic: *Foundations of Bilingual Education*) may not both be counted.
- 341C. Early Childhood Education.** Three lecture hours a week for one semester. Curriculum and Instruction 341C and 371 (Topic 7: *Early Childhood Education*) may not both be counted.
- 341D. Early Childhood Program Development.** Three lecture hours a week for one semester. Curriculum and Instruction 341D and 371 (Topic 8: *Early Childhood Program Development*) may not both be counted.
- 343. Informal Science Education.** Three lecture hours and one three-hour field laboratory a week for one semester, with one four-hour Saturday field trip to be arranged. Curriculum and Instruction 343 and 371 (Topic 3: *Informal Science Education*) may not both be counted. Prerequisite: Upper-division standing, six semester hours of coursework in science, or consent of instructor.
- 344. Computing Tools for Educators.** Three lecture hours a week for one semester. Curriculum and Instruction 344 and 371 (Topic 15: *Computing Tools for Educators*) may not both be counted.
- 345. Curriculum Issues in Physical Education.** Three lecture hours a week for one semester. Curriculum and Instruction 345 and 371 (Topic 26: *Curriculum Issues in Physical Education*) may not both be counted. Prerequisite: A major in applied movement science and admission to the professional development sequence of courses.
- 350. Topics in Educational Studies.** Analysis of selected topics and problems in education. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

- 350E, 650E, 950E. Elementary Grade Teaching Practicum.** Supervised practicum in early childhood through grade four classroom teaching, conducted in cooperating schools, as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 350M, 650M, 950M. Middle Grade Teaching Practicum.** Supervised practicum in middle grade classroom teaching, conducted in cooperating schools, as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Some sections are offered on the pass/fail basis only and some sections are offered on the letter-grade basis only; consult the *Course Schedule*. No more than nine semester hours of this course may be taken for credit. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 350S, 650S, 950S. Secondary School Teaching Practicum.** Supervised practicum in secondary classroom teaching, conducted in cooperating schools, as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Some sections are offered on the pass/fail basis only and some sections are offered on the letter-grade basis only; consult the *Course Schedule*. No more than nine semester hours of this course may be taken for credit. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 350W, 650W, 950W. All-Level Teaching Practicum.** Supervised practicum in elementary, middle school, and secondary classroom teaching. Conducted in cooperating schools as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 364, 664. Internship.** Supervised fieldwork or clinical work in the student's area of study. For 364, at least one conference hour and six hours of fieldwork a week for one semester; for 664, at least one conference hour and twelve hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: Consent of instructor.
- 365C. Knowing and Learning in Math and Science.** Same as UTeach-Natural Sciences 350. Restricted to students in the UTeach-Natural Sciences program. Psychological foundations of learning; problem solving in mathematics and science education utilizing technology; principles of expertise and novice understanding of subject matter; implications of high stakes testing; and foundations of formative and summative assessment. Three lecture hours a week for one semester; additional hours may be required. Curriculum and Instruction 365C and 371 (Topic 21: *Knowing and Learning in Math and Science*) may not both be counted. Prerequisite: Credit with a grade of at least C- or registration for UTeach-Natural Sciences 101.
- 365D. Classroom Interactions.** Same as UTeach-Natural Sciences 355. Restricted to students in the UTeach-Natural Sciences program. Principles of delivering effective instruction in various formats (lecture, lab activity, collaborative settings); examination of gender, class, race, and culture in mathematics and science education; overview of policy related to mathematics and science education. Three lecture hours a week for one semester; additional hours may be required. Curriculum and Instruction 365D and 371 (Topic 20: *Classroom Interactions*) may not both be counted. Prerequisite: A University grade point average of at least 2.50, Curriculum and Instruction 365C or UTeach-Natural Sciences 350 with a grade of at least C-, and UTeach-Natural Sciences 110 with a grade of at least C-.
- 365E. Project-Based Instruction.** Same as UTeach-Natural Sciences 360. Restricted to students in the UTeach-Natural Sciences program who have earned a passing score on the preliminary portfolio. Foundations of project-based, case-based, and problem-based learning environments; principles of project-based curriculum development in mathematics and science education; classroom management and organization of project-based learning classrooms. Three lecture hours a week for one semester; additional hours may be required. Curriculum and Instruction 365E and 371 (Topic 22: *Project-Based Instruction*) may not both be counted. Prerequisite: A University grade point average of at least 2.50, and Curriculum and Instruction 365D or UTeach-Natural Sciences 355 with a grade of at least C-.
- 370E, 670E. Elementary School Subjects.** Curriculum content and organization, teaching procedures, materials, and research in elementary school subjects. Three class hours a week for one or two semesters, including fieldwork in elementary schools. May be repeated for credit when the topics vary. Topics 3, 4, 5, and 15 are offered only as 370E. Topic 19 is offered only as 670EA and 670EB; either half may be taken for independent credit. Prerequisite: A University grade point average of at least 2.50.
- Topic 1: Reading.** Additional prerequisite: Admission to the professional development sequence of courses.
- Topic 2: Language Arts.** Additional prerequisite: Admission to the professional development sequence of courses.
- Topic 3: Science.** Additional prerequisite: Admission to the professional development sequence of courses.
- Topic 4: Social Studies.** Additional prerequisite: Admission to the professional development sequence of courses.
- Topic 5: Mathematics.** Additional prerequisite: Mathematics 316L or consent of the mathematics education faculty; and admission to the professional development sequence of courses.
- Topic 15: Special Adaptations for the Deaf.**
- Topic 19: Reading/Language Arts.** Additional prerequisite: Admission to the professional development sequence of courses.
- Topic 20: Teaching English as a Second Language.** The methods, teaching strategies, and materials for developing and assessing English language proficiency in culturally and linguistically diverse populations within the context of the elementary school curriculum.
- Topic 21: Kinesiology.**

- 370S. Secondary School Subjects.** Curriculum content and organization, teaching procedures, materials, and research in one secondary school subject. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. The topic in the appropriate field is required for secondary school teacher certification. Prerequisite: Admission to the professional development sequence of courses, completion of ninety semester hours of coursework, and six semester hours of upper-division coursework in the appropriate subject.
- Topic 1: Advanced Methods in English, Language Arts, and Reading.** Restricted to students in the UTeach-Liberal Arts program. Additional prerequisite: Concurrent enrollment in UTeach-Liberal Arts 303E.
- Topic 3: Advanced Methods in Social Studies.** Restricted to students in the UTeach-Liberal Arts program. Additional prerequisite: Concurrent enrollment in UTeach-Liberal Arts 303S.
- Topic 5: Advanced Methods in Foreign Language.** Restricted to students in the UTeach-Liberal Arts program. Additional prerequisite: Concurrent enrollment in UTeach-Liberal Arts 303L.
- Topic 7: Art.** Additional prerequisite: Curriculum and Instruction 331S and 332S.
- Topic 8: Music (Vocal).** Additional prerequisite: Curriculum and Instruction 331S and 332S.
- Topic 9: Music (Instrumental).** Additional prerequisite: Curriculum and Instruction 331S and 332S.
- Topic 10: Drama.** Additional prerequisite: Curriculum and Instruction 331S and 332S.
- Topic 11: Speech.** Additional prerequisite: Consent of instructor.
- Topic 12: Kinesiology.** Additional prerequisite: Kinesiology 219S, 219T, 360, and Curriculum and Instruction 370E (Topic 21: *Kinesiology*); nine semester hours chosen from the following courses: Kinesiology 321M, 324K, 325K, 326K; and credit or registration for the following topics of Kinesiology 119: (Topic 8: *Swimming*; Topic 11: *Rhythmic Activities*; Topic 12: *Gymnastics*; Topic 14: *Tennis*; Topic 15: *Volleyball* or Topic 17: *Basketball*; Topic 16: *Ballroom Dance*; Topic 18: *Adventure Activities*).
- 370W. All-Level School Subjects.** Curriculum content and organization; teaching procedures, materials, and research in one school subject at all grade levels. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. The topic in the appropriate field is required for all-level school teacher certification. Prerequisite: Admission to the professional development sequence of courses.
- Topic 1: English as a Second Language.**
- Topic 2: Art.**
- Topic 3: Music.**
- Topic 4: Theatre.**
- Topic 5: Foreign Language Education.**
- 371G. Guiding Young Children in Groups.** Designed to provide students with frameworks for observing and interacting with young children in classroom settings, and to acquaint students with the teacher's varied roles in early childhood classrooms. Topics include cultural and linguistic diversity; supervising and interacting with children in a range of instructional groupings, including center-based and play-based learning activities and whole-group experiences; planning and implementing appropriate practices and strategies; and record-keeping and assessment. Three lecture hours a week for one semester, and twelve to sixteen hours of fieldwork a week in a public school. Curriculum and Instruction 371 (Topic 19: *Guiding Young Children in Groups*) and 371G may not both be counted. Prerequisite: Upper-division standing, twelve semester hours of upper-division coursework in education, or consent of the education adviser; and admission to the professional development sequence of courses and a University grade point average of at least 2.50.
- 371R. Reading Difficulties.** Reading theory, assessment, materials, and instruction with emphasis on struggling readers; field experiences in reading tutoring. Three lecture hours a week for one semester with additional field hours to be arranged. Curriculum and Instruction 371 (Topic 24: *Reading Difficulties*) and 371R may not both be counted. Prerequisite: Upper-division standing, twelve semester hours of upper-division coursework in education, or consent of the education adviser; and admission to the professional development sequence of courses and a University grade point average of at least 2.50.
- 373. African Americans in Sports.** Theoretical and practical complexities in issues surrounding African Americans in sports, including the relationship between athletics and higher education. Focuses on racial stereotyping, identity theory, and how practical knowledge of these theories can aid in understanding the current state of athletics. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in African and African American Studies 374F (Topic 5: *History of the Hip-Hop Generation*) or History 373C.
- 377. Conference Course in Curriculum and Instruction.** Independent studies in instructional methodology and curriculum. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDUCATIONAL PSYCHOLOGY: EDP

LOWER-DIVISION COURSES

- 110, 210, 310. Introduction to Educational Psychology.** An elective course open to lower-division students in any division of the University. Principles of psychology, human development, learning, and teaching. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Individual Learning Skills.

Topic 2: Selected Topics.

Topic 3: Intergroup Dialogue. Group discussion of the definitions and implications of social identities. Topics may include gender, race, ethnicity, religion, sexual orientation, physical ability, and age.

- 312. Lower-Division Seminar.** Issues and research in various areas of educational psychology and the behavioral sciences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

Topic 1: Issues and Debates in Life Development. Restricted to students in the Longhorn Scholars Program. Additional prerequisite: Consent of the School of Undergraduate Studies.

UPPER-DIVISION COURSES

- 332. Psychological Foundations of Education.** Scientific contributions to the understanding of human behavior and educational processes: cultural influences, processes of learning and socialization, classroom management, development, intellectual functioning, and educational achievement. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 162, 262, 362. The Individual and Education.** Frames of reference for studying human behavior, self-concepts and individual attributes, individual and cultural nature of human learning, societal impacts on the individual personality, individualization of guidance and teaching. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may be required for some topics; these are given in the *Course Schedule*.

Topic 1: Emergent Views of Intelligent Behavior.

Topic 2: Early Childhood.

Topic 3: Selected Topics.

Topic 4: Mexican Americans in the Schooling Process. Educational Psychology 362 is same as Mexican American Studies 374 (Topic 8: *Mexican Americans in the Schooling Process*).

Topic 5: Chicano Educational Struggles. Educational Psychology 362 (Topic 5) is same as Mexican American Studies 374 (Topic 25: *Chicano Educational Struggles*).

Topic 6: Psychology of Race and Racism. Educational Psychology 362 (Topic 6) is same as African and African American Studies 374D (Topic 8: *Psychology of Race and Racism*). Educational Psychology 362 (Topic 6) and African and African American Studies 374D (Topic: *Psychology of Race and Racism*) may not both be counted.

- 362T. Tests and Measurements.** Fundamental psychometric concepts; educational and psychological measurement instruments; constructing, administering, scoring, and interpreting tests for educational and individual evaluation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Tests and Measurements—Elementary.

Topic 2: Tests and Measurements—Secondary.

Topic 3: Tests and Measurements—Reading.

Topic 4: Tests and Measurements—Elementary/Secondary/Reading.

- 363. Personality and Behavior.** Selected approaches to the study of the dynamics of behavior, its antecedents and its appraisal. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Psychology 301 or another introductory behavioral science course.

Topic 1: Selected Topics.

Topic 2: Personality Development.

Topic 3: Human Sexuality.

Topic 4: Dynamics of Interpersonal Communication.

Topic 5: Emotional and Behavioral Disorders.

- 363M. Personality and Mental Health.** Exposition of theories of personality, research literature on mental health and character development, applications of principles and theories to the educative enterprise; applications of personality theory to the guidance of children and youth. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in education or other behavioral sciences.

Topic 1: Character Development.

Topic 2: School Promotion of Mental Health.

Topic 3: Adolescent Development.

Topic 4: Life Span Adjustment.

Topic 5: Life Span Development of Black Women. The psychological and social issues that affect the life span development of Black women. Discusses issues such as socioeconomic status, political climate, social norms, gender and ethnic identity, mental health, family dynamics, academic achievement, and social adjustment. Additional prerequisite: Psychology 301 or another introductory behavioral science course.

- 367. Studies in Counseling and Psychotherapy.** Nature of the counseling process, dynamics of behavior change, client-counselor roles and relationships; an experiencing of the group process as a basis for studying dynamics of individual and group behavior. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of ninety semester hours of coursework, twelve semester hours of upper-division coursework in behavioral sciences, and consent of instructor.

Topic 1: Introduction to Individual Counseling and Psychotherapy.

- 169K, 269K, 369K, 469K. Upper-Division Seminar.** Issues and research in various areas of educational psychology and the behavioral sciences examined in relation to human development. One, two, three, or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Six semester hours of upper-division coursework in education or other behavioral sciences, and consent of instructor.

Topic 1: Career Planning. Additional laboratory hour to be arranged.

Topic 2: Resident Assistant Development.

Topic 3: Students and Community Involvement.

Topic 4: Selected Topics.

Topic 5: Greek Leadership Issues. Designed to facilitate development of leaders within University sororities and fraternities. Includes leadership skills development in areas such as academics, risk management, social justice, and community service. Additional prerequisite: Consent of the Office of the Dean of Students.

Topic 6: Minority Student Leadership Issues.

Topic 7: Student Organizational Leadership. Additional prerequisite: Consent of the Office of the Dean of Students.

Topic 8: Training Procedures in Intergroup Dialogue. Designed to develop the foundational skills and knowledge required to facilitate discussions in a culturally diverse group, particularly intergroup dialogues. Topics include social identity and group development; prejudice and stereotyping; intergroup communication; conflict intervention; and community-building techniques.

Topic 9: Practicum in Facilitating Intergroup Dialogue. Additional prerequisite: Consent of the Office of the Dean of Students.

- 371. Introduction to Statistics.** Measures of central tendency and variability; correlation and regression; probability and statistical inference; analysis of variance; nonparametric statistics. Three lecture hours a week for one semester.
- 379L. Problems in Educational Psychology.** Supervised individual research on selected problems in educational psychology. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Educational Psychology 310 or another introductory behavioral science course.
- 628. Internship in Health Promotion.** Applied experiences in development, delivery, or evaluation of professional health promotion programs. One conference hour and seventeen hours of fieldwork a week for one semester. May be repeated once for credit. Prerequisite: Upper-division standing, consent of the director of the degree program in kinesiology, and a University grade point average of at least 2.50. A higher grade point average may be required.
- 329K. Child, Adolescent, and Adult Health.** Restricted to students in the College of Education. The foundations of child, adolescent, and adult health; health education; and the biological, environmental, and behavioral health determinants of health. Includes the application of evidence-based child, adolescent, and adult health promotion concepts; prominent health risk behaviors established during youth that increase the risk of morbidity and mortality; and the application of personal health and wellness information. Three lecture hours a week for one semester. Only one of the following may be counted: Health Education 329, 329K, Kinesiology 333.
- 335. Theories of Substance Abuse Prevention.** An introduction to the physiological, psychological, social, and cultural aspects of alcohol, tobacco, and other psychoactive substances that modify an individual's behavior. Includes theories of substance use and abuse, and prevention and treatment plans. Three lecture hours a week for one semester. Health Education 335 and Kinesiology 367 may not both be counted.
- 343. Epidemiology in Health Promotion.** An introduction to the principles of epidemiology; disease causation and patterns of occurrence, agent, host, environmental factors, and vital statistics. Three lecture hours a week for one semester. Health Education 343 and Kinesiology 377 may not both be counted. Prerequisite: Consent of instructor.
- 352K. Studies in Health: Topical Studies.** Analysis and synthesis of the literature and discussion of current and specific issues in health. Three lecture hours a week for one semester. Laboratory work is required for some topics; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 2: Psychosocial Issues in Women's Health. Psychosocial issues in women's physical and mental health. Includes a broad definition of women's health that considers traditional reproductive issues, disorders that are more common in women than in men, and the leading causes of death in women. Covers gender influences on health risk behaviors, and societal influences on women's health through a consideration of social norms and roles. Health Education 352K (Topic 2) and Kinesiology 352K (Topic 7: *Psychosocial Issues in Women's Health*) may not both be counted.

DEPARTMENT OF KINESIOLOGY AND HEALTH EDUCATION

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

HEALTH EDUCATION: HED

UPPER-DIVISION COURSES

- 127L, 227L, 327L, 627L. Fieldwork in Health Promotion.** Applied experiences in development, delivery, or evaluation of professional health promotion programs. For 127L, one conference hour and two hours of fieldwork a week for one semester; for 227L, one conference hour and five hours of fieldwork a week for one semester; for 327L, one conference hour and eight hours of fieldwork a week for one semester; for 627L, one conference hour and seventeen hours of fieldwork a week for one semester. No more than twelve semester hours in the following courses may be counted: Health Education 127L, 227L, 327L, 627L, Kinesiology 127L, 227L, 327L, 627L. Prerequisite: Upper-division standing, consent of the director of the degree program in kinesiology, and a University grade point average of at least 2.50. A higher grade point average may be required.

- Topic 3: Psychosocial Issues in Adult Development and Health.** Examines psychosocial issues in adult physical and mental health within the context of adult psychological development, using a biopsychosocial approach. Examines psychosocial factors in the major health risks in adulthood and in preventative health behavior. Also considers psychosocial factors in stress and coping and their implications for health. Health Education 352K (Topic 3) and Kinesiology 352K (Topic 16: *Psychosocial Issues in Adult Development and Health*) may not both be counted.
- 366. Human Sexuality.** Analysis of the physiological, psychological, and social factors in human sexuality. Three lecture hours a week for one semester. Health Education 366 and Kinesiology 366 may not both be counted.
- 370K. Topical Seminar in Health Promotion.** Identification, causes, incidence, prevention, control, and social implications of major problems in health. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Foundations of Health Promotion I.** Introduction to the field of health promotion and the use of theory, processes, and activities in health education and health promotion practice. Health Education 370K (Topic 1) and Kinesiology 370K (Topic 2: *Introduction to Health Promotion*) may not both be counted.
- Topic 2: Adolescent Health Risk Behavior.** Health Education 370K (Topic 2) and Kinesiology 370K (Topic 3: *Adolescent Health Risk Behavior*) may not both be counted.
- 371K. Foundations of Health Promotion II.** Introduction to the processes of planning, implementing, and evaluating health promotion programs. Three lecture hours a week for one semester. Only one of the following may be counted: Health Education 352K (Topic 1: *Foundations of Health Promotion II*), 371K, Kinesiology 352K (Topic 14: *Techniques of Health Promotion*). Prerequisite: Upper-division standing and Health Education 370K (Topic 1: *Foundations of Health Promotion I*).
- 373. Evaluation and Research Design.** Overview of the theory and practice of evaluation research. Application of fundamentals of evaluation to the design and implementation of health promotion and disease prevention programs. Three lecture hours a week for one semester. Health Education 373 and Kinesiology 373 may not both be counted.
- 178C, 278C, 378C, 678C. Fieldwork in Health.** Undergraduate research and/or experience with a health agency in the field attempting to analyze or solve community health problems through education; students are supervised by the health agency and by the kinesiology and health education faculty. For each semester hour of credit earned, two laboratory hours a week for one semester. May be repeated for credit when the topics vary. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and consent of instructor.

KINESIOLOGY: KIN

LOWER-DIVISION COURSES

- 001. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various kinesiology disciplines. One lecture hour a week for one semester.
- 310. Physiological Basis of Conditioning.** Analysis and discussion of current issues and theories of physical conditioning. Three lecture hours a week for one semester. Only one of the following may be counted: Kinesiology 310, 339, 352K (Topic 2: *Physiological Basis of Conditioning*).
- 311K. Sport Psychology.** The influence of psychological variables on sport performance, and the influence of sport participation on psychological phenomena. Three lecture hours a week for one semester.
- 312. Issues in Kinesiology: Topical Studies.** Analysis and discussion of current issues within the discipline of kinesiology. Three lecture hours a week for one semester. Additional hours may be required for some topics; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary.
- Topic 2: Care and Prevention of Athletic Injuries.** Principles of athletic training, including mechanisms, signs and symptoms, treatments, and basic rehabilitation of athletic injuries and illnesses. Three lecture hours and one laboratory/discussion hour a week for one semester.
- Topic 3: Fundamentals of Coaching.** An introduction to the principles and practices of coaching as they relate to the integration of sports science, practice structure and design, and the development of a coaching philosophy. Involves group work and field experience with youth athletic organizations. Prerequisite: Kinesiology 316.
- 312G. Golf Instruction.** Designed to train students to teach the game of golf. Three lecture hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Consent of instructor.
- 312M. Management of Physical Activity and Sport Programs.** Introductory survey of the field of sport management. Examines various types of sport organizations and introduces the student to practices in marketing, management, sport law, and basic finance. Includes sport-specific management challenges, particularly events and facilities, and considerations for the future, such as social issues. Three lecture hours a week for one semester.
- 213. Safety Information and Procedures.** Factors affecting human safety; techniques and procedures to promote and ensure safe living. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: First Aid.**
- Topic 2: Water Safety Instruction.** Prerequisite: American Red Cross Beginning Swimming certification and the ability to tread water for two minutes, or consent of instructor.
- Topic 3: Lifeguarding.**
- Topic 4: Lifeguarding Instruction.**

- 314 (TCCN: PHED 1331). Children's Movement.** Designed for students who wish to teach children's physical education classes. Subjects may include professional standards, policy, legislation, physiological principles, learning principles, movement skills, and appropriate teaching strategies. Three lecture hours and three laboratory hours a week for one semester, including off-campus observation of children's movement programs. Prerequisite: Fifteen semester hours of college coursework, and a major in the College of Education or consent of instructor.
- 315. Motor Learning.** Psychological factors affecting performance and acquisition of motor skills. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 315 and 335 may not both be counted. Prerequisite: Psychology 301.
- 316. Structure and Organization of Sport Programs.** Introduction to sport management and effective organizational behavior for sport programs. Analysis of the dynamic management process necessary for the improvement of organizational productivity. Three lecture hours a week for one semester. May be repeated once for credit.
- 119. Movement Competence.** Acquisition and knowledge of techniques, with emphasis on mechanical and perceptual principles, rules, strategy, and officiating. The equivalent of three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: A major or minor in the Department of Kinesiology and Health Education.
- Topic 1: Archery.**
Topic 2: Ballet.
Topic 3: Bowling.
Topic 4: Diving.
Topic 5: Fencing.
Topic 6: Golf.
Topic 7: Scuba Diving.
Topic 8: Swimming. Students focus on the skills necessary to conduct an activity course in an educational environment. Includes instruction in seven swimming strokes, springboard diving, cardiovascular conditioning, exercise physiology concepts, nutrition, personal safety, elementary rescue skills, and basic snorkeling techniques. Provides preparation for American Red Cross certification. Additional prerequisite: Demonstrated swimming proficiency.
Topic 10: Conditioning. Introduces students to the fundamentals of conditioning with an emphasis on sport performance enhancement. Additional prerequisite: Physical Education 106C (Topic 7: *Weight Training*).
Topic 11: Rhythmic Activities. Introduces a variety of movement and dance activities that can be used to teach rhythm to youth, with an emphasis on grades K–6.
Topic 12: Gymnastics.
Topic 13: Manipulative Activities.
Topic 14: Tennis.
Topic 15: Volleyball.
Topic 16: Social Dance. An introduction to popular social partner dances such as swing, waltz, tango, merengue, cha-cha, salsa, and two-step. Emphasis on connecting with a dance partner and the art of both leading and following.
- Topic 17: Basketball.**
Topic 18: Adventure Activities. Study of the skills involved in adventure activities, such as orienteering, hiking, camping, rock climbing, fishing, canoeing, and in-line skating. Focus on methods, progressions, drills, performance cues, and safety standards. Activities may vary each semester. Includes off-campus activities. Additional prerequisite: Kinesiology 119 (Topic 8: *Swimming*) or equivalent instruction.
Topic 19: Core Body Development. Introduces basic movement skills and how they relate to more advanced sport skills through developmental gymnastics, yoga, Pilates, and martial arts. Additional prerequisite: A major in applied movement science.
- 219D. Movement Analysis: Dual Activities.** Application of scientific principles to the analysis of selected movement activities, with particular emphasis on dual sports. Two lecture hours and one laboratory hour a week for one semester. Prerequisite: A major in applied movement science.
- 219G. Advanced Golf.** Designed for the advanced golfer. Includes technical swing analysis and instruction, course management and course play, and tournament play. Two lecture hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Consent of instructor, and a certified Professional Golfers Association (PGA) handicap of 15 or below or equivalent proficiency.
- 219K. Athletics.** Knowledge and skills required for officials, coaches, and trainers of interschool sports. Two lecture hours and two laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Coaching.**
Topic 2: Officiating.
Topic 3: Introduction to Athletic Training. An introduction to athletic training principles and theories, including the prevention, recognition, and management of athletic injuries and illnesses. Includes basic skill development in areas such as first aid, emergency care, and supportive taping, wrapping, and bracing. Requires a one-day first aid and CPR workshop.
- 219S. Movement Analysis: Individual Activities.** Application of scientific principles to the analysis of selected movement activities, with emphasis on individual activities. Two lecture hours and one laboratory hour a week for one semester. Prerequisite: A major in applied movement science and approved proficiency in swimming, dance, and conditioning.
- 219T. Movement Analysis: Team Activities.** Application of scientific principles to the analysis of selected movement activities, with particular emphasis on team sports. Two lecture hours and one laboratory hour a week for one semester. Prerequisite: A major in applied movement science.

UPPER-DIVISION COURSES

- 320. Applied Biomechanics of Human Movement.** Designed to provide students with an understanding of applied scientific analysis of movement. Examines the physiological, structural, and mechanical bases for human movement, with examples drawn from sport and rehabilitation. Lectures concentrate on a scientific approach to mechanisms underlying human movement and to strategies and practices of clinical and sport applications. Laboratory sessions focus on both theoretical and applied aspects of selected mechanical concepts. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Kinesiology 324K, and Mathematics 305G or the equivalent.
- 321M. Motor Development and Performance.** Development of fundamental motor patterns and skills from birth to adolescence; factors that influence motor skill development, such as growth, maturation, and neural and physiological mechanisms. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing.
- 322. Diagnosis and Evaluation of Fitness.** Three lecture hours a week for one semester.
- 324K. Applied Human Anatomy.** Combines the study of systematic and regional human anatomy. Includes applications of the skeletal system, and attachments and actions of muscles, with an emphasis on the mechanics of support and motion and their clinical applications. Two lecture hours and three laboratory hours a week for one semester. Biology 478L and Kinesiology 324K may not both be counted.
- 325K. Physiology of Exercise.** Application of principles of physiology to muscular activities. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Kinesiology 324K or a course in human physiology.
- 226. Advanced Weight Training.** Explores various advanced techniques of weight training, with emphasis on the lifts used in the competitive strength sports of weightlifting and powerlifting. Includes plyometrics and functional training movements for athletic enhancement. Two lecture hours a week for one semester.
- 326K. Kinesiology: Biomechanical Analysis of Movement.** Study of the principles of equilibrium, force, and motion as applied to human movement. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Kinesiology 324K, Mathematics 408C, and Physics 302K.
- 127L, 227L, 327L, 627L. Fieldwork.** Supervised fieldwork or clinical work in appropriate activities. For 127L, one conference hour and two hours of fieldwork a week for one semester; for 227L, one conference hour and five hours of fieldwork a week for one semester; for 327L, one conference hour and eight hours of fieldwork a week for one semester; for 627L, one conference hour and seventeen hours of fieldwork a week for one semester. May be repeated for credit up to twelve semester hours. No more than twelve semester hours in this course may be counted. No more than twelve semester hours in the following courses may be counted: Health Education 127L, 227L, 327L, 627L, Kinesiology 127L, 227L, 327L, 627L. No more than twelve semester hours in the following courses may be counted: Kinesiology 127L, 227L, 327L, 627L, 628. Students taking Kinesiology 127L, 227L, or 327L as an elective outside the major must register on the pass/fail basis; those using it to fulfill a degree requirement must register on the letter-grade basis; those taking it as an elective within the major may register on either the pass/fail or the letter-grade basis. Prerequisite: Upper-division standing, consent of the director of the degree program in kinesiology, and a University grade point average of at least 2.50. A higher grade point average may be required. Students will be dropped from the course if they have not obtained the director's consent in advance.
- Topic 3: Aiding in Fitness Leadership.**
- Topic 4: Fieldwork in Kinesiology.**
- Topic 5: Personal Training.**
- Topic 6: Clinical Exercise Testing.**
- Topic 8: Teaching Physical Education.** Includes off-campus instruction with physical education teachers in elementary and secondary school physical education programs.
- Topic 9: Sensory Motor Integration.** Students participate in the University of Texas Autism Project (UTAP) to explore evidence-based sensory motor integration practices used with children and adults on the autism spectrum. Additional prerequisite: Consent of instructor.
- 628. Fieldwork in Sport Management.** Twenty-seven hours of fieldwork a week for one semester. May be repeated once for credit. No more than twelve semester hours in the following courses may be counted: Kinesiology 127L, 227L, 327L, 627L, 628. Prerequisite: Upper-division standing, a University grade point average of at least 2.50, completion of an online test, and consent of the faculty adviser.
- 330E. Sport Nutrition.** The nutritional needs of people whose physical activity ranges from recreational to elite competitive athletics. Development of practical dietary strategies based upon understanding how macronutrients, vitamins, minerals, and water are digested and absorbed for metabolism and/or anabolism. Three lecture hours a week for one semester. Kinesiology 330E and 352K (Topic 13: *Sport Nutrition*) may not both be counted. Prerequisite: Upper-division standing, and Chemistry 314N or a course in human physiology.
- 331. Physical Aging in America.** Three lecture hours a week for one semester. Kinesiology 331 and 352K (Topic: *Physical Aging in America*) may not both be counted. Prerequisite: Upper-division standing; Kinesiology 310, 315, or 325K; and six additional semester hours of coursework in kinesiology.

- 332. Techniques of Fitness Leadership.** Practical application of theoretical content from exercise physiology, anatomy, and biomechanics. Emphasis on program design and development for healthy adults and special populations. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Kinesiology 332 and 352K (Topic 12: *Techniques of Fitness Leadership*) may not both be counted. Prerequisite: Kinesiology 310 or 325K.
- 334. Children's Exercise and Physical Activity.** Children's changing capacity for performance in exercise and sport. Includes performance changes as a function of physical growth and maturation, physiological response to activity and training, the relationship between children's health and adult health, and the psychosocial parameters that influence participation in physical activity. Three lecture hours a week for one semester. Kinesiology 334 and 352K (Topic 8: *Children's Exercise and Physical Activity*) may not both be counted. Prerequisite: Kinesiology 325K.
- 336. Neuromuscular Control.** Central and peripheral nervous system control of human muscular contractions and limb movement. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Kinesiology 324K, or a course in human physiology.
- 338. Motor Development and Assessment.** Three lecture hours a week for one semester. Kinesiology 338 and 352K (Topic 9: *Motor Development: Assessment*) may not both be counted. Prerequisite: Kinesiology 321M; Kinesiology 360 is recommended.
- 339. Physiological Basis of Conditioning.** Three lecture hours a week for one semester. Only one of the following may be counted: Kinesiology 310, 339, 352K (Topic 2: *Physiological Basis of Conditioning*).
- 140C. Practicum in Athletic Training: Level 1A.** Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, and immediate care of injuries and illnesses suffered by athletic and physically active populations. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.
- 140D. Practicum in Athletic Training: Level 1B.** Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, and treatment of injuries and illnesses suffered by athletic and physically active populations. Emphasizes the application of therapeutic modalities and soft-tissue therapy techniques. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.
- 140E. Practicum in Athletic Training: Level 2A.** Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, and diagnosis of injuries and illnesses suffered by athletic and physically active populations. Emphasizes clinical evaluation and assessment techniques. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.
- 140F. Practicum in Athletic Training: Level 2B.** Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes therapeutic exercise and rehabilitation procedures. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.
- 140G. Practicum in Athletic Training: Level 3A.** Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes general medical conditions. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.
- 140J. Practicum in Athletic Training: Level 3B.** Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes the administrative and professional aspects of managing these conditions. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of education competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

- 341. Therapeutic Modalities in Athletic Training.** The study and practice of using therapeutic modalities, including soft tissue and manual therapy techniques, to treat athletic injuries. Covers physiological effects, indications, contraindications, protocols, injury pathology, and tissue healing. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 341 and 352K (Topic 19: *Therapeutic Modalities in Athletic Training*) may not both be counted. Prerequisite: Kinesiology 312 (Topic 2: *Care and Prevention of Athletic Injuries*), and Biology 301L or 311C; or consent of instructor.
- 342. Clinical Evaluation of Athletic Injuries in the Lower Body.** The study and practice of techniques involved in the evaluation of athletic injuries affecting the lower body. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 342 and 352K (Topic 22: *Clinical Evaluation of Athletic Injuries in the Lower Body*) may not both be counted. Prerequisite: Kinesiology 312 (Topic 2: *Care and Prevention of Athletic Injuries*) and 324K, and concurrent enrollment in Kinesiology 343; or consent of instructor.
- 343. Clinical Evaluation of Athletic Injuries in the Upper Body.** The study and practice of techniques involved in the evaluation of athletic injuries affecting the upper body. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 343 and 352K (Topic 15: *Clinical Evaluation of Athletic Injuries in the Upper Body*) may not both be counted. Prerequisite: Kinesiology 312 (Topic 2: *Care and Prevention of Athletic Injuries*) and 324K, and concurrent enrollment in Kinesiology 342; or consent of instructor.
- 344. Therapeutic Exercise and Rehabilitation Techniques.** The study and practice of therapeutic exercise techniques and rehabilitation protocols in treating athletic injuries and illnesses. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 344 and 352K (Topic 24: *Advanced Athletic Training: Therapeutic Exercise and Rehabilitation*) may not both be counted. Prerequisite: Kinesiology 324K and 342, or consent of instructor.
- 345. Topics in Athletic Training.** Presentations, including some by medical and allied medical specialists, covering topics in athletic training and sports medicine. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 345 and 352K (Topic 20: *Topics in Athletic Training*) may not both be counted. Prerequisite: Consent of instructor.
- 346. Athletic Training Program Administration.** The study of organizational and administrative principles involved with athletic training programs. Includes legal issues, budgetary concerns, and policies and procedures. Also includes résumé development and career planning. Three lecture hours a week for one semester. Kinesiology 346 and 352K (Topic 21: *Athletic Training Program Administration*) may not both be counted. Prerequisite: Kinesiology 219K (Topic 3: *Introduction to Athletic Training*), 341, 342, and 344; or consent of instructor.
- 347. Historical and Ethical Issues in Physical Culture and Sports.** Designed to provide an overview of the historical antecedents of the modern fitness movement and examine the intellectual and social motivations involved in the pursuit of health and physical fitness. Explores the history of sport science, how laboratory revelations lead to new fitness regimens, and ethical issues in the field of physical culture and sport, such as the use of ergogenic drugs, the social consequences of high performance sport, and professional ethics in the fields of kinesiology and health education. Three lecture hours a week for one semester.
- 348. Psychological Aspects of Exercise.** Examines both the psychological benefits that accrue from exercise, such as reduced depression and stress, as well as the psychological predictors of exercise adherence. Three lecture hours a week for one semester. Kinesiology 348 and 352K (Topic 17: *Psychological Aspects of Exercise*) may not both be counted.
- 349. History of Sport and Physical Activity.** Significant developments in sport and physical activity since prehistoric time; emphasis on events influencing contemporary American programs and the International Olympic Games. Three lecture hours a week for one semester. Kinesiology 330 and 349 may not both be counted. Prerequisite: Upper-division standing.
- 350. Sociological Aspects of Sport and Physical Activity.** Three lecture hours a week for one semester. Kinesiology 350 and 352K (Topic: *Sociological Aspects of Sport and Physical Activity*) may not both be counted.
- 351. Philosophy of Sport and Physical Activity.** Designed to introduce the student to the ideas and methodologies of the philosophic exploration of play, sport, athletics, exercise, and the body. Emphasis on the study of sport and ethics. Three lecture hours a week for one semester. Kinesiology 329 and 351 may not both be counted. Prerequisite: Upper-division standing.
- 352K. Studies in Human Movement: Topical Studies.** Analysis and synthesis of the literature and discussion of current and specific issues in kinesiology. Three lecture hours a week for one semester. Laboratory work is required for some topics; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 3: Women and Sport.** Same as Women's and Gender Studies 345 (Topic 5: *Women and Sport*).
- Topic 5: Sport, Fitness, and Mass Media.** Same as American Studies 322 (Topic 3: *Sport, Fitness, and Mass Media*).
- Topic 6: Race and Sport in African American Life.** Same as African and African American Studies 374 (Topic 27: *Race and Sport in African American Life*) and Anthropology 324L (Topic 26: *Race and Sport in African American Life*). Prerequisite: Upper-division standing.
- 353. Sport Law.** Introduces the legal principles applicable to a variety of sport settings. Topics include tort liability, with a special emphasis on the effective management of risk; and constitutional law issues, focusing on the individual rights of amateur athletes and employees in sport organizations. Three lecture hours a week for one semester. Kinesiology 352K (Topic 25: *Sport and Law*) and 353 may not both be counted.

- 354. Sport and Event Promotion.** Application of the fundamental principles used in the marketing of sport and events. An introduction to service quality for increasing customer satisfaction and effectiveness of sport organizations. Three lecture hours a week for one semester. Kinesiology 352K (Topic 11: *Sport and Event Promotion*) and 354 may not both be counted.
- 355. Media and Public Relations in Sport.** Examination and application of the concepts of public and media relations to sport and leisure organizations. Topics include effective interpersonal communication, persuasion, media relations, publicity tactics, and writing and oral communications skills. Three lecture hours a week for one semester. Kinesiology 352K (Topic 26: *Media and Public Relations in Sport*) and 355 may not both be counted.
- 356. Revenue and Budgeting in Sport.** Introduction to financial analysis and budgeting techniques in the context of sport organizations; conventional and innovative methods for the acquisition of revenue available to sport organizations. Three lecture hours a week for one semester. Kinesiology 352K (Topic 10: *Revenue and Budgeting in Sport*) and 356 may not both be counted.
- 357. Management of Sport and Health Promotion Programs.** Examination of management and service delivery systems in sport and health promotion programs. Designed to develop specific knowledge and management skills in the areas of human resources, events, facilities, and risk management. Three lecture hours a week for one semester. Kinesiology 352K (Topic 4: *Management of Sport and Health Promotion Programs*) and 357 may not both be counted.
- 360. Programming for People with Disabilities.** Design and implementation of modifications that enable people with disabilities to participate in all activities. Three lecture hours a week for one semester, with additional field observation hours to be arranged. Prerequisite: A major or minor in the Department of Kinesiology and Health Education; and six semester hours of coursework in kinesiology or consent of instructor.
- 361. Coaching Theory and Principles I.** Examines the philosophy, ethics, strategies, motivational techniques, performance analysis, program organization, contest administration, and facilities management related to coaching. Three lecture hours a week for one semester. Kinesiology 352 and 361 may not both be counted.
- 362. Coaching Theory and Principles II.** Examines the process of becoming a successful coach and developing a coaching protocol for a specific sport. Three lecture hours a week for one semester. Kinesiology 352 and 362 may not both be counted.
- 363. Theory and Practice in Strength Coaching.** Explores the physiology and biomechanics of strength training and conditioning, as well as popular assessment protocols and exercise prescription principles. Additional areas include the organization and administration of a strength/conditioning facility, staff utilization, integration of weight training with other training techniques, and other standard strength coaching practices. Three lecture hours a week for one semester.
- 364. Aquatic Facility Operator: Management and Administration.** Designed to prepare the aquatic professional for leadership in the management of indoor and outdoor facilities. Includes aquatic facility operation, administration of programs, physical operations, policies and procedures, and staff development and training. Includes design, pool operation, water chemistry, facility management, safety procedures and risk management, budgeting, and marketing aquatic programs. Studies educational, sport, and recreational aspects of pools, lakes, camps, and beachfronts. Three lecture hours a week for one semester.
- 365. The Business of Golf.** Restricted to students in the College of Education. Designed for students pursuing a career in the golf business. Includes clubhouse and links management, sales, agronomy, technology, and equipment. Three lecture hours a week for one semester.
- 370K. Topical Seminar in Health Promotion.** Identification, causes, incidence, prevention, control, and social implications of major problems in health. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Emergency Medical Technology.**
- 375. Issues and Trends in Developmental Movement Programs.** Introduction to issues related to the goals, organization, and success of developmental movement programs, such as school physical education, youth sports, YMCA, and other recreation programs and community activities. Issues include equity, competition, fitness, social development, safety and liability, and sportsmanship. Involves group work and observation and involvement in community programs. Two lecture hours and three laboratory hours a week for one semester.
- 376. Measurement in Kinesiology.** Measurement and assessment procedures; application of statistical procedures; standards for authentic assessment; measurement/assessment selection and evaluation; use of microcomputers in tracking development of motor skills. Three lecture hours a week for one semester. Prerequisite: Six semester hours of upper-division coursework in kinesiology.
- 178, 278, 378, 678. Fieldwork in Health.** Undergraduate research and/or experience with a health agency in the field attempting to analyze or solve community health problems through education; supervision by the health agency and by the kinesiology and health education faculty. For each semester hour of credit earned, two laboratory hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Upper-division standing and consent of instructor.
- Topic 1: Substance Abuse Prevention I.**
Topic 2: Substance Abuse Prevention II.
Topic 3: Sexual Health I.
Topic 4: Substance Abuse Prevention III.

379H. Honors Tutorial Course. Readings or a research project, under the supervision of a faculty member, in specific areas of research within kinesiology. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: A University grade point average of at least 3.00 and consent of instructor.

PHYSICAL EDUCATION (ACTIVITY COURSES): PED

LOWER-DIVISION COURSES

AQUATICS

101J. Swimming. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Beginning Swimming I. For nonswimmers. Elementary physical and mental adjustments, four basic strokes, water safety.

Topic 2: Beginning Swimming II. For well-adjusted but weak swimmers. Five basic strokes, elementary diving, water safety.

Topic 3: Intermediate Swimming. For the average swimmer. Six power strokes, diving, water safety, introduction to conditioning.

Topic 5: Stroke Technique and Fitness Swimming.

RELATED AQUATIC ACTIVITIES

102G. Skin Diving and Scuba Diving. Training in underwater safety, skin and scuba skills, care of equipment. Culminates in PADI certification. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Advanced-level swimming skills. Strong swimming and survival skills required.

Topic 1: Basic Scuba Diving. Classroom, pool, and open water training with emphasis on underwater safety, the skills of skin and scuba diving, equipment, the underwater environment, planning for a dive. Culminates in nationally recognized certification.

Topic 2: Intermediate Scuba Diving. Open to divers with Basic Certification. Classroom, pool, and open water training with emphasis on navigation, air consumption, emergency procedures, night dives. Culminates in nationally recognized certification.

Topic 3: Advanced Scuba Diving. Open to experienced divers with Intermediate Certification. Classroom, pool, and open water training with emphasis on deep dives, mapping, search and research diving, equipment rescue work. Culminates in nationally recognized certification.

DANCE

103L. Dance. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Ballroom Dance.

RACQUET SPORTS

104P. Tennis. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Beginning Tennis. For the nonplayer.

Topic 2: Advanced Beginning Tennis. For players with weak strokes and serves.

Topic 3: Intermediate Tennis. Prerequisite: A steady stroke and consistent serve.

Topic 4: Advanced Intermediate Tennis. Prerequisite: Skilled all-court play.

Topic 5: Advanced Tennis. Prerequisite: Competence for tournament play.

104R. Racquetball. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Beginning Racquetball. For the nonplayer.

Topic 2: Intermediate Racquetball. Prerequisite: Racquetball experience.

Topic 3: Advanced Racquetball. Prerequisite: Competence for tournament play.

DUAL ACTIVITIES

105C. Handball. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Beginning Handball. For the nonplayer.

Topic 2: Intermediate Handball. Prerequisite: Handball experience.

Topic 3: Advanced Handball. Prerequisite: Competence for tournament play.

Topic 4: Handball Doubles. Prerequisite: Handball experience.

105M. Fencing. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Beginning Fencing: Foil.

Topic 2: Beginning Fencing: Épée.

Topic 3: Intermediate Fencing: Foil. Prerequisite: Physical Education 105M (Topic 1).

Topic 4: Intermediate Fencing: Épée. Prerequisite: Physical Education 105M (Topic 2).

Topic 5: Intermediate Fencing: Saber. Prerequisite: Physical Education 105M (Topic 1).

Topic 6: Advanced Fencing: Foil. Prerequisite: Any intermediate-level fencing course.

105R. Karate/Tae Kwon Do. Includes self-defense. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Beginning Karate/Tae Kwon Do. Prerequisite: No experience required.

Topic 2: Intermediate Karate/Tae Kwon Do. Prerequisite: Karate experience.

Topic 3: Advanced Karate/Tae Kwon Do. Prerequisite: Competence for tournament play.

105T. Judo. Includes self-defense. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Beginning Judo. No experience required.

Topic 2: Intermediate Judo. Prerequisite: Judo experience.

Topic 3: Advanced Judo. Prerequisite: Competence for tournament play.

CONDITIONING

- 106C. Conditioning.** Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: Swimming.**
 - Topic 2: Cardiovascular and Weight Training.**
 - Topic 3: Aerobic Walking.**
 - Topic 4: Aerobics.**
 - Topic 5: Body Works.**
 - Topic 6: Circuit Aerobics.**
 - Topic 7: Weight Training.**
 - Topic 8: Running.**

INDIVIDUAL ACTIVITIES

- 107C. Archery.** Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: Beginning Archery.** Basic form.
 - Topic 2: Intermediate Archery.** Bow mechanics and competition. Prerequisite: Archery experience.
 - Topic 3: Intermediate Field Archery.** Prerequisite: Archery experience.
 - Topic 4: Advanced Archery.** Tournament shooting and psychology of competition. Prerequisite: Intermediate-level archery skills or 225 FITA average.
- 107D. Golf.** Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: Beginning Golf.**
 - Topic 2: Intermediate Golf.** Prerequisite: One semester of beginning golf or an eighteen-hole scoring average of eighty to one hundred.
- 107L. Gymnastics.** Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: Beginning Tumbling and Trampoline.**
 - Topic 2: Intermediate Tumbling and Trampoline.** Prerequisite: Tumbling and trampoline experience.
 - Topic 3: Rhythmic Gymnastics.** Combination of gymnastics and dance movements performed to music using the hand apparatus of balls, hoops, ribbons, or ropes.
 - Topic 4: Beginning Gymnastics I.** Apparatus work in either men's or women's Olympic gymnastics events.
 - Topic 5: Beginning Gymnastics II.** Apparatus work in either men's or women's Olympic gymnastics events. Prerequisite: Limited gymnastics experience.
 - Topic 6: Intermediate Gymnastics.** Apparatus work in either men's or women's Olympic gymnastics events. Prerequisite: Gymnastics experience.
 - Topic 7: Intermediate Advanced Gymnastics.** Apparatus work in either men's or women's Olympic gymnastics events. Intense activity. Prerequisite: Gymnastics experience.
 - Topic 8: Advanced Gymnastics.** Apparatus work in either men's or women's Olympic gymnastics events. Intense activity. Prerequisite: Intermediate-level gymnastics experience.

TEAM ACTIVITIES

- 108C. Basketball.** Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: Beginning Basketball.** For those with little or no basketball experience.
 - Topic 2: Intermediate Basketball.** For those with some skills in the game.
 - Topic 3: Advanced Basketball.** For those with high skill and some competitive experience.
- 108J. Power Volleyball.** Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: Beginning Power Volleyball.** For those with few or no volleyball skills.
 - Topic 2: Intermediate Power Volleyball.** For those with good basic skills: bump, set, spike, serve.
 - Topic 3: Advanced Power Volleyball.** For those with high skills and knowledge of multiple offenses.
- 108S. Softball.** Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 1: Beginning Softball.** For those with few softball skills.
 - Topic 2: Intermediate Softball.** For those with experience and good basic skills.

SCIENCE

SCIENCE: SCI

UPPER-DIVISION COURSE

- 360. Seminar on Recent Advances in Science.** Recent advances in the life, earth/space, and physical sciences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For certified teachers, a bachelor's degree or consent of instructor; for others, six semester hours of coursework in science, in the biological sciences, in one of the physical sciences, or in one of the earth/space sciences, or consent of instructor.
- Topic 1: Life Science.**
 - Topic 2: Earth Science.**
 - Topic 3: Physical Science.**

DEPARTMENT OF SPECIAL EDUCATION

SPECIAL EDUCATION: SED

UPPER-DIVISION COURSES

- 332. Field Experiences in Special Education.** Observation and participation in a variety of educational settings that serve children with disabilities. Two lecture hours and two four-hour sessions of fieldwork a week for one semester. Fieldwork sessions must be arranged between 8:00 AM and noon. Special Education 322 and 332 may not both be counted. Required for all undergraduate students seeking special education certification.
- 337. Intercultural Communication and Collaboration.** Basic principles of interpersonal and intergroup communication in culturally and linguistically diverse educational settings. Designed to help students understand the relationship between culture, language, and disability using a variety of formats, including discussion, dialogue, journals, simulations, case studies, and field-based assignments. Three lecture hours a week for one semester. Required for undergraduate students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 360, 660, 960. Apprenticeship: Research to Practice.** Supervised practicum in special education classroom teaching, conducted in cooperating schools, as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Required for undergraduate students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 366. Behavior Management for the Exceptional Learner.** Behavior management procedures used in a variety of educational environments with a wide range of learners. Emphasis on instructional procedures, behavior and program evaluation, and principles of applied behavior analysis. Instructional management, classroom management, functional assessment of behavior, procedures for increasing successful school behavior while decreasing undesirable behavior, social skills instruction, and crisis management. Three lecture hours and two one-hour field placement sessions a week for one semester. Required for students seeking special education certification. Prerequisite: Applied Learning and Development 322 and consent of the undergraduate adviser.
- 667. Student Teaching in Special Education.** Directed and closely supervised performance in the full range of duties of a teacher, conducted in cooperating schools; accompanying directed study and seminars. Required in the professional development sequence for elementary school teacher candidates also seeking special education certification. Forty hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Completion of the twenty-four hours of coursework required for the special education academic specialization; consent of the undergraduate adviser; and admission to the professional development sequence of courses. Admission by application only, filed in the Office of Student Field Experiences by March 1 for fall semester registration and by October 1 for spring semester registration.
- 372. Assessment of Individuals with Mild to Moderate Disabilities.** Assessment and high-stakes testing policies, procedures, and practices in special education; curriculum-based measurement used to monitor academic outcomes for students with disabilities; and principles and procedures used to reduce misidentification of individuals from culturally and linguistically diverse backgrounds and with limited English proficiency. Assessment data and individualized education plan development is also covered. Three lecture hours a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 675. Instructional Methods in Special Education.** Procedures and practice in the instruction of students with mild or moderate exceptionalities. Emphasis on adaptations within the regular classroom and methods specific to exceptionalities. Three lecture hours a week for one semester, and six hours a week in an internship. Required for students seeking special education certification. Prerequisite: Applied Learning and Development 322, Special Education 376, and consent of the undergraduate adviser.
- 375C. Teaching Individuals with Mild to Moderate Disabilities.** Instructional practices associated with improved outcomes for students with mild to moderate disabilities receiving services in general and special education classrooms, including an emphasis on teaching reading in content areas, such as mathematics, science, and social studies. Three lecture hours and sixteen to twenty internship hours a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 376. Foundations and Issues in Special Education.** Key issues affecting decision-making and practices by special education teachers, assessment personnel, and administrators related to the treatment and education of students with disabilities. Three lecture hours a week for one semester. Required for students seeking special education certification.

- 377. Transition and the Exceptional Learner.** An overview of the transitions within the life span, particularly the transition to postsecondary school settings for individuals with disabilities. Designed to help students develop the ability to infuse transition-related topics into curricula, assess transition needs, develop transition plans, and become knowledgeable about existing vocational and community services. Three lecture hours a week for one semester, with fieldwork to be arranged. Required for students seeking special education certification. Prerequisite: Applied Learning and Development 322 and consent of the undergraduate adviser.
- 378D. Assessment Practices in Autism and Developmental Disabilities.** Assessment practices for developing and evaluating educational programs for individuals with autism and developmental disabilities. Considers the theoretical orientations that underlie the major assessment strategies, including standardized, behavioral, and informal practices. Three lecture hours and three hours of fieldwork a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 378E. Advanced Early Childhood Intervention.** Designed to assist students in acquiring in-depth knowledge of early childhood intervention, particularly related to services within the state of Texas, including an understanding of the legal policies related to serving young children with disabilities and their families. Three lecture hours and eight hours of fieldwork a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 378R. Reading Difficulties within Diverse Populations.** The knowledge and skills associated with assessing, instructing, and monitoring the progress of students who experience mild to moderate difficulties with reading, as well as students with dyslexia. The emphasis is on reading, spelling, and writing for kindergarten through grade five. Three lecture hours and four hours of fieldwork a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 378S. Teaching Individuals with Autism and Developmental Disabilities.** Assessment and instructional strategies for educating students with autism and other developmental and physical disabilities. Focuses on implementation and evaluation of instructional procedures for teaching a range of adaptive behaviors, such as self-care, and communication, social, and community living skills. Three lecture hours and eight hours of fieldwork a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.
- 378T. Topics in Special Education.** Three lecture hours and three and one-half hours of fieldwork a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Language-Minority Students in Special Education.** Prerequisite: Applied Learning and Development 322.
- 379. Seminar in Special Education.** Specialized study in an identified area of interest in education of the exceptional child. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Applied Learning and Development 322 and consent of the undergraduate adviser.

7. Cockrell School of Engineering

Gregory L. Fenves, PhD, *Dean*

Gerald E. Speitel Jr., PhD, PE, *Associate Dean for Academic Affairs*

John C. Halton III, MA, *Associate Dean, College and Alumni Relations*

John G. Ekerdt, PhD, PE, *Associate Dean, Research*

Patricia A. Gore, MEd, *Assistant Dean*

Wesley G. Queen, BBA, *Assistant Dean*

<http://www.engr.utexas.edu/>

GENERAL INFORMATION

HISTORY

The Department of Engineering was established in 1884, an outgrowth of work in applied mathematics first offered in the Department of Literature, Science, and Arts. About 1920, the department became a college; in 2007, the college was renamed the Cockrell School of Engineering in honor of Ernest Cockrell Jr., an alumnus and benefactor of the University. The first degree in engineering, a Bachelor of Science with a major in civil engineering, was conferred in 1888. Civil engineering degrees have been conferred since 1894 and electrical engineering degrees since 1896.

Degrees in architecture were conferred in the College of Engineering from 1909 through 1951, when the School of Architecture became an autonomous division of the University. Degrees in chemical engineering have been conferred since 1916; degrees in mechanical engineering since 1919; degrees in architectural engineering since 1928; degrees in petroleum engineering since 1931; degrees in aeronautical engineering from 1943 to 1959 and in aerospace engineering since 1960; degrees in ceramic engineering from 1948 to 1961; degrees in meteorology from 1951 to 1963; degrees in geosystems engineering and hydrogeology, offered jointly with the College of Natural Sciences, since 1996; and undergraduate degrees in biomedical engineering beginning in 2002. A degree in engineering science was offered from 1960 until 1988.

ENGINEERING EDUCATION

The mission of the Cockrell School of Engineering is to achieve excellence in undergraduate and graduate education, research, and public service. The school strives to provide an educational experience that inspires students to reach for the highest levels of intellectual attainment and personal growth throughout their lives, to provide a scholarly and professional environment that enables students and faculty members to make lasting contributions to the advancement of knowledge and the creative practice of engineering, to engage in service that enhances the public's understanding of technology and facilitates the use of technology for the betterment of society, and to lead the nation in providing equality of opportunity for engineering education.

Engineering education affords individuals the opportunity to prepare themselves for life in an era when human well-being depends more than ever before on the ability to apply technology for the benefit of society. It has become clear that in producing the goods and services demanded by an expanding population, we must consider the effects of technology on the environment. Solution of many of the problems faced by society today will involve a high level of technology.

Engineers are involved with all the devices and systems made by and for people—buildings and factories, transportation and communication systems, equipment for generating and distributing electrical energy, computers and electronic devices; indeed, all of the manufactured products we see around us.

Engineers of diverse backgrounds working together and with other professionals have produced heart pumps, surgical lasers, robotics for manufacturing and construction, polymers, safer and more efficient nuclear reactors, advances in space research and in environmental protection, safe and attractive bridges, satellites and telecommunication systems, and small but powerful computers. Just as much of the technology being applied today has been developed within the past ten years, the solution of tomorrow's problems will require the development of new technology through engineering research.

In addition to its traditional function of giving men and women the opportunity to prepare for careers as professional engineers, the Cockrell School of Engineering also has a second function: providing the opportunity to acquire a technical background to students who plan to continue their education in areas such as business, public affairs, law, medicine, and scientific disciplines related to engineering. The engineering faculty willingly accepts its obligation to enhance cooperation between engineers and others working to improve the quality of life.

The school is organized into academic departments that offer a variety of degrees. Although there are distinct differences among the degree programs, they have much in common; all are based on a foundation of mathematics, natural sciences, and basic engineering subjects. Following the development of an adequate foundation during the first two years, an engineering student begins concentrated study in a particular area. During the senior year the student delves into practical engineering problems, developing skills in defining a problem, translating available information into equations that can be analyzed logically, creating additional information when necessary, and choosing a course of action that has a reasonable chance of producing the desired results.

The school seeks to give students the knowledge necessary to take advantage of opportunities in a number of areas. The engineer who begins a professional career immediately following graduation usually will find opportunity for a variety of responsible positions in industry and government. The first assignments usually are of a technical nature. Later, one may choose to become a technical specialist or to move into positions involving administration and management. Either choice can lead to a rewarding professional career.

Many engineering graduates elect to continue their education. Studies by the American Society for Engineering Education indicate that nearly 50 percent of all engineering graduates eventually earn a master's degree.

Most do their graduate work in engineering, either in a professional program where advanced design techniques are emphasized or in a graduate school where the emphasis is on research. Others elect to enroll in graduate programs in other disciplines. The flexibility to accommodate a broad spectrum of educational objectives has been incorporated into the degree structure of the Cockrell School of Engineering through technical area options and electives that permit students to define programs of study that best suit their needs.

INSTRUCTIONAL FACILITIES

The Cockrell School occupies six buildings on the central campus, with a total of 927,000 square feet for classrooms, laboratories, and offices. The Nuclear Engineering Teaching Laboratory and a substantial number of other engineering research laboratory facilities are housed at the J. J. Pickle Research Campus, about six miles north of the central campus.

LIBRARIES

University libraries include the Perry-Castañeda Library, the Tarlton Law Library, the Harry Ransom Humanities Research Center, and several branch libraries and special collections. The units together make up one of the largest academic libraries in the United States, with more than six million volumes covering almost all fields of academic and scientific research.

The Richard W. McKinney Engineering Library, a branch of the University Libraries located in Ernest Cockrell Jr. Hall, supports teaching and research in all fields offered by the school. Extensive facilities are available for electronic retrieval of technical literature at <http://www.lib.utexas.edu/>. Special resources, such as the online Ask a Librarian, access to selected industry standards, several information tutorials, and US patent and trademark searching are available at <http://www.lib.utexas.edu/engin/>.

Other branch libraries of special interest to engineers are the Architecture and Planning Library, the Mallet Chemistry Library, the Walter Geology Library, the Kuehne Physics Mathematics Astronomy Library, and the Life Science Library.

All units of the University Libraries offer reference services, circulation and reserve, access to electronic information, and interlibrary loan services.

OFFICE OF STUDENT AFFAIRS

The mission of the Office of Student Affairs (SAO) is to serve the University and the public by helping to recruit, retain, and graduate engineering students. The office aims to accomplish this mission by providing personal and responsive guidance and support throughout each student's University experience. The staff strives to provide a foundation for students to develop successful lives, careers, and long-term relationships with the University.

The SAO represents the Office of the Dean in student matters. Academic advisers and SAO staff members are available to assist students in the following areas: adding, dropping, and withdrawing; application to take more than seventeen hours; concurrent enrollment approval; correspondence course approval; course selection for new students; crisis intervention; degree holder/nondegree seeker status; extension course approval; final degree audits; First-Year Interest Groups (FIGS); supplemental instruction courses; grade change processing; graduation; the Engineering Honors Program; internal transfer application (change of major); new student orientation; probation and dismissal; prospective student visits; recruitment; and resource referral.

The SAO also serves as a clearinghouse for information about the Cockrell School and the University. Students may seek assistance in person in Ernest Cockrell Jr. Hall 2.200, by phone at (512) 471-4321, or by e-mail at student-affairs@enr.utexas.edu. The SAO also provides information online at <http://www.enr.utexas.edu/undergraduate/services/>.

INTERNATIONAL ENGINEERING EDUCATION

Each semester, a growing number of students in the Cockrell School of Engineering pursue opportunities to study in a foreign country. Practicing engineers who are undergraduates today are likely to work with citizens of other countries and to be involved professionally in international projects. Participation in a study abroad experience is excellent preparation for this global marketplace.

There are many international programs that allow students to take courses that will count toward their degrees. Some programs require proficiency in a foreign language, while others allow for study in English. Engineering students who are interested in going abroad should visit the International Engineering Education Office in Ernest Cockrell Jr. Hall 2.200.

The Cockrell School supports the International Engineering Focus Programs, in which students may study abroad for a long-session semester or summer session; Maymester Abroad courses are also available in May and June. There is a program available for every engineering department. Students may study at respected engineering schools in Argentina, Singapore, Australia, France, Mexico, England, Sweden, South Korea, Turkey, the Netherlands, and Scotland. Courses are approved in advance, to ensure that they will count toward the engineering degree. All the engineering courses in the International Engineering Focus Programs are taught in English.

All engineering students interested in going abroad are encouraged to meet with the International Engineering Education Office program coordinator, who can help them decide which program will best suit their needs.

More information about engineering study abroad can be found online at <http://www.enr.utexas.edu/undergraduate/studyabroad/>, in Ernest Cockrell Jr. Hall 2.200, or by telephone at (512) 471-4321.

The Cockrell School's International Engineering Education Office and Engineering Student Life Office offers opportunities for students to work on engineering community development projects in Texas and abroad. The Projects in Underserved Communities program is a two-course sequence focusing on project development and project management that allows student teams to work on engineering projects that will directly impact communities abroad. More information about this program is available from the International Engineering Education Office coordinator in Ernest Cockrell Jr. Hall 2.200 or in the Engineering Student Life Office in Ernest Cockrell Jr. Hall 1.224.

ENGINEERING CAREER ASSISTANCE CENTER

Located in Ernest Cockrell Jr. Hall 2.400, the Engineering Career Assistance Center (ECAC) helps to prepare engineering students for the job search through counseling, workshops, and a comprehensive on-campus recruiting program. Students should register with the ECAC beginning in August each academic year to receive full benefit of the center's services.

The center hosts interviews in its twenty-three interview rooms throughout the fall and spring recruiting seasons. Interviewers represent employers that seek graduating students, co-op students, and summer interns in all engineering disciplines.

ECAC offers individual career counseling services to engineering students on a walk-in basis or by ap-

pointment. Topics addressed in individual counseling sessions and workshops include résumé and letter writing, interviewing skills, dressing for success, site visits, salary negotiation, online job searches, career exploration, and other career issues.

Students may contact ECAC online at <http://www.engr.utexas.edu/ecac/> or by phone at (512) 471-1915.

COOPERATIVE ENGINEERING EDUCATION PROGRAM

The Cooperative Engineering Education (Co-op) Program is an academic program that allows undergraduate students to obtain full-time engineering experience before they graduate. Students gain work experience directly related to their field of engineering by alternating semesters of full-time campus study with training in industry.

Students should apply for the Co-op Program in Ernest Cockrell Jr. Hall 2.400 at least one semester before planning to begin a co-op work term. Students may apply for the first work term after completing twenty-eight semester hours of basic sequence coursework, which must include eight hours each of physics and calculus and coursework in the selected engineering discipline. Students must have a University grade point average of at least 2.50, a grade point average of at least 2.00 in the major area of study, and at least twelve semester hours of degree-applicable coursework left to complete after the final co-op term. Transfer students may apply for the program after one semester at the University.

To realize the full academic and professional value of the Co-op Program, the student must complete either two or three semesters with the same employer in a cooperative engineering position. The student is then eligible to receive two or three hours of letter-grade credit that may be applied toward the engineering degree as a technical elective.

Students may contact the Co-op Program office online at <http://www.engr.utexas.edu/ecac/coop/> or by phone at (512) 471-5954.

EQUAL OPPORTUNITY IN ENGINEERING (EOE) PROGRAM

The Equal Opportunity in Engineering (EOE) Program invites students to become part of a community that focuses on academic success and personal growth. EOE initiatives such as the Fall Kick-Off, First-Year Interest Groups (FIGS), and Engineering Peer Leaders help students establish a strong academic foundation and promote the formation of a peer support network.

In addition, EOE provides students with access to tutoring, undergraduate research opportunities through the Texas Research Experience (TRES) program, and professional development workshops. In partnership with Pi Sigma Pi Minority Academic Engineering Society, the National Society of Black Engineers, and the Society of Hispanic Professional Engineers, the EOE Program builds a network that makes it easy to meet other engineering students, form study groups, and develop friendships that last well after graduation.

The Cockrell School established the EOE Program in 1970 to promote the recruitment and academic development of Hispanic, African American, and Native American students interested in pursuing careers in engineering. Since that time, EOE has expanded its goals; the program now seeks to increase the diversity of the college's student body by supporting students who come from historically underrepresented population groups in Texas and students who have backgrounds or experiences that will contribute to the overall diversity of the Cockrell School.

Additional information about the EOE Program is available online at <http://www.engr.utexas.edu/eoe/>; in Ernest Cockrell Jr. Hall 2.102; by telephone at (512) 471-5953; and by e-mail at eoengr@engr.utexas.edu.

ENGINEERING SCHOLARSHIP PROGRAM

Information about undergraduate scholarships, graduate fellowships, and other financial resources available to students in the Cockrell School can be found by visiting <http://www.engr.utexas.edu/undergraduate/scholarships/>, by e-mailing scholarships@engr.utexas.edu, or by visiting the Engineering Scholarship Program in Ernest Cockrell Jr. Hall 2.106.

OFFICE OF STUDENT LIFE

Founded in 1999 at the request of engineering student leaders, the Office of Student Life (OSL) provides a variety of student development programs for engineering students. These programs provide opportunities outside the classroom for students to develop skills in leadership, teamwork, and communication, to create a sense of community in the school, and to involve engineering students in the life of the school. Among these programs are the Ramshorn Retreats, Life Skills Workshop, and LeaderShape-Texas.

In addition, the OSL is the Cockrell School's primary liaison to all sixty of the engineering student organizations. These organizations are generally student chap-

ters of national professional engineering organizations, and the OSL works with them on leadership development, programming, team building, and budgeting.

More information about the Office of Student Life, its programs, and engineering student organizations is available online at <http://www.engr.utexas.edu/studentlife/> and in Ernest Cockrell Jr. Hall 1.224.

WOMEN IN ENGINEERING PROGRAM

The Women in Engineering Program (WEP) connects students to opportunities and careers in engineering and introduces them to mentors, peers, and resources in the field. The mission of WEP is to increase the overall percentage of women in the Cockrell School of Engineering. WEP strives to educate girls and women about engineering, inspire women to pursue the unlimited opportunities within the world of engineering, and empower women engineers to benefit society.

WEP's First-Year Initiative (FYI) provides academic and peer support to connect first-year students to the engineering community. The Women in Their Second Year of Engineering (WISE) series of workshops provides career exploration opportunities to help second-year students discover possibilities and make informed decisions for the future. Graduates Linked with Undergraduates in Engineering (GLUE) gives students opportunities to gain practical research experience, and WEP leadership and career development seminars help prepare students for leadership roles in the engineering profession.

Additional information about WEP is available online at <http://www.engr.utexas.edu/wep/>; in the WEP office, Ernest Cockrell Jr. Hall 2.108; by phone at (512) 471-5650; and by e-mail at wep@engr.utexas.edu.

RESEARCH ORGANIZATIONS

Faculty members and students of the Cockrell School of Engineering may participate in a wide variety of research projects conducted under the Bureau of Engineering Research. The bureau and its component research units are supported by federal, state, and industrial research contracts and grants that provide part-time employment for selected undergraduate and graduate students and for some faculty members. More than six hundred individual research projects are usually underway at any one time. In addition to providing students with experience in research methodology, these research projects enable faculty members to keep abreast of developments in their principal areas of interest.

Research units currently operating within the Bureau of Engineering Research are the Advanced Manufacturing Center; Center for Aeromechanics Research; Computer Engineering Research Center; Center for Mechanics of Solids, Structures, and Materials; Construction Industry Institute; Center for Energy and Environmental Resources; Geotechnical Engineering Center; Microelectronics Research Center; Offshore Technology Research Center; Center for Petroleum and Geosystems Engineering; Center for Space Research; Phil M. Ferguson Structural Engineering Laboratory; Center for Transportation Research; Center for Excellence in Distributed Global Environments; Wireless Networking and Communications Group; and Center for Research in Water Resources.

The Nuclear Engineering Teaching Laboratory is an academic unit of the Cockrell School. Interdisciplinary research units operated cooperatively by the school and other colleges are the Texas Materials Institute, the Center for Construction Industry Studies, the Center for Perceptual Systems, and the Institute for Computational Engineering and Sciences. Research organizations are located both on the main campus and at the J. J. Pickle Research Campus.

ENGINEERING FOUNDATION

In 1955, the University's Board of Regents authorized establishment of the Engineering Foundation and the Engineering Foundation Advisory Council (renamed the Engineering Advisory Board in 2007) to promote academic excellence in engineering education. Since then, the generous contributions of alumni and individual and corporate friends of the school have enabled the Engineering Foundation to develop a program of excellence through the encouragement and support of innovation in teaching and research; the creation of academic and leadership enhancement programs for engineering students; the establishment of funds for scholarships and graduate student fellowships; support for outstanding engineering faculty members; the endowment of chairs, professorships, faculty fellowships, and program support funds; and the development of facilities.

The Engineering Foundation office supports the work of the Engineering Advisory Board, a body of corporate leaders who volunteer to advise and assist the school. Through the Engineering Foundation, the school conducts fund-raising efforts in several areas: Friends of Alec (alumni support); alumni relations; endowments; and bequests and estate planning. The staff of the Engineering Foundation coordinates these

efforts, and the Engineering Advisory Board provides strategic leadership.

ADMISSION AND REGISTRATION

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. All students who wish to major in engineering must be admitted to the University according to the procedures given in *General Information*. However, enrollment in any engineering degree plan may be limited by the availability of adequate academic resources. Hence, a student may be admitted to the University but denied admission to a specific engineering degree plan. An applicant who is denied admission to an engineering degree plan may seek to enter another major in the Cockrell School of Engineering or in another college or school.

INFORMATION FOR FRESHMEN

Freshman applicants seeking admission to the Cockrell School must meet the calculus readiness requirement by the official admissions application deadline. More information about calculus readiness is available at <http://www.engr.utexas.edu/undergraduate/admission/calculus/>.

Applicants to the Cockrell School should use the online application at <http://www.applytexas.org/> and select engineering as a first-choice major. When selecting a second-choice major, freshman applicants may choose from one of the many other majors offered at the University, but are encouraged to choose a second engineering major when applying to the Cockrell School.

INFORMATION FOR TRANSFER STUDENTS

Transfer applicants seeking admission to the Cockrell School must demonstrate that they are taking or have completed a course that is equivalent to Mathematics 408C, *Differential and Integral Calculus*. Details regarding transfer calculus readiness are available at <http://www.engr.utexas.edu/undergraduate/admission/externaltransfer/>. Below are general guidelines for prospective transfer students; additional information is given at <http://bealonghorn.utexas.edu/transfer/>. Because significant differences may exist among courses that appear to be quite similar, students are encouraged to contact the Cockrell School for information about which courses are transferable.

General information is available from The University of Texas at Austin, Office of Student Affairs, Cockrell School of Engineering, 1 University Station C2108, Austin TX 78712. The telephone number is (512) 471-4321.

Students who have questions about the requirements of a specific degree plan should contact the appropriate departmental advising office. Additional information about academic advising can be found at <http://www.engr.utexas.edu/undergraduate/services/>.

GUIDELINES FOR TRANSFER STUDENTS

1. Students who wish to transfer to the University from another college or university must apply to the Office of Admissions as described in *General Information*. Requirements for admission as a transfer student vary, but all transfer applicants must submit transcripts of all college and high school coursework.
2. Only courses listed in the student's engineering degree program, or equivalent courses accepted by the department chair and approved by the dean, may be counted toward an engineering degree. A course may therefore be accepted for transfer credit but not be applicable toward an engineering degree.
3. Courses that are common to all degree programs in the Cockrell School are listed on page 171–172. These may be taken at any school offering courses acceptable for transfer to the University.
4. Completion of sequences of technical courses in the major area sometimes requires five or more semesters. Therefore, most transfer students should anticipate a minimum of five semesters or the equivalent in residence at the University.
5. Transfer students with more than forty semester hours of credit in an engineering or preengineering program may be eligible for admission to a major sequence as explained in the following section.

ADMISSION TO A MAJOR SEQUENCE

In engineering degree programs, the major sequence is a set of courses in which the student learns to put to engineering use the concepts learned in the basic sequence. Major sequence courses are normally taken in the last two years of undergraduate study.

Students must apply online for admission to a major sequence. The following requirements apply both to students seeking to transfer to the school from another

institution and to those currently enrolled at the University, either in another college or school or in a basic sequence of courses in the Cockrell School. Those in another college or school must also meet the requirements given in *General Information* for transfer from one division to another within the University.

1. Applications for admission to the major sequence are evaluated by the engineering departments each semester. The criteria for admission vary from semester to semester; current criteria are published at <http://www.engr.utexas.edu/undergraduate/policies/sequence/>.
2. To be eligible for admission to a major sequence, the applicant must have received credit from the University for the basic sequence of courses of the degree plan, either by completing the courses at the University or by receiving transfer credit for equivalent courses taken elsewhere. The student must not be on scholastic probation according to University regulations and must not be on engineering probation according to the regulations of the Cockrell School. For the basic sequence of courses in each degree plan, see the outline of the plan later in this chapter.
3. No engineering student may register for a course identified as a major sequence course in any of the degree plans of the Cockrell School unless the student has been admitted to the major sequence.
4. An applicant who has not previously been registered at the University must be admitted to the University as described in *General Information*. Admission to the University does not imply or guarantee admission to a major sequence in the Cockrell School. A student's application to the major sequence is considered only after the student has been admitted to the University.
5. Application for admission to a major sequence must be made online at <http://www.engr.utexas.edu/undergraduate/policies/sequence/>.
 - a. A student who is currently enrolled in the school must submit a completed application form.
 - b. A student seeking to transfer from another institution must first be admitted to the University by the Office of Admissions. Each transfer student must then confer with the transfer adviser for the major under which the student was admitted to the Cockrell School. A student who wishes to change majors within the Cockrell School after being admitted to the

University must meet the requirements given in the section "Transfer to an Engineering Major (Internal Transfer)," page 163–164.

6. Priority deadlines for submitting completed applications for admission to a major sequence are October 1 for entrance in the following spring semester and March 1 for entrance in either the following summer session or the following fall semester.
7. A student who has been admitted to a major sequence but does not enroll, and who wishes to enter in a subsequent semester, must reapply for admission to a major sequence and must meet all requirements in place at the time of reapplication. A student who has been admitted to the University but does not enroll must reapply to the University for admission according to the policies in place at the time of reapplication.
8. A student who has been enrolled in a major sequence and wishes to return to the school after being out for one or more semesters must apply for admission or readmission to a major sequence on the basis of all requirements in place at the time of return. A student who has been out of the University for at least one long-session semester must apply for readmission to the University.
9. Any student who has been denied admission to a major sequence will not be considered for admission for a subsequent semester unless reapplication is made.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

To register for a course, a student must fulfill the prerequisite given in the catalog or *Course Schedule*. If the student has not fulfilled the prerequisite, he or she must obtain the approval of the department offering the course before registering for it.

During the summer, orientation sessions are held

to acquaint entering students with many aspects of life at the University. Abbreviated orientation programs are offered just before the beginning of each semester and summer session.

CONCURRENT ENROLLMENT

An engineering student must have the approval of the dean before registering concurrently at another institution, either for coursework in residence or for a distance education course, and before enrolling in correspondence or extension coursework either at the University or elsewhere. Application for this approval should be made online at <http://www.engr.utexas.edu/undergraduate/policies/concurrent/>. The student may not enroll concurrently in any course counted toward the degree in the semester he or she will be graduating. More information about the approval process is available in the Office of Student Affairs, Ernest Cockrell Jr. Hall 2.200.

ADVISING

ACADEMIC ADVISING

To facilitate movement through an academic program, each engineering student must be advised in his or her major department before registering for each semester or summer session. The student may not register until his or her proposed schedule of courses has been approved. Approval as specified by the student's major department is required for any change from the set of courses initially approved. Continued registration for courses without proper approval is justification for the student to be dropped from such courses. Students are also required to consult their advisers whenever they change their academic programs. Departmental advisers are available throughout the year to discuss matters that affect the student's performance.

Each student should review his or her audit every semester through IDA, the University's Interactive Degree Audit system. The advising audit lists the courses remaining in the student's degree plan and the requirements the student has not yet fulfilled. It normally provides an accurate statement of requirements, but the student is responsible for knowing the exact requirements for the degree as stated in a catalog under which he or she is entitled to graduate and for registering so as to fulfill those requirements. A transfer student registering in the Cockrell School for the first time is advised by an undergraduate adviser in the department

in which the student will be enrolled. To be advised properly, the student must have both the transcripts of work completed at other colleges and the evaluation of that work by the University's Office of Admissions.

COUNSELING AND REFERRAL SERVICES

The Office of Student Affairs advises and counsels students about problems or concerns they have about their academic work or life in the school.

In addition, University counseling services are available from the Counseling and Mental Health Center, the Telephone Counseling Service, the UT Learning Center, and University Health Services. These offices are described in *General Information*.

TRANSFER TO AN ENGINEERING MAJOR (INTERNAL TRANSFER)

A student may transfer to the Cockrell School of Engineering from another division of the University in accordance with the regulations given in *General Information*.

A University student, either an engineering major or a nonmajor, who wants to transfer to a major in the Cockrell School must meet the following requirements:

1. Completion of at least twenty-four semester hours of coursework in residence at the University. Credit by exam and correspondence, extension, and transfer hours may not be counted toward this requirement.
2. A cumulative in-residence grade point average of at least 2.50.
3. Completion of Mathematics 408D and Physics 303K and 103M, or their equivalents.

Only currently enrolled students may apply; students may apply while in the process of meeting the admission requirements. Application forms are available online at <http://www.engr.utexas.edu/undergraduate/policies/changeofmajor/>.

Admission to all engineering majors is offered as space is available to the students who are best qualified. For equally qualified applicants, preference is given to the student who has completed more of the basic sequence courses for the requested major. No more than 10 percent of internal transfer students may be non-Texas residents. Information on Texas residency is available in *General Information*. Some degree programs may have additional admission considerations; these are described in their individual sections later in this chapter.

If a student who has been admitted to a major sequence is granted admission to another major, he or she must complete all the requirements of the basic sequence of the new major and must apply for admission to the new major sequence on the basis of the curriculum in effect at the time of application.

ACADEMIC POLICIES AND PROCEDURES

GRADE POINT AVERAGE FOR ACADEMIC DECISIONS

In the Cockrell School of Engineering, the grade point average used in all academic decisions is the average of grades the student has earned in residence in courses applicable to the degree. Academic decisions are decisions about engineering probation, engineering dismissal, internal transfer (change of major), admission to the major sequence, admission to the Engineering Honors Program, designation as an Engineering Scholar, eligibility for graduation, and eligibility for graduation with University Honors.

QUANTITY OF WORK RULE

MAXIMUM NUMBER OF HOURS IN THE LONG SESSION

As used in items 1 and 2 below, “coursework” includes correspondence courses, extension courses, distance education courses, nonrequired electives, physical activity courses, and courses for which the student is registered concurrently at another institution.

1. An engineering student may not register for more than seventeen semester hours of coursework without an approved application to do so. Application is made online at <http://www.engr.utexas.edu/undergraduate/policies/maxhours/>.
2. No student may register for more than twenty-one semester hours of coursework during any long-session semester.

RULES FOR THE SUMMER SESSION

A student may not receive credit for more than fourteen semester hours during a twelve-week summer session nor for more than eight semester hours in a six-week summer term. These limits apply whether the courses are taken at the University or another institution. For

more information about the quantity of work allowed in the summer, see *General Information*.

REPETITION OF A COURSE

An undergraduate in the Cockrell School may not enroll in any course required in his or her engineering degree plan more than once without written consent of an adviser in his or her department. If the student registers for a course without having received consent, his or her registration may be cancelled. If the student is denied approval to repeat a required course, he or she will be placed in the undeclared major code and must consider other degree options.

A student who is denied approval to repeat a course in residence at the University will also be denied approval to complete the course by transfer, extension, correspondence, distance education, or credit by examination and then count it toward the degree.

Except in unusual circumstances that can be documented, it is unlikely that an engineering student will be given consent to enroll in a required course more than twice.

To be “enrolled” is to be registered for the course as of the twelfth class day in the fall or spring or the fourth class day in the summer. If the student drops a course or withdraws from the University after this date, the student is considered to have been enrolled.

A student in the Cockrell School may not repeat for a letter grade a course in which he or she has earned a grade of C or better.

The application to repeat a course is submitted online at <http://www.engr.utexas.edu/undergraduate/policies/repetition/>.

The official grade in a course is the last final grade reported. If a student repeats a course and has two or more grades, all grades and all semester hours are used in calculating the University grade point average, in determining the student’s scholastic eligibility to remain in the University, and in determining the student’s academic standing in the Cockrell School.

ATTENDANCE

Engineering students are expected to attend all meetings of the classes for which they are registered. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes. With the approval of the dean, a student may be dropped from a course with a grade of F for repeated

unexcused absences.

STANDARD OF WORK REQUIRED AND SCHOLASTIC POLICIES

In addition to the scholastic standards described in *General Information*, the Cockrell School imposes the following academic standards. Students who fail to meet the standards stated in *General Information* are placed on “scholastic probation” by the University. The probationary status given to those who fail to meet the following school standards is “engineering probation.”

In cases with extenuating circumstances, the student may appeal to the dean for a waiver of any of the following requirements.

A student is placed on academic probation in engineering under the following circumstances:

- ▶ If his or her grade point average in courses in the major area of study taken in residence falls below 2.00. The “major area of study” includes all courses in the student’s discipline (biomedical, chemical, electrical, mechanical, or petroleum and geosystems engineering) and required under the student’s engineering degree plan. For architectural engineering and civil engineering majors, the major area includes all courses in both architectural engineering and civil engineering; for aerospace engineering majors, the major area includes all courses in both aerospace engineering and engineering mechanics; for geosystems engineering and hydrogeology majors, the major area includes all courses in both geological sciences and petroleum and geosystems engineering.
- ▶ If the student’s grade point average in required technical courses taken in residence falls below 2.00. “Required technical courses” are courses taken in the Cockrell School, the College of Natural Sciences, or the Jackson School of Geosciences and required under the student’s engineering degree plan; they include approved technical elective courses. Courses required to overcome admission or prerequisite deficiencies are not considered in decisions on engineering probation.

Grades received at the University in all courses in the major area, including grades in courses that have been repeated, are included in computing the student’s grade point average.

A student on engineering probation will be removed from probation at the end of a long-session semester or summer session if the student is no longer subject

to engineering probation under either of the criteria above.

After being placed on engineering probation, a student must be removed from probation within the next two long-session semesters in which he or she is registered. A student who fails to be removed from engineering probation within this time will be placed on engineering dismissal from the school.

A student seeking to reenter the school after having been scholastically dismissed from the University must enroll as an undeclared major unless there is a reasonable likelihood that the student can complete the degree plan under which he or she last registered. A student seeking to reenter the school after having been dismissed from engineering must enroll as an undeclared major. Students who are undeclared majors may not enroll in engineering courses.

Any student having academic difficulty should discuss his or her status with an academic adviser in the Office of Student Affairs, Ernest Cockrell Jr. Hall 2.200.

PASS/FAIL OPTION

With the approval of the departmental undergraduate adviser, a student may elect to take the degree-required approved nontechnical electives or any extra courses (taken for benefit and not to be counted toward the degree) on the pass/fail basis rather than for a letter grade. All other courses required for the degree, and Mathematics 305G, Chemistry 304K, and Physics 306, if taken, must be taken for a letter grade.

To elect the pass/fail system of grading, a student must have received thirty semester hours of college credit. He or she may take no more than one course applicable to the degree program on this basis each semester. Credit by examination may be earned only on the pass/fail basis; such credit is not counted toward the University’s maximum of five courses taken pass/fail that may be counted toward the degree. For more information on how to receive credit by examination, see *General Information*.

CERTIFICATE IN COMPUTATIONAL SCIENCE AND ENGINEERING

The transcript-recognized Certificate in Computational Science and Engineering is described on page 8. The Cockrell School sponsors this program along with the Jackson School of Geosciences, the College of Liberal Arts, and the College of Natural Sciences.

HONORS

ENGINEERING HONORS PROGRAM

The Engineering Honors Program (EHP) is designed to provide an intellectual challenge, opportunities for leadership development, and social interaction for students who have distinguished themselves academically and in leadership roles outside the classroom.

Admission to the program is limited to a small number of exceptional students who are chosen on a competitive basis by the Engineering Honors Program Committee. Most students enter the program when they enter the University. Engineering students may also apply for admission to the EHP when they have completed in residence at least twenty-four hours of the coursework to be counted toward the degree. To be invited to apply, the student must have at least sixty hours of coursework remaining in the degree program and must have an in-residence grade point average of at least 3.50. Selection is based on the student's rank in his or her degree plan class, in-residence grade point average on courses to be counted toward the degree, extracurricular activities, an essay related to engineering, and faculty review.

To remain in the EHP, the student must maintain an in-residence grade point average of at least 3.50. The grade point average is evaluated each year after grades for the spring semester have been awarded.

To earn Special Honors in Engineering and to have that designation placed on the academic record, the student must complete the undergraduate honors thesis course in his or her discipline.

Additional information is available from the Office of Student Affairs.

ENGINEERING SCHOLARS

Engineering Scholars are designated each spring semester from the sophomore, junior, and senior classes. To be eligible, a student must be enrolled in the Cockrell School, must have completed at least twenty-four semester hours of coursework in residence while enrolled in the school, must have a grade point average that places him or her in the top 5 percent of the class, must be of good character, and must show promise of continued success in engineering. The grade point average used to determine the student's class rank includes only courses that the student has completed in residence and that are applicable to the degree.

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

PROFESSIONAL AND HONOR SOCIETIES

Professional and honor societies play an important role in the life of an engineering student. Many of these societies are student branches of national professional societies that endeavor to advance the profession of engineering by education, service, professional development, publication, and sponsorship of meetings, activities, and conferences. Engineering student societies frequently support projects that aid students and benefit the Cockrell School, the University, and the community. Membership in professional societies is open to all students studying engineering and related fields.

The purpose of the honor societies is to recognize through membership those students who have established outstanding scholastic records and have demonstrated desirable character and personality traits. Honor societies frequently support projects that aid students and benefit the Cockrell School.

The engineering honor societies are Engineering Honors Council, Chi Epsilon (architectural and civil engineering), Beta Mu Epsilon (biomedical engineering), Eta Kappa Nu (electrical engineering), Omega Chi Epsilon (chemical engineering), Phi Alpha Epsilon (architectural engineering), Pi Epsilon Tau (petroleum engineering), Pi Tau Sigma (mechanical engineering), and Sigma Gamma Tau (aerospace engineering).

Embracing all branches of engineering is the Texas Alpha Chapter of Tau Beta Pi, which was organized at the University in 1916. Only students in the upper fifth of the senior class or the upper eighth of the junior class, and a few graduate students, qualify scholastically for membership consideration. Character and

personality traits are also considered in selecting new members. Generally the chapter elects fewer members than the number of eligible students. Also embracing all branches of engineering is Kappa Theta Epsilon, the cooperative engineering education honor society. Only students who are enrolled in the cooperative engineering program and are in the top 20 percent of their class are considered for membership.

The Student Engineering Council is the governing body representing all undergraduate engineering students. Representatives to the council are elected by the professional and honor societies in the Cockrell School; members-at-large are elected annually.

Engineering societies are overseen by the Cockrell School Office of Student Life, located in Ernest Cockrell Jr. Hall 1.224. A complete list of engineering societies is published online at <http://www.engr.utexas.edu/studentlife/learn/>.

GRADUATION

SPECIAL REQUIREMENTS OF THE COCKRELL SCHOOL

All University students must have a grade point average of at least 2.00 to graduate. Students in the Cockrell School must also have an in-residence grade point average of at least 2.00 in the major area of study and in required technical courses. “Major area of study” and “required technical courses” are defined in the section “Standard of Work Required and Scholastic Policies,” pages 165.

A candidate for a degree in engineering must be registered in the Cockrell School either in residence or in absentia the semester or summer session the degree is to be awarded. No later than the date given in the official academic calendar, the candidate must complete an online application form for graduation or graduation in absentia at <http://www.engr.utexas.edu/undergraduate/policies/graduation/>.

All individual degree programs must include at least forty-eight semester hours of engineering coursework.

RESIDENCE RULES

All University students must complete in residence at least sixty semester hours of the coursework counted toward the degree. In the Cockrell School, thirty of these sixty hours must be in the major field or in a field closely related to the major as approved by the major department and the dean.

At least the last twenty-four hours of technical coursework counted toward an engineering degree must be taken while the student is registered as an undergraduate engineering major at the University. A student seeking an exception to this requirement must obtain written approval in advance from the dean. Information about the petition process is available in the Office of Student Affairs, Ernest Cockrell Jr. Hall 2.200.

THE DEGREE AUDIT

After earning ninety semester hours of credit toward the degree, the student should request a degree audit in the undergraduate office of his or her academic department. Failure to do so may delay the student’s graduation. Each student may review his or her degree audit through IDA, the University’s Interactive Degree Audit system.

The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the requirements for the degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill these requirements. Rules on graduation under a particular catalog are given in chapter 1. Since the student is responsible for correct registration toward completion of the degree program, he or she should seek an official ruling in the Office of Student Affairs before registering if in doubt about any requirement. Avoidance of errors is the main purpose of the degree audit, but it remains the responsibility of the student to fulfill all catalog requirements.

APPLYING FOR GRADUATION

Students must apply for graduation the first semester they are eligible to graduate. Failure to do so will jeopardize the student’s future registration in the Cockrell School. Any subsequent registration must be recommended by the undergraduate adviser and approved by the dean.

A student is considered eligible to graduate if he or she can complete all course requirements by registering for twelve semester hours or fewer.

NONRESIDENCE COURSEWORK

A student in his or her final semester may not enroll concurrently at another institution in any course, including a distance education course, to be counted toward the degree. In the final semester, the student

may also not enroll by extension or correspondence in coursework to be counted toward the degree. All transfer, extension, and correspondence coursework must be added to the student's official record before his or her last semester.

FINAL DEGREE AUDIT

The student must complete all procedures associated with the final degree audit.

Any student who does not graduate when eligible must contact the Engineering Office of Student Affairs in Ernest Cockrell Jr. Hall 2.200. The degree auditor will advise the student what steps are needed for future registration and graduation.

SECOND DEGREES

A student who completes a bachelor's degree in engineering may receive a second bachelor's degree in a second engineering discipline if the student (1) completes at least twenty-four hours of approved coursework beyond the work counted toward the first bachelor's degree; and (2) meets all the requirements of the second degree that he or she did not meet in completing the first degree. No student may receive two bachelor's degrees in the same discipline of engineering, even if the technical area options are different. For example, a student may receive the degree of Bachelor of Science in Chemical Engineering and that of Bachelor of Science in Mechanical Engineering but may not receive two Bachelor of Science in Chemical Engineering degrees. A student may not receive bachelor's degrees in both architectural engineering and civil engineering.

COMMENCEMENT

In addition to the University commencement ceremony held each spring, the Cockrell School holds graduation ceremonies in December and May. August degree candidates who have completed a degree audit and online graduation application may participate in the May graduation ceremony. Information about graduation is available at <http://www.engr.utexas.edu/undergraduate/policies/graduation/>.

REGISTRATION AS A PROFESSIONAL ENGINEER

The practice of engineering has a profound effect on public health, safety, and welfare. Therefore, the commitment to the public good through the licensing or registration provisions available in all states and many foreign countries is an important step in the professional development of an engineer. Becoming licensed in Texas as a professional engineer requires graduation from an approved curriculum in engineering, passage of the examination requirements, and a specific record of an additional four years or more of active practice in engineering work indicating that the applicant is competent to be placed in responsible charge of such work. Additional requirements include good character and reputation.

Engineering students are encouraged to take the Fundamentals of Engineering examination during their last long-session semester and to seek certification as an "engineer in training."

For additional information, contact the Texas Board of Professional Engineers or the equivalent agency in another state.

DEGREES

To satisfy the course requirements for an engineering degree, a student must earn credit for all of the courses listed in the curriculum for that degree.

All University curricula leading to bachelor's degrees in engineering are accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700. ABET sets minimum standards for engineering education, defined in terms of curriculum content, the quality of the faculty, and the adequacy of facilities. Graduation from an accredited program is an advantage when applying for membership in a professional society or for registration as a professional engineer.

DUAL DEGREE PROGRAMS

ENGINEERING/PLAN II HONORS PROGRAM

A limited number of students whose high school class standing and admission test scores indicate strong academic potential and motivation may pursue a curriculum leading to both a bachelor's degree in engineering and the Bachelor of Arts, Plan II. This dual degree option, offered jointly by the Cockrell School and the Plan II Honors Program of the College of Lib-

eral Arts, provides the student with challenging liberal arts courses while he or she also pursues a professional degree in engineering. Admission to this program requires at least two separate applications: one to the University and one to the Plan II Honors Program. Students should contact both the Cockrell School Office of Student Affairs and the Plan II office for more information on applications and early deadlines.

ARCHITECTURAL ENGINEERING/ ARCHITECTURE

A program that leads to both the Bachelor of Science in Architectural Engineering degree and the Bachelor of Architecture degree is available to qualified students. The program combines the course requirements of both degrees and requires six years for completion. Students who wish to pursue both degrees must apply for admission to the School of Architecture according to the procedures and deadlines established by the school. The program is described on pages 34–35; additional information is available from the undergraduate adviser for architectural engineering.

SIMULTANEOUS MAJORS

An engineering student may pursue two majors simultaneously. The student must follow all procedures and meet all requirements associated with both majors. An engineering student may not pursue two engineering majors simultaneously.

The simultaneous major option is available only to undergraduates who have completed thirty hours of coursework in residence at the University and who have been admitted to both degree programs.

TECHNICAL AREA OPTIONS

Several engineering degree programs require a student to select a “technical area option” and to complete a specified number of courses in that area. Other degree programs do not require a student to specify a particular option but allow the student to choose courses either within an area of specialty or more broadly across technical areas. Although most options are designed to help the student develop greater competence in a particular aspect of the major, others permit the student to develop background knowledge in areas outside the major. In many cases, students who elect the latter options intend to continue their education in professional or graduate school; these options are particularly appropriate for

students who plan to work in those interdisciplinary areas where the creation of new technology through research and development is very important.

PREPARATION FOR PROFESSIONAL SCHOOL

Technical area options also allow the student to fulfill the special course requirements for admission to professional schools. For more information, students should consult an adviser who is familiar with the admission requirements of the professional program in which they are interested.

Medical school. A properly constructed program in engineering provides excellent preparation for entering medical school. The engineer’s strong background in mathematics and natural science—combined with a knowledge of such subjects as applied mechanics, fluid dynamics, heat transfer, thermodynamics, chemical kinetics, diffusion, and electricity and magnetism—enhance the mastery of many aspects of medical science. An engineering background is also useful to those who develop and use new instruments for detecting and monitoring medical abnormalities. The engineering/premedical programs described in this catalog usually afford opportunities to pursue alternative vocations for those who do not enter medical school. Medical school admission requirements for which engineering students may have to make special arrangements include eight semester hours of organic chemistry and fourteen semester hours in the life sciences. A competitive grade point average, a suitable score on the Medical College Admission Test, and letters of recommendation are requirements for admission to most medical schools. Arrangements for providing the necessary data must be completed during the summer preceding the student’s senior year. Preliminary planning should be initiated early in the sophomore year. Students who intend to apply for admission to a medical school should contact Health Professions Advising in the College of Natural Sciences for information about admission requirements and application and test deadlines.

Dental school. Much of the information above about medical school applies also to dental school. All applicants must take the Dental Admission Test. Certain courses not taken by all engineers are also required, but these vary markedly from school to school. Students who are interested in dentistry can obtain specific information from Health Professions Advising.

Law school. Each year a few graduates, representing all engineering disciplines, elect to enter law school, where they find their training in careful and objective analysis is a distinct asset. Many of these students are preparing for careers in patent or corporate law that will enable them to draw on their combined knowledge of engineering and law. Others may not plan to use their engineering knowledge directly, but they still find that the discipline in logical reasoning acquired in an engineering education provides excellent preparation for the study of law. Students interested in admission to the law school of the University should consult the catalog of the School of Law.

Graduate study in business. Since many engineering graduates advance rapidly into positions of administrative responsibility, it is not surprising that they often elect to do graduate work in the area of business administration. In addition to an understanding of the technical aspects of manufacturing, the engineer has the facility with mathematics to master the quantitative methods of modern business administration.

Requirements for admission to the University's graduate business programs are outlined in the graduate catalog. Many engineering degree programs offer technical area options that include business and management courses. These can be used with advantage by students who plan to do graduate-level work in business.

THE MINOR

While a minor is not required as part of any engineering degree program, the student may choose to complete a minor in a field outside the Cockrell School. A student may complete only one minor. The minor consists of at least twelve semester hours in a single field, including at least six hours of upper-division coursework. Six of these hours must be completed in residence. A course to be counted toward the minor may not be taken on the pass/fail basis, unless the course is offered only on that basis. Only one course counted toward the standard requirements of the student's degree may also be counted toward the minor.

If the minor is in a foreign language other than that used to fulfill the basic education foreign language requirement, the twelve hours may be lower-division but must include at least six hours completed in residence and at least six hours beyond course 507 or the equivalent.

All minors must be approved by the student's major department faculty adviser and the Office of the Dean.

The Cockrell School allows the student to minor in any field outside the school in which the University offers a major. However, prerequisites and other enrollment restrictions may prevent the student from pursuing a minor in some fields. Before planning to use specific courses to make up the minor, the student should consult the department that offers those courses.

ABET CRITERIA

To be accredited by the Engineering Accreditation Commission of ABET, a degree plan of the Cockrell School must include the following:

1. One year of an appropriate combination of mathematics and basic sciences.
2. One and one-half years of engineering topics and any requirements listed in ABET's Program Criteria for that program.
3. A general education component.

Although the degree plans that follow have been designed to meet these criteria, it is the student's responsibility, in consultation with the adviser, to choose elective courses that satisfy them. Courses in such subjects as accounting, industrial management, finance, and personnel administration; introductory language courses; and ROTC courses normally do not fulfill the general education requirement, regardless of their general value in the engineering program.

LIBERAL EDUCATION OF ENGINEERS

Each student must complete the University's core curriculum, described in chapter 2. The core curriculum includes the first-year signature course and courses in English composition, American and Texas government, American history, mathematics, science and technology, visual and performing arts, humanities, and social and behavioral sciences. It must be an integral part of all engineering degree programs, so that engineering graduates will be aware of their social responsibilities and the effects of technology on society.

Courses used to satisfy the social and behavioral sciences and visual and performing arts requirements of the core curriculum should be chosen to fulfill the ABET accreditation criteria given above so that these courses can simultaneously satisfy multiple degree requirements. Guidance for courses that fulfill these ABET requirements is given below.

SOCIAL AND BEHAVIORAL SCIENCES REQUIREMENT

As part of the University's core curriculum, each student must complete three semester hours of coursework in social and behavioral sciences. Students preparing for the professional practice of engineering are encouraged to elect coursework in economics to fulfill this requirement. Engineering students should not choose courses in logic, cartography, or mapping, because these courses do not meet the ABET criteria given above.

VISUAL AND PERFORMING ARTS REQUIREMENT

As part of the University's core curriculum, each student must complete three semester hours of coursework in visual and performing arts. Engineering students should not choose performance, studio, or ensemble courses to fulfill this requirement, because these courses do not meet the ABET criteria given above.

Architectural engineering majors must take an approved architectural history course as part of the Bachelor of Science in Architectural Engineering requirement. This course (or its prerequisite) will fulfill the visual and performing arts requirement of the core curriculum.

FOREIGN LANGUAGE REQUIREMENT

In accordance with the University's basic education requirements, all students must demonstrate proficiency in a foreign language equivalent to that shown by completion of two semesters of college coursework. Credit earned at the college level to achieve the proficiency may not be counted toward a degree. For a student admitted to the University as a freshman, this requirement is fulfilled by completion of the two high school units in a single foreign language that are required for admission; students admitted with a deficiency in foreign language must remove that deficiency as specified in *General Information*.

APPLICABILITY OF CERTAIN COURSES

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They may not be counted toward a degree in the Cockrell

School. However, they are counted as courses for which the student is enrolled, and the grades are included in the University grade point average.

ROTC COURSES

The dean, on the recommendation of the department chair, may substitute credit for air force science, military science, or naval science courses for other courses prescribed in an engineering degree program. Six semester hours of ROTC coursework may be substituted for three hours of American government and three hours of elective work. The elective for which an ROTC course is substituted must be approved by the student's major department faculty adviser. All ROTC students should consult their undergraduate adviser. The total number of semester hours required for the degree remains unchanged. Substitution is permitted only upon the student's completion of the last two years of ROTC coursework and receipt at the University of a commission in the service.

CORRESPONDENCE AND EXTENSION COURSES

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence or through distance education at another school will not be counted toward a degree in the Cockrell School unless specifically approved in advance by the dean. Application for this approval should be made online or at the Office of Student Affairs, Ernest Cockrell Jr. Hall 2.200. No more than twenty semester hours required for any degree offered in the Cockrell School may be taken by correspondence.

REQUIREMENTS INCLUDED IN ALL ENGINEERING DEGREE PLANS

Each student must complete the University's core curriculum, described in chapter 2. In the process of fulfilling engineering degree requirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for each engineering degree plan. Students are advised

to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

In addition, students in all engineering degree plans must complete the following requirements. In some cases, a course that fulfills one of the following requirements may also be counted toward core curriculum or flag requirements; these courses are identified below.

COURSES	SEM HRS
Engineering communication	
▶ Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T (This course may also be counted toward the writing flag requirement.)	3
Mathematics	
▶ Mathematics 408C, <i>Differential and Integral Calculus</i> (This course may also be used to fulfill the mathematics requirement of the core curriculum and the quantitative reasoning flag requirement.)	4
▶ Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
▶ Mathematics 427K, <i>Advanced Calculus for Applications I</i> (This course may also be used to fulfill the quantitative reasoning flag requirement.)	4
Physics	
▶ Physics 303K, <i>Engineering Physics I</i> (This course may also be counted toward the science and technology, part I, requirement of the core curriculum and the quantitative reasoning flag requirement.)	3
▶ Physics 103M, <i>Laboratory for Physics 303K</i>	1
▶ Physics 303L, <i>Engineering Physics II</i> (This course may also be counted toward the science and technology, part I, requirement of the core curriculum and the quantitative reasoning flag requirement.)	3
▶ Physics 103N, <i>Laboratory for Physics 303L</i>	1

LENGTH OF DEGREE PROGRAM

An eight-semester arrangement of courses leading to the bachelor's degree is given for each of the engineering degree plans. The exact order in which the courses are taken is not critical, as long as the prerequisite for each course is fulfilled. A student who registers for fewer than the indicated number of hours each semester will need more than eight semesters to complete the degree. The student is responsible for including in each semester's work any courses that are prerequisite to those he or she will take the following semester.

The first three semesters of all curricula contain

many of the same courses. This commonality gives students some freedom to change degree plans without undue loss of credit.

BACHELOR OF SCIENCE IN AEROSPACE ENGINEERING

The field of aerospace engineering developed because of humanity's desire for aircraft systems for military, commercial, and civilian purposes; it was first called aeronautical engineering or aeronautics. When the space age began, it was natural for aeronautical engineers to participate in the development of spacecraft systems for space exploration. This branch of engineering became known as astronautical engineering or astronautics, and the combined field is called aerospace engineering or aeronautics and astronautics. Because of the diverse nature of the work, the aerospace engineer must have a basic knowledge of physics, mathematics, digital computation, and the various disciplines of aerospace engineering: aerodynamics and propulsion, structural mechanics, flight mechanics and orbital mechanics, and control. Because of their extensive education in fundamental disciplines, aerospace engineers can work in areas other than aerospace engineering and are employed in a wide range of careers.

The objectives of the aerospace engineering degree program are to prepare students for professional practice in aerospace engineering and related engineering and scientific fields; to prepare students for such post-baccalaureate study as their aptitudes and professional goals may dictate; to instill in students a commitment to lifelong education and to ethical behavior throughout their professional careers; and to make students aware of the global and societal effects of technology. To meet these objectives, the faculty has designed a rigorous curriculum that emphasizes fundamentals in the basic sciences, mathematics, and the humanities, and integrates classroom and laboratory experiences in the engineering disciplines of aerodynamics and propulsion, structural mechanics, mechanics of materials, flight and orbital mechanics, controls, computation, measurements and instrumentation, design, and technical communication. The curriculum requires students to use modern engineering tools, to work individually, and to practice teamwork.

The first two years of the aerospace engineering curriculum emphasize fundamental material along with engineering sciences, while the third year introduces concepts in the areas of fluid mechanics, structural mechanics, system dynamics and control,

and experimentation. The fourth year provides further depth in aerospace engineering, with emphasis on design and laboratory courses. After acceptance into the major sequence, usually during the junior year, the student elects to pursue one of two technical areas, atmospheric flight or space flight. Both area options are complemented by general education courses and courses offered in other engineering disciplines. In addition, the student may choose technical electives that increase the breadth of the program or that provide additional depth within one or more subdisciplines. All of the following subdisciplines are also represented in the required courses for both technical area options.

Aerodynamics and propulsion. This subdiscipline embraces study in one of the more traditional areas of aerospace engineering. It involves fluid motion, propulsion, lift and drag on wings and other bodies, high-speed heating effects, and wind tunnel investigation of these problems. Topics of study include fluid mechanics, gas dynamics, heat transfer, aerodynamics, propulsion, and experimental fluid mechanics.

Structural mechanics. This subdiscipline includes the study of airplane, spacecraft, and missile structures, the materials that make them efficient, and methods for testing, analysis, and design of new structural systems. Course topics include structural analysis, structural dynamics, materials (including advanced composites), aeroelasticity, experimental structural mechanics, and computer-aided design of structures.

Flight mechanics and orbital mechanics. Flight mechanics involves the analysis of the motion of aircraft, missiles, rockets, reentry vehicles, and spacecraft that are subjected to gravitational, propulsive, and aerodynamic forces; the study of uncontrolled motion of satellites and coasting spacecraft is usually referred to as orbital mechanics. Subject matter in these areas includes trajectory analysis and optimization; attitude dynamics, stability, and control; flight test; orbit determination; orbital operations; systems engineering; sensors; satellite hardware applications; and simulation.

Flight control. Control theory is applied in aerospace engineering to the development of automatic flight control systems for aircraft (autopilots and stability augmentation systems), attitude control systems for satellites, and guidance and control systems for missiles, rockets, reentry vehicles, and spacecraft. Course topics include linear system theory, classical control

theory, digital control, and probability theory.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course that fulfills one of the following requirements may also be counted toward core curriculum or flag requirements; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree requirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill technical elective requirements must be approved by the aerospace engineering faculty before the student enrolls in them.

The student must take all courses required for the degree on the letter-grade basis and must earn a grade of at least C- in each course. He or she must also maintain grade point averages of at least 2.00 in the major area of study and in required technical courses as described on page 165, and a cumulative University grade point average of at least 2.00 as described in *General Information*.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Aerospace Engineering 102, 311, 333T (Aerospace Engineering 333T carries a writing flag.)	7
▶ Chemistry 301 (may be used to fulfill the science and technology, part II, requirement of the core curriculum)	3
▶ Engineering Mechanics 306, 311M, 319	9
▶ Mathematics 408C, 408D, 427K, 427L (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	16
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may also be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag)	3
	TOTAL 49
Major Sequence Courses	
▶ Aerospace Engineering 320, 120K, 324L, 330M, 362K, 365, 366K, 367K, 269K, 370L, 376K	30
▶ Technical area courses	13
▶ Approved technical electives	6
	TOTAL 49
Other Required Courses	
▶ Mechanical Engineering 210, 320, 340, 140L	9
Remaining Core Curriculum Courses	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American history	6
▶ Social and behavioral sciences	3
▶ Visual and performing arts	3
	TOTAL 21
	MINIMUM REQUIRED 128

TECHNICAL AREA OPTIONS

The technical area option allows the student to choose thirteen semester hours of technical area courses in either atmospheric flight or space flight. Each student should choose a technical area by the end of the first semester of the junior year and plan an academic program to meet the area requirements in the next three semesters. Many students choose technical electives that will strengthen their backgrounds in one specialty area, but this is not required. It should be noted that a student may choose the technical area courses in the other technical area as technical electives.

AREA 1, ATMOSPHERIC FLIGHT

Also called aeronautics, this area provides the student with a well-rounded program of study emphasizing the major disciplines of aerodynamics, propulsion, structures, design, performance, and control of aircraft. These subjects are treated at a fundamental level that lays a foundation for work in a broad variety of specialties in the aircraft industry. This option is intended for the undergraduate student whose primary interest is aircraft.

ASE 321K, *Structural Analysis*

ASE 361K, *Aircraft Design I* (carries an independent inquiry flag)

ASE 361L, *Aircraft Design II*

ASE 162M, *High-Speed Aerodynamics Laboratory*

ASE 364, *Applied Aerodynamics*

AREA 2, SPACE FLIGHT

Also called astronautics, this area offers a well-rounded program of study that provides a background in the traditional areas of fluid mechanics, materials, structures, propulsion, controls, and flight mechanics, while also giving the student a chance to learn about the space environment, attitude determination and control, orbital mechanics, mission design, and spacecraft systems engineering. These subjects are treated at a fundamental level that lays a foundation for work in a broad variety of specialties in space-related industries. This option is intended for the undergraduate student whose primary interest is space and spacecraft.

ASE 366L, *Applied Orbital Mechanics*

ASE 166M, *Spacecraft Systems Laboratory*

ASE 372K, *Attitude Dynamics*

ASE 374K, *Space Systems Engineering Design*

ASE 374L, *Spacecraft/Mission Design* (carries an independent inquiry flag)

SPECIAL PROJECTS LABORATORIES

The department offers students the opportunity to participate in special projects such as student-built radio-controlled aircraft competitions and student satellite-building projects. These time-intensive projects are open to all aerospace engineering students with at least fifteen semester hours of University credit toward the degree and a grade point average of at least 2.50. Academic credit for participation in departmentally approved student projects is available on the pass/fail basis through the course Aerospace Engineering 128. Three such laboratory courses can

be combined to count as one three-hour technical elective; one such laboratory course can be combined with a two-hour cooperative program to count as one three-hour technical elective.

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS
FIRST YEAR	
FALL	
UGS 302 or 303, <i>First-Year Signature Course</i>	3
CH 301, <i>Principles of Chemistry I</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4
RHE 306, <i>Rhetoric and Writing</i>	3
Social and behavioral sciences or visual and performing arts	3
TOTAL 16	
SPRING	
ASE 102, <i>Introduction to Aerospace Engineering</i>	1
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
M E 210, <i>Engineering Design Graphics</i>	2
PHY 303K, <i>Engineering Physics I</i>	3
PHY 103M, <i>Laboratory for Physics 303K</i>	1
American and Texas government	3
American history	3
TOTAL 17	
SECOND YEAR	
FALL	
ASE 333T, <i>Engineering Communication</i>	3
E M 306, <i>Statics</i>	3
M 427K, <i>Advanced Calculus for Applications I</i>	4
PHY 303L, <i>Engineering Physics II</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1
American and Texas government	3
TOTAL 17	
SPRING	
ASE 311, <i>Engineering Computation</i>	3
E M 311M, <i>Dynamics</i>	3
E M 319, <i>Mechanics of Solids</i>	3
M 427L, <i>Advanced Calculus for Applications II</i>	4
M E 320, <i>Applied Thermodynamics</i>	3
TOTAL 16	
THIRD YEAR	
FALL	
ASE 320, <i>Low-Speed Aerodynamics</i>	3
ASE 120K, <i>Low-Speed Aerodynamics Laboratory</i>	1
ASE 330M, <i>Linear System Analysis</i>	3
ASE 366K, <i>Spacecraft Dynamics</i>	3
E 316K, <i>Masterworks of Literature</i>	3
Social and behavioral sciences or visual and performing arts	3
TOTAL 16	

COURSES	SEM HRS
SPRING	
ASE 362K, <i>Compressible Flow</i>	3
ASE 365, <i>Structural Dynamics</i>	3
ASE 367K, <i>Flight Dynamics</i>	3
M E 340, <i>Mechatronics</i>	3
M E 140L, <i>Mechatronics Laboratory</i>	1
Technical area course	3
TOTAL 16	

FOURTH YEAR	
FALL	
ASE 269K, <i>Measurements and Instrumentation</i>	2
ASE 376K, <i>Propulsion</i>	3
Technical area courses	7
Technical elective	3
TOTAL 15	

SPRING	
ASE 370L, <i>Flight Control Systems</i>	3
ASE 324L, <i>Aerospace Materials Laboratory</i>	3
American history	3
Technical area course	3
Technical area elective	3
TOTAL 15	

BACHELOR OF SCIENCE IN ARCHITECTURAL ENGINEERING

An unprecedented growth in the building industry, already one of the largest industries in the nation, has created a pressing demand for engineers with specialized training to plan and direct the activities of the industry. This need has been further intensified by the introduction of new materials, new structural systems, and new methods and management techniques. The curriculum in architectural engineering is designed to meet this demand. It offers training in the fundamentals of engineering, with specialization in structures, building environmental systems, or building construction/materials.

This curriculum affords the student the opportunity to attain competence in the structural design of buildings from high-rise to long-span structures and from commercial buildings to complex industrial facilities. Courses in environmental control systems permit graduates to integrate modern electrical, mechanical, and utility distribution systems with the structural and architectural elements of buildings. Courses in construction methods and project management offer

the student an opportunity to obtain a versatile background suitable for all areas of the building industry.

The extensive technical requirements, coupled with courses in arts and sciences, provide the architectural engineering student with an opportunity to obtain a background that is ideally suited for careers and positions of responsibility with consulting engineers, general contractors, manufacturers, government agencies, and architecture firms. The curriculum also serves as an excellent springboard to graduate study in the areas of structures, building environmental systems, or building construction/materials.

PROGRAM OUTCOMES

Graduates of the architectural engineering program are expected to have

- ▶ An ability to apply knowledge of mathematics, science, and engineering.
- ▶ An ability to design and conduct experiments, as well as to analyze and interpret data.
- ▶ An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- ▶ An ability to function on multidisciplinary teams.
- ▶ An ability to identify, formulate, and solve engineering problems.
- ▶ An understanding of professional and ethical responsibility.
- ▶ An ability to communicate effectively.
- ▶ The broad education necessary to understand what impact engineering solutions have in global, economic, environmental, and societal contexts.
- ▶ Recognition of the need for and an ability to engage in lifelong learning.
- ▶ Knowledge of contemporary issues.
- ▶ An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

PROGRAM EDUCATIONAL OBJECTIVES

Graduates of the architectural engineering program should solve architectural engineering problems within a greater societal context. They should

- ▶ Act professionally and ethically.
- ▶ Apply knowledge, strong reasoning, and quantitative skills to design and implement creative

and sustainable solutions.

- ▶ Engage in lifelong learning in order to meet the challenges facing the profession.
- ▶ Exhibit strong communication, interpersonal, and resource-management skills as leaders in the architectural engineering profession.

DUAL DEGREE PROGRAM IN ARCHITECTURAL ENGINEERING AND ARCHITECTURE

A program that leads to both the Bachelor of Science in Architectural Engineering degree and the Bachelor of Architecture degree is available to qualified students. The program combines the course requirements of both degrees and requires six years for completion. Students who wish to pursue both degrees must apply for admission to the School of Architecture according to the procedures and deadlines established by the school. The program is described on pages 34–35; additional information is available from the undergraduate adviser for architectural engineering.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course required for the BSArchE may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree requirements, students must also complete courses with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic

sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Architectural Engineering 102, 217	3
▶ Chemistry 301 (may be used to fulfill the science and technology, part II, requirement of the core curriculum)	3
▶ Civil Engineering 311K, 311S, 314K	9
▶ Engineering Mechanics 306, 319	6
▶ Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag)	3
TOTAL 47	
Major Sequence Courses	
▶ Architectural Engineering 320K, 320L, 323K, 335, 346N, 465, 366 (Architectural Engineering 465 carries an independent inquiry flag.)	22
▶ Civil Engineering 319F, 329, 331 or 335, 333T, 357 (Civil Engineering 333T carries a writing flag.)	15
▶ Approved technical electives	12
TOTAL 49	
Other Required Courses	
▶ Geological Sciences 303	3
▶ Mechanical Engineering 320	3
▶ Approved architectural history elective (may be used to fulfill the visual and performing arts requirement of the core curriculum)	3
▶ Approved mathematics or science elective	3
TOTAL 12	
Remaining Core Curriculum Courses	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American history	6
▶ Social and behavioral sciences	3
TOTAL 18	
MINIMUM REQUIRED 126	

TECHNICAL ELECTIVES

Technical electives in architectural engineering are listed in three areas of specialization below. Twelve semester hours must be chosen from the following approved technical elective courses or selected with the approval of the department undergraduate adviser. Within the twelve semester hours (four courses), each student's program must include at least one technical elective from each of two different areas of specialization. Lower-division courses may not be used as technical electives.

AREA 1, STRUCTURES

ARE 345K, *Masonry Engineering*
 ARE 362L, *Structural Design in Wood*
 C E 331, *Reinforced Concrete Design*; or C E 335, *Elements of Steel Design*
 C E 360K, *Foundation Engineering*
 C E 362M, *Advanced Reinforced Concrete Design*
 C E 362N, *Advanced Steel Design*
 C E 363, *Advanced Structural Analysis*
 C E 375, *Earth Slopes and Retaining Structures*
 E M 339, *Advanced Strength of Materials*

AREA 2, BUILDING ENVIRONMENTAL SYSTEMS

ARE 346P, *HVAC Design*
 ARE 370, *Design of Energy Efficient and Healthy Buildings*
 ARE 371, *Energy Simulation in Building Design*
 ARE 372, *Modeling of Air and Pollutant Flows in Buildings*
 C E 341, *Introduction to Environmental Engineering*
 M E 339, *Heat Transfer*
 M E 374F, *Fire Science*
 M E 374S, *Solar Energy Systems Design*
 M E 379N, *Engineering Acoustics*

AREA 3, BUILDING CONSTRUCTION/MATERIALS

ARE 350, *Advanced CAD Procedures*
 ARE 358, *Cost Estimating in Building Construction*
 C E 351, *Concrete Materials*
 M E 349, *Corrosion Engineering*
 M E 378K, *Mechanical Behavior of Materials*
 M E 378P, *Properties and Applications of Polymers*

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS
FIRST YEAR	
FALL	
ARE 102, <i>Introduction to Architectural Engineering</i>	1
CH 301, <i>Principles of Chemistry I</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4
RHE 306, <i>Rhetoric and Writing</i>	3
UGS 302 or 303, <i>First-Year Signature Course</i>	3
TOTAL 14	
SPRING	
E M 306, <i>Statics</i>	3
GEO 303, <i>Introduction to Geology</i>	3
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
PHY 303K, <i>Engineering Physics I</i>	3
PHY 103M, <i>Laboratory for Physics 303K</i>	1
American and Texas government	3
TOTAL 17	
SECOND YEAR	
FALL	
C E 311K, <i>Introduction to Computer Methods</i>	3
E M 319, <i>Mechanics of Solids</i>	3
M 427K, <i>Advanced Calculus for Applications I</i>	4
PHY 303L, <i>Engineering Physics II</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1
Approved architectural history elective	3
TOTAL 17	
SPRING	
ARE 217, <i>Computer-Aided Design and Graphics</i>	2
C E 311S, <i>Probability and Statistics for Civil Engineers</i>	3
C E 314K, <i>Properties and Behavior of Engineering Materials</i>	3
E 316K, <i>Masterworks of Literature</i>	3
Social and behavioral sciences	3
Approved mathematics/science elective	3
TOTAL 17	
THIRD YEAR	
FALL	
ARE 320K, <i>Introduction to Design I</i>	3
C E 319F, <i>Elementary Mechanics of Fluids</i>	3
C E 329, <i>Structural Analysis</i>	3
M E 320, <i>Applied Thermodynamics</i>	3
American government	3
TOTAL 15	
SPRING	
ARE 320L, <i>Introduction to Design II</i>	3
ARE 335, <i>Materials and Methods of Building Construction</i>	3
ARE 346N, <i>Building Environmental Systems</i>	3
C E 331, <i>Reinforced Concrete Design</i> ; or C E 335, <i>Elements of Steel Design</i>	3
C E 333T, <i>Engineering Communication</i>	3
TOTAL 15	

COURSES	SEM HRS
---------	---------

FOURTH YEAR

FALL

ARE 323K, <i>Project Management and Economics</i>	3
C E 357, <i>Geotechnical Engineering</i>	3
Approved technical electives	6
American history	3
TOTAL 15	

SPRING

ARE 465, <i>Integrated Design Project</i>	4
ARE 366, <i>Contracts, Liability, and Ethics</i>	3
American history	3
Approved technical electives	6
TOTAL 16	

**BACHELOR OF SCIENCE
IN BIOMEDICAL ENGINEERING**

The mission of the Department of Biomedical Engineering is to develop clinically translatable solutions for human health by training the next generation of biomedical engineers, cultivating leaders, and nurturing the integration of science, engineering, and medicine in a discovery-centered environment. The main educational objective is to provide a thorough training in the fundamentals of engineering science, design, and biology. The curriculum is designed to provide concepts central to understanding living systems from the molecular and cellular levels to the tissue and organismal levels. The curriculum incorporates principles of vertical integration, leading to the choice of a technical area (biomedical imaging and instrumentation, cell and biomolecular engineering, or computational biomedical engineering), and culminates in a team capstone design experience. Research, industrial, and clinical internships provide students with novel educational experiences and unique perspectives on biomedical engineering applications. Students are expected to develop an understanding of industrial, research, and clinical biomedical engineering environments; an understanding of regulatory issues and biomedical ethics; the ability to create, identify, formulate, and solve biomedical engineering problems; the ability to design systems to meet needs in medical/life science applications; an understanding of life processes at the molecular, cellular, tissue, and organismal levels; the ability to use instrumentation and to make measurements and interpret data in living systems; and an appreciation of the interdisciplinary nature of biomedical engineering research.

PROGRAM OUTCOMES

Graduates of the biomedical engineering program are expected to have

- ▶ An ability to apply knowledge of mathematics, science, and engineering.
- ▶ An ability to design and conduct experiments, as well as to analyze and interpret data.
- ▶ An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- ▶ An ability to function on multidisciplinary teams.
- ▶ An ability to identify, formulate, and solve engineering problems.
- ▶ An understanding of professional and ethical responsibility.
- ▶ An ability to communicate effectively.
- ▶ The broad education necessary to understand what impact engineering solutions have in global, economic, environmental, and societal contexts.
- ▶ A recognition of the need for and an ability to engage in lifelong learning.
- ▶ A knowledge of contemporary issues.
- ▶ An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

PROGRAM EDUCATIONAL OBJECTIVES

Achievement of the preceding program outcomes gives students the foundation for accomplishing the biomedical engineering program educational objectives. A few years after graduation, students are expected to be able to

- ▶ Conduct themselves with exemplary professional ethics and highest integrity.
- ▶ Demonstrate a quantitative, analytical, and systems approach to problem solving in their professional practice.
- ▶ Demonstrate a continuous quest for professional excellence and success.
- ▶ Participate in continuing education to expand their knowledge of contemporary professional issues.
- ▶ Exhibit effective scientific, technical, communication, and resource management skills in their professional practice.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course that fulfills one of the following requirements may also be counted toward core curriculum or flag requirements; these courses are identified below.

To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree requirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

The first two years of the curriculum consist of basic sequence courses for all biomedical engineering students. Subsequent enrollment in major sequence courses and one of three technical areas is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

Prior to registration, students must receive approval from the Biomedical Engineering Undergraduate Advising Office for courses to be used to fulfill technical and nontechnical elective requirements. The student must take all courses required for the degree on the letter-grade basis and must earn a grade of at least C in each.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Biology 205L or 206L, 311C	5
▶ Biomedical Engineering 102L, 303, 311, 113L, 314, 333T (Biomedical Engineering 333T carries a writing flag.)	14
▶ Chemistry 302, 204, and 310M or 318M	8
▶ Electrical Engineering 319K	3
▶ Mathematics 408C, 408D, 427K (Mathematics 408C may also be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may also be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections may carry a writing flag.)	3
	TOTAL 56
Major Sequence Courses	
▶ Biomedical Engineering 221, 335, 343, 348, 251, 353, 365R, 365S, 370, 371	28
▶ Approved technical area electives	15–17 ¹
▶ Senior engineering electives	4–6 ¹
	TOTAL 49¹
Other Required Courses	
▶ Chemistry 118K, 353 or 353M, 369	7
Remaining Core Curriculum Courses	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American history	6
▶ Social and behavioral sciences	3
▶ Visual and performing arts	3
	TOTAL 21
	MINIMUM REQUIRED 133

TECHNICAL AREA OPTIONS

The technical area option allows the student to build on the biomedical engineering core curriculum by choosing fifteen to seventeen semester hours of technical area coursework in biomedical imaging and instrumentation, cell and biomolecular engineering, or computational biomedical engineering. Each student should choose a technical area by the end of the sophomore year and plan an academic program to meet the area requirements during the next two years.

Preparation for health professions. Students who plan to attend medical, veterinary, or dental school in Texas must complete coursework in addition to that required for the BS BiomedE in order to meet professional school admission requirements; those who plan to attend schools outside Texas may need additional coursework. The student is responsible for knowing and meeting these additional requirements, but assistance and information are available from Health Professions Advising in the College of Natural Sciences, Painter Hall 5.03. Additional information about preparation for health professions is available online.

Preparation for law. There is no sequential arrangement of courses prescribed for a prelaw program. The Association of American Law Schools puts special emphasis on comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and analytical power in thinking. Courses relevant to these objectives deal with communication of ideas, logic, mathematics, social sciences, history, philosophy, and the physical sciences. Services for prelaw students are provided to students in all colleges by Liberal Arts Career Services (LACS), Flawn Academic Center 18. Additional information about preparation for law is available online.

Plan II Honors Program. Students enrolled in the Plan II Honors Program are encouraged to contact the Biomedical Engineering Plan II faculty adviser, the Biomedical Engineering Undergraduate Advising Office, and the Plan II Office to ensure that requirements for both programs are met. Plan II courses may count toward biomedical engineering program requirements.

Certificate programs. Biomedical engineering students may enrich their education through the following certificate programs.

Business Foundations Program. Students who wish to learn about fundamental business concepts and practices may take supplemental coursework that leads to the Business Foundations Certificate, awarded by the Red McCombs School of Business. The program is described on pages 51–52. More information about the Business Foundations Program is available at <http://www.mcombs.utexas.edu/bba/academics/non-business-majors/>, from the McCombs School, and from the Biomedical Engineering Undergraduate Advising Office.

1. The technical area option chosen by the student determines the minimum number of semester hours required for the approved technical area electives and the senior engineering electives. However, the total minimum number of semester hours required for the major sequence courses remains forty-nine.

Elements of Computing. Students who wish to learn about computer science may take the coursework that leads to the certificate in the Elements of Computing, awarded by the Department of Computer Science. The program is described on page 514. More information about the Elements of Computing Program is available at http://www.cs.utexas.edu/academics/non_majors/elements/, from the Department of Computer Science, and from the Biomedical Engineering Undergraduate Advising Office.

TECHNICAL AREA 1, BIOMEDICAL IMAGING AND INSTRUMENTATION

This technical area is designed for students interested in the general area of medical instrumentation and imaging science. The main objective is to prepare students to design and use biomedical instrumentation for imaging, diagnostic, and therapeutic applications, with focus on the new fields of molecular engineering, cell and tissue engineering, and biotechnology. A solid foundation, practical knowledge, and skills are established in analog and digital network analysis, software and hardware programming, electronic circuits, sensors, data acquisition systems, image and signal processing, and computational analysis of data as it applies to living systems.

Students must complete the following:

1. The following three courses:
 - E E 312, *Introduction to Programming*
 - E E 422C, *Data Structures*
 - E E 445S, *Real-Time Digital Signal Processing Laboratory*
2. Six hours of coursework chosen from the following list:
 - BME 357, *Biomedical Imaging Modalities*
 - BME 374K, *Biomedical Electronics*; and BME 374L, *Applications of Biomedical Engineering Laboratory*
 - E E 445L, *Microprocessor Applications and Organization*; and E E 345M, *Embedded and Real-Time Systems Laboratory*
 - E E 347, *Modern Optics*
 - E E 351M, *Digital Signal Processing*
 - E E 371R, *Digital Image and Video Processing*

TECHNICAL AREA 2, CELL AND BIOMOLECULAR ENGINEERING

The major objective of this area is to teach students how to integrate knowledge in cell and molecular biology with engineering analysis, so that they can address problems in molecular-based medicine. Three disciplines within this technical area are tissue engineering as it relates to the underlying molecular biology issues; materials science, with an emphasis on bioactive materials and construction of nanoscale devices and probes; and bioengineering analysis of infectious diseases and immunological responses.

Students must complete the following:

1. The following two courses:
 - BME 339, *Biochemical Engineering*
 - BME 352, *Engineering Biomaterials*
2. Nine hours of coursework chosen from the following list; at least three hours must be in biomedical engineering.
 - BIO 325, *Genetics*
 - BME 354, *Molecular Sensors and Nanodevices for Biomedical Engineering Applications*
 - BME 376, *Cell Engineering*
 - BME 379, *Tissue Engineering*
 - CHE 350, *Chemical Engineering Materials*
 - Approved upper-division biology courses
 - CH 318N, *Organic Chemistry II*, and 118L, *Organic Chemistry Laboratory*; or CH 310N, *Organic Chemistry II*, and 210C, *Organic Chemistry Laboratory*

TECHNICAL AREA 3, COMPUTATIONAL BIOMEDICAL ENGINEERING

The objective of this area is to provide students with the knowledge and skills that will enable them to design and use computational algorithms to address problems in biomedical research and health care. Examples include (a) designing medical decision aids using statistical and machine learning models, (b) dynamic modeling and computer simulation to study the biomechanics and control of movement, (c) development of thermodynamic models of dynamic processes at the microscopic and macroscopic scales in biological systems, and (d) image processing techniques for quantitative measurement and interpretation of biomedical images.

All students must complete the following:

1. The following four courses:
 - E E 312, *Introduction to Programming*
 - E E 422C, *Data Structures*
 - E E 360C, *Algorithms*
 - M 325K, *Discrete Mathematics*; or PHL 313K, *Logic, Sets, and Functions*
2. Three hours of coursework chosen from the following list:
 - BME 341, *Computational Genomics Laboratory*
 - BME 342, *Computational Biomechanics*
 - BME 345, *Graphics and Visualization Laboratory*
 - BME 346, *Computational Structural Biology*
 - M 340L, *Matrices and Matrix Calculations*
 - Approved computer science courses

SENIOR ENGINEERING ELECTIVES

All students must complete four to six semester hours in senior engineering electives, depending on which technical area is chosen. At least three hours must be in a lecture or laboratory course. The remaining hours may be in a research project or an internship. The following may be counted toward this requirement:

- ▶ An engineering course in any one of the three technical areas. A course may not be counted toward both the technical area requirement and the senior elective requirement.
- ▶ An approved upper-division engineering, physics, mathematics, or computer science course. A course may not be counted toward both the technical area requirement and the senior elective requirement.
- ▶ Three hours of coursework chosen from the following list:
 - BME 325L, *Cooperative Engineering*; or BME 225M, *Cooperative Engineering*
 - BME 177, 277, 377, *Undergraduate Research Project*
 - BME 377M, *Medical Internship*
 - BME 377P, *Integrated Clinical Research Internship*
 - BME 377Q, *Integrated Clinical Medical Internship*
 - BME 377R, *Research Internship*
 - BME 377S, *Industrial Internship*

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS
FIRST YEAR	
FALL	
BIO 311C, <i>Introductory Biology I</i>	3
BME 102L, <i>Introduction to Biomedical Engineering Laboratory</i>	1
BME 303, <i>Introduction to Computing</i>	3
CH 302, <i>Principles of Chemistry II</i>	3
CH 204, <i>Introduction to Chemical Practice</i>	2
M 408C, <i>Differential and Integral Calculus</i>	4
TOTAL 16	
SPRING	
BIO 205L, <i>Laboratory Experiments in Biology: Cellular and Molecular Biology</i> ; or BIO 206L, <i>Laboratory Experiments in Biology: Structure and Function of Organisms</i>	2
UGS 302 or 303, <i>First-Year Signature Course</i>	3
E E 319K, <i>Introduction to Embedded Systems</i>	3
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
PHY 303K, <i>Engineering Physics I</i>	3
PHY 103M, <i>Laboratory for Physics 303K</i>	1
RHE 306, <i>Rhetoric and Writing</i>	3
TOTAL 19	
SECOND YEAR	
FALL	
BME 314, <i>Engineering Foundations of Biomedical Engineering</i>	3
CH 310M, <i>Organic Chemistry I</i> ; or CH 318M, <i>Organic Chemistry I</i>	3
CH 118K, <i>Organic Chemistry Laboratory</i>	1
E 316K, <i>Masterworks of Literature</i>	3
M 427K, <i>Advanced Calculus for Applications I</i>	4
PHY 303L, <i>Engineering Physics II</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1
TOTAL 18	
SPRING	
BME 311, <i>Network Analysis in Biomedical Engineering</i>	3
BME 113L, <i>Introduction to Numerical Methods in Biomedical Engineering</i>	1
BME 333T, <i>Engineering Communication</i>	3
BME 335, <i>Engineering Probability and Statistics</i>	3
CH 353, <i>Physical Chemistry I</i> ; or CH 353M, <i>Physical Chemistry I for Life Sciences</i>	3
CH 369, <i>Fundamentals of Biochemistry</i>	3
TOTAL 16	

COURSES	SEM HRS
THIRD YEAR	
FALL	
BME 221, <i>Measurement and Instrumentation Laboratory</i>	2
BME 343, <i>Biomedical Engineering Signal and Systems Analysis</i>	3
BME 365R, <i>Quantitative Engineering Physiology I</i>	3
Technical area electives	6
TOTAL 14	
SPRING	
BME 251, <i>Biomedical Image, Signal, and Transport Process Laboratory</i>	2
BME 348, <i>Modeling of Biomedical Engineering Systems</i>	3
BME 353, <i>Transport Phenomena in Living Systems</i>	3
BME 365S, <i>Quantitative Engineering Physiology II</i>	3
Technical area electives	3
American history	3
TOTAL 17	
FOURTH YEAR	
FALL	
BME 370, <i>Principles of Engineering Design</i>	3
GOV 310L, <i>American Government</i>	3
Technical area elective	3
Senior engineering elective	3
Visual and performing arts	3
Social and behavioral sciences	3
TOTAL 18	
SPRING	
BME 371, <i>Biomedical Engineering Design Project</i>	3
GOV 312L, <i>Issues and Policies in American Government</i>	3
Senior engineering elective	3
Technical area elective	3
American history	3
TOTAL 15	

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Chemical engineering is one of the most broadly based engineering disciplines. Its field of practice covers the development, design, and control of processes and products that involve molecular change, both chemical and biological, and the operation of such processes. Because many of the products that sustain and improve life are produced by carefully designed and controlled molecular changes, the chemical engineer serves in a wide variety of industries. These industries range from chemical and energy companies to producers of all types of consumer and specialty products, pharmaceuticals, textiles, polymers, advanced materials, and

solid-state devices.

Careers are available in industry, government, consulting, and education. Areas of professional work include research and development, operations, technical service, product development, process and plant design, market analysis and development, process control, and pollution abatement.

The objective of the chemical engineering degree program is to prepare students for professional practice in chemically related careers after the bachelor's degree or an advanced degree. Chemical engineering graduates are expected to apply fundamentals of science and engineering to solve problems of analysis and design of components, systems, and processes important in chemical engineering practice and research; demonstrate interpersonal skills required to lead and/or participate effectively in interdisciplinary projects; recognize the importance of lifelong learning in meeting professional and personal goals so they can be successful in their chosen profession, including graduate school; exhibit effectiveness in communication skills; and articulate and practice professional, ethical, environmental, and societal responsibilities, and value different global and cultural perspectives. To meet the program objective, the faculty has designed a rigorous, demanding, and state-of-the-art curriculum that integrates lectures and laboratory experience in basic science, mathematics, engineering science, engineering design, and the liberal arts.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course required for the BSChE may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree requirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the

second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Chemical Engineering 210, 317	5
▶ Chemistry 302, 204, 118K, 318M (Chemistry 302 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	9
▶ Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may also be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag)	3
	TOTAL 40
Major Sequence Courses	
▶ Chemical Engineering 322, 333T, 348, 350, 353, 253K, 253M, 354, 360, 363, 264, 372, 473K (Chemical Engineering 333T carries a writing flag; Chemical Engineering 473K carries an independent inquiry flag.)	37
▶ Approved technical focus area electives in chemical engineering	6
▶ Approved technical focus area electives	6
	TOTAL 49
Other Required Courses	
▶ Biology 311C	3
▶ Chemistry 118L, 318N, 353, 153K	8
▶ Chemistry elective with a laboratory experience chosen from Chemistry 431, 354 and 154K, 154K and 354L, and 455; or Chemical Engineering 179 and Chemistry 339K, 354, or 369 ²	4
▶ Approved advanced mathematics, physics, chemistry, or biology elective	3
	TOTAL 18

2. Chemical Engineering 179 is an independent study course taken under the supervision of a chemical engineering faculty member. The student's area of study is arranged by the student and the faculty member to provide a laboratory experience that complements one of the three chemistry courses.

COURSES	SEM HRS
Remaining Core Curriculum Courses	
▶ English 316K	3
▶ American and Texas government	6
▶ American history	6
▶ Visual and performing arts	3
▶ Social and behavioral sciences	3
	TOTAL 21
	MINIMUM REQUIRED 128

HONORS PROGRAM

Chemical engineering students who maintain a grade point average of at least 3.50 may take the honors research course, Chemical Engineering 679H. In this course the student performs research over two consecutive semesters under the supervision of a faculty member, makes two oral presentations, and writes a thesis. Chemical Engineering 679H may be used to fulfill either the approved area electives requirement or the approved area electives in chemical engineering requirement.

TECHNICAL FOCUS AREAS

Because of the broad training in natural sciences and engineering received by the chemical engineer, opportunities are provided for students also to develop particular talents and interests in one or two areas of emphasis. Each student must complete twelve semester hours in one of the following areas or six semester hours in each of two areas, including at least two chemical engineering courses. The technical focus area courses should be selected in consultation with a faculty adviser and must be approved by the department chair. The courses listed in each area do not constitute a complete list of technical focus area courses but illustrate the types of courses that are generally suitable for a given area. A list of suggested complementary biology, physics, mathematics, and chemistry electives for each of the technical focus areas is available from the Chemical Engineering Undergraduate Office and published on the departmental Web page.

Students with a grade point average of at least 3.00 who are interested in seeking an advanced degree in chemical engineering are encouraged to discuss their plans with the graduate adviser or another faculty member. These students are encouraged to take at least one advanced mathematics course among their electives. They should also inquire about undergraduate research positions in the department.

For all areas, Chemical Engineering 325L and 377K may be counted as chemical engineering electives only with the approval of the student's academic adviser. Chemical Engineering 377K may be counted only once toward the degree.

AREA 1, PROCESS SYSTEMS AND PRODUCT ENGINEERING

The chemical process industry is one of the most advanced in the applications of modern design and control techniques and computer technology. Competence in design, economics, fault detection, optimization, control, and simulation is essential in this industry. Chemical engineers are also frequently involved in the development of new consumer and specialty products, an assignment that requires not only technical skills but also an understanding of the principles of successful marketing and quality control. Chemical engineering courses in this technical focus area cover topics such as optimization and statistical quality control, while courses in mechanical engineering and electrical engineering deal with both theory and applications in statistics, computer control, economic analysis, and operations research.

CHE 341, *Design for Environment*

CHE 342, *Chemical Engineering Economics and Business Analysis*

CHE 356, *Optimization: Theory and Practice*

CHE 376K, *Process Evaluation and Quality Control*

E E 370K, *Computer Control Systems*

E E 379K, Topic: *Statistical Quality Control*

ARE 323K, *Project Management and Economics*

M E 335, *Engineering Statistics*

M E 348D, *Introduction to Mechatronics II*

M E 353, *Engineering Economics Analysis*

M E 366L, *Operations Research Models*

MKT 320F, *Foundations of Marketing*

I B 378, *International Business Operations*

MKT 460, *Information and Analysis*

Upper-division mathematics course

AREA 2, MATERIALS ENGINEERING

Advances in technology and improvements in our quality of life are linked to the development, processing, and manufacture of engineering materials. Materials span the spectrum from "hard" to "soft" materials and include metals, ceramics, semiconductors, and polymers; all are prepared in carefully controlled chemical processes. These materials are used technologically in objects such as catalysts, fuel cells, microelectronic

devices, membranes, solar cells, and high-performance plastics. With advancements in analytical probes and modeling, our understanding of materials has become increasingly more molecular and the traditional boundaries between disciplines have faded to the extent that this is a truly interdisciplinary area. Chemical engineers can assume a creative role in this area when provided with the appropriate fundamentals and applications background.

CH 341, *Special Topics in Laboratory Chemistry*

CH 354, *Quantum Chemistry and Spectroscopy*

CH 354L, *Physical Chemistry II*

CH 367L, *Macromolecular Chemistry*

CH 376K, *Advanced Analytical Chemistry*

CHE 322M, *Molecular Thermodynamics*

CHE 323, *Chemical Engineering for Microelectronics*

CHE 355, *Introduction to Polymers*

CHE 379, Topic: *Computation Methods with Applications to Materials*

CHE 379, Topic: *Polymer Kinetics and Reaction Engineering*

E E 339, *Solid-State Electronic Devices*

M E 349, *Corrosion Engineering*

M E 359, *Materials Selection*

M E 374S, *Solar Energy Systems Design*

M E 378C, *Electroc ceramics*

M E 378S, *Structural Ceramics*

PHY 338K, *Electronic Techniques*

PHY 355, *Modern Physics for Engineers*

PHY 375S, *Introductory Solid-State Physics*

AREA 3, ENVIRONMENTAL ENGINEERING

Chemical engineers are uniquely qualified to contribute to the solution of environmental problems and to design processes and products that minimize environmental hazards. From pollution prevention by process optimization, to new understanding of chemical processes that occur in the environment, to new materials for advanced catalysts and carbon-free energy sources, chemical engineers are creating the "green" technologies needed to sustain the planet.

C E 341, *Introduction to Environmental Engineering*

C E 342, *Water and Wastewater Treatment Engineering*

C E 346K, *Hazardous Waste Management*

C E 364, *Design of Wastewater and Water Treatment Facilities*

C E 369L, *Air Pollution Engineering*

C E 370K, *Environmental Sampling and Analysis*

CHE 341, *Design for Environment*

CHE 357, *Technology and Its Impact on the Environment*

CHE 359, *Energy Technology and Policy*
 CHE 376K, *Process Evaluation and Quality Control*
 M E 374S, *Solar Energy Systems Design*
 M E 379M, *Energy Technology and Policy*

AREA 4, BIOCHEMICAL, BIOMOLECULAR, AND BIOMEDICAL ENGINEERING

Track A: Cellular and Bioprocess Engineering

Chemical engineers are developing innovative solutions to practical problems in biotechnology and in the biochemical, pharmaceutical, and life science industries. This track is designed to prepare students for a career or research in the areas of applied cellular engineering and bioprocess engineering in the chemicals and pharmaceutical industry. Chemical engineering and elective courses are available that cover chemical engineering principles applied to biological systems and the fundamentals of biomolecular, cellular, and metabolic processes. This track is also suitable for students interested in biofuels.

BIO 311D, *Introductory Biology II*
 BIO 325, *Genetics*
 BIO 326R, *General Microbiology: Microbial Cell Structure and Genetics*
 CHE 339, *Introduction to Biochemical Engineering*
 CHE 339P, *Introduction to Biological Physics*
 CH 339K, *Biochemistry I*
 CH 339L, *Biochemistry II*
 CH 370, *Physical Methods for Biochemistry*

Track B: Biomedical Engineering

This track is designed to prepare students for careers in the biomedical and pharmaceutical industries that deal with medical systems or improvement of health treatment alternatives. This is also a natural track to be followed by students who plan to attend medical school. Chemical engineering courses and electives are available that cover the application of chemical engineering principles to the design of new medical and therapeutic devices, as well as to the understanding of physiological processes.

BIO 311D, *Introductory Biology II*
 BIO 320, *Cell Biology*
 BIO 325, *Genetics*
 BIO 326R, *General Microbiology: Microbial Cell Structure and Genetics*
 BIO 365R, *Vertebrate Physiology I*
 BIO 365S, *Vertebrate Physiology II*
 BME 352, *Advanced Engineering Biomaterials*
 BME 353, *Transport Phenomena in Living Systems*

BME 365R, *Quantitative Engineering Physiology I*
 CHE 339, *Introduction to Biochemical Engineering*
 CHE 339P, *Introduction to Biological Physics*
 CHE 339T, *Cell and Tissue Engineering*
 CHE 355, *Introduction to Polymers*
 CH 339K, *Biochemistry I*
 E E 374K, *Biomedical Electronics*
 M E 354, *Introduction to Biomechanical Engineering*

AREA 5, ENERGY TECHNOLOGIES

The need for energy sustainability and new energy technologies provides some of the most significant scientific and engineering challenges that face society. Chemical engineers are uniquely qualified to address these issues and contribute new solutions to the problem. Technologies include solar energy utilization in the form of photovoltaics, biofuels and solar fuels; new and more efficient ways to extract fossil fuels from existing reservoirs; alternative power sources like wind, geothermal, and nuclear. Policy is also an important and active area that involves chemical engineers. Chemical engineering and other elective courses are available that teach fundamentals of energy technology and policy.

CHE 323, *Chemical Engineering for Microelectronics*
 CHE 339, *Introduction to Biochemical Engineering*
 CHE 341, *Design for Environment*
 CHE 355, *Introduction to Polymers*
 CHE 357, *Technology and Its Impact on the Environment*
 CHE 359, *Energy Technology and Policy*
 C E 341, *Introduction to Environmental Engineering*
 E E 339, *Solid-State Electronic Devices*
 M E 374S, *Solar Energy Systems Design*
 M E 379M, *Energy Technology and Policy*
 PGE 305, *Energy and the Environment*

AREA 6, ENGINEERING ECONOMICS AND BUSINESS LEADERSHIP

Chemical engineers who understand the economic and policy issues faced by modern chemical and materials companies are needed to solve the challenges of modern industry. Globalization, sustainability, safety and modern labor practices, intellectual property protection, and the process of innovation are all issues facing modern industry. This focus area is designed to prepare students for business leadership in a technical arena.

CHE 342, *Chemical Engineering Economics and Business Analysis*
 CHE 356, *Optimization: Theory and Practice*

ARE 323K, <i>Project Management and Economics</i>
ECO 304K, <i>Introduction to Microeconomics</i>
ECO 304L, <i>Introduction to Macroeconomics</i>
ECO 328, <i>Industrial Organization</i>
ECO 339K, <i>International Trade and Investment</i>
ECO 351K, <i>Current Issues in Business Economics</i>
M E 353, <i>Engineering Economics Analysis</i>
M E 366L, <i>Operations Research Models</i>
MKT 320F, <i>Foundations of Marketing</i>
I B 378, <i>International Business Operation</i>
MKT 460, <i>Information and Analysis</i>
STS 332, <i>The Nanotechnology and Science Revolution</i>

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS
FIRST YEAR	
FALL	
CH 302, <i>Principles of Chemistry II</i>	3
CHE 102, <i>Introduction to Chemical Engineering (optional)</i> ³	1
CHE 210, <i>Introduction to Computing</i>	2
M 408C, <i>Differential and Integral Calculus</i>	4
RHE 306, <i>Rhetoric and Writing</i>	3
Social and behavioral sciences	3
TOTAL 15 or 16³	
SPRING	
BIO 311C, <i>Introductory Biology I</i>	3
CH 204, <i>Introduction to Chemical Practice</i>	2
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
PHY 303K, <i>Engineering Physics I</i>	3
PHY 103M, <i>Laboratory for Physics 303K</i>	1
UGS 302 or 303, <i>First-Year Signature Course</i>	3
TOTAL 16	
SECOND YEAR	
FALL	
CH 118K, <i>Organic Chemistry Laboratory</i>	1
CH 318M, <i>Organic Chemistry I</i>	3
CHE 317, <i>Introduction to Chemical Engineering Analysis</i>	3
M 427K, <i>Advanced Calculus for Applications I</i>	4
PHY 303L, <i>Engineering Physics II</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1
TOTAL 15	
SPRING	
CH 118L, <i>Organic Chemistry Laboratory</i>	1
CH 318N, <i>Organic Chemistry II</i>	3
CH 353, <i>Physical Chemistry I</i>	3
CHE 353, <i>Transport Phenomena</i>	3
E 316K, <i>Masterworks of Literature</i>	3
American and Texas government	3
TOTAL 16	

COURSES	SEM HRS
---------	---------

THIRD YEAR

FALL	
CH 153K, <i>Physical Chemistry Laboratory</i>	1
CHE 322, <i>Thermodynamics</i>	3
CHE 333T, <i>Engineering Communication</i>	3
CHE 253K, <i>Applied Statistics</i>	2
CHE 354, <i>Transport Processes</i>	3
Chemistry elective	4
TOTAL 16	

SPRING

CHE 253M, <i>Measurement, Control, and Data Analysis Laboratory</i>	2
CHE 363, <i>Separation Processes and Mass Transfer</i>	3
CHE 348, <i>Numerical Methods in Chemical Engineering and Problem Solving</i>	3
American history	3
Approved technical area course	3
Visual and performing arts	3
TOTAL 17	

FOURTH YEAR

FALL	
CHE 350, <i>Chemical Engineering Materials</i>	3
CHE 264, <i>Chemical Engineering Process and Projects Laboratory</i>	2
CHE 372, <i>Chemical Reactor Analysis and Design</i>	3
Approved chemical engineering area course	3
American and Texas government	3
Approved advanced mathematics, physics, chemistry, or biology elective	3
TOTAL 17	

SPRING

CHE 360, <i>Process Control</i>	3
CHE 473K, <i>Process Design and Operations</i>	4
American history	3
Approved chemical engineering area course	3
Approved technical area course	3
TOTAL 16	

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Engineering is the application of scientific principles and technical knowledge to real-world problems. Civil engineering is the segment of the engineering profession that strives to provide for the basic needs of humanity. The civil engineer is involved with the physical environment through the planning, design, construction, and operation of building and housing systems, transportation systems, and systems for the protection and use of air and water resources.

³ Chemical Engineering 102 is not a degree requirement. Students who do not take this course will take fifteen hours of coursework in the fall semester of the first year.

The civil engineering student has the opportunity to obtain a broad background in mathematics and the physical sciences and their applications to all areas of civil engineering. This flexible curriculum allows the student to elect eighteen semester hours of approved technical coursework to emphasize the areas of civil engineering of most interest to the student. In addition, courses in the humanities and social sciences are included.

To excel as a civil engineer, a student should have an aptitude for mathematics and science, an interest in the practical application of technical knowledge to societal problems, the motivation to study and prepare for engineering practice, and the desire to be a professional. Civil engineering graduates of the University may seek a wide variety of positions in planning, design, and construction with government agencies, industry, and private consulting firms. Those who plan to pursue graduate work in engineering, or in other professions such as business, medicine, law, or journalism, have an excellent base on which to build.

PROGRAM OUTCOMES

Graduates of the civil engineering program should attain the following outcomes:

- ▶ An ability to apply knowledge of mathematics, science, and engineering.
- ▶ An ability to design and conduct experiments, as well as to analyze and interpret data.
- ▶ An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- ▶ An ability to function on multidisciplinary teams.
- ▶ An ability to identify, formulate, and solve engineering problems.
- ▶ An understanding of professional and ethical responsibility.
- ▶ An ability to communicate effectively.
- ▶ The broad education necessary to understand what impact engineering solutions have in global, economic, environmental, and societal contexts.
- ▶ Recognition of the need for and an ability to engage in lifelong learning.
- ▶ Knowledge of contemporary issues.
- ▶ An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

PROGRAM EDUCATIONAL OBJECTIVES

Graduates of the civil engineering program should solve civil engineering problems within a greater societal context. They should

- ▶ Act professionally and ethically.
- ▶ Apply knowledge, strong reasoning, and quantitative skills to design and implement creative and sustainable solutions.
- ▶ Engage in lifelong learning in order to meet the challenges facing the profession.
- ▶ Exhibit strong communication, interpersonal, and resource-management skills as leaders in the civil engineering profession.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree requirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Chemistry 301, 302 (Chemistry 301 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	6
▶ Civil Engineering 301, 311K, 311S, 314K, 319F	15
▶ Engineering Mechanics 306, 319	6
▶ Mathematics 408C, 408D (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; it carries a quantitative reasoning flag.)	8
▶ Mechanical Engineering 210	2
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be counted toward the first-year signature course requirement of the core curriculum; some sections carry a writing flag)	3
	TOTAL 51
Major Sequence Courses	
Base level courses:	
▶ Architectural Engineering 323K	3
▶ Civil Engineering 321, 329, 341, 356, 357	15
▶ Civil Engineering 333T, 171P (Civil Engineering 333T carries a writing flag.)	4
▶ Level I electives	15
▶ Level II elective	3
	TOTAL 40
Other Required Courses	
▶ Mathematics 427K (carries a quantitative reasoning flag)	4
▶ Engineering Mechanics 311M or Mechanical Engineering 320	3
▶ Approved science elective	3
▶ Approved mathematics, science, or engineering science elective	3
	TOTAL 13
Remaining Core Curriculum Courses	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American history	6
▶ Social and behavioral sciences	3
▶ Visual and performing arts	3
	TOTAL 21
	MINIMUM REQUIRED 125

LEVEL I AND LEVEL II TECHNICAL ELECTIVES

The civil engineering curriculum does not require the student to declare a specific technical area option. However, for the guidance of students with particular interests, level I electives in civil engineering are listed

in areas of specialization. The fifteen semester hours of level I electives must be chosen from the following civil engineering and architectural engineering courses; in special cases, with the written permission of the department chair, this requirement may be relaxed, provided the student demonstrates in advance that the courses to be substituted for civil engineering or architectural engineering courses are part of a consistent educational plan. To provide a broad general background, at least one technical elective from each of three different areas of specialization must be included in each student's program.

To assure a background in design, each student must take at least one technical area option level II elective. Level II electives may be substituted for technical area option level I electives, but the requirement of at least one technical elective from each of three different areas of specialization still applies.

The following lists reflect current course offerings and are subject to change by the faculty. Current lists are available in the departmental undergraduate office.

LEVEL I ELECTIVES

Construction Engineering and Project Management

ARE 350, *Advanced CAD Procedures*

ARE 358, *Cost Estimating in Building Construction*

ARE 366, *Contracts, Liability, and Ethics*

Construction Materials

C E 351, *Concrete Materials*

C E 366K, *Design of Bituminous Mixtures*

Environmental Engineering

C E 342, *Water and Wastewater Treatment Engineering*

C E 346, *Solid Waste Engineering and Management*

C E 346K, *Hazardous Waste Management*

C E 369L, *Air Pollution Engineering*

C E 370K, *Environmental Sampling and Analysis*

Geotechnical Engineering

C E 375, *Earth Slopes and Retaining Structures*

Structures

ARE 345K, *Masonry Engineering*

ARE 362L, *Structural Design in Wood*

C E 331, *Reinforced Concrete Design*

C E 335, *Elements of Steel Design*

C E 363, *Advanced Structural Analysis*

Transportation

- C E 367P, *Pavement Design and Performance*
 C E 367T, *Traffic Engineering*

Water Resources

- C E 358, *Introductory Ocean Engineering*
 C E 374K, *Hydrology*
 C E 374L, *Groundwater Hydraulics*

LEVEL II ELECTIVES (DESIGN)**Environmental Engineering**

- C E 364, *Design of Wastewater and Water Treatment Facilities* (carries an independent inquiry flag)

Geotechnical Engineering

- C E 360K, *Foundation Engineering* (carries an independent inquiry flag)

Structures

- C E 362M, *Advanced Reinforced Concrete Design* (carries an independent inquiry flag)
 C E 362N, *Advanced Steel Design* (carries an independent inquiry flag)

Transportation

- C E 367, *Highway Engineering* (carries an independent inquiry flag)
 C E 376, *Airport Design*

Water Resources

- C E 365K, *Hydraulic Engineering Design* (carries an independent inquiry flag)

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS
FIRST YEAR	
FALL	
C E 301, <i>Civil Engineering Systems</i>	3
CH 301, <i>Principles of Chemistry I</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4
M E 210, <i>Engineering Design Graphics</i>	2
UGS 302 or 303, <i>First-Year Signature Course</i>	3
TOTAL	15

COURSES	SEM HRS
SPRING	
CH 302, <i>Principles of Chemistry II</i>	3
E M 306, <i>Statics</i>	3
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
PHY 303K, <i>Engineering Physics I</i>	3
PHY 103M, <i>Laboratory for Physics 303K</i>	1
RHE 306, <i>Rhetoric and Writing</i>	3
TOTAL	17

SECOND YEAR

FALL

C E 311K, <i>Introduction to Computer Methods</i>	3
E M 311M, <i>Dynamics</i> or M E 320, <i>Applied Thermodynamics</i>	3
E M 319, <i>Mechanics of Solids</i>	3
PHY 303L, <i>Engineering Physics II</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1
Social and behavioral sciences or visual and performing arts ⁴	3
TOTAL	16

SPRING

C E 311S, <i>Probability and Statistics for Civil Engineers</i>	3
C E 314K, <i>Properties and Behavior of Engineering Materials</i>	3
C E 319F, <i>Elementary Mechanics of Fluids</i>	3
E 316K, <i>Masterworks of Literature</i>	3
M 427K, <i>Advanced Calculus for Applications I</i>	4
TOTAL	16

THIRD YEAR

FALL

Approved mathematics, science, or engineering science elective	3
Base level courses	9
American history	3
TOTAL	15

SPRING

American history	3
Base level courses	9
Approved science elective	3
TOTAL	15

FOURTH YEAR

FALL

C E 333T, <i>Engineering Communication</i>	3
Level I electives	9
American government	3
TOTAL	15

SPRING

C E 171P, <i>Engineering Professionalism</i>	1
Level I electives	6
Level II elective	3
American and Texas government	3
Social and behavioral sciences or visual and performing arts ⁴	3
TOTAL	16

4. These courses may be taken in any semester.

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Students seeking the Bachelor of Science in Electrical Engineering pursue one of two curricula—electrical engineering or computer engineering. Both curricula contain the fundamentals of electrical engineering and computer engineering; they differ in their core and technical area requirements in order to suit different career objectives.

The curricula in electrical engineering and computer engineering are designed to educate students in the fundamentals of engineering, which are built upon a foundation of mathematics, science, communication, and the liberal arts. Graduates should be equipped to advance their knowledge while contributing professionally to a rapidly changing technology. Areas in which electrical and computer engineers contribute significantly are computer and communication systems; control, robotic, and manufacturing systems; power and energy systems; biomedical instrumentation systems; electronic materials; and device design and manufacturing. Typical career paths of graduates include design, development, management, consulting, teaching, and research. Many graduates seek further education in law, medicine, business, or engineering.

The core requirements of the Bachelor of Science in Electrical Engineering provide a foundation of engineering fundamentals. Students then build on the core requirements by choosing a primary and a secondary technical core area; students also choose two advanced laboratory courses. Once the primary technical core area is chosen, the student is assigned a faculty adviser with expertise in that area to help the student select technical area courses that are appropriate to his or her career and educational goals. The curriculum thus ensures breadth through the core courses and the choice of a technical elective; technical core area coursework provides additional depth.

PROGRAM EDUCATIONAL OBJECTIVES

Within a few years of graduation, electrical and computer engineering graduates should

- ▶ Contribute to the economic development of

Texas and beyond through the ethical practice of electrical and computer engineering in industry and public service.

- ▶ Exhibit leadership in technical or business activity through engineering ability, communication skills, and knowledge of contemporary and global issues.
- ▶ Continue to educate themselves through professional study and personal research.
- ▶ Be prepared for admission to, and to excel in, the best graduate programs in the world.
- ▶ Design systems to collect, encode, store, transmit, and process energy and information, and to evaluate system performance, either individually or in teams.
- ▶ Use their engineering ability and creative potential to create technology that will improve the quality of life in society.

PROGRAM OUTCOMES

Electrical and computer engineering graduates should demonstrate

- ▶ An ability to apply knowledge of mathematics, science, and engineering.
- ▶ An ability to design and conduct experiments, as well as analyze and interpret data.
- ▶ An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- ▶ An ability to function on multidisciplinary teams.
- ▶ An ability to identify, formulate, and solve engineering problems.
- ▶ An understanding of professional and ethical responsibility.
- ▶ An ability to communicate effectively.
- ▶ The broad education necessary to understand what impact engineering solutions have in global, economic, environmental, and societal contexts.
- ▶ A recognition of the need for and an ability to engage in lifelong learning.
- ▶ A knowledge of contemporary issues.
- ▶ An ability to use techniques, skills, and modern engineering tools necessary for engineering practice.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree requirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill technical area, math or science technical elective, and other elective requirements must be approved by the electrical and computer engineering faculty before the student enrolls in them.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Mathematics 408C, 408D, 427K, 340L (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	15
▶ Electrical Engineering 302, 306, 411, 312, 313, 319K (Electrical Engineering 302 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	19

5. Students may choose some four-hour courses to fulfill this requirement, which can result in a total of fourteen hours; however, only twelve hours are required.

COURSES	SEM HRS
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag)	3
TOTAL 48	
Major Sequence Courses	
▶ Electrical Engineering 333T, 351K, 364D, and one of the following senior design project courses: Electrical Engineering 464G, 464H, 464K, 464R. (Electrical Engineering 333T carries a writing flag; the design project courses carry independent inquiry flags.)	13
▶ Primary technical core: Core courses (six hours), core laboratory course (four hours), advanced mathematics course (four hours)	14
▶ Primary core electives: Four courses (twelve to fourteen hours) ⁵	12
▶ Secondary technical core: Core courses (six hours), core laboratory course (four hours), advanced mathematics course (four hours)	14
TOTAL 53	
Other Required Courses	
▶ Approved elective	3
Remaining Core Curriculum Courses	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American history	6
▶ Visual and performing arts	3
▶ Social and behavior sciences	3
TOTAL 21	
MINIMUM REQUIRED 125	

UPPER-DIVISION TECHNICAL CORE AREAS

Both electrical engineering and computer engineering students must choose a primary and a secondary technical core area. Electrical engineering students must choose their primary technical core area from the electrical engineering technical core areas listed below; computer engineering students must choose their primary technical core area from the computer engineering core areas. For the secondary technical core area, students may choose any technical core area, including academic enrichment.

For all technical core areas, the student must complete all courses in the core area on the letter-grade basis. A course may not be counted toward more than

one technical core area.

In cases where a single electrical engineering course appears on both the primary and secondary technical core area list, the student must replace the secondary technical core area course with an elective from the same secondary technical core area list. In the case of a duplicate mathematics course, the student must choose an approved mathematics or science course to replace it.

ACADEMIC ENRICHMENT TECHNICAL CORE AREA

A student may choose the academic enrichment technical core area, but only as his or her secondary technical core area. For this core area, the student selects nine hours of elective coursework to support his or her personal or career goals and an upper-division course in either mathematics or science. Before registering for these courses, the student must prepare a career plan statement and a list of relevant electives; this plan must be approved by the undergraduate adviser.

These electives may include traditional upper-division technical courses in electrical engineering and other engineering fields; courses in other fields at the University that satisfy degree requirements, such as business, economics, communication, music, and philosophy; or research done with a faculty member in Electrical Engineering 360, *Special Problems in Electrical and Computer Engineering*. The courses must be completed in residence; courses in an approved study abroad program require the approval of the undergraduate adviser. The nine elective course hours must include at least six hours of upper-division coursework; they may include Electrical Engineering 325L, *Cooperative Engineering*, or up to three hours in Electrical Engineering 125S, *Internship in Electrical and Computer Engineering*, but not both.

ELECTRICAL ENGINEERING TECHNICAL CORES

Communications, Signal Processing, Networks, and Systems

Communications, signal processing, networks, and systems broadly encompasses the principles underlying the design and implementation of systems for information transmission. The field considers how information is represented, compressed, and transmitted on wired and wireless links and how communication networks can be, and are, designed and operated. A student who chooses this technical core area should recognize that communications and networking is a broad application domain where many engineering

tools come into play: from circuit design for wireless phones to embedded network processors to system and application software for networked systems.

Students complete the following:

1. E E 325, *Electromagnetic Engineering*
2. Either E E 351M, *Digital Signal Processing*, or E E 362K, *Introduction to Automatic Control*
3. Core laboratory course: E E 445S, *Real-Time Digital Signal Processing Laboratory*
4. Core mathematics course: M 427L, *Advanced Calculus for Applications II*
5. Four courses from the following list:
 - E E 325K, *Antennas and Wireless Propagation*
 - E E 351M, *Digital Signal Processing*
 - E E 360C, *Algorithms*
 - E E 360K, *Introduction to Digital Communications*
 - E E 362K, *Introduction to Automatic Control*
 - E E 363M, *Microwave and Radio Frequency Engineering*
 - E E 370K, *Computer Control Systems*
 - E E 370N, *Introduction to Robotics and Mechatronics*
 - E E 371C, *Wireless Communications Laboratory*
 - E E 371R, *Digital Image and Video Processing*
 - E E 372N, *Telecommunication Networks*
 - E E 379K, *Introduction to Data Mining*
 - M 325K, *Discrete Mathematics*
 - M 362M, *Introduction to Stochastic Processes*
 - M 365C, *Real Analysis I*

Electronics and Integrated Circuits

The electronics and integrated circuits technical core area involves the design and analysis of the circuits that provide the functionality of a system. The types of circuits that students encounter include analog and digital integrated circuits, radio frequency circuits, mixed signal (combination of analog and digital) circuits, power electronics, and biomedical electronics. The design and implementation of integrated circuits and systems using analog and digital building blocks are included in this core area. A student should choose this technical core area if he or she is interested in designing chips for applications, such as computing, telecommunications, and signal processing.

Students complete the following:

1. E E 325, *Electromagnetic Engineering*
2. E E 339, *Solid-State Electronic Devices*
3. Core laboratory course: E E 438, *Electronic Circuits I*
4. Core mathematics course: M 427L, *Advanced Calculus for Applications II*

5. E E 316, *Digital Logic Design*
6. Three courses from the following list:
 - E E 338K, *Electronic Circuits II*
 - E E 338L, *Analog Integrated Circuit Design*
 - E E 440, *Microelectronics Fabrication Techniques*
 - E E 445S, *Real-Time Digital Signal Processing Laboratory*
 - E E 360M, *Digital Systems Design Using VHDL*
 - E E 460N, *Computer Architecture*
 - E E 360R, *Computer-Aided Integrated Circuit Design*
 - E E 360S, *Digital Integrated Circuit Design*
 - E E 374K, *Biomedical Electronic Instrument Design*
 - E E 374L, *Applications of Biomedical Engineering*

Energy Systems and Renewable Energy

This technical core area provides the foundation for a career in electric power systems, generation, grid operation, motors and drives, and renewable energy sources. This core area involves the study and design of reliable and economic electric power systems, including both traditional and renewable resources. Energy conversion involves conversion to and from electrical energy, including the study and design of electrical machines.

Students complete the following:

1. E E 325, *Electromagnetic Engineering*
2. E E 339, *Solid-State Electronic Devices*
3. Core laboratory course: E E 462L, *Power Electronics*
4. Core mathematics course: M 427L, *Advanced Calculus for Applications II*
5. E E 362K, *Introduction to Automatic Control*
6. Three courses from the following list:
 - E E 341, *Electric Drives and Machines*
 - E E 362Q, *Power Quality and Harmonics*
 - E E 362R, *Renewal Energy and Power Systems*
 - E E 362S, *Development of a Solar-powered Vehicle*
 - E E 368L, *Power Systems Apparatus and Laboratory*
 - E E 369, *Power Systems Engineering*
 - E E 379K, *Topic: Solar Conversion Devices*
 - M E 337C, *Introduction to Nuclear Power Systems*

Electromagnetic Fields, Waves, and Systems

Students in this technical core area study different aspects of applied electromagnetics, including antennas, radio wave propagation, microwave and radio frequency circuits and transmission structures, optical components and lasers, and engineering acoustics. A student should choose the electromagnetic engineering core area if he or

she is interested in engineering that involves the physical layer in modern communication and radar systems. Graduates are well positioned for jobs in antenna design and testing, propagation channel characterization, microwave and radio frequency circuit design, electromagnetic emission testing from electronic devices and systems, radar system design and development, optical telecommunication, optical information and signal processing systems, and component design and development.

Students complete the following:

1. E E 325, *Electromagnetic Engineering*
2. E E 339, *Solid-State Electronic Devices*
3. Core laboratory course: E E 438, *Electronic Circuits I*, or E E 462L, *Power Electronics Laboratory*
4. Core mathematics course: M 427L, *Advanced Calculus for Applications II*
5. Either E E 325K, *Antennas and Wireless Propagation*, or E E 363M, *Microwave and Radio Frequency Engineering*
6. Three courses from the following list:
 - E E 321K, *Mixed Signal and Circuits Laboratory*
 - E E 325K, *Antennas and Wireless Propagation*
 - E E 334K, *Theory of Engineering Materials*
 - E E 341, *Electric Drives and Machines*
 - E E 347, *Modern Optics*
 - E E 348, *Laser and Optical Engineering*
 - E E 361R, *Radio Frequency Integrated Circuit Design*
 - E E 363M, *Microwave and Radio Frequency Engineering*
 - E E 363N, *Engineering Acoustics*
 - E E 369, *Power Systems Engineering*
 - E E 374K, *Biomedical Electronic Instrument Design*
 - E E 374L, *Applications of Biomedical Engineering*

Nanoelectronics and Nanotechnology

Students in this technical core area learn about the materials and devices used in modern electronic and optoelectronic systems. With a heavy emphasis on semiconductors, courses in this area include the fundamentals of charge transport and interactions with light. Devices studied begin with p-n junctions and transistors, the building blocks of integrated circuits. Later courses concentrate on semiconductor lasers and detectors used in optoelectronics. With exposure to the topics in this area, students are well positioned to work in a wide variety of areas that rely on semiconductor technology, such as computers, telecommunications, the automotive industry, and consumer electronics.

Students complete the following:

1. E E 325, *Electromagnetic Engineering*
2. E E 339, *Solid-State Electronic Devices*

3. Core laboratory course: E E 440, *Microelectronics Fabrication Techniques*
4. Core mathematics course: M 427L, *Advanced Calculus for Applications II*
5. Four courses from the following list:
 - E E 438, *Electronic Circuits I*
 - E E 338L, *Analog Integrated Circuit Design*
 - E E 347, *Modern Optics*
 - E E 348, *Laser and Optical Engineering*
 - E E 360S, *Digital Integrated Circuit Design*
 - E E 379K, Topic: *Solar Conversion Devices*

COMPUTER ENGINEERING TECHNICAL CORE AREAS

Computer Architecture and Embedded Systems

Computer architecture involves understanding the operation and design of computers on many different levels. These levels include the instruction set, micro-architecture, and logic design. Embedded systems represent the combination of software and hardware that are designed to perform specific functions. These systems may be stand-alone items or an integral part of a larger system. Within this technical core area, students are exposed to logic design, programming, computer architecture, systems design, and digital signal processing. The student studying computer architecture will be well positioned to join the micro-processor design industry as a logic designer or a circuit designer. After a good deal of experience on the job, the student would be well positioned to become the chief architect of a new design.

Jobs in embedded systems involve defining, designing, and fabricating application-specific processors and computers in areas such as automotive electronics, consumer devices, and telecommunications.

Students complete the following:

1. E E 316, *Digital Logic Design*
2. E E 460N, *Computer Architecture*
3. Core laboratory course: E E 445L, *Microprocessor Applications and Organization*
4. Core mathematics course: M 325K, *Discrete Mathematics*
5. E E 360C, *Algorithms*
6. Three courses from the following list:
 - E E 422C, *Data Structures*
 - E E 345M, *Embedded and Real-Time Systems Laboratory*
 - E E 445S, *Real-Time Digital Signal Processing Laboratory*
 - E E 360M, *Digital Systems Design Using VHDL*
 - E E 360P, *Concurrent and Distributed Systems*

- E E 360R, *Computer-Aided Integrated Circuit Design*
- E E 362K, *Introduction to Automatic Control*
- C S 375, *Compilers*

Software Engineering and Design

Courses in this area cover the engineering life cycle of software systems, including requirement analysis and specification, design, construction/programming, testing, deployment, maintenance, and evolution. Area courses are intended to teach students theory, practical methods, and tools for designing, building, delivering, maintaining, and evolving software to meet stakeholder requirements. Every software engineer must understand how software systems operate and how they can be used to solve engineering problems and deliver solutions. The courses in this area are designed to educate students about a diverse and relevant set of technologies and about the ways that technology can be used to design and build software systems.

Students complete the following:

1. E E 422C, *Data Structures*
2. E E 360C, *Algorithms*
3. Core laboratory course: E E 379K, Topic: *Software Engineering and Design Laboratory*
4. Core mathematics course: M 325K, *Discrete Mathematics*
5. Four courses from the following list:
 - E E 316, *Digital Logic Design*
 - E E 445L, *Microprocessor Applications and Organization*
 - E E 345M, *Embedded and Real-Time Systems Laboratory*
 - E E 360F, *Introduction to Software Engineering*
 - E E 460N, *Computer Architecture*
 - E E 360P, *Concurrent and Distributed Systems*
 - E E 361Q, *Requirements Engineering*
 - E E 372N, *Telecommunication Networks*
 - E E 360T, *Software Testing*
 - E E 361M, *Introduction to Data Mining*

Alternate Mathematics Courses

For students who choose both primary and secondary technical core areas in computer engineering:

- M 427L, *Advanced Calculus for Applications II*
- M 328K, *Introduction to Number Theory*
- M 343K, *Introduction to Algebraic Structures*
- M 344K, *Intermediate Symbolic Logic*
- M 348, *Scientific Computation in Numerical Analysis*

- M 358K, *Applied Statistics*
 M 374M, *Mathematical Modeling in Science and Engineering*
 C S 341, *Automata Theory*
 C S 346, *Cryptography*

For students who choose both primary and secondary technical core areas in electrical engineering:

- M 325K, *Discrete Mathematics*
 M 328K, *Introduction to Number Theory*
 M 346, *Applied Linear Algebra*
 M 348, *Scientific Computation in Numerical Analysis*
 M 358K, *Applied Statistics*
 M 361, *Theory of Functions of a Complex Variable*
 M 362M, *Introduction to Stochastic Processes*
 M 372K, *Partial Differential Equations and Applications*
 M 374, *Fourier and Laplace Transforms*
 M 374M, *Mathematical Modeling in Science and Engineering*

SUGGESTED ARRANGEMENT OF COURSES

ELECTRICAL AND COMPUTER ENGINEERING CURRICULUM

COURSES	SEM	HRS
FIRST YEAR		
FALL		
E E 302, <i>Introduction to Electrical Engineering</i>	3	
E E 306, <i>Introduction to Computing</i>	3	
M 408C, <i>Differential and Integral Calculus</i>	4	
RHE 306, <i>Rhetoric and Writing</i>	3	
UGS 302 or 303, <i>First-Year Signature Course</i>	3	
	TOTAL	16
SPRING		
E E 319K, <i>Introduction to Embedded Systems</i>	3	
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4	
PHY 303K, <i>Engineering Physics I</i>	3	
PHY 103M, <i>Laboratory for Physics 303K</i>	1	
Visual and performing arts or social and behavioral sciences	3	
	TOTAL	14

COURSES	SEM	HRS
SECOND YEAR		
FALL		
E E 411, <i>Circuit Theory</i>	4	
M 427K, <i>Advanced Calculus for Applications I</i>	4	
PHY 303L, <i>Engineering Physics II</i>	3	
PHY 103N, <i>Laboratory for Physics 303L</i>	1	
Visual and performing arts or social and behavioral sciences	3	
	TOTAL	15
SPRING		
E 316K, <i>Masterworks of Literature</i>	3	
E E 312, <i>Introduction to Programming</i>	3	
E E 313, <i>Linear Systems and Signals</i>	3	
GOV 310L, <i>American Government</i>	3	
M 340L, <i>Matrices and Matrix Calculations</i>	3	
	TOTAL	15
THIRD YEAR		
FALL		
E E 333T, <i>Engineering Communication</i>	3	
E E 351K, <i>Probability and Random Processes</i>	3	
Primary technical core (mathematics)	3 or 4	
Primary technical core laboratory	4	
Primary technical core requirement	3 or 4	
	TOTAL	16 to 18
SPRING		
Secondary technical core (mathematics)	3 or 4	
Secondary technical core laboratory	4	
Secondary technical core requirement	3 or 4	
Primary technical core requirement	3	
Primary technical core (requirement or elective)	3	
	TOTAL	16 to 18
FOURTH YEAR		
FALL		
E E 364D, <i>Introduction to Engineering Design</i>	3	
American history	3	
Secondary technical core requirement	3	
Primary technical core electives	6	
	TOTAL	15
SPRING		
E E 464C, <i>Corporate Senior Design Project</i> ; E E 464G, <i>Multidisciplinary Senior Design Project</i> , E E 464H, <i>Honors Senior Design Project</i> ; E E 464K, <i>Senior Design Project</i> ; or E E 464R, <i>Research Senior Design Project</i>	4	
GOV 312L, <i>Issues and Policies in American Government</i>	3	
American history	3	
Primary technical core elective	3	
Approved elective	3	
	TOTAL	16

BACHELOR OF SCIENCE IN GEOSYSTEMS ENGINEERING AND HYDROGEOLOGY

Geosystems engineers and hydrogeologists are concerned with the development and use of engineering approaches in the management of natural resources from the earth's surface and subsurface, environmental restoration of subsurface sites, and other processes related to the earth sciences. This degree program, offered jointly by the Cockrell School of Engineering and the Jackson School of Geosciences, is designed to teach students the geological and engineering principles needed to solve subsurface resource development and environmental problems. The curriculum includes a fundamental sequence of engineering and geological sciences courses in such areas as multiphase fluid flow, physical hydrology, heat and mass transfer, field methods, and engineering design. This interdisciplinary systems approach, combining engineering and geological sciences, is increasingly required to address complex real-world problems such as characterization and remediation of aquifers. The degree program is designed to prepare graduates for employment with environmental, water resource management, and energy companies in addition to many government agencies. Better-qualified graduates of the program may pursue graduate study in subsurface environmental engineering, petroleum engineering, geology, and other related fields.

The objective of the degree program is to prepare graduates for successful careers in the fields of subsurface environmental engineering (including carbon dioxide sequestration), oil and gas production and services, or similar pursuits. Graduates are expected to understand the fundamental principles of science and engineering behind the technology of geosystems engineering and hydrogeology to keep their education from becoming outdated and to give them the capability of self-instruction after graduation. They should also be prepared to serve society by applying the ideals of ethical behavior, professionalism, and environmentally responsible stewardship of natural resources.

Containing the following elements, the technical curriculum provides both breadth and depth in a range of topics.

- ▶ A combination of college-level mathematics and basic sciences (some with experimental work) that includes mathematics through differential equations, physics, chemistry, and geology.
- ▶ Basic engineering and geologic topics that develop a working knowledge of fluid mechanics, strength of materials, transport phenomena,

material properties, phase behavior, and thermodynamics.

- ▶ Engineering and geosciences topics that develop competence in characterization and evaluation of subsurface geological formations and their resources using geoscientific and engineering methods, including field methods; design and analysis of systems for producing, injecting, and handling fluids; application of hydrogeologic and reservoir engineering principles and practices for water and energy resource development and management; contamination evaluation and remediation methods for hydrologic resources; and use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty.
- ▶ A major capstone design experience that prepares students for engineering and hydrogeologic practice, based on the knowledge and skills acquired in earlier coursework and incorporating engineering and geological standards and realistic constraints.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree requirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill nontechnical elective requirements must be approved by the petroleum and geosystems engineering faculty and the geological sciences faculty before the student registers for them.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Chemistry 301, 302 (Chemistry 301 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	6
▶ Engineering Mechanics 306, 319	6
▶ Geological Sciences 303, 416K, 416M	11
▶ Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
▶ Petroleum and Geosystems Engineering 310, 312, 322K, 333T (Petroleum and Geosystems Engineering 333T carries a writing flag.)	12
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag)	8
▶ Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag)	3
	TOTAL 61
Major Sequence Courses	
▶ Geological Sciences 420K, 428, 468K, 476K, 376L, 376S	22
▶ Petroleum and Geosystems Engineering 323K, 323L, 323M, 424, 326, 365, 368, 373L	25
▶ Civil Engineering 357	3
	TOTAL 50
Remaining Core Curriculum Courses	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American history	6
▶ Visual and performing arts	3
▶ Social and behavioral sciences	3
	TOTAL 21
	MINIMUM REQUIRED 132

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS
FIRST YEAR	
FALL	
CH 301, <i>Principles of Chemistry I</i>	3
GEO 303, <i>Introduction to Geology</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4
RHE 306, <i>Rhetoric and Writing</i>	3
UGS 302 or 303, <i>First-Year Signature Course</i>	3
	TOTAL 16
SPRING	
CH 302, <i>Principles of Chemistry II</i>	3
GEO 416M, <i>Sedimentary Rocks</i>	4
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
PHY 303K, <i>Engineering Physics I</i>	3
PHY 103M, <i>Laboratory for Physics 303K</i>	1
	TOTAL 15
SECOND YEAR	
FALL	
E M 306, <i>Statics</i>	3
GEO 416K, <i>Earth Materials</i>	4
M 427K, <i>Advanced Calculus for Applications I</i>	4
PGE 310, <i>Formulation and Solution of Geosystems Engineering Problems</i>	3
American history	3
	TOTAL 17
SPRING	
E M 319, <i>Mechanics of Solids</i>	3
PGE 312, <i>Physical and Chemical Behavior of Fluids I</i>	3
PGE 322K, <i>Transport Phenomena in Geosystems</i>	3
PGE 333T, <i>Engineering Communication</i>	3
PHY 303L, <i>Engineering Physics II</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1
	TOTAL 16
THIRD YEAR	
FALL	
GEO 476K, <i>Groundwater Hydrology</i>	4
PGE 323K, <i>Reservoir Engineering I: Primary Recovery</i>	3
PGE 424, <i>Petrophysics</i>	4
PGE 326, <i>Thermodynamics and Phase Behavior</i>	3
Social and behavioral sciences	3
	TOTAL 17
SPRING	
C E 357, <i>Geotechnical Engineering</i>	3
GEO 420K, <i>Introduction to Field and Stratigraphic Methods</i>	4
PGE 323L, <i>Reservoir Engineering II: Secondary and Tertiary Recovery</i>	3
PGE 368, <i>Fundamentals of Well Logging</i>	3
American history	3
	TOTAL 16

COURSES	SEM HRS
SUMMER	
GEO 376L, <i>Field Methods in Groundwater Hydrology</i>	3
TOTAL 3	
FOURTH YEAR	
FALL	
E 316K, <i>Masterworks of Literature</i>	3
GEO 428, <i>Structural Geology</i>	4
GEO 376S, <i>Physical Hydrology</i>	3
PGE 323M, <i>Reservoir Engineering III: Numerical Simulation</i>	3
PGE 365, <i>Resource Economics and Valuation</i>	3
TOTAL 16	
SPRING	
GEO 468K, <i>Geophysics for Geological Sciences Majors</i>	4
PGE 373L, <i>Geosystems Engineering Design and Analysis II</i>	3
American and Texas government	3
American and Texas government	3
Visual and performing arts	3
TOTAL 16	

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Mechanical engineers are broadly concerned with the engineering systems used to control and transform energy to meet the needs of humanity. They design, develop, and produce devices and systems from space probes to washing machines, from turbojet engines to lawn mowers, from automatic machine tools and vending machines to computer-controlled systems. Because mechanical engineering is one of the broadest-based fields of technical study, it is also an excellent foundation for further education in business, law, medicine, and other professions that require a good working knowledge of science and technology.

The mechanical engineering department is dedicated to graduating mechanical engineers who practice mechanical engineering in the general stems of thermal/fluid systems, mechanical systems and design, and materials and manufacturing in industry and government settings; are prepared for advanced education, research and development, and other creative efforts in science and technology; conduct themselves in a responsible, professional, and ethical manner; and participate as leaders in activities that support service to and economic development of the region, state, and nation.

The mechanical engineering faculty has defined ten educational outcomes that students in the program are expected to achieve by the time of graduation. These

outcomes are

- ▶ Knowledge of and ability to apply engineering and science fundamentals to real problems
- ▶ Ability to formulate and solve open-ended problems
- ▶ Ability to design mechanical components, systems, and processes
- ▶ Ability to set up, conduct, and interpret experiments, and to present the results in a professional manner
- ▶ Ability to use modern computer tools in mechanical engineering
- ▶ Ability to communicate in written, oral, and graphical forms
- ▶ Ability to work in teams and apply interpersonal skills in engineering contexts
- ▶ Ability and desire to lay a foundation for continued learning beyond the baccalaureate degree
- ▶ Awareness of professional issues in engineering practice, including ethical responsibility, safety, the creative enterprise, and loyalty and commitment to the profession
- ▶ Awareness of contemporary issues in engineering practice, including economic, social, political, and environmental issues and global impact

The mechanical engineering curriculum meets these outcomes by providing breadth and depth across a range of topics.

- ▶ A combination of college-level mathematics and basic science courses (some with experimental work) that includes mathematics through differential equations, probability and statistics, physics, and chemistry.
- ▶ Engineering courses that develop a working knowledge of graphics and computer-aided design, engineering mechanics, thermodynamics, kinematics, dynamics and control of mechanical systems, computational methods, fluid mechanics, heat transfer, materials science and engineering, electric circuits and electronics, technical communication, and engineering economics.
- ▶ Mechanical engineering project and laboratory experiences that develop competence in measurements and instrumentation, interpretation of data, reverse engineering analysis of mechanical systems, use of computational tools for engineering analysis, integration of multidisciplinary topics in design of complex systems, teamwork and project planning, and written and oral communication.

- ▶ A sequence of engineering design courses, culminating in a major capstone design experience in collaboration with an industrial sponsor, that draws on the knowledge and skills students have acquired in earlier coursework and incorporates modern engineering standards and realistic constraints.
- ▶ Core curriculum courses, including social and behavioral sciences, humanities, and visual and performing arts electives, that complement the technical content of the curriculum.
- ▶ A variety of senior elective options that provide a career gateway to further study and lifelong learning in the practice of engineering and other professions.

PROCEED (PROJECT-CENTERED EDUCATION)

The undergraduate curriculum in mechanical engineering is built on the principle of project-centered education, or PROCEED. A number of courses throughout the curriculum are structured to motivate the study of engineering science by challenging students with in-depth analysis of real mechanical components and systems. In PROCEED, students address real-world projects based on current industrial methods and practices, and have opportunities to discuss the projects with engineering experts from both inside and outside the University. Undergraduate laboratories and computer facilities are integrated into the curriculum to connect theory with practice, and a Web-based portfolio system, Polaris, has been developed to provide a mechanism for students to showcase project-based work to prospective employers and graduate schools.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree re-

quirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Chemistry 301 (may be used to fulfill the science and technology, part II, requirement of the core curriculum)	3
▶ Engineering Mechanics 306, 319	6
▶ Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
▶ Mechanical Engineering 302, 205, 311, 111L, 324, 326	15
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may also be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag.)	3
	TOTAL 50
Major Sequence Courses	
▶ Mechanical Engineering 333T, 335, 336, 136L, 338, 339, 139L, 340, 140L, 343, 344, 144L, 353, 366J, 266K, 266P (Mechanical Engineering 333T carries a writing flag; Mechanical Engineering 266K carries an independent inquiry flag.)	38
Other Required Courses	
▶ Mechanical Engineering 218, 330, 130L	6
▶ Approved career gateway electives	6
▶ Approved mathematics elective	3
▶ Approved natural science/mathematics elective	3
	TOTAL 18

COURSES	SEM HRS
Remaining Core Curriculum Requirements	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American History	6
▶ Social and behavioral sciences	3
▶ Visual and performing arts	3
TOTAL 21	
MINIMUM REQUIRED 127	

BRIDGES TO THE FUTURE CERTIFICATE PROGRAM

The Department of Mechanical Engineering offers highly qualified senior-level undergraduate students an opportunity for in-depth study and research in an emerging area of mechanical engineering through the Bridges to the Future Certificate Program. Upon completion of a prescribed series of technical electives and an independent research study under the direction of a faculty member and a doctoral student mentor, students receive a certificate and a letter from the department chair that describes the program and the work completed. The certificate and its supporting documentation, plus supporting letters from supervising faculty and mentors, can be valuable assets for students applying to graduate school or pursuing competitive job opportunities. This certificate will not appear on the student's transcript.

Certificate programs are currently available in the areas of advanced materials engineering, nuclear and radiation engineering, sustainable energy systems, advanced design and manufacturing, biomechanical engineering, and micro- and nanoscale engineering. The Department of Mechanical Engineering provides each certificate candidate with a small project grant, and in some cases, with scholarship support.

Students must apply for admission to a certificate program during the junior year; they must have completed all basic sequence courses with a grade of at least C in each and must have been admitted to the major sequence in mechanical engineering. Students admitted to the program must begin the required coursework early in the senior year; six hours of undergraduate coursework may be used to fulfill the career gateway elective requirement described below. In some cases, the coursework may include a graduate course, which may be credited toward a University graduate degree.

Details on course offerings and admission procedures are available from the Department of Mechanical Engineering undergraduate office.

CAREER GATEWAY ELECTIVE OPTIONS

The mechanical engineering curriculum includes six hours of career gateway electives, which are to be selected by the student to support his or her career goals. These courses must be chosen carefully and must be pertinent to each other and to the student's career goals.

Before registering for any potential career gateway elective courses, students must prepare a career statement and a list of relevant, related courses, and a mechanical engineering faculty mentor must provide preliminary approval. Ultimately, the faculty undergraduate adviser in mechanical engineering must provide final approval before the student's first degree audit for graduation.

By the beginning of the semester in which he or she will take the first potential career gateway elective, the student must have completed all basic sequence courses with a grade of at least C in each and must have been admitted unconditionally to the major sequence in mechanical engineering.

Career gateway electives must include approved upper-division technical courses from mechanical engineering and other engineering departments, approved advanced courses in natural sciences, and preparatory courses for graduate study in the health professions. Highly qualified students are encouraged to fulfill career gateway elective requirements as part of the Bridges to the Future certificate program described above.

Career gateway elective options may include a total of three hours of special topics coursework (Mechanical Engineering 179M, 279M, 379M) without special approval or projects coursework (Mechanical Engineering 177K, 277K, 377K) with special approval by the undergraduate adviser. Students who wish to count additional topics or projects for credit must petition for consent by the undergraduate adviser. Options may also include either Mechanical Engineering 325L or Mechanical Engineering 225M.

With special approval of the Engineering Honors Program director, a mechanical engineering student in the honors program may include Mechanical Engineering 679H in the career gateway elective option.

Some possible career gateway elective options and related courses are listed below.

BIOMECHANICAL ENGINEERING

Biomechanical engineering is one of the most exciting emerging areas of engineering, and mechanical engineers will play an important role in this field. Areas of special interest include biomaterials, biomechanics,

fluid flow, heat transfer, mechanical design, nuclear science, and systems analysis. This option also can be tailored to provide a background for professional education in medicine or dentistry or for graduate study in biomedical engineering. Courses supporting a career in biomechanical engineering include

M E 354, *Introduction to Biomechanical Engineering*

M E 354M, *Biomechanics of Human Movement*

M E 372J, *Robotics and Automation*

M E 379N, *Engineering Acoustics*

Approved biomedical engineering and natural science electives

DYNAMICS AND CONTROL

The engineering of “intelligent machines” is a rapidly growing field, demanding an understanding of mechanical and electronic components, of software, and of the ways these elements interact in complex systems. Courses supporting career paths in this area include

M E 348C, *Introduction to Mechatronics I*

M E 348D, *Introduction to Mechatronics II*

M E 355K, *Engineering Vibrations*

M E 360, *Vehicle System Dynamics and Controls*

M E 364L, *Automatic Control System Design*

M E 372J, *Robotics and Automation*

M E 379N, *Engineering Acoustics*

Approved electrical and computer engineering and natural science electives

MANUFACTURING AND DESIGN

Mechanical engineering is the focal point for design and manufacturing of components and systems ranging from automobiles to computer chips. The manufacturing and design option prepares students for leadership in this important field. Suggested courses include

M E 350, *Machine Tool Operations for Engineers*

M E 352K, *Engineering Computer Graphics*

M E 364L, *Automatic Control System Design*

M E 365K, *Finite Element Method*

M E 368J, *Computer-Aided Design*

M E 372J, *Robotics and Automation*

M E 379M, Topic: *Engineering Entrepreneurship*

M E 379M, Topic: *Solid Freeform Fabrication*

M E 379M, Topic: *Statistical Methods in Manufacturing*

M E 379M, Topic: *Polymer Nanocomposites*

Approved engineering and natural science electives

MATERIALS ENGINEERING

The design and manufacture of most engineering devices and systems is heavily constrained by materials

properties and the availability of materials. This option allows students to obtain a concentration in materials engineering as a basis for practice and graduate study in this field. Relevant courses include

M E 349, *Corrosion Engineering*

M E 359, *Materials Selection*

M E 378C, *Electroceramics*

M E 378K, *Mechanical Behavior of Materials*

M E 378P, *Properties and Applications of Polymers*

M E 378S, *Structural Ceramics*

Approved materials-related engineering and natural science electives

NUCLEAR AND RADIATION ENGINEERING

Engineers with a background in nuclear and radiation engineering find opportunities providing electrical power in safe, efficient, and environmentally benign ways for commercial or defense purposes; extending nuclear reactor plant life; developing new ways of producing and using radioisotopes in medical physics for organ imaging or cancer therapy; developing new industrial applications for neutron or gamma-ray radiation use; developing long-term strategies for radioactive waste disposal; and developing systems to maintain the security of nuclear materials. They also work with nuclear-related national security issues and in nuclear chemical engineering. It is recommended that students interested in this area take one or more of the following courses.

M E 136N, 236N, *Concepts in Nuclear and Radiation Engineering*

M E 337C, *Introduction to Nuclear Power Systems*

M E 337F, *Nuclear Environmental Protection*

M E 361E, *Nuclear Reactor Operations and Engineering*

M E 361F, *Radiation and Radiation Protection Laboratory*

OPERATIONS RESEARCH AND INDUSTRIAL ENGINEERING

Today’s industrial planners and managers commonly use quantitative decision-making techniques. This option melds traditional industrial engineering and its modern outgrowth, operations research. Emphasis is on mathematical modeling, applied statistics, and the use of the computer to assist the decision maker. Students interested in this option should consider courses such as

M E 366L, *Operations Research Models*

M E 367S, *Simulation Modeling*

M E 373K, *Basic Industrial Engineering*

M E 375K, *Production Engineering Management*

Approved engineering, business, or mathematics electives

THERMAL/FLUID SYSTEMS ENGINEERING

A traditional field of mechanical engineering is the design and manufacture of systems for the production, transmission, storage, and use of energy. This option is designed to prepare students for careers and graduate study in energy conversion, thermal system design, thermodynamics, heat transfer, and fluid mechanics. Suggested courses include

ARE 346P, *HVAC Design*

ARE 370, *Design of Energy Efficient and Healthy Buildings*

ARE 371, *Energy Simulation in Building Design*

ASE 362K, *Compressible Flow*

M E 337C, *Introduction to Nuclear Power Systems*

M E 360L, *Turbomachinery and Compressible Flow*

M E 360N, *Intermediate Heat Transfer*

M E 361E, *Nuclear Reactor Operations and Engineering*

M E 369L, *Introduction to Computational Fluid Dynamics*

M E 374C, *Combustion Engine Processes*

M E 374D, *Automotive Engineering Laboratory*

M E 374F, *Fire Science*

M E 374R, *Design of Air Conditioning Systems*

M E 374S, *Solar Energy Systems Design*

M E 379M, Topic: *Renewable Energy and Systems and Sustainability*

M E 379M, Topic: *Energy Technology and Policy*

Approved engineering and natural science electives

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS
FIRST YEAR	
FALL	
CH 301, <i>Principles of Chemistry I</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4
M E 302, <i>Introduction to Engineering Design and Graphics</i>	3
RHE 306, <i>Rhetoric and Writing</i>	3
UGS 302 or 303, <i>First-Year Signature Course</i>	3
TOTAL 16	
SPRING	
E M 306, <i>Statics</i>	3
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
M E 205, <i>Introduction to Computers and Programming</i>	2
PHY 303K, <i>Engineering Physics I</i>	3
PHY 103M, <i>Laboratory for Physics 303K</i>	1
Social and behavioral sciences or visual and performing arts	3
TOTAL 16	

COURSES SEM HRS

SECOND YEAR

FALL

E 316K, <i>Masterworks of Literature</i>	3
E M 319, <i>Mechanics of Solids</i>	3
M 427K, <i>Advanced Calculus for Applications I</i>	4
M E 326, <i>Thermodynamics</i>	3
PHY 303L, <i>Engineering Physics II</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1
TOTAL 17	

SPRING

M E 311, <i>Materials Engineering</i>	3
M E 111L, <i>Materials Engineering Laboratory</i>	1
M E 218, <i>Engineering Computational Methods</i>	2
M E 324, <i>Dynamics</i>	3
M E 330, <i>Fluid Mechanics</i>	3
M E 130L, <i>Experimental Fluid Mechanics</i>	1
American and Texas government	3
TOTAL 16	

THIRD YEAR

FALL

M E 335, <i>Engineering Statistics</i>	3
M E 336, <i>Materials Processing</i>	3
M E 136L, <i>Materials Processing Laboratory</i>	1
M E 338, <i>Machine Elements</i>	3
M E 339, <i>Heat Transfer</i>	3
M E 139L, <i>Experimental Heat Transfer</i>	1
American and Texas government	3
TOTAL 17	

SPRING

M E 333T, <i>Engineering Communication</i>	3
M E 340, <i>Mechatronics</i>	3
M E 140L, <i>Mechatronics Laboratory</i>	1
M E 343, <i>Thermal-Fluid Systems</i>	3
American history	3
Approved mathematics elective	3
TOTAL 16	

FOURTH YEAR

FALL

M E 344, <i>Dynamic Systems and Controls</i>	3
M E 144L, <i>Dynamic Systems and Controls Laboratory</i>	1
M E 353, <i>Engineering Finance</i>	3
M E 366J, <i>Mechanical Engineering Design Methodology</i>	3
Approved career gateway elective	3
American history	3
TOTAL 16	

COURSES	SEM HRS
SPRING	
M E 266K, <i>Mechanical Engineering Design Project</i>	2
M E 266P, <i>Design Project Laboratory</i>	2
Approved career gateway elective	3
Approved mathematics/natural science elective	3
Social and behavioral sciences or visual and performing arts	3
TOTAL 13	

BACHELOR OF SCIENCE IN PETROLEUM ENGINEERING

Producing oil, gas, and other fluid resources from the earth is the task of the petroleum engineer. This challenging field of engineering requires application of a wide range of knowledge—from the basic sciences of mathematics, physics, geology, and chemistry to the principles of engineering analysis, design, and management.

Petroleum engineers provide the technological expertise to bring oil and natural gas from deep within the earth to the surface for delivery to processing facilities. Petroleum engineers focus on the efficient and safe extraction of fluids from their natural geologic formations.

Once geologists have located potential oil- or gas-bearing formations, petroleum engineers design and monitor the drilling of exploratory and development wells used to locate and produce the fluids contained within these formations. Drilling operations can be extremely expensive and technologically challenging, especially in offshore and remote areas or when drilling horizontal wells. In addition to overseeing drilling, petroleum engineers evaluate the characteristics of oil and gas reservoirs, select and implement recovery methods, develop methods to lift fluids, and design surface collection and treatment facilities to prepare produced hydrocarbons for delivery to a refinery or pipeline. Petroleum engineers are asked to devise novel advanced technologies to recover more oil or gas than what is naturally released from the rock pore system. Advanced computational methods are often used to aid in accurate acquisition and analysis of data, simulation of alternative recovery schemes, and other difficult design problems.

In addition to traditional petroleum engineering career choices, there are other emerging careers for petroleum engineering graduates in pollution cleanup, underground waste disposal (including the subsurface

injection of carbon dioxide to reduce atmospheric greenhouse gases), and hydrology. These disciplines increasingly rely on the expertise of petroleum engineers. Additional energy-related applications for which petroleum engineers are uniquely educated include in situ uranium leaching, geothermal energy production, and coal gasification.

Worldwide proved oil and gas reserves are larger than ever before. Experts agree that oil and gas will continue to play an important role in the global energy supply. Because hydrocarbon reserves are found in such diverse areas as Asia, South America, and the Middle East, petroleum engineers will have opportunities for challenging assignments all over the world.

The challenges facing the petroleum industry require large investments in technologically complex projects. The task of making wise and cost-effective investments falls to a great extent upon petroleum engineers, providing them with a high degree of challenge and responsibility.

The objective of the petroleum engineering program is to graduate practical, qualified engineers who can successfully pursue careers in the oil and gas production and services industries or similar areas. Graduates of the program are expected to understand the fundamental principles of science and engineering behind the technology of petroleum engineering to keep their education current and to give them the capability of self-instruction after graduation. They should be prepared to serve society by using the ideals of ethical behavior, professionalism, and environmentally responsible stewardship of natural resources.

The technical curriculum contains the following elements:

- ▶ A combination of college-level mathematics and basic sciences (some with experimental work) that includes mathematics through differential equations, probability and statistics, physics, chemistry, and geology.
- ▶ Engineering topics that develop a working knowledge of fluid mechanics, strength of materials, transport phenomena, material properties, phase behavior, and thermodynamics.
- ▶ Petroleum engineering topics that develop competence in (1) design and analysis of well systems and procedures for drilling and completing wells; (2) characterization and evaluation of subsurface geological formations and their resources using geoscientific and engineering methods; (3) design and analysis of systems for producing, injecting, and handling fluids; (4) ap-

plication of reservoir engineering principles and practices to optimize resource development and management; and (5) use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty.

- ▶ A major capstone design experience that prepares students for engineering practice, based on the knowledge and skills acquired in earlier coursework and incorporating engineering standards and realistic constraints.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling engineering degree requirements, students must also complete a course with an independent inquiry flag, a course with a quantitative reasoning flag, and two courses with a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill technical and nontechnical elective requirements must be approved by the Petroleum and Geosystems Engineering undergraduate adviser before the student enrolls in them.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Chemistry 301, 302 (Chemistry 301 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	6
▶ Engineering Mechanics 306, 319	6
▶ Geological Sciences 303, 416M	7
▶ Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
▶ Petroleum and Geosystems Engineering 301, 310, 312, 322K, 333T (Petroleum and Geosystems Engineering 333T carries a writing flag.)	15
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may also be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag)	3
	TOTAL 60
Major Sequence Courses	
▶ Petroleum and Geosystems Engineering 421K, 323K, 323L, 323M, 424, 326, 430, 334, 337, 362, 365, 368, 373L	42
▶ Approved technical area electives	6
	TOTAL 48
Remaining Core Curriculum Courses	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American history	6
▶ Visual and performing arts	3
▶ Social and behavioral sciences	3
	TOTAL 21
	MINIMUM REQUIRED 129

SUGGESTED ARRANGEMENT OF COURSES

COURSES	SEM HRS
FIRST YEAR	
FALL	
CH 301, <i>Principles of Chemistry I</i>	3
GEO 303, <i>Introduction to Geology</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4
RHE 306, <i>Rhetoric and Writing</i>	3
UGS 302 or 303, <i>First-Year Signature Course</i>	3
	TOTAL 16

COURSES	SEM HRS
SPRING	
CH 302, <i>Principles of Chemistry II</i>	3
M 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
PHY 303K, <i>Engineering Physics I</i>	3
PHY 103M, <i>Laboratory for Physics 303K</i>	1
PGE 301, <i>Engineering, Energy, and the Environment</i>	3
Social and behavioral sciences or visual and performing arts	3
TOTAL 17	

SECOND YEAR

COURSES	SEM HRS
FALL	
E M 306, <i>Statics</i>	3
PHY 303L, <i>Engineering Physics II</i>	3
PHY 103N, <i>Laboratory for Physics 303L</i>	1
M 427K, <i>Advanced Calculus for Applications I</i>	4
PGE 310, <i>Formulation and Solution of Geosystems Engineering Problems</i>	3
PGE 312, <i>Physical and Chemical Behavior of Fluids I</i>	3
TOTAL 17	

SPRING

E M 319, <i>Mechanics of Solids</i>	3
PGE 322K, <i>Transport Phenomena in Geosystems</i>	3
PGE 333T, <i>Engineering Communication</i>	3
GEO 416M, <i>Sedimentary Rocks</i>	4
Social and behavioral sciences or visual and performing arts	3
TOTAL 16	

COURSES	SEM HRS
THIRD YEAR	
FALL	
PGE 323K, <i>Reservoir Engineering I: Primary Recovery</i>	3
PGE 424, <i>Petrophysics</i>	4
PGE 326, <i>Thermodynamics and Phase Behavior</i>	3
PGE 430, <i>Drilling and Well Completions</i>	4
American government	3
TOTAL 17	

SPRING

PGE 421K, <i>Physical and Chemical Behavior of Fluids II</i>	4
PGE 323L, <i>Reservoir Engineering II: Secondary and Tertiary Recovery</i>	3
PGE 362, <i>Production Technology and Design</i>	3
PGE 368, <i>Fundamentals of Well Logging</i>	3
American history	3
TOTAL 16	

FOURTH YEAR**FALL**

PGE 323M, <i>Reservoir Engineering III: Numerical Simulation</i>	3
PGE 334, <i>Reservoir Geomechanics</i>	3
PGE 337, <i>Introduction to Geostatistics</i>	3
PGE 365, <i>Resource Economics and Valuation</i>	3
American government	3
TOTAL 15	

SPRING

E 316K, <i>Masterworks of Literature</i>	3
PGE 373L, <i>Geosystems Engineering Design and Analysis II</i>	3
American history	3
Approved technical area electives	6
TOTAL 15	

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

GENERAL ENGINEERING

GENERAL ENGINEERING: G E

LOWER-DIVISION COURSES

- 301C. Freshman Seminar.** Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.
- 301D. Connecting Research Experience.** Restricted to freshmen and sophomores. Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Admission to the Connexus Bridging Disciplines Program.
- 001F. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various Cockrell School of Engineering disciplines. One lecture hour a week for one semester.
- 102. Introduction to Engineering.** Enrollment restricted to undeclared freshmen in engineering. Introduction to engineering as a profession, including opportunities and responsibilities of a career in engineering. Individual learning skills. Two lecture hours a week for one semester. Offered on the pass/fail basis only. May not be counted toward any engineering degree.
- 206C. Supplemental Instruction for Chemistry 304K.** Restricted to engineering students. Development of problem-solving skills in the material covered in Chemistry 304K. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Chemistry 304K.
- 206D. Supplemental Instruction for Chemistry 301.** Restricted to engineering students. Development of problem-solving skills in the material covered in Chemistry 301. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Chemistry 301.
- 206E. Supplemental Instruction for Chemistry 302.** Restricted to engineering students. Development of problem-solving skills in the material covered in Chemistry 302. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Chemistry 302.
- 207C. Supplemental Instruction for Mathematics 408C.** Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 408C. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408C.
- 207D. Supplemental Instruction for Mathematics 408D.** Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 408D. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408D.
- 207E. Supplemental Instruction for Mathematics 340L.** Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 340L. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 340L.
- 207G. Supplemental Instruction for Mathematics 305G.** Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 305G. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 305G.
- 207K. Supplemental Instruction for Mathematics 427K.** Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 427K. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 427K.
- 207L. Supplemental Instruction for Mathematics 427L.** Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 427L. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 427L.
- 207R. Supplemental Instruction for Mathematics 408K.** Restricted to engineering students. Four lecture hours a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408K.
- 207S. Supplemental Instruction for Mathematics 408L.** Restricted to engineering students. Four lecture hours a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408L.

- 207T. Supplemental Instruction for Mathematics 408M.** Restricted to engineering students. Four lecture hours a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408M.
- 208C. Supplemental Instruction for Physics 306.** Restricted to engineering students. Development of problem-solving skills in the material covered in Physics 306. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Physics 306.
- 208K. Supplemental Instruction for Physics 303K.** Restricted to engineering students. Development of problem-solving skills in the material covered in Physics 303K. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Physics 303K.
- 208L. Supplemental Instruction for Physics 303L.** Restricted to engineering students. Development of problem-solving skills in the material covered in Physics 303L. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Physics 303L.
- 212. Supplemental Instruction for Electrical Engineering 312.** Restricted to engineering students. Development of problem-solving skills in the material covered in Electrical Engineering 312. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Electrical Engineering 312.
- 118C, 218C, 318C. Forum Seminar Series.** Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320C. Connecting Research Experience.** Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Upper-division standing and admission to the Connexus Bridging Disciplines Program.
- 222. Topics in Professional Development.** Restricted to engineering students. Small-group seminar involving reading, discussion, and oral reports. Two lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the pass/fail basis only.
- 160, 260, 360. Service Learning for Engineers.** Supervised participation in a service-learning project that helps meet a community need. Individual instruction. May be repeated for credit when the projects vary. With approval of the student's major department, may be counted toward an engineering degree. Prerequisite: Consent of instructor.
- 370H. Engineering Entrepreneurship.** Principles of engineering entrepreneurship, including legal aspects and the ethics of practice. Three lecture hours a week for one semester. Prerequisite: Admission to an appropriate major sequence in engineering and to the Engineering Honors Program.
- 279K. Undergraduate Research Experience.** Restricted to undergraduate students in the Graduates Linking with Undergraduates in Engineering (GLUE) program. Directed study or research in a selected area of engineering. One lecture hour and three laboratory hours a week for one semester. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: A major in engineering and a University grade point average of at least 3.00.
- 279L. Women in Engineering Leadership Seminar.** Restricted to engineering students. Lectures, discussions, and exercises related to various leadership issues. Two lecture hours a week for one semester. Offered on the pass/fail basis only.
- 079M. Undergraduate Research Experience.** Restricted to undergraduate students in the Equal Opportunity in Engineering Program. One lecture hour a week for one semester. Prerequisite: A major in engineering and a University grade point average of at least 3.00.

DEPARTMENT OF AEROSPACE ENGINEERING AND ENGINEERING MECHANICS

Students should note that all prerequisite courses for the following courses must be completed on the letter-grade basis with a grade of at least C-.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

AEROSPACE ENGINEERING: ASE

LOWER-DIVISION COURSES

- 201. Introduction to Computer Programming.** Fundamentals of programming in MATLAB. Designed for students who have not taken a computer programming class and who intend to take Aerospace Engineering 311. Two lecture hours a week for one semester. May not be counted as an aerospace engineering course for the Bachelor of Science in Aerospace Engineering.

- 102. Introduction to Aerospace Engineering.** Introduction to engineering analysis and design; introduction to aerodynamics, propulsion, flight mechanics, structural analysis, and orbital mechanics. One lecture hour a week for one semester. Prerequisite: Mathematics 408C or 408K with a grade of at least C-, and credit for high school physics.
- 311. Engineering Computation.** Numerical methods and applications to aerospace engineering problems. May include linear algebra, curve fitting, statistics, integration, and differentiation. Students use MATLAB. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-. Previous programming experience is recommended.

UPPER-DIVISION COURSES

- 320. Low-Speed Aerodynamics.** Fundamental concepts, fluid statics; integral and differential analysis; detailed analysis of inviscid, incompressible flows; aerodynamics of airfoils and wings. Three lecture hours a week for one semester. Prerequisite: Mathematics 427L and Mechanical Engineering 320 with a grade of at least C- in each.
- 120K. Low-Speed Aerodynamics Laboratory.** Wind tunnel and water channel experiments at subsonic speeds; use of instrumentation and written reports. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Aerospace Engineering 320; Aerospace Engineering 333T (or another approved engineering communication course) with a grade of at least C-; and Mathematics 427L with a grade of at least C-.
- 321K. Structural Analysis.** Analysis of aerospace structural systems, with emphasis on matrix methods. Three lecture hours a week for one semester, with discussion hours to be arranged. Prerequisite: Aerospace Engineering 311 and Engineering Mechanics 319 with a grade of at least C- in each.
- 324L. Aerospace Materials Laboratory.** Study of the deformation and fracture behavior of materials used in aerospace vehicles. Structure-property relations, methods of characterizing material behavior, use of properties in the design process. Case histories. Written reports. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Engineering Mechanics 319 with a grade of at least C-.
- 325L. Cooperative Engineering.** This course covers the work period of aerospace engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. May be repeated for credit. The student must complete Aerospace Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Aerospace Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Aerospace Engineering 325LY and appointment for a full-time cooperative work tour.
- 225M. Cooperative Engineering.** This course covers the work period of aerospace engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Aerospace Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Aerospace Engineering 225MA and appointment for a full-time cooperative work tour.
- 125N. Cooperative Engineering.** This course covers the work period of aerospace engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Aerospace Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.
- 128. Aerospace Engineering Projects Laboratory.** Directed work on an organized student project in aerospace engineering or engineering mechanics. The equivalent of one lecture hour a week for one semester. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: At least fifteen semester hours of coursework, a University grade point average of at least 2.50, preparation of a laboratory participation log, and approval by both the faculty member directing the student project and the undergraduate adviser.
- 330M. Linear System Analysis.** Fundamentals of signals and systems; convolution; Laplace transforms; response of linear, time-invariant systems to standard inputs; frequency response methods; time-domain analysis; introduction to control systems. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 311M and Mathematics 427K with a grade of at least C- in each.
- 333T. Engineering Communication.** Open only to aerospace engineering majors. Technical communication skills for engineers: written and oral reports; individual and collaborative composition; online and traditional research; editing techniques; document design for electronic and hard copy. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306 or the equivalent with a grade of at least C-.
- 339. Advanced Strength of Materials.** Same as Engineering Mechanics 339. Curved beams, shear deformation, beam columns, beams on elastic foundations; inelastic behavior of members; elementary plate bending. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 319 with a grade of at least C-.
- 346. Viscous Fluid Flow.** Navier-Stokes equations, laminar and turbulent boundary layers, transition, effects of pressure gradients and compressibility. Three lecture hours a week for one semester. Aerospace Engineering 346 and 379L (Topic 5: *Viscous Fluid Flow*) may not both be counted. Prerequisite: Aerospace Engineering 320 and Mechanical Engineering 320 with a grade of at least C- in each.

- 347. Introduction to Computational Fluid Dynamics.** Development and implementation of finite-difference schemes for numerical solution of subsonic, transonic, and supersonic flows. Emphasis on convection and diffusion equations of fluid dynamics. Evaluation of accuracy, stability, and efficiency. Three lecture hours a week for one semester. Aerospace Engineering 347 and Mechanical Engineering 369L may not both be counted. Prerequisite: Aerospace Engineering 311 and 320 with a grade of at least C- in each.
- 355. Aeroelasticity.** Studies static aeroelastic phenomena; wing torsional divergence, control reversal, effect of wing sweep, flexibility effects on aircraft stability and control, and design implications; dynamic aeroelasticity; and galloping of transmission lines, flutter, and unsteady aerodynamics. Includes an introduction to experimental aeroelasticity. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 321K and 330M with a grade of at least C- in each.
- 357. Mechanics of Composite Materials.** Anisotropic constitutive relationships, lamination theory, failure theories, micromechanical behavior of laminates; laminated composite plates—bending, vibration, and buckling; composite fabrication, sandwich and other composite lightweight structures. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 321K with a grade of at least C-.
- 361K. Aircraft Design I.** Conceptual design of an aircraft to meet a mission specification. Includes estimation of weight, cost from payload, and range requirements; selection of configuration; preliminary sizing of wing, fuselage, and tail/canard; aerodynamic design of wing and tail; weight and balance; and performance estimation. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 367K with a grade of at least C-, and credit with a grade of at least C- or registration for Aerospace Engineering 364 and 376K.
- 361L. Aircraft Design II.** Preliminary design of an aircraft from a conceptual design to satisfy a given set of requirements. Includes preliminary structural design; detailed estimates of weight, balance, and performance; and satisfaction of stability, control, and handling quality requirements. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 321K and 361K with a grade of at least C- in each, and credit with a grade of at least C- or registration for Aerospace Engineering 324L and 370L.
- 362K. Compressible Flow.** Studies shock and expansion waves, quasi-one-dimensional flow, converging-diverging nozzles, diffusers, wind tunnel operation, linearized flow, and compressibility effects on aerodynamics of airfoils and bodies. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 320 with a grade of at least C-.
- 162M. High-Speed Aerodynamics Laboratory.** Experiments using a variable-Mach number supersonic wind tunnel and ballistics range. Studies aerodynamics of blunt bodies and simple airfoils in supersonic flow. Three laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 362K with a grade of at least C-.
- 363L. History of Space Flight.** History and principles of space flight from early Chinese rocket experiments to Apollo 17 and the Space Shuttle; technological benefits from the space program and future space projects. Three lecture hours a week for one semester. May not be counted as an aerospace engineering course for the Bachelor of Science in Aerospace Engineering; may not be counted as a technical elective, a technical area course, or an engineering elective for any engineering degree. Prerequisite: Upper-division standing or consent of instructor.
- 364. Applied Aerodynamics.** Detailed analysis of aerodynamics of compressible and incompressible flows about wings and airfoils; wing and airfoil parameters and force and moment coefficients; and thin-airfoil theory, lifting-line theory, panel methods, high-lift devices, delta wings, transonic flows, and supersonic flows over wings. Three lecture hours a week for one semester. Aerospace Engineering 364 and 379L (Topic: *Airfoil and Wing Design Theory*) may not both be counted. Prerequisite: Aerospace Engineering 362K with a grade of at least C-, and credit with a grade of at least C- or registration for Aerospace Engineering 361K and 162M.
- 365. Structural Dynamics.** Analysis of discrete and continuous vibrating systems; deriving equations of motion; determining response; and natural frequencies and modes of vibration. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 330M with a grade of at least C-.
- 366K. Spacecraft Dynamics.** Basic satellite and spacecraft motion, orbital elements, coordinate systems and transformations; basic three-dimensional spacecraft attitude dynamics. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 311M and Mathematics 427K with a grade of at least C- in each.
- 366L. Applied Orbital Mechanics.** Selected topics in satellite motion and satellite applications, orbital coordinate systems, time, rendezvous and intercept, interplanetary trajectories, perturbing forces and perturbed trajectories. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-.
- 166M. Spacecraft Systems Laboratory.** Overview of spacecraft subsystems, mission design program library, numerical techniques, mission planning references, mission constraints, and mission design projects. Includes written reports. Three laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-, and credit with a grade of at least C- or registration for Aerospace Engineering 374K.
- 367K. Flight Dynamics.** Equations of motion for rigid aircraft; aircraft performance, weight and balance, static stability and control, and dynamic stability; design implications. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 320 and 330M with a grade of at least C- in each.
- 167M. Flight Dynamics Laboratory.** Introduction to flight testing; instrumentation and methodology; performance testing. Computer modeling and dynamic simulation of aircraft motion; aircraft sizing. Written reports. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Aerospace Engineering 367K.

- 269K. Measurements and Instrumentation.** Introduction to the instrumentation used in structural analysis, including linear variable displacement transducers (LVDTs), strain gauges, piezoelectric force sensors, accelerometers, and other sensors. Studies various methods of experimental design and data acquisition. Students explore the response of different aerospace structures through hands-on laboratory experiments. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Engineering Mechanics 319 and Mechanical Engineering 340 with a grade of at least C- in each.
- 370L. Flight Control Systems.** Fundamentals of linear control analysis and design for single-input, single-output systems; stability and performance measures; Routh Hurwitz analysis; root locus methods; frequency response (Bode and Nyquist); introduction to full-state feedback. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Aerospace Engineering 367K.
- 170P. Controls Laboratory.** Three laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 370L with a grade of at least C-.
- 372K. Attitude Dynamics.** Studies attitude representations, rotational kinematics, rigid-body dynamics, sensors and actuators, attitude determination, and passive and active attitude control systems. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-.
- 372L. Satellite Applications.** Classical and modern orbit determination, remote sensors and their outputs, pattern recognition, image enhancement, satellite data analysis projects. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-.
- 372N. Satellite-Based Navigation.** Satellite-based navigation systems, with focus on the Global Positioning System (GPS), ground and space segments, navigation receivers, satellite signal coordinate/time systems, denial of signal, differential techniques, GPS data analysis. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-.
- 374K. Space Systems Engineering Design.** Restricted to aerospace engineering majors. Introduction to systems engineering: the systems engineering process, requirements, design fundamentals, trade studies, cost and risk analyses, integration, technical reviews, case studies, and ethics. Includes written reports. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-, and credit with a grade of at least C- or registration for Aerospace Engineering 366L and 166M.
- 374L. Spacecraft/Mission Design.** Spacecraft systems characteristics, mission requirements, sensors, and consumables analyses; and mission phases, request for proposal, problem definition, ideation, proposal preparation, conceptual design review, preliminary design development and review, and design report preparation. Includes written reports. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 366K, 166M, and 374K with a grade of at least C- in each, and credit with a grade of at least C- or registration for Aerospace Engineering 376K.
- 376K. Propulsion.** Review of control volume analysis and quasi-one-dimensional compressible flow. Analysis and design of rocket nozzles and air-breathing engines, including performance and cycle analysis; the flow in nozzles, diffusers, compressors, and turbines; and combustion chamber processes and propellants. Includes an introduction to chemical and electric rocket propulsion. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 362K with a grade of at least C-.
- 679H. Undergraduate Honors Thesis.** Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a Bachelor of Science in Engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Aerospace Engineering 679HA and enrollment in the Engineering Honors Program.
- 179K, 279K, 379K. Research in Aerospace Engineering.** Directed study or research in a selected area of aerospace engineering. One, two, or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, a University grade point average of at least 3.00, selection of project, and consent of the faculty member directing project and the undergraduate adviser.
- 379L. Studies in Aerospace Engineering.** Courses on current topics in aerospace engineering. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Selected Topics in Fluid Mechanics.** Three lecture hours a week for one semester.
- Topic 2: Selected Topics in Structural Mechanics.** Three lecture hours a week for one semester.
- Topic 3: Selected Topics in Flight Mechanics.** Three lecture hours a week for one semester.
- Topic 4: Selected Topics in Orbital Mechanics.** Three lecture hours a week for one semester.
- Topic 9: Selected Topics in Controls.** Three lecture hours a week for one semester.
- 179R. Research Seminar.** Designed for students who plan to pursue a substantial research project or undergraduate honors thesis in aerospace engineering. Department faculty present information and lead discussions about their current research projects so that students can learn about available research opportunities. One lecture hour a week for one semester. Offered on the pass/fail basis only. May not be repeated for credit. Prerequisite: Completion of at least twenty-four semester hours of coursework and a University grade point average of at least 3.50.

ENGINEERING MECHANICS: E M

LOWER-DIVISION COURSES

- 306 (TCCN: ENGR 2301). Statics.** Vector algebra, force systems, free-body diagrams; engineering applications of equilibrium, including frames, friction, distributed loads; centroids, moments of inertia. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 408D or 408L, and credit with a grade of at least C- or registration for Physics 303K.
- 311M (TCCN: ENGR 2302). Dynamics.** Two- and three-dimensional kinematics and dynamics, applied to a broad class of engineering problems. Three lecture hours a week for one semester, with discussion hours if necessary. Prerequisite: Engineering Mechanics 306, Mathematics 408D or 408M, and Physics 303K with a grade of at least C- in each.
- 319 (TCCN: ENGR 2332). Mechanics of Solids.** Internal forces and deformations in solids; stress and strain in elastic and plastic solids; application to simple engineering problems. Three lecture hours a week for one semester, with discussion hours if necessary. Prerequisite: Engineering Mechanics 306, Mathematics 408D or 408M, and Physics 303K with a grade of at least C- in each.

UPPER-DIVISION COURSES

- 339. Advanced Strength of Materials.** Same as Aerospace Engineering 339. Curved beams, shear deformation, beam columns, beams on elastic foundations; inelastic behavior of members; elementary plate bending. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 319 with a grade of at least C-.
- 360. Studies in Engineering Mechanics.** Advanced work in the various areas of engineering mechanics, based on recent developments. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing in engineering and consent of instructor.
- Topic 4: Theory of Material Science.**
Topic 13: Applications of Finite Element Methods.

DEPARTMENT OF BIOMEDICAL ENGINEERING**BIOMEDICAL ENGINEERING: BME**

LOWER-DIVISION COURSES

- 301. World Health and Biotechnology.** Overview of contemporary technological advances to improve human health. Introduction to major human health problems, the engineering method as applied to medical technologies, and legal and ethical issues involved with the development of new medical technologies. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Biomedical Engineering.
- 102. Introduction to Biomedical Engineering.** Restricted to biomedical engineering majors. Examines the engineering method as applied to medical technologies used to improve human health. Two lecture hours a week for eight weeks.
- 102L. Introduction to Biomedical Engineering Design Principles.** Restricted to biomedical engineering majors. Introduction to concepts of creative design, engineering analysis, reverse engineering, concept selection, and fabrication of biomedical engineering devices. Three laboratory hours a week for one semester.
- 303. Introduction to Computing.** Restricted to biomedical engineering majors. Introduction to computing and programming, focusing on arithmetic and logic operations, processor architecture, and programming structures. Programming skills for solving problems using machine and assembly language programming. Emphasis is on biomedical engineering applications of computing. Three lecture hours and two recitation hours a week for one semester.
- 311. Network Analysis in Biomedical Engineering.** Restricted to biomedical engineering majors. Linear analysis and design of systems for biomedical engineering; steady-state response to signals; simple transient response, nodal and loop analysis; Bode plots; Fourier and Laplace transforms; operational amplifiers. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Electrical Engineering 312, Physics 303K, and credit or registration for Mathematics 427K.
- 313. Numerical Methods and Modeling in Biomedical Engineering.** Restricted to biomedical engineering majors. Principles and techniques of numerical analysis of biomedical engineering problems using high-level programming languages such as C++, Java, MATLAB, and LabVIEW. Numerical methods of integration, differentiation, interpolation, curve fitting, data analysis, sampling and estimation, error analysis, and analysis of ordinary differential equations. Numerical modeling of biomedical engineering systems, symbolic computation and scientific visualization, and integration of hardware and software. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 303 and Mathematics 408C.

- 113L. Introduction to Numerical Methods in Biomedical Engineering.** Restricted to biomedical engineering majors. Introduces principles and techniques of numerical analysis of biomedical engineering problems. Covers numerical methods of integration, differentiation, interpolation, curve fitting, data analysis, sampling and estimation, error analysis, analysis of ordinary differential equations, numerical modeling of biomedical engineering systems, symbolic computation, and scientific visualization. One lecture hour and one laboratory hour a week for one semester. Prerequisite: Biomedical Engineering 314, Electrical Engineering 312, Mathematics 427K, and credit or registration for Biomedical Engineering 311 and 335.
- 314. Engineering Foundations of Biomedical Engineering.** Application of engineering and mathematics to analysis and constructive manipulation of biological systems and the development of biomedical therapies. Includes physiological mass and momentum transfer; biomechanics; structure, properties, and behavior of biological materials; electrophysiology and linear circuits; and biomedical imaging. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Biology 311C (or 211 and 212), Chemistry 302, Physics 303K and 103M, and credit or registration for Biomedical Engineering 102, Mathematics 427K, Physics 303L, and 103N.

UPPER-DIVISION COURSES

- 221. Measurement and Instrumentation Laboratory.** Restricted to biomedical engineering majors. Introduction to the basics of assembling and using instrumentation for the purposes of recording and displaying electrophysiological signals. Mechanical, chemical, and biological principles for biomedical instrumentation. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 311, 113L, 314, and 333T.
- 325L. Cooperative Engineering.** Restricted to biomedical engineering majors. This course covers the work period of biomedical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Biomedical Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Biomedical Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Biomedical Engineering 325LY and appointment for a full-time cooperative work tour.
- 225M. Cooperative Engineering.** This course covers the work period of biomedical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Biomedical Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Biomedical Engineering 225MA and appointment for a full-time cooperative work tour.
- 125N. Cooperative Engineering.** This course covers the work period of biomedical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Biomedical Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.
- 333T. Engineering Communication.** Restricted to biomedical engineering majors. Advanced communication skills for engineers, with emphasis on biomedical engineering topics. Strategies for written, visual, and interpersonal communication, and for oral presentation. Introduction to library research and to ethical decision making in biomedical engineering. Three lecture hours and one recitation hour a week for one semester. Prerequisite: Rhetoric and Writing 306 and credit or registration for Biomedical Engineering 314.
- 335. Engineering Probability and Statistics.** Restricted to biomedical engineering majors. Fundamentals of probability, random processes, and statistics with emphasis on biomedical engineering applications. Includes hypothesis testing, regression, and sample size calculations. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Electrical Engineering 312 and Mathematics 408D.
- 339. Biochemical Engineering.** Restricted to biomedical engineering majors. Principles of fermentation and cell culture technologies; introduction to recombinant DNA technology and protein expression; the development of therapeutics, vaccines, and diagnostics using genetic engineering. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 335, Biomedical Engineering 339, Chemical Engineering 339, 379 (Topic: *Introduction to Biochemical Engineering*). Prerequisite: Biology 311C (or 211 and 212); Chemistry 353 or 353M, and Chemistry 339K or 369.
- 341. Tools for Computational Biomolecular Engineering.** Covers technologies, such as DNA microarray, for high throughput acquisition of molecular biological data; databases generated by international consortia; mathematical analysis and modeling of data using signal processing, numerical computation, and information systems; and predictions made by analyses and their applications in biology and medicine. Four laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 113L, Electrical Engineering 360C, and Mathematics 427K; or consent of instructor.
- 342. Computational Biomechanics.** Introduction to computational modeling and simulation of musculoskeletal systems, with emphasis on lumped-parameter models of muscle, bone, tendon, and ligament. Three lecture hours a week for one semester. Prerequisite: Computer Science 323E, Mathematics 340L, and Physics 303K and 103M.

- 343. Biomedical Engineering Signal and Systems Analysis.** Restricted to biomedical engineering majors. Signals and systems representation; sampling and quantization; time and frequency domains; Laplace and z-transforms, transfer functions, and frequency response; two-port networks; Bode plots; convolution; stability; Fourier series; Fourier transform; AM/FM modulation; filter design; and applications in biomedical engineering. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 311, 314, and Mathematics 427K.
- 345. Graphics and Visualization Laboratory.** Restricted to biomedical engineering majors. Introduction to techniques for graphical display of biological data. Topics include transformations, geometric modeling, and two- and three-dimensional display algorithms. Includes computational projects with biomedical applications. Four laboratory hours a week for one semester. Prerequisite: Computer Science 323E, Electrical Engineering 422C (or 322C), and Mathematics 340L.
- 346. Computational Biomolecular Engineering.** Introduction to computational structural biology and molecular modeling, including the fundamentals of biomolecular structure and molecular thermodynamics. The principles and applications of biomolecular modeling used to explore the critical relationship between structure, function, and thermodynamic driving forces in molecular biology. Two lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Biology 311C (or 211 and 212), Biomedical Engineering 113L, Chemistry 353 or 353M, and Computer Science 323E.
- 348. Modeling of Biomedical Engineering Systems.** Restricted to biomedical engineering majors. Lumped and distributed models of physiological system function from molecular through organismal levels. Linear system steady-state and transient behaviors. Interactions among multiple energy domains, including electrical, chemical, diffusional, mechanical, fluid, and thermal. Introduction to feedback control. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 311, 113L, and 314, and Mathematics 427K.
- 251. Biomedical Image, Signal, and Transport Process Laboratory.** Restricted to biomedical engineering majors. Processing and analysis of signals and images recorded from human studies or models. Lab projects are drawn from image digitization and reconstruction, mechanical studies conducted by students, and transport models. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 221 and Mathematics 427K.
- 352. Engineering Biomaterials.** Restricted to biomedical engineering majors. Overview of properties of metallic, ceramic, polymeric, and composite biomaterials used in biomedical applications. Material synthesis and processing. Analysis of mechanical and chemical properties, including stress-strain. Material interactions with the body and blood. Soft and hard biomaterials applications. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 314 and Chemical Engineering 350.
- 353. Transport Phenomena in Living Systems.** Restricted to biomedical engineering majors. Modeling and analysis of momentum, energy, and mass transport in living systems. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 113L, 314, Chemistry 353 or 353M, and Mathematics 427K.
- 354. Molecular Sensors and Nanodevices for Biomedical Engineering Applications.** Introduction to major types of molecular sensor systems, device miniaturization, and detection mechanisms, including molecular capture mechanisms; electrical, optical, and mechanical transducers; micro-array analysis of biomolecules; semiconductor and metal nanosensors; microfluidic systems; and microelectromechanical systems (MEMS) fabrication and applications for biomedical engineering. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 314 and Chemical Engineering 350.
- 357. Biomedical Imaging Modalities.** Introduction to major biomedical imaging modalities, including X-ray radiography, computed tomography (CT), nuclear medicine (SPECT and PET), magnetic resonance imaging (MRI), and ultrasound. Emphasis on principles, approaches, and applications of each imaging modality. Basic physics and imaging equations of the imaging system; hardware and software; sources of noise and primary artifacts; safety and patient risk. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 348 and 251.
- 365R. Quantitative Engineering Physiology I.** Restricted to biomedical engineering majors. Vertebrate systems physiology: basic cellular physiology, electrophysiology of nerve and muscle, the motor system, the central nervous system, and the cardiovascular system. Focuses on a quantitative, model-oriented approach to physiological systems. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Biology 205L or 206L, Biomedical Engineering 311 and 314, Chemistry 339K or 369, Mathematics 427K, and Physics 303L and 103N.
- 365S. Quantitative Engineering Physiology II.** Restricted to biomedical engineering majors. Biological control systems: sensory, renal, respiratory, and immune systems. Focuses on a quantitative, model-oriented approach to physiological systems. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Biomedical Engineering 365R.
- 370. Principles of Engineering Design.** Restricted to biomedical engineering majors. Structured methodologies for designing systems or to interface with living systems. Creative design, analysis, selection, development, and fabrication of biomedical components and systems. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 348, 251, and 365S.
- 371. Biomedical Engineering Design Project.** Restricted to biomedical engineering majors. Development of team projects in biomedical engineering with emphasis on prototype development and quantitative analysis, and written and oral reporting of the outcome. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 335 and 370.

- 374K. Biomedical Electronics.** Restricted to biomedical engineering, electrical engineering, or mechanical engineering majors. Application of electrical engineering techniques to analysis and instrumentation in the biological sciences. Includes pressure, flow, and temperature measurement; bioelectric signals; pacemakers; ultrasonics; electrical safety; electrotherapeutics; and lasers. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 311 and Electrical Engineering 438, or Electrical Engineering 313 and 438.
- 374L. Applications of Biomedical Engineering Laboratory.** Restricted to biomedical engineering, electrical engineering, or mechanical engineering majors. An in-depth examination of selected topics in biomedical engineering, including optical and thermal properties of laser interaction with tissue; measurement of perfusion in the microvascular system; diagnostic imaging; interaction of living systems with electromagnetic fields; robotic surgical tools; ophthalmic instrumentation; and noninvasive cardiovascular measurements. Students have the opportunity to design analog and digital measurements and acquire and process meaningful biomedical signals. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 374K or Electrical Engineering 374K.
- 376. Cell Engineering.** Introduction to principles that govern the structure, organization, and processes at cellular and subcellular levels. Special focus on engineering and quantitative aspects of cellular machinery. Employs engineering approaches to study receptors, macromolecular complexes, and cellular signaling; clinical and pharmaceutical approaches to perturb cellular structure and function for disease prevention and drug design. State-of-the-art experimental and computational techniques to study cellular engineering. Three lecture hours a week for one semester. Prerequisite: Biology 311C (or 211 and 212), Biomedical Engineering 314, Chemical Engineering 350, and Mathematics 408C.
- 177, 277, 377. Undergraduate Research Project.** Restricted to biomedical engineering majors. Recommended for students considering graduate study. Topic is selected in conjunction with a faculty member in the Department of Biomedical Engineering or in another approved University department. A final written report or the equivalent is required. Three, six, or nine laboratory hours a week for one semester.
- 377M. Medical Internship.** Restricted to biomedical engineering majors. Designed for students considering medical school. Students participate in a variety of medical and clinical activities, including clinical inpatient rounds, outpatient visits, operating room procedures, and medical grand rounds. The equivalent of three lecture hours a week for one semester.
- 377P. Integrated Clinical Research Internship.** Restricted to biomedical engineering majors. Students perform integrated clinical research at the University of Texas M.D. Anderson Cancer Center and the University of Texas Health Science Center at Houston. Requires a substantial final report. The equivalent of three lecture hours a week for one semester.
- 377Q. Integrated Clinical Medical Internship.** Restricted to biomedical engineering majors. Students work with physicians at either the University of Texas M.D. Anderson Cancer Center or the University of Texas Health Science Center at Houston and participate in a variety of clinical routines. Requires a substantial final report. The equivalent of three lecture hours a week for one semester.
- 377R. Research Internship.** Restricted to biomedical engineering majors. Students perform biomedical research with a faculty member at an approved institution. Requires a substantial final report. The equivalent of three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 333T and 348.
- 377S. Industrial Internship.** Restricted to biomedical engineering majors. Students conduct research in biomedical companies in Texas and nationwide. Research may include development, management, business administration, and other topics. Requires a substantial final report. The equivalent of three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 333T and 348.
- 177T, 277T, 377T. Topics in Biomedical Engineering.** Restricted to biomedical engineering majors. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 678. Undergraduate Thesis in Biomedical Engineering.** Restricted to biomedical engineering majors. Research performed during two consecutive semesters under the supervision of a biomedical engineering faculty member or other approved faculty member; topics are selected jointly by the student and faculty member. The student provides a progress report at the end of the first semester and writes a thesis and gives an oral presentation at the end of the second semester. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a Bachelor of Science in Biomedical Engineering may use this course to fulfill the thesis requirements for the Bachelor of Arts, Plan II. Prerequisite: For 678A, admission to the major sequence in biomedical engineering and a University grade point average of at least 3.50; for 678B, a University grade point average of at least 3.50 and Biomedical Engineering 678A.
- 379. Tissue Engineering.** Restricted to biomedical engineering majors. Introduction to biomedical research in tissue engineering. Includes case studies of tissues and organs of the body, physiology and biology of tissue, pathologies of tissue, current clinical treatments, the role of engineers in development of new technologies to diagnose and treat pathologies, quantitative cellular and molecular techniques, and applications of synthetic and natural biomaterials. Three lecture hours a week for one semester. Only one of the following may be counted: Biomedical Engineering 379, Chemical Engineering 339T, 379 (Topic: *Cell and Tissue Engineering*). Prerequisite: Biology 311C (or 211 and 212), and Biomedical Engineering 352 and 365S.

679H. Undergraduate Honors Thesis. Restricted to biomedical engineering majors. Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Biomedical Engineering 679HA and enrollment in the Engineering Honors Program.

DEPARTMENT OF CHEMICAL ENGINEERING

CHEMICAL ENGINEERING: CHE

LOWER-DIVISION COURSES

- 102. Introduction to Chemical Engineering.** Enrollment limited to freshmen. Introduction to chemical engineering, including problem solving and study skills. Opportunities and responsibilities of a career in chemical engineering. One lecture hour and one recitation hour a week for one semester. Offered on the pass/fail basis only. May not be counted toward any engineering degree.
- 210. Introduction to Computing.** Computer programming focusing on basics of computing, high-level programming environments, and spreadsheets, with application to chemical engineering. Two lecture hours and one laboratory hour a week for one semester. Chemical engineering majors must make a grade of at least C in this course. Prerequisite: A major in chemical engineering or consent of instructor.
- 311. Engineering Sustainable Technologies.** Flows of materials and energy in engineering environments at local, regional, and global scales, and the interaction of those anthropogenic flows with natural cycles of materials and energy. Discusses biogeochemical flows (grand cycles) and anthropogenic material flows at the national level, in industrial sectors, and for consumer products. Three lecture hours a week for one semester. Prerequisite: A high school course in chemistry and experience with Internet searches.
- 317. Introduction to Chemical Engineering Analysis.** Principles and applications of material and energy balances in process analysis. Three lecture hours and one or two recitation hours a week for one semester. Chemical engineering majors must make a grade of at least C in this course in order to take upper-division courses in chemical engineering. Prerequisite: Chemical Engineering 210, Chemistry 302, and Mathematics 408D with a grade of at least C in each.

UPPER-DIVISION COURSES

- 322. Thermodynamics.** Introductory course in thermodynamics with special reference to chemical process applications: basic laws, thermodynamic properties of single component systems, expansion and compression of fluids, heat engines, multicomponent systems, physical equilibrium, chemical equilibrium. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C in this course. Prerequisite: Chemical Engineering 210 and 317 with a grade of at least C in each, Mathematics 427K, and Chemistry 353.
- 322M. Molecular Thermodynamics.** Statistical and molecular concepts, especially the role of the microscopic chemical potential. Three lecture hours a week for one semester. Chemical Engineering 322M and 379 (Topic: *Molecular Thermodynamics*) may not both be counted. Prerequisite: Upper-division standing, Chemical Engineering 322 or the equivalent, and admission to an appropriate major sequence in engineering or consent of the department.
- 323. Chemical Engineering for Microelectronics.** Definition and description of the terminology and processes of microelectronics. Introduction to semiconductor fundamentals, crystal structure, and facilities and chemical processes for integrated circuit manufacture. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Chemistry 318M or 310M, and 318N or 310N, and admission to an appropriate major sequence in engineering or consent of department.
- 325L. Cooperative Engineering.** This course covers the work period of chemical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. May be repeated for credit. The student must complete Chemical Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Chemical Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Chemical Engineering 325LY and appointment for a full-time cooperative work tour.
- 225M. Cooperative Engineering.** This course covers the work period of chemical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Chemical Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Chemical Engineering 225MA and appointment for a full-time cooperative work tour.
- 125N. Cooperative Engineering.** This course covers the work period of chemical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Chemical Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

- 333T. Engineering Communication.** Advanced technical communication skills, with emphasis on writing strategies for technical documents, oral presentations, and visual aids. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and admission to an appropriate major sequence in engineering.
- 339. Introduction to Biochemical Engineering.** Microorganisms in chemical and biochemical syntheses; genetic manipulation of cells by classical and recombinant DNA techniques. Enzyme technology; design of bioreactors and microbial fermentations; separations of biological products. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 335, Biomedical Engineering 339, Chemical Engineering 339, 379 (Topic: *Introduction to Biochemical Engineering*). Prerequisite: Upper-division standing; Biology 311C and Chemistry 353; and admission to an appropriate major sequence in engineering or consent of the undergraduate faculty adviser.
- 339P. Introduction to Biological Physics.** Diffusion, dissipation, and driving forces in cellular processes. Locomotion of bacteria, basic modeling of biomolecular folding and binding events, osmotic flows, and self-assembly in cells. Three lecture hours a week for one semester. Chemical Engineering 339P and 379 (Topic: *Molecular Driving Force in Biology*) may not both be counted. Prerequisite: Chemical Engineering 322, 353, and 253K with a grade of at least C in each, or consent of the department.
- 339T. Cell and Tissue Engineering.** Introduction to biomedical research in tissue engineering. Includes case studies of tissues and organs of the body, physiology and biology of tissue, pathologies of tissue, current clinical treatments, the role of engineers in development of new technologies to diagnose and treat pathologies, quantitative cellular and molecular techniques, and applications of synthetic and natural biomaterials. Three lecture hours a week for one semester. Only one of the following may be counted: Biomedical Engineering 379, Chemical Engineering 339T, 379 (Topic: *Cell and Tissue Engineering*). Prerequisite: Biology 311C and Chemical Engineering 350.
- 341. Design for Environment.** Overview of environmental assessment tools for chemical processes and products, including life cycle and risk assessments. Overview of design tools for improving environmental performance of chemical processes, including unit operations and flowsheet analysis methods. Three lecture hours a week for one semester. Only one of the following may be counted: Chemical Engineering 341, 384 (Topic: *Design for Environment*), 395K. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.
- 342. Chemical Engineering Economics and Business Analysis.** Study of the economic decisions faced by chemical engineers. Discounted cash flow techniques. Personal finance, managerial economics, and other special topics. Three lecture hours a week for one semester. Only one of the following may be counted: Chemical Engineering 342, 384 (Topic: *Chemical Engineering Economics and Business Analysis*), 395G. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.
- 348. Numerical Methods in Chemical Engineering and Problem Solving.** Numerical solutions to algebraic and differential equations; numerical methods to integration, interpolation, and regression analysis, with application to chemical engineering. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C in this course. Prerequisite: Chemical Engineering 210 and 317 and Mathematics 427K with a grade of at least C in each.
- 350. Chemical Engineering Materials.** Metallic, ceramic, polymeric, and composite materials. Crystal structures, phase diagrams, diffusion, and mechanical properties. Emphasis on structure-property-processing relationships. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Chemistry 353 with a grade of at least C, and admission to an appropriate major sequence in engineering or consent of the department.
- 353. Transport Phenomena.** Basic study of momentum, energy and mass transport; includes viscous and turbulent flow; heat transfer and mass diffusion. Three lecture hours and up to two recitation hours a week for one semester. Chemical engineering majors must make a grade of at least C in this course. Prerequisite: Chemical Engineering 317 and Mathematics 427K with a grade of at least C in each.
- 253K. Applied Statistics.** Statistical methods such as probability and probability distribution, statistical inference and analysis of variance, and design of experiments and statistical quality control. Two lecture hours a week for one semester. Chemical engineering majors must make a grade of at least C in this course. Prerequisite: Chemical Engineering 210 and 317 and Mathematics 427K with a grade of at least C in each.
- 253M. Measurement, Control, and Data Analysis Laboratory.** Measurement of process variables in transport phenomena; computer data acquisition and control; statistical analysis of data; laboratory safety. Written reports. Five laboratory hours a week for one semester. Prerequisite: Chemical Engineering 333T, 348, 353, and 253K with a grade of at least C in each.
- 354. Transport Processes.** Design and analysis of heat exchangers, fluid-flow systems and equipment, and interphase-contact devices. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C in this course. Prerequisite: Chemical Engineering 348 and 353 with a grade of at least C in each.
- 355. Introduction to Polymers.** Synthesis, structural characterization, physical properties, and applications of polymers. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Chemical Engineering 322, and admission to an appropriate major sequence in engineering or consent of the department.

- 356. Optimization: Theory and Practice.** Techniques of optimization, including formulation of optimization problems, one-dimensional search techniques, analytical methods, and n-dimensional search techniques; application of methods to process-industry problems. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Chemical Engineering 348 and 353, and admission to an appropriate major sequence in engineering or consent of the department.
- 357. Technology and Its Impact on the Environment.** Study of sources and fates of environmental pollutants; environmental quality standards—their measurement and regulation; and pollution control design procedures. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.
- 359. Energy Technology and Policy.** Technology and policy related to energy supply and demand, oil and gas production, coal utilization, hydrogen production, fuel cells, transportation, nuclear power, solar and wind energy, biomass utilization, energy conservation, and climate change. Three lecture hours a week for one semester. Only one of the following may be counted: Chemical Engineering 359, 379 (Topic: *Energy Technology and Policy*), 384 (Topic: *Energy Technology and Policy*). Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.
- 360. Process Control.** Analysis of process dynamics and methods for the design of automatic control systems for chemical process plants. Three lecture hours and one or two recitation hours a week for one semester. Prerequisite: Chemical Engineering 322, 253M, and 354 with a grade of at least C in each.
- 363. Separation Processes and Mass Transfer.** Design and analysis of equilibrium and mass transfer based on separations such as absorption, chromatography, crystallization, distillation, extraction, and membrane-based processes. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C in this course. Prerequisite: Chemical Engineering 322, 348, and 353 with a grade of at least C in each.
- 264. Chemical Engineering Process and Projects Laboratory.** Experimental studies of unit operations. Laboratory safety. Statistical data analysis. Written and oral reports. Six laboratory hours a week for one semester. Prerequisite: Chemical Engineering 253M and 363 with a grade of at least C in each. Students must register in the undergraduate advising office.
- 372. Chemical Reactor Analysis and Design.** Planning and design of commercial chemical and biochemical reaction systems for producing fuels, polymers, specialty and consumer products, pharmaceuticals, solid-state devices, and other products. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C in this course. Prerequisite: Chemical Engineering 322, 348, and 354 with a grade of at least C in each.
- 473K. Process Design and Operations.** Process design, economics, and safety; design projects representing a variety of industries and products. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Chemical Engineering 354, 363, and 372 with a grade of at least C in each.
- 376K. Process Evaluation and Quality Control.** Use of statistical techniques to evaluate, compare, and optimize processes. Design of experiments for improved product quality control. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.
- 177K, 277K, 377K. Undergraduate Research Project.** Recommended for students considering graduate study. Topic to be selected in conjunction with individual chemical engineering faculty member, with approval by the department chair. A final written report is required. Three, six, or nine laboratory hours a week for one semester. Prerequisite: A grade point average of at least 3.00 in chemical engineering courses. Students must register in the undergraduate advising office.
- 179, 279, 379, 479. Topics in Chemical Engineering.** Special topics of current interest. The equivalent of one, two, three, or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.
- 679H. Undergraduate Honors Thesis.** Research performed during two consecutive semesters under the supervision of a chemical engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the department chair. The student makes two oral presentations and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and the Bachelor of Science in Chemical Engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Chemical Engineering Honors Program; for 679HB, enrollment in the Chemical Engineering Honors Program and credit for Chemical Engineering 679HA.

DEPARTMENT OF CIVIL, ARCHITECTURAL, AND ENVIRONMENTAL ENGINEERING

ARCHITECTURAL ENGINEERING: ARE

LOWER-DIVISION COURSES

- 102. Introduction to Architectural Engineering.** Introduction to architectural engineering as a career by use of case studies. One lecture hour a week for one semester. Offered in the fall semester only. Prerequisite: A major in architectural engineering, civil engineering, or architecture, or consent of instructor.

- 217. Computer-Aided Design and Graphics.** Introduction to procedures in computer-aided design and computer graphics used in producing plans and three-dimensional electronic models associated with building design and construction. Three hours of lecture and laboratory a week for one semester. Prerequisite: Civil Engineering 311K.

UPPER-DIVISION COURSES

- 320K. Introduction to Design I.** Introduction to design principles, concepts, and problem-solving approaches. Issues addressed by a series of two- and three-dimensional studies. Nine laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Credit or registration for Architectural Engineering 217.
- 320L. Introduction to Design II.** Continuation of Architectural Engineering 320K. Focus on building design. Nine laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Architectural Engineering 320K and credit or registration for Architectural Engineering 335.
- 323K. Project Management and Economics.** Solving economic problems related to construction and engineering; construction project management techniques; characteristics of construction organizations, equipment, and methods. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M.
- 325L. Cooperative Engineering.** This course covers the work period of architectural engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. May be repeated for credit. The student must complete Architectural Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Architectural Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Architectural Engineering 325LY and appointment for a full-time cooperative work tour.
- 225M. Cooperative Engineering.** This course covers the work period of architectural engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Architectural Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Architectural Engineering 225MA and appointment for a full-time cooperative work tour.
- 125N. Cooperative Engineering.** This course covers the work period of architectural engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Architectural Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.
- 335. Materials and Methods of Building Construction.** Elements and properties of construction materials and components; fabrication and construction technologies, methods, and processes; engineering systems characteristic of commercial buildings such as foundation, structural, and building envelope systems. Three or four lecture and discussion hours a week for one semester. Prerequisite: Architectural Engineering 320K, Civil Engineering 314K, and admission to the major sequence in architectural engineering.
- 345K. Masonry Engineering.** Behavior and design of masonry with respect to architectural, economic, and structural criteria. Four and one-half hours a week for one semester, including lecture and laboratory. Prerequisite: Civil Engineering 329 and credit or registration for Civil Engineering 331.
- 346N. Building Environmental Systems.** Analysis and design of building air conditioning systems; heating and cooling load calculations, air side systems analysis, air distribution, building electrical requirements, electrical and lighting systems. Three lecture hours a week for one semester. Prerequisite: Physics 303L and 103N, and credit or registration for Mechanical Engineering 320 or 326.
- 346P. HVAC Design.** Design and analysis of heating, ventilation, and cooling systems for buildings. Focus on application of fundamental energy and mass transfer principles to HVAC components. Three lecture hours a week for one semester. Prerequisite: Architectural Engineering 346N, Mechanical Engineering 320 or 326, and Mechanical Engineering 339; or consent of instructor.
- 350. Advanced CAD Procedures.** Introduction to advanced CAD procedures and CAD systems and their influence on building design and construction. Nine laboratory hours a week for one semester. Prerequisite: Architectural Engineering 102 or Civil Engineering 301; Civil Engineering 311K; admission to the major sequence in architectural or civil engineering; and Architectural Engineering 217 or consent of instructor.
- 358. Cost Estimating in Building Construction.** Building construction quantity surveying from plans and specifications, unit prices, lump sum estimates, job sites, overhead, general overhead, and bidding procedures. Two lecture hours and three supervised laboratory hours a week for one semester. Prerequisite: Architectural Engineering 335 and admission to the major sequence in architectural engineering. Experience reading construction blueprints is recommended.
- 362L. Structural Design in Wood.** Engineering properties of wood; design of glued-laminated and lumber structural members, connections, and simple systems; introduction to shear walls and diaphragms. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 329.
- 465. Integrated Design Project.** Design of low-rise buildings, including structural and environmental systems; preparation of contract documents. Six hours a week for one semester, including lecture and laboratory. Prerequisite: Architectural Engineering 217, 320L, 335, and 346N, and Civil Engineering 331 or 335, and 357.

- 366. Contracts, Liability, and Ethics.** Legal aspects of engineering and construction contracts; contract formation, interpretation, rights and duties, and changes; legal liabilities and professional ethics of architects, engineers, and contractors. Two lecture hours and two laboratory hours a week for one semester. Prerequisite: Admission to the major sequence in civil engineering or architectural engineering.
- 370. Design of Energy Efficient and Healthy Buildings.** Design and analysis of building ventilation systems, envelopes and facades, and energy and resource use in energy efficient and healthy buildings. Applies building science principles used to avoid moisture problems, minimize sick-building syndrome symptoms, and reduce energy use. Three lecture hours a week for one semester. Prerequisite: Architectural Engineering 346N, and Mechanical Engineering 320 or 326; or consent of instructor.
- 371. Energy Simulation in Building Design.** Fundamentals of building energy simulations, analytical models for heat transfer in buildings, general numerical methods for solving equations from the analytical models, use of energy simulation tools in building design analysis, and parametric analyses used to study various operational parameters that affect energy use in buildings. Three lecture hours a week for one semester. Prerequisite: Architectural Engineering 346N and Mechanical Engineering 320; or consent of instructor.
- 372. Modeling of Air and Pollutant Flows in Buildings.** Fundamentals of indoor airflow modeling; use of computational fluid dynamics (CFD) for air quality and thermal comfort analyses; application of CFD for analysis of air velocity, temperature, humidity, and contaminant distributions with different ventilation systems. Three lecture hours a week for one semester. Prerequisite: Architectural Engineering 346N, Civil Engineering 319F, or consent of instructor.
- 177K, 277K, 377K. Studies in Architectural Engineering.** Various specified topics or conference course. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Additional hours are required for some topics; these topics are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Some topics are offered on the pass/fail basis only. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 679H. Undergraduate Honors Thesis.** Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Architectural Engineering 679HA and enrollment in the Engineering Honors Program.

CIVIL ENGINEERING: C E

LOWER-DIVISION COURSES

- 301. Civil Engineering Systems.** Introduction to civil engineering as a career; engineering problem solving; microcomputers for text and graphics; introduction to civil engineering measurements; disciplines within civil engineering; engineering ethics. Two lecture hours and three laboratory hours a week for one semester.
- 311K. Introduction to Computer Methods.** Organization and programming of civil engineering problems for computer solutions. Five hours a week for one semester, including lecture and laboratory. Prerequisite: Credit or registration for Mathematics 408D or 308L; additional prerequisite for civil engineering majors, Civil Engineering 301.
- 311S. Probability and Statistics for Civil Engineers.** Basic theory of probability and statistics with practical applications to civil engineering problems, including statistical inference and sampling. Additional subjects may include reliability and risk analyses, estimation and regression analyses, and experimental design. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Mathematics 408D or 408M.
- 314K. Properties and Behavior of Engineering Materials.** Structure, properties, and behavior of engineering materials, including concrete and metals. Laboratory exercises illustrate mechanical behavior of typical materials and demonstrate selected principles of mechanics. Six hours of lecture, laboratory, and supervised work a week for one semester. Prerequisite: Chemistry 301 and Engineering Mechanics 319.
- 319F. Elementary Mechanics of Fluids.** Fluid properties, hydrostatics, elements of fluid dynamics, energy and momentum, boundary layers, similitude, pipe flow, metering instruments, drag forces. Three lecture hours and two laboratory hours a week for one semester. Civil Engineering 319F and Mechanical Engineering 330 may not both be counted. Prerequisite: Engineering Mechanics 306.

UPPER-DIVISION COURSES

- 321. Transportation Systems.** Planning, economics, location, construction, operation, maintenance, and design of transportation systems; concepts of various modes of transportation. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 311S.
- 325L. Cooperative Engineering.** This course covers the work period of civil engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. May be repeated for credit. The student must complete Civil Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Civil Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Civil Engineering 325LY and appointment for a full-time cooperative work tour.

- 225M. Cooperative Engineering.** This course covers the work period of civil engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Civil Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Civil Engineering 225MA and appointment for a full-time cooperative work tour.
- 125N. Cooperative Engineering.** This course covers the work period of civil engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Civil Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.
- 329. Structural Analysis.** Classical methods of analysis for determinate and indeterminate structures under stationary and moving loads. Four hours of lecture and supervised work a week for one semester. Prerequisite: Engineering Mechanics 319 and Civil Engineering 311K.
- 331. Reinforced Concrete Design.** Design of reinforced concrete beams and columns. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 314K and 329.
- 333H. Engineering Communication: Honors.** Technical communication skills for use in industry and academia: writing and peer-reviewing technical research reports and papers, representing information graphically, delivering oral presentations, working collaboratively, and managing computer-mediated communication. Two lecture hours and one and one-half laboratory hours a week for one semester. Civil Engineering 333H and 333T may not both be counted. Prerequisite: Rhetoric and Writing 306, admission to an appropriate major sequence in engineering, and admission to an engineering honors program or consent of instructor.
- 333T. Engineering Communication.** Technical communication skills for engineers, especially researching and writing technical documents for many kinds of readers, representing information graphically, delivering oral presentations, working collaboratively, and managing computer-mediated communication. Two lecture hours and one and one-half laboratory hours a week for one semester. Civil Engineering 333H and 333T may not both be counted. Prerequisite: Rhetoric and Writing 306 and admission to an appropriate major sequence in architectural or civil engineering.
- 335. Elements of Steel Design.** Analysis and design of tension members, beams, columns, and bolted and welded connections. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 314K and 329.
- 341. Introduction to Environmental Engineering.** Quantitative evaluation of the environmental, economic, and technical problems involved in control of pollutants of the air, water, and land. Three lecture hours a week for one semester. Prerequisite: Chemistry 301 and 302, or consent of instructor.
- 342. Water and Wastewater Treatment Engineering.** Application of chemical, biological, and physical principles to the analysis and design of water and wastewater treatment processes. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 341 and credit or registration for Civil Engineering 319F, or consent of instructor.
- 346. Solid Waste Engineering and Management.** Characteristics of municipal and industrial solid wastes, generation rates, collection systems, recycling, processing, and disposal. Three lecture hours a week for one semester, with occasional field trips. Prerequisite: Civil Engineering 341 or consent of instructor.
- 346K. Hazardous Waste Management.** Technical and regulatory aspects of handling and treating hazardous wastes. Contaminant fate and transport, site investigation and remediation techniques, risk assessment methodology, and treatment and disposal methods. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 341 or consent of instructor.
- 351. Concrete Materials.** Portland cement, aggregates, supplementary cementing materials, properties of fresh and hardened concrete, concrete durability, mixture proportioning, concrete construction, special concretes. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Civil Engineering 314K.
- 356. Elements of Hydraulic Engineering.** Flow in closed conduits, hydraulic machinery; open-channel flow; flow measurement; design of storm sewers. Five hours a week for one semester, including lecture and laboratory. Prerequisite: Civil Engineering 319F.
- 357. Geotechnical Engineering.** Engineering properties of soils; permeability and shear strength of soils; settlement of embankments and foundations of structures; laboratory measurements. Six hours a week for one semester, including lecture and laboratory. Prerequisite: Engineering Mechanics 319 and Civil Engineering 319F.
- 358. Introductory Ocean Engineering.** Wave theory and its applications to coastal engineering and offshore structure technology. Includes fundamentals of inviscid and viscous flow of incompressible fluids, and applications of computational fluid dynamics (CFD) in design. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 319F or consent of instructor.
- 360K. Foundation Engineering.** Effect of geotechnical conditions on the behavior, proportioning, and choice of foundation type; design of shallow and deep foundations; study of foundation case histories. Five hours a week for one semester, including lecture and discussion. Prerequisite: Civil Engineering 357.
- 362M. Advanced Reinforced Concrete Design.** Design of reinforced concrete buildings, including floor systems and structural walls. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 331.
- 362N. Advanced Steel Design.** Design of steel buildings, beam columns, composite beams, plate girders, and connections. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 335.

- 363. Advanced Structural Analysis.** Structural analysis for forces and deflections using stiffness and flexibility approaches; application of energy methods in structural analysis; stiffness methods for computer-based structural analysis. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 329.
- 364. Design of Wastewater and Water Treatment Facilities.** Analysis, synthesis, and integrated design of collection systems, pumping stations, and treatment plants for municipal wastewater; design of water treatment plants. Six hours a week for one semester, including lecture and design laboratory. Prerequisite: Civil Engineering 356 and credit or registration for Civil Engineering 342, or consent of instructor.
- 365K. Hydraulic Engineering Design.** Application of engineering hydraulics to stormwater management; storm sewer design; engineering hydrology; open-channel hydraulics; hydraulic structures; culverts and bridges; stormwater detention facilities. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 356.
- 366K. Design of Bituminous Mixtures.** Fundamental properties of asphalt and aggregates; design and construction of asphalt mixtures; special mixtures; superpave design method. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 367. Highway Engineering.** Geometric design of modern highways and streets, including intersections and interchanges; driver behavior; and safety. Three lecture hours and one hour of computer-aided-design laboratory a week for one semester. Prerequisite: Civil Engineering 321 or consent of instructor.
- 367P. Pavement Design and Performance.** Basic principles of design of pavements for highways, airfields, and railroads; pavement construction, maintenance, and rehabilitation. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 321, 357, and 366K.
- 367T. Traffic Engineering.** Driver and vehicle characteristics, traffic studies, traffic laws and ordinances, intersection capacity, signs, markings, signals, bus transit, parking, design of street systems, and operational controls. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 321 or consent of instructor.
- 369L. Air Pollution Engineering.** Characterization of sources, emissions, transport, transformation, effects, and control of outdoor and indoor air pollutants. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 341 and Mechanical Engineering 320, or consent of instructor.
- 370K. Environmental Sampling and Analysis.** Principles of environmental chemistry; measurement of contaminants in air, water, and land environments; applications to municipal, industrial, and ambient samples. Six hours a week for one semester, including lecture and laboratory. Prerequisite: Upper-division standing in engineering and Civil Engineering 341, or consent of instructor.
- 171P. Engineering Professionalism.** Examines professional engineering licensure, ethics, leadership, public service, and public policy, with an emphasis on multidisciplinary perspectives, legal and business considerations, and the importance of lifelong learning. Includes participation in a public service project. Two lecture hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Admission to the major sequence in civil engineering and credit or registration for one of the following: Civil Engineering 360K, 362M, 362N, 364, 365K, 367, 376.
- 374K. Hydrology.** Phases of the hydrologic cycle, unit hydrograph, flow routing, hydrologic statistics, design storms and flows, design of storm sewers, detention ponds and water supply reservoirs. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 311S and 356.
- 374L. Groundwater Hydraulics.** Darcy's law, steady flow in aquifers, aquifer and well testing, regional flow, numerical simulation of groundwater flow, unsaturated flow, and groundwater recharge. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 356 or consent of instructor.
- 375. Earth Slopes and Retaining Structures.** Earth fills, excavations, and dams; soil compaction, ground improvement, and slope stability; seepage and dewatering; study of earth-pressure theories; design of earth-retaining structures. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Civil Engineering 357.
- 376. Airport Design.** Factors influencing the location, design, and construction of airports, including lighting, terminal facilities, noise-level control, aircraft control, airspace utilization, and automobile parking. Three lecture hours and one hour of computer laboratory a week for one semester. Prerequisite: Civil Engineering 321 or consent of instructor.
- 177K, 277K, 377K. Studies in Civil Engineering.** Various specified topics or conference course. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Additional hours may be required for some topics; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Some topics are offered on the pass/fail basis only. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 679H. Undergraduate Honors Thesis.** Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Civil Engineering 679HA and enrollment in the Engineering Honors Program.

379K. Introduction to Numerical Methods. Introduction to numerical modeling of physical systems, sources of errors in engineering simulations, solutions of nonlinear equations, solutions of systems of linear equations (direct and iterative methods), numerical solution of initial- and boundary-value problems, eigenvalue problems, and numerical optimization. Instruction complemented with numerical and symbolic computation software. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 311K and admission to the major sequence in civil or architectural engineering.

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

ELECTRICAL ENGINEERING: E E

LOWER-DIVISION COURSES

- 302. Introduction to Electrical Engineering.** The scope and nature of professional activities of electrical engineers, including problem-solving techniques; analysis and design methods; engineering professional ethics; analysis of analog resistive circuits, including Thevenin/Norton equivalents, mesh analysis, and nodal analysis; and operational amplifiers (DC response). Three lecture hours and two laboratory hours a week for one semester. Electrical Engineering 302 and 302H may not both be counted. Prerequisite: An appropriate score on the ALEKS placement examination, or Mathematics 305G with a grade of at least C-.
- 302H. Introduction to Electrical Engineering: Honors.** Restricted to students in the Engineering Honors Program. The scope and nature of professional activities of electrical engineers, including problem-solving techniques; analysis and design methods; engineering professional ethics; analysis of analog resistive circuits, including Thevenin/Norton equivalents, mesh analysis, and nodal analysis; and operational amplifiers (DC response). Three lecture hours and two laboratory hours a week for one semester. Electrical Engineering 302 and 302H may not both be counted. Prerequisite: An appropriate score on the ALEKS placement examination, or Mathematics 305G with a grade of at least C-.
- 306. Introduction to Computing.** Motivated, bottom-up introduction to computing; bits and operations on bits; number formats; arithmetic and logic operations; digital logic; the Von Neumann model of processing, including memory, arithmetic logic unit, registers, and instruction decoding and execution; introduction to structured programming and debugging; machine and assembly language programming; the structure of an assembler; physical input/output through device registers; subroutine call/return; trap instruction; stacks and applications of stacks. Three lecture hours and one recitation hour a week for one semester. Electrical Engineering 306 and 379K (Topic: *Introduction to Computing*) may not both be counted. Prerequisite: An appropriate score on the ALEKS placement examination, or Mathematics 305G with a grade of at least C-.
- 309K. Topics in Electrical Engineering.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
- 309S. Development of a Solar-Powered Vehicle.** Analysis, design, and construction of a solar-powered car for national competitions involving other universities. Study of electrical, mechanical, and aerodynamic systems. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 309K (Topic: *Development of a Solar Car for NASC*) and 309S may not both be counted.
- 411. Circuit Theory.** Capacitance and inductance; first- and second-order transient circuit response, including operational amplifier circuits; sinusoidal steady state analysis; Bode plots; three-phase circuits; transformers; two-port networks (Z-parameters and Y-parameters); and computer-aided analysis and design. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Electrical Engineering 302 or 302H with a grade of at least C-; credit with a grade of at least C- or registration for Mathematics 427K; and credit with a grade of at least C- or registration for Physics 303L and 103N.
- 312. Introduction to Programming.** Programming skills for problem solving; programming in C; elementary data structures; and asymptotic analysis. Three lecture hours and one recitation hour a week for one semester. Prerequisite: Electrical Engineering 306 or Biomedical Engineering 303 with a grade of at least C-, and Electrical Engineering 319K with a grade of at least C-.
- 313. Linear Systems and Signals.** Representation of signals and systems; system properties; sampling; Laplace and z-transforms; transfer functions and frequency response; convolution; stability; Fourier transform; feedback; and control applications. Computer analysis using MATLAB. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 411, 331, or Biomedical Engineering 311 with a grade of at least C-; Mathematics 427K with a grade of at least C-; and credit with a grade of at least C- or registration for Mathematics 340L.
- 316. Digital Logic Design.** Boolean algebra; analysis and design of combinational and sequential logic circuits; state machine design and state tables and graphs; simulation of combinational and sequential circuits; applications to computer design; and introduction to VHDL and field-programmable gate arrays (FPGAs). Three lecture hours and one recitation hour a week for one semester. Prerequisite: Electrical Engineering 306, Computer Science 307, 315, or 315H with a grade of at least C-; and credit with a grade of at least C- or registration for Electrical Engineering 319K, Computer Science 310, or 310H.
- 319K. Introduction to Embedded Systems.** Embedded systems; machine language execution; assembly and C language programming; local variables and subroutines; input/output synchronization; analog to digital conversion and digital to analog conversion; debugging; and interrupts. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Electrical Engineering 306 or Biomedical Engineering 303 with a grade of at least C-, and Electrical Engineering 302 or Biomedical Engineering 102L with a grade of at least C-.

UPPER-DIVISION COURSES

- 321K. Mixed Signal and Circuits Laboratory.** Digital and analog parametric testing of mixed-signal circuits and systems, including frequency response, harmonic and intermodulation, and noise behavior; use of system-level test equipment, including network analyzers, spectrum analyzers, and probe stations; coherent v. noncoherent measurements; design for testability. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 438 with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 422C. Data Structures.** Programming with abstractions; data structures; algorithm analysis. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Electrical Engineering 312 with a grade of at least C-.
- 325. Electromagnetic Engineering.** Introduction to electrostatics and magnetostatics; properties of conductive, dielectric, and magnetic materials; solutions of Maxwell's equations; uniform plane wave applications; frequency- and time-domain analyses of transmission lines. Three lecture hours a week for one semester. Prerequisite: Physics 303L, 103N, and Mathematics 427K with a grade of at least C- in each, and credit with a grade of at least C- or registration for Mathematics 427L.
- 325K. Antennas and Wireless Propagation.** Solutions of time-varying Maxwell's equations with applications to antennas and wireless propagation; antenna theory and design, array synthesis; electromagnetic wave propagation, scattering, and diffraction; numerical methods for solving Maxwell's equations. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 325 with a grade of at least C-.
- 325L. Cooperative Engineering.** This course covers the work period of electrical and computer engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. May be repeated for credit. The student must complete Electrical Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Electrical Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Electrical Engineering 325LY and appointment for a full-time cooperative work tour.
- 225M. Cooperative Engineering.** This course covers the work period of electrical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Electrical Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Electrical Engineering 225MA and appointment for a full-time cooperative work tour.
- 125N. Cooperative Engineering.** This course covers the work period of electrical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Electrical Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.
- 125S. Internship in Electrical and Computer Engineering.** Practical work experience in industry or a research lab under the supervision of an engineer or scientist. Requires a substantial final report. At least ten hours of work a week, for a total of 150 hours a semester or summer session. Offered on the pass/fail basis only. May be repeated for credit, but only three hours may be counted toward an electrical engineering degree. Prerequisite: Consent of the undergraduate adviser.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Electrical Engineering.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Electrical and Computer Engineering. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 331. Electrical Circuits, Electronics, and Machinery.** Not open to electrical engineering majors. Brief theory of direct and alternating current circuits; single-phase and three-phase power transmission; electronic devices and instrumentation; electromechanics. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M with a grade of at least C-, and Physics 303L and 103N with a grade of at least C- in each.
- 333T. Engineering Communication.** Advanced engineering communication skills, with emphasis on technical documents, oral reports, and graphics; collaborative work involving online communication and research. Three lecture hours a week for one semester. Prerequisite: English 316K with a grade of at least C-.
- 334K. Theory of Engineering Materials.** Introduction to quantum mechanics; atoms and molecules; electron statistics; quantum theory of solids; electronic phenomena in semiconductors; and device applications based on these phenomena. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, Physics 303L, and 103N with a grade of at least C- in each.

- 438. Electronic Circuits I.** Electronic devices in analog and digital circuits. Device physics and modeling; two-port networks; analysis and design of power supply circuits and amplifiers; frequency response; Bode plots. Laboratory work covers generation and acquisition of test signals; current, voltage, and impedance measurements; transfer function measurement; and spectrum measurements and analysis. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Electrical Engineering 313 or Biomedical Engineering 343.
- 338K. Electronic Circuits II.** Feedback principles; Bode plots; analysis and design of circuits with operational amplifiers and oscillators; filters; power amplifiers. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 438 with a grade of at least C-.
- 338L. Analog Integrated Circuit Design.** Analysis and design of analog integrated circuits; transistor models and integrated circuit technologies; layout techniques; mismatches; simple and advanced current mirrors, and single-stage amplifiers; differential-pair amplifiers; frequency response; noise considerations; feedback and stability; nonlinear circuits; voltage reference circuits; and operational amplifiers using state-of-the-art CAD tools for design, simulation, and layout. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 338K and 339 with a grade of at least C- in each.
- 339. Solid-State Electronic Devices.** Quantum theory of energy levels; semiconductor materials and carrier transport; p-n junctions and Schottky barriers; bipolar and field effect transistors; light-emitting diodes, lasers, and photodetectors. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, Physics 303L, and 103N with a grade of at least C- in each.
- 440. Microelectronics Fabrication Techniques.** Integrated circuit fabrication: crystal growth and wafer preparation; epitaxial growth; oxidation, diffusion, and ion implantation; thin-film deposition techniques; lithography and etching processes; integrated circuit process integration and process simulation. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 339 with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 341. Electric Drives and Machines.** Fundamentals of electric machines. Electromechanical energy conversion; magnetic circuits, transformers, and energy conversion devices; and an introduction to power electronics. Motor drive fundamentals and applications. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 313 or 331 with a grade of at least C-.
- 445L. Microprocessor Applications and Organization.** Microprocessor organization and interfacing; memory interfacing; hardware-software design of microprocessor systems; and applications, including communication systems. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 312 and 319K with a grade of at least C- in each; Electrical Engineering 411 and 313, or Biomedical Engineering 311 and 343, with a grade of at least C- in each; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 345M. Embedded and Real-Time Systems Laboratory.** Embedded microcomputer systems; implementation of multitasking, synchronization, protection, and paging; operating systems for embedded microcomputers; design, optimization, evaluation, and simulation of digital and analog interfaces; real-time microcomputer software; and applications, including data acquisition and robotics. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 445L (or 345L) or 445S (or 345S) with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 445S. Real-Time Digital Signal Processing Laboratory.** Architectures of programmable digital signal processors; programming for real-time performance; design and implementation of digital filters, modulators, data scramblers, pulse shapers, and modems in real time; and interfaces to telecommunication systems. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 312 and 319K with a grade of at least C- in each; Biomedical Engineering 343 or Electrical Engineering 313 with a grade of at least C-; credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T; and credit with a grade of at least C- or registration for Biomedical Engineering 335 or Electrical Engineering 351K.
- 347. Modern Optics.** Modern optical wave phenomena with applications to imaging, holography, fiber optics, lasers, and optical information processing. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 313 and 325 with a grade of at least C- in each, or Biomedical Engineering 343 with a grade of at least C-.
- 348. Laser and Optical Engineering.** Principles of operation and applications of lasers, optical modulators, and optical detectors. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 339 with a grade of at least C-.

- 351K. Probability and Random Processes.** Probability, random variables, statistics, and random processes, including counting, independence, conditioning, expectation, density functions, distributions, law of large numbers, central limit theorem, confidence intervals, hypothesis testing, statistical estimation, stationary processes, Markov chains, and ergodicity. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 313 with a grade of at least C-.
- 351M. Digital Signal Processing.** Sampling, aliasing, truncation effects; discrete and fast Fourier transform methods; convolution and deconvolution; finite and infinite impulse response filter design methods; Wiener, Kalman, noncausal, linear phase, median, and prediction filters; and spectral estimation. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biomedical Engineering 335 or Electrical Engineering 351K.
- 155. Electrical and Computer Engineering Seminar.** Presentations by speakers from industry, government, academia, and professional private practice. Topics include environmental and other ethical concerns, safety awareness, quality management, technical career descriptions, and professionalism. Substantial practice in engineering communication. One lecture hour a week for one semester. Electrical Engineering 155 and 364D may not both be counted. Prerequisite: English 316K with a grade of at least C-.
- 155L. Engineering Leadership Seminar.** Presentations by speakers from industry, government, academia, and professional private practice. Topics include environmental and other ethical concerns, safety awareness, quality management, technical career descriptions, and professionalism. One lecture hour a week for one semester. Prerequisite: English 316K with a grade of at least C-, and consent of the dean.
- 160, 260, 360, 460. Special Problems in Electrical and Computer Engineering.** Elective course open to upper-division students in electrical engineering for original investigation of special problems approved by the department. For each semester hour of credit earned, the equivalent of three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.
- 360C. Algorithms.** Complexity analysis; advanced combinatorial algorithms; algorithm design principles; intractability. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 312 with a grade of at least C-; and Mathematics 325K or Philosophy 313K with a grade of at least C-.
- 360F. Introduction to Software Engineering.** Introduction to the discipline of software engineering. Includes software system creation and evolution; fundamental concepts and principles of software product and software process systems, including requirements, architecture and design, construction, deployment, and maintenance; and documentation and document management, measurement and evaluation, software evolution, teamwork, and project management. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 422C (or 322C) with a grade of at least C-.
- 360K. Introduction to Digital Communications.** Communication channels and their impairments; modulation; demodulation; probability-of-error analysis; source coding; error control coding; link budget analysis; equalization; synchronization and multiple access; spread spectrum; applications in wireline and wireless communication systems. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 335 or Electrical Engineering 351K with a grade of at least C-.
- 360M. Digital Systems Design Using VHDL.** Hardware implementation of arithmetic and other algorithmic processes; hardware description languages (VHDL); Field Programmable Gate Arrays (FPGAs); state machine charts; microprogramming; floating point arithmetic; and organization, design, simulation, synthesis, and testing of digital systems. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 316 and 319K with a grade of at least C- in each.
- 460N. Computer Architecture.** Characteristics of instruction set architecture and microarchitecture; physical and virtual memory; caches and cache design; interrupts and exceptions; integer and floating-point arithmetic; I/O processing; buses; pipelining, out-of-order execution, branch prediction, and other performance enhancements; design trade-offs; case studies of commercial microprocessors. Laboratory work includes completing the behavioral-level design of a microarchitecture. Three lecture hours and one and one-half laboratory/recitation hours a week for one semester. Prerequisite: Electrical Engineering 316 and 319K with a grade of at least C- in each.
- 360P. Concurrent and Distributed Systems.** Concurrency, synchronization, resource allocation, deadlock, and scheduling; multithreaded programming; client/server distributed systems programming. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Electrical Engineering 445L (or credit with a grade of at least C- for 345L).
- 360R. Computer-Aided Integrated Circuit Design.** Theory and practice of integrated circuit design. Classes of chip design, chip partitioning, and architecture; computer-aided design tools for simulation and physical design. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 316, 438, and 339 with a grade of at least C- in each.
- 360S. Digital Integrated Circuit Design.** Circuit-level aspects of metal oxide silicon (MOS) and bipolar integrated circuit technologies. Logic gates and latches; propagation delays; circuit simulation models. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 438 and 339 with a grade of at least C- in each.
- 360T. Software Testing.** Basic concepts and techniques used in testing software and finding bugs. Includes process, unit, integration, and system testing; manual and automatic techniques for generation of test inputs and validation of test outputs; and coverage criteria. Focus on functional testing. Three lecture hours a week for one semester. Electrical Engineering 360T and 379K (Topic: *Software Testing*) may not both be counted. Prerequisite: Electrical Engineering 422C (or 322C) with a grade of at least C-.

- 361D. System Design Metrics.** Survey of engineering design, manufacturing, and lifetime support issues; implications of customer perceptions of quality on design; economics of design; legal implications of design decisions. The equivalent of three lecture hours a week for one semester. Electrical Engineering 361D and 379K (Topic 22: *System Design Metrics*) may not both be counted. Prerequisite: Electrical Engineering 364D with a grade of at least C-.
- 461L. Software Engineering and Design Laboratory.** Large-scale software system development; design and modeling tools; analysis and testing tools; collaborative development methods; object-oriented design and analysis; and life cycle analysis. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 422C (or 322C) with a grade of at least C-; credit with a grade of at least C- or registration for Electrical Engineering 360C; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 361M. Introduction to Data Mining.** Goals, methods, and applications of data mining. Includes data preprocessing, sampling, and visualization; algorithms for machine learning; clustering, classification, and predicting and forecasting; mining the Internet for content, link structure, and usage information; search engine design and social network analysis; and statistical methods. Three lecture hours a week for one semester. Electrical Engineering 361M and 379K (Topic: *Introduction to Data Mining*) may not both be counted. Prerequisite: Electrical Engineering 422C (or 322C), 351K, and Mathematics 340L with a grade of at least C- in each.
- 361Q. Requirements Engineering.** Methods and technology for acquiring, representing, documenting, verifying, validating, and maintaining requirements; text-based, graphic-based, and computational requirements model representations; requirements analysis to synthesize and resolve conflicts among disparate stakeholder viewpoints; requirements traceability and evolution, and change management. The equivalent of three lecture hours a week for one semester. Electrical Engineering 361Q and 379K (Topic: *Requirements Engineering*) may not both be counted. Prerequisite: Electrical Engineering 422C (or 322C) with a grade of at least C-.
- 361R. Radio Frequency Circuit Design.** Integrated passive devices and transmission lines; two-port circuit analysis; active devices and device models; bias circuits; noise and distortion in RF circuits; design of narrow-band front-end amplifiers; impedance matching; power gain; noise performance and stability; variable gain and power amplifiers; and frequency conversion mixers. The equivalent of three lecture hours a week for one semester. Electrical Engineering 361R and 379K (Topic: *Radio Frequency Circuit Design*) may not both be counted. Prerequisite: Electrical Engineering 325, 438, and 339 with a grade of at least C- in each.
- 362K. Introduction to Automatic Control.** Analysis of linear automatic control systems in time and frequency domains; stability analysis; state variable analysis of continuous-time and discrete-time systems; root locus; Nyquist diagrams; Bode plots; sensitivity; lead and lag compensation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Electrical Engineering 313 and Mathematics 340L with a grade of at least C- in each.
- 462L. Power Electronics Laboratory.** Analysis, design, and operation of power electronic circuits; power conversion from AC to DC, DC to DC, and DC to AC; rectifiers, inverters, and pulse width modulated motor drives. Laboratory work focuses on the use of energy from renewable sources such as photovoltaics and wind. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 331 (or 331K) or 438 with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 362Q. Power Quality and Harmonics.** Introduction to and analysis of power quality and harmonic phenomena in electric power systems. Includes characteristics and definitions, voltage sags, electrical transients, harmonics, mitigation techniques, and standards of power quality and harmonics. The equivalent of three lecture hours a week for one semester. Electrical Engineering 362Q and 379K (Topic: *Power Quality and Harmonics*) may not both be counted. Prerequisite: Electrical Engineering 368L or 369 with a grade of at least C-.
- 362R. Renewable Energy and Power Systems.** Introduction to renewable energy sources and their integration into power systems. Includes wind energy: resources, turbines, blades, rotor power characteristics, generators, active and reactive power, variability, and voltage regulation; solar energy: resources, solar radiation measurements, photovoltaic materials and properties, photovoltaic electrical characteristics, and system integration; and demonstrations with commercial-grade solar panels and laboratory-scale wind turbines. Three lecture hours a week for one semester. Electrical Engineering 362R and 379K (Topic: *Renewable Energy and Power Systems*) may not both be counted. Prerequisite: Electrical Engineering 411 or 331 with a grade of at least C-.
- 362S. Development of a Solar-Powered Vehicle.** Analysis, design, and construction of a solar-powered car for national competitions involving other universities. Study of electrical, mechanical, and aerodynamic systems. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 362S and 379K (Topic: *Development of a Solar Car for NASC*) may not both be counted. Prerequisite: Upper-division standing.
- 363M. Microwave and Radio Frequency Engineering.** Design principles in microwave and radio frequency systems; transmission lines and waveguides; S-parameter representation; impedance matching; microwave network analysis; microwave devices and components; electromagnetic effects in high-speed/high-frequency applications. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 325 with a grade of at least C-.

- 363N. Engineering Acoustics.** Same as Mechanical Engineering 379N. Principles of acoustics, with applications drawn from audio engineering, biomedical ultrasound, industrial acoustics, noise control, room acoustics, and underwater sound. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C.
- 464C. Corporate Senior Design Project.** Design and experimental projects, done in the laboratories of local companies, for electrical engineering students working full-time in industry; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Electrical Engineering 364D with a grade of at least C-; and Electrical Engineering 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L) with a grade of at least C-.
- 364D. Introduction to Engineering Design.** Introduction to the engineering design process; assessing engineering problems and customer needs; acquiring, documenting, and verifying requirements; high-level system design principles; effects of economic, environmental, ethical, safety, and social issues in design; writing design specifications. Two lecture hours and three laboratory hours a week for one semester. Additional laboratory hours may be required for some sections; these are identified in the *Course Schedule*. Electrical Engineering 155 and 364D may not both be counted. Prerequisite: Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T, with a grade of at least C-; credit with a grade of at least C- or registration for Electrical Engineering 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L); and credit with a grade of at least C- or registration for Electrical Engineering 366.
- 464G. Multidisciplinary Senior Design Project.** Design and experimental projects done with teams of students from multiple engineering disciplines; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Electrical Engineering 364D with a grade of at least C-; and Electrical Engineering 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L) with a grade of at least C-.
- 464H. Honors Senior Design Project.** Restricted to students in the Engineering Honors Program. Design and experimental projects done under the direction of a University faculty member; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Electrical Engineering 364D with a grade of at least C-; and Electrical Engineering 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L) with a grade of at least C-.
- 464K. Senior Design Project.** Design and experimental projects done in Department of Electrical and Computer Engineering laboratories; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Electrical Engineering 364D with a grade of at least C-; and Electrical Engineering 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L) with a grade of at least C-.
- 464R. Research Senior Design Project.** Design and experimental projects done under the supervision of a University faculty member; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Electrical Engineering 364D with a grade of at least C-; and Electrical Engineering 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L) with a grade of at least C-.
- 366. Engineering Economics I.** Business organization; discounted cash flow calculations, including present-worth and rate-of-return calculations; replacement analyses; financial analyses; accounting and depreciation; income taxes; inflation; risk analysis, utility theory, decision models, sequential decision making; value of information. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Electrical Engineering 351K.
- 366K. Engineering Economics II.** Fundamentals of risk management, including portfolio theory, capital asset pricing theory, and optimal project mix; hedging financial risk; advanced economic analysis of alternative energy systems; and advanced mathematical modeling techniques for economic analysis. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 366 with a grade of at least C-.
- 366L. Statistics for Manufacturing.** Statistical analysis applied to the development and control of manufacturing operations; quality control, statistical process control, and design of experiments. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 351K with a grade of at least C-.
- 368L. Power Systems Apparatus and Laboratory.** Fundamentals of power systems emphasized through laboratory experiments; complex power, three-phase circuits, per-unit system, transformers, synchronous machines, transmission line models, steady-state analysis, induction machines, capacitor banks, protective relaying, surge arrestors, and instrumentation. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 368L and 379K (Topic: *Power Systems Apparatus and Laboratory*) may not both be counted. Prerequisite: Electrical Engineering 411 or 331 with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

- 369. Power Systems Engineering.** Three-phase power systems, system component models, symmetrical components, and admittance and impedance matrices. Formulation and analysis of loadflow, short circuit, and stability for electric grids. Economic operation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Electrical Engineering 313 or 331 with a grade of at least C-.
- 369L. Relay Protection of Power Systems.** Theory, principles, and practices for protecting medium-voltage industrial power systems and high-voltage transmission grids. Includes symmetrical components; fault calculations and grounding; protection of motors, generators, cables, and transmission lines; and relay settings, fusing, and coordination of multiple protection devices. Two lecture hours and three laboratory hours a week for one semester. Electrical Engineering 369L and 379K (Topic 6: *Relay Protection of Power Systems*) may not both be counted. Prerequisite: Electrical Engineering 411 with a grade of at least C-.
- 370. Automatic Control II.** Introduction to modern control theory, nonlinear and optimal control systems; controllability, observability, stability; state feedback, observers, eigenvalue assignment. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Electrical Engineering 362K.
- 370K. Computer Control Systems.** Analysis and design of linear discrete time control systems; z-transform theory; modified z-transforms; stability; multirate systems; digital simulation of discrete time systems; synthesis of algorithms for computer controllers. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Electrical Engineering 362K.
- 370L. Introduction to Manufacturing Systems Automation.** Applications of automation techniques to manufacturing systems; robotics and computer vision. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 362K with a grade of at least C-.
- 370N. Introduction to Robotics and Mechatronics.** Structures for industrial robots; geometry and transformation; direct and inverse kinematics; differential kinematics; dynamics; trajectory planning; actuators and sensors; adaptive control and learning compliance; vision and pattern recognition; expert systems. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 362K with a grade of at least C-.
- 371C. Wireless Communications Laboratory.** The fundamentals of wireless communication from a digital signal processing perspective; linear modulation, demodulation, and orthogonal frequency division multiplexing; synchronization, channel estimation, and equalization; communication in fading channels; and wireless standards. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 371C and 379K (Topic: *Wireless Communications Laboratory*) may not both be counted. Prerequisite: Electrical Engineering 445S (or 345S), 351M, or 360K with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 371D. Introduction to Neural Networks.** Characteristics of artificial neural networks, feedforward networks, and recurrent networks; learning algorithms; self-organization; biological links; data mining and other applications. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 351K and Mathematics 340L with a grade of at least C- in each.
- 371M. Communication Systems.** Analog and digital modulation; noise in communication systems; signal-to-noise ratio; coding; optimal receiver design; phase-locked loops; and performance analysis. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biomedical Engineering 335 or Electrical Engineering 351K.
- 371R. Digital Image and Video Processing.** Digital image acquisition, processing, and analysis; algebraic and geometric image transformations; two-dimensional Fourier analysis; image filtering and coding. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biomedical Engineering 335 or Electrical Engineering 351K.
- 372L. Network Engineering Laboratory.** Local, metropolitan, and wide-area operations; telecommunication common carrier organization and services; administrative and political considerations; premise distribution systems; name resolution, address assignment, and mail; datagrams, packets, frames, and cells; addressing and network-level interconnection; internetwork architecture; TCP/IP protocol suite (v. 4 and 6); Ethernet and IEEE 802.3 standards; IEEE 802.11 standards and wireless access points; repeaters, hubs, bridges, routers; local area network emulation; public switched network access through POTS and ISDN; intradomain and interdomain routing; routing protocols, including RIP, OSPF, and BGP; multicast; media testing; local- and wide-area diagnostic tools. The equivalent of three lecture hours a week for one semester. Electrical Engineering 372L and 379K (Topic 19: *Network Engineering Laboratory*) may not both be counted. Prerequisite: Electrical Engineering 372N with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 372N. Telecommunication Networks.** Circuit and packet-switched networks; local area networks; protocol stacks; ATM and broadband ISDN; Internet; routing, congestion control, and performance evaluation; multimedia applications. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 351K with a grade of at least C-.
- 372S. Cryptography and Network Security.** Distributed information system security; cryptographic tools; authentication; message security; system management. The equivalent of three lecture hours a week for one semester. Electrical Engineering 372S and 379K (Topic 18: *Network Security*) may not both be counted. Prerequisite: Mathematics 325K or 340L with a grade of at least C-.

- 374K. Biomedical Electronic Instrument Design.** The application of electrical engineering design techniques and instrument design analysis for medical and biological sciences testing and measurement; pressure, flow, temperature, and volume measurement; biopotentials; pacemakers, stimulators, defibrillators, and other therapeutic devices; electrical safety; and power supply design. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 438 with a grade of at least C-.
- 374L. Applications of Biomedical Engineering.** An in-depth examination of selected topics in biomedical engineering, such as optical and thermal properties of laser interaction with tissue; measurement of perfusion in the microvascular system; diagnostic imaging; interaction of living systems with electromagnetic fields; robotic surgical tools; ophthalmic instrumentation; noninvasive cardiovascular measurements. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Electrical Engineering 374K with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.
- 679H. Undergraduate Honors Thesis.** Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Electrical Engineering 679HA with a grade of at least C- and enrollment in the Engineering Honors Program.
- 379K. Topics in Electrical Engineering.** The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

Topic 1: Conference Course.

Topic 15: Information Theory. Measures of information; noiseless coding and data compression; discrete memoryless channels and channel capacity; broadcast channels; error-correcting codes. Additional prerequisite: Electrical Engineering 351K with a grade of at least C-.

Topic 20: Computer Architecture: Personal Computer Design. Commercial general purpose processors, memory architecture, buses, storage devices, graphics subsystems, I/O devices and peripherals, audio subsystems, operating systems, benchmarking, manufacturing, and testing of personal computer systems. One class meeting may take place outside of normally scheduled class time for a tour of a PC manufacturing site. Additional prerequisite: Electrical Engineering 460N (or 360N) with a grade of at least C-.

Topic 21: Information and Cryptography. Information theory; construction of codes; cryptography, including security and randomized encryption; Kolmogorov complexity; statistics, including large deviations, non-parametrics, and information inequalities; Vapnik-Cervonenkis methods for learning theory. Additional prerequisite: Electrical Engineering 351K with a grade of at least C-.

DEPARTMENT OF MECHANICAL ENGINEERING

MECHANICAL ENGINEERING: M E

LOWER-DIVISION COURSES

- 302. Introduction to Engineering Design and Graphics.** Introduction to mechanical engineering education and practice through lectures and laboratory experiences. Graphics and modeling fundamentals for engineering design: freehand sketching, computer modeling of solid geometry, and generation of engineering drawings. Introduction to reverse engineering, computer-aided design, rapid prototyping, and manufacturing. Application of the design process and problem solving through individual and team projects. Two lecture hours and four laboratory hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 302, 210, 210H. May not be taken concurrently with Mechanical Engineering 205. Prerequisite: Credit or registration for Mathematics 408C or 408K (or credit for 308K).
- 103. Studies in Engineering Design Graphics.** Computer laboratory work in engineering design graphics for students with transfer credit for Mechanical Engineering 210 who need additional work. Three computer laboratory hours a week for one semester. May not be counted by students with credit for Mechanical Engineering 302, 210, or 210H. Prerequisite: Consent of the undergraduate adviser.
- 205. Introduction to Computers and Programming.** Introduction to computer hardware and software systems; programming using a high-level language; mathematical software programming; and introduction to machine language. Includes significant hands-on programming opportunities. One lecture hour and three laboratory hours a week for one semester. May not be taken concurrently with Mechanical Engineering 302. Prerequisite: Credit or registration for Mathematics 408C or 408K (or credit for 308K).
- 210. Engineering Design Graphics.** Graphics and modeling fundamentals for engineering design: freehand sketching, computer modeling of solid geometry, and generation of engineering drawings. Introduction to reverse engineering, computer-aided design, rapid prototyping, and manufacturing. Application of the design process to problem solving. Individual and team design projects. Two lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 302, 210, 210H. May not be counted toward the Bachelor of Science in Mechanical Engineering degree. Prerequisite: Credit or registration for Mathematics 408C or 408K (or credit for 308K).

- 210H. Engineering Design Graphics: Honors.** Graphics and modeling fundamentals for engineering design: freehand sketching, computer modeling of solid geometry, and generation of engineering drawings. Introduction to reverse engineering, computer-aided design, rapid prototyping, and manufacturing. Application of the design process to problem solving. Individual and team design projects. One lecture hour and four laboratory hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 302, 210, 210H. May not be counted toward the Bachelor of Science in Mechanical Engineering degree. Prerequisite: Credit or registration for Mathematics 408C or 408K (or credit for 308K), and admission to an engineering honors program.
- 311. Materials Engineering.** Fundamental aspects of the structure, properties, and behavior of engineering materials. Three lecture hours a week for one semester. Prerequisite: Chemistry 301, Engineering Mechanics 319, Mechanical Engineering 302, 205, and 326, and Physics 303K and 103M with a grade of at least C in each; and credit or registration for Mechanical Engineering 111L, Physics 303L, and 103N.
- 111L. Materials Engineering Laboratory.** Hands-on experiments in materials science and engineering topics and microstructure-property relationships discussed in Mechanical Engineering 311. One to one and one-half lecture hours and three laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 302 and 205 with a grade of at least C in each, and credit or registration for Mechanical Engineering 311.
- 218. Engineering Computational Methods.** Applied numerical analysis, programming of computational algorithms using mathematical software, and applications of computational methods to the solution of mechanical engineering problems. One and one-half lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Mathematics 427K and Mechanical Engineering 205 with a grade of at least C in each.

UPPER-DIVISION COURSES

- 320. Applied Thermodynamics.** First and second laws of thermodynamics; thermodynamic processes, cycles, and heat transfer. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Mechanical Engineering degree. Prerequisite: Chemistry 301, Mathematics 408D, and Physics 303K.
- 324. Dynamics.** Analysis of motions, forces, momenta, and energies in mechanical systems. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Engineering Mechanics 306 and Mathematics 408D with a grade of at least C in each.
- 325L. Cooperative Engineering.** This course covers the work period of mechanical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. May be repeated for credit. Only one of the following may be counted: Mechanical Engineering 325L, 362K, 371K, 377K. The student must complete Mechanical Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Mechanical Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Mechanical Engineering 325LY and appointment for a full-time cooperative work tour.
- 225M. Cooperative Engineering.** This course covers the work period of mechanical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Mechanical Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Mechanical Engineering 225MA and appointment for a full-time cooperative work tour.
- 125N. Cooperative Engineering.** This course covers the work period of mechanical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Mechanical Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.
- 326. Thermodynamics.** Properties, heat and work, first and second laws, thermodynamic processes, introduction to ideal power cycles. Three lecture hours a week for one semester. For some sections, two discussion hours a week are also required; these sections are identified in the *Course Schedule*. Mechanical Engineering 326 and 326H may not both be counted. Prerequisite: Chemistry 301, Mathematics 408D, and Physics 303K with a grade of at least C in each.
- 326H. Thermodynamics: Honors.** Properties, heat and work, first and second laws, thermodynamic processes, introduction to ideal power cycles. Three lecture hours a week for one semester. For some sections, two discussion hours a week are also required; these sections are identified in the *Course Schedule*. Mechanical Engineering 326 and 326H may not both be counted. Prerequisite: Chemistry 301, Mathematics 408D, and Physics 303K with a grade of at least C in each, and admission to an engineering honors program.
- 330. Fluid Mechanics.** Fluid properties, statics, conservation laws, inviscid and viscous incompressible flow, flow in confined streams and around objects. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, Engineering Mechanics 306, and Mechanical Engineering 326 or 326H with a grade of at least C in each; and credit or registration for Mechanical Engineering 130L.

- 130L. Experimental Fluid Mechanics.** Experimental design concepts, uncertainty analysis, and systems analysis as applied to thermodynamics, fluid mechanics, and heat transfer systems. One lecture hour and two laboratory hours a week for one semester. Mechanical Engineering 130L and 242L may not both be counted. Prerequisite: Credit or registration for Mechanical Engineering 330.
- 333H. Engineering Communication: Honors.** Professional communication skills for engineers, with emphasis on research, writing, editing, and oral presentation on topics of social and technical significance in engineering. Students collaborate to publish an online journal. Two lecture hours and two laboratory hours a week for one semester. Mechanical Engineering 333H and 333T may not both be counted. Prerequisite: Rhetoric and Writing 306 with a grade of at least C, and admission to an appropriate major sequence in engineering and to an engineering honors program.
- 333T. Engineering Communication.** Professional communication skills for engineers, with emphasis on research, writing, and oral presentation on topics of social and technical significance in engineering. Two lecture hours and two laboratory hours a week for one semester. Mechanical Engineering 333H and 333T may not both be counted. Prerequisite: Rhetoric and Writing 306 with a grade of at least C, and admission to an appropriate major sequence in engineering.
- 335. Engineering Statistics.** Fundamentals of probability, distribution theory, data analysis and statistics, interval estimation, hypothesis testing, and statistical quality control. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Mathematics 408D and Mechanical Engineering 205 with a grade of at least C in each, and admission to an appropriate major sequence in engineering.
- 336. Materials Processing.** Effects of processing on materials properties; materials selection. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 311 and 111L and Engineering Mechanics 319 with a grade of at least C in each, concurrent enrollment in Mechanical Engineering 136L, and admission to an appropriate major sequence in engineering.
- 136L. Materials Processing Laboratory.** Hands-on study of selected materials processing procedures and processing-microstructure-property relationships discussed in Mechanical Engineering 336. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 111L and Engineering Mechanics 319 with a grade of at least C in each, concurrent enrollment in Mechanical Engineering 336, and admission to an appropriate major sequence in engineering.
- 136N, 236N. Concepts in Nuclear and Radiation Engineering.** Restricted to students in the Colleges of Engineering, Liberal Arts, and Natural Sciences, and the Jackson School of Geosciences. For Mechanical Engineering 136N, one lecture hour a week for one semester; for 236N, the equivalent of two lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of college coursework, or consent of instructor.
- 337C. Introduction to Nuclear Power Systems.** Radioactivity, nuclear interactions: fission and fusion, fission reactors, nuclear power systems, nuclear power safety. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 218 and Physics 303L and 103N with a grade of at least C in each, and admission to an appropriate major sequence in engineering; for non-engineering majors, upper-division standing and written consent of instructor.
- 337F. Nuclear Environmental Protection.** Ionizing radiation and its interactions with matter and living tissues; radioactive decay kinetics; external and internal dose measurement; transportation through the environment; managing radioactive waste streams; and safeguards. Three lecture hours a week for one semester. May not be counted by students with credit for Mechanical Engineering 337D and 337E. Mechanical Engineering 337F and 389C may not both be counted. Prerequisite: For engineering majors, Physics 303L and 103N with a grade of at least C in each and admission to an appropriate major sequence in engineering; for others, upper-division standing.
- 337G. Nuclear Safety and Security.** Probabilistic risk assessment models and nuclear arms nonproliferation, including failure classifications; failure mode, effects, and criticality analysis (FMECA); fault and event trees; and reliability block diagrams. Discussion of specific areas from the Code of Federal Regulations. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 337G, 388H, Operations Research and Industrial Engineering 390R (Topic 15: *Nuclear Safety and Security*). Prerequisite: For engineering majors, Physics 103N and 303L with a grade of at least C in each and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.
- 338. Machine Elements.** Analysis for the design and manufacture of basic mechanical elements, and their role in the design of machines; application of finite element modeling. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 319 and Mechanical Engineering 311 with a grade of at least C in each, and admission to an appropriate major sequence in engineering.
- 339. Heat Transfer.** Steady and transient heat conduction; forced and natural convection; radiation; introduction to heat exchangers and applications. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 218, 330, and 130L with a grade of at least C in each, concurrent enrollment in Mechanical Engineering 139L, and admission to an appropriate major sequence in engineering.
- 139L. Experimental Heat Transfer.** Experimental design concepts, uncertainty analysis, and systems analysis as applied to thermodynamics, fluid mechanics, and heat transfer systems. One lecture hour and two laboratory hours a week for one semester. Mechanical Engineering 139L and 242L may not both be counted. Prerequisite: Concurrent enrollment in Mechanical Engineering 339 and admission to an appropriate major sequence in engineering.

- 340. Mechatronics.** Theory and application of electrical circuits, electronics, and electromechanical devices; concepts in electrical power transmission; instrumentation; feedback; integration of electronics and instrumentation with mechanical engineering systems (mechatronics). Three lecture hours a week for one semester. Prerequisite: Mathematics 408D, Mechanical Engineering 205, and Physics 303L and 103N with a grade of at least C in each, concurrent enrollment in Mechanical Engineering 140L, and admission to an appropriate major sequence in engineering.
- 140L. Mechatronics Laboratory.** Hands-on laboratory using hand-held and bench-top electronic test and prototyping equipment for circuits and mechatronics applications; computer-aided instrumentation and data acquisition; laboratory study in design, prototyping, and testing with electrical and electronics components and electromechanical devices. One lecture hour and two laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 205, concurrent enrollment in Mechanical Engineering 340, and admission to an appropriate major sequence in engineering.
- 343. Thermal-Fluid Systems.** Analysis and design of integrated systems involving simultaneous application of thermodynamics, heat transfer, and fluid mechanics. Applications to power generation, vehicle engineering, materials processing, environmental control, and manufacturing. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Mechanical Engineering 330, 130L, 339, and 139L with a grade of at least C in each; and admission to an appropriate major sequence in engineering.
- 344. Dynamic Systems and Controls.** Lumped physical system models; electrical, fluid, mechanical, and thermal system analysis; linear system transient, steady-state behavior; introduction to feedback control. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K and Mechanical Engineering 205 and 324 with a grade of at least C in each; Mechanical Engineering 340 and 140L or their equivalents with a grade of at least C in each; concurrent enrollment in Mechanical Engineering 144L or 244L; and admission to an appropriate major sequence in engineering.
- 144L, 244L. Dynamic Systems and Controls Laboratory.** Modeling of engineering systems, digital simulation, and assessment of results with experimental study; methods for analysis of first- and second-order systems, system identification, frequency response and feedback control principles; hands-on experimentation with mechanical, fluid, electrical, and magnetic systems; data acquisition and analysis using oscilloscopes and microcomputer-based analog-to-digital and digital-to-analog conversion; theoretical and practical principles governing the design and use of various sensors and transducers. For 144L, one lecture hour and two laboratory hours a week for one semester; for 244L, one lecture hour and three laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Mechanical Engineering 344, and admission to an appropriate major sequence in engineering.
- 347. Processing of Materials.** Analysis of forces in processing operations; effects of friction and their control; metalworking efficiencies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For engineering majors, Mechanical Engineering 336, credit or registration for Mechanical Engineering 136L, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- Topic 1: Powder Processing.** Powder particle characterization and size/shape/distribution, powder synthesis, compaction, sintering theory, sintering maps, full-density processing, powder-processed part microstructure and properties.
- Topic 2: Deformation Processing.** Analysis of forces in processing operations; effects of friction and their control; slab method; upper-bound force theory; slip-line field theory; metalworking efficiencies.
- 348C. Introduction to Mechatronics I.** Integrated use of mechanical, electrical, and computer systems for information processing and control of machines and devices. System modeling, electromechanics, sensors and actuators, basic electronics design, signal processing and conditioning, noise and its abatement, grounding and shielding, filters, and system interfacing techniques. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: For engineering majors, Electrical Engineering 331 and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 348D. Introduction to Mechatronics II.** Interfacing microcomputers with sensors and actuators; hybrid (analog/digital) design; digital logic and analog circuitry; data acquisition and control; microcomputer architecture, assembly language programming; signal conditioning, filters, analog-to-digital and digital-to-analog conversion. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: For engineering majors, Electrical Engineering 331 and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 349. Corrosion Engineering.** Corrosion principles; electrochemical, environmental, and metallurgical effects; types of corrosion; corrosion testing and prevention; modern theories: principles and applications. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 or the equivalent with a grade of at least C, Mechanical Engineering 326 (or 326H) or the equivalent with a grade of at least C, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

- 350. Machine Tool Operations for Engineers.** Hands-on manual and computer-numerical-controlled machine tool operation. Part design and tool selection for production. One lecture hour and six laboratory hours a week for one semester. Offered on the letter-grade basis only. Mechanical Engineering 350 and 379M (Topic 7: *Machine Tool Operations for Engineers*) may not both be counted. Prerequisite: Admission to an appropriate major sequence in engineering.
- 352K. Engineering Computer Graphics.** Introduction to interactive computer graphics as a tool in computer-aided design. Use of graphics software packages. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: For engineering majors, admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.
- 353. Engineering Finance.** Evaluating the financial impact of engineering decisions. Comparing alternatives with cash flow analysis considering rate of return, inflation, and taxes, with emphasis on analyzing risk. Managing complex projects with activity scheduling and resource allocation considering cash flows. Methods include probabilistic analysis and simulation. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Mathematics 408C, Mechanical Engineering 205, and 335 with a grade of at least C in each, and admission to an appropriate major sequence in engineering.
- 354. Introduction to Biomechanical Engineering.** The application of mechanical engineering principles to problems in the life sciences; transport phenomena of physiological solids and fluids; biosignal analysis and instrumentation; biomaterials design and compatibility; principles of medical imaging, diagnostics, and therapeutics; rehabilitation engineering. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mathematics 427K with a grade of at least C and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 354M. Biomechanics of Human Movement.** Modeling and simulation of human movement; neuromuscular control; computer applications; introduction to experimental techniques. Three lecture hours a week for one semester. Prerequisite: For engineering majors, admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 355K. Engineering Vibrations.** Time-domain and frequency-domain analysis of vibrating systems; matrix methods, instrumentation, and vibration control; numerical methods. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 324 with a grade of at least C, Mathematics 427K with a grade of at least C, and admission to an appropriate major sequence in engineering.
- 259, 359. Materials Selection.** Description of commercial metals, polymers, ceramics, concrete, and wood for use in mechanical engineering applications. Applications include strength, toughness, stiffness, fatigue, creep, corrosion, casting, forming, machining, and welding. Two or three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 336 and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 360. Vehicle System Dynamics and Controls.** Fundamentals of ground vehicle dynamics, tire-road mechanics, vehicle control systems, vehicle stability, and simulation of vehicle systems. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 360, 379M (Topic: *Vehicle System Dynamics and Controls*), 390, 397 (Topic: *Vehicle System Dynamics and Controls*). Prerequisite: For engineering majors, upper-division standing, admission to an appropriate major sequence in engineering, and Mechanical Engineering 344 with a grade of at least C; for others, upper-division standing and written consent of instructor.
- 260K, 360K. Metallurgy of Engineering Alloys.** Microstructure and property relationships of metals and alloys; steel alloys; aluminum alloys; titanium alloys; magnesium alloys; solidification and casting; thermomechanical processing; heat treating and solid-state phase transformations. Two or three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 with a grade of at least C, credit or registration for Mechanical Engineering 111L, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 360L. Turbomachinery and Compressible Flow.** Positive displacement and dynamic rotating machinery; pumps, compressors, and turbines; performance characteristics and scaling laws. One-dimensional compressible flow with area change, friction, or heat addition. Normal and oblique shock waves; Prandtl-Meyer expansion. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 330, 130L and 139L, and admission to an appropriate major sequence in engineering.
- 360N. Intermediate Heat Transfer.** Multidimensional and transient diffusion; laminar and turbulent convection; radiation exchange; special topics. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 339 and admission to an appropriate major sequence in engineering.
- 361E. Nuclear Reactor Operations and Engineering.** Fission and chain reactions; neutron diffusion and moderation; reactor equations; Fermi Age theory; and multigroup and multiregional analysis. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 218 and Physics 303L and 103N with a grade of at least C in each, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

- 361F. Radiation and Radiation Protection Laboratory.** Introduction to the application of radiation and radiation protection instrumentation. Lecture and laboratory topics include personnel monitoring, radiation detection systems, gamma-ray spectroscopy, determination of environmental radiation, counting statistics, gamma and neutron shielding, and air sampling. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 218 with a grade of at least C, Physics 303L and 103N with a grade of at least C in each, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.
- 261M, 361M. Materials Thermodynamics.** First and second laws; heat of combustion; heat engine cycles; chemical equilibria and/or phase equilibria; point defects in crystals. Two or three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 with a grade of at least C, Mechanical Engineering 326 or 326H with a grade of at least C, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 362K. Readings in Engineering.** A study of the interrelated problems of society, technology, and energy. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 325L, 362K, 371K, 377K. Prerequisite: Admission to an appropriate major sequence in engineering.
- 363L. Energy Systems Laboratory.** Experimental analysis of thermal energy systems, including heat transfer equipment, engines, the University chilling station and the University power plant. Use of a variety of industrial instrumentation for assessment of system and component performance and of experimental uncertainty. Written and oral technical communication of experimental results. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 339, 139L, 343, and admission to an appropriate major sequence in engineering.
- 364L. Automatic Control System Design.** Feedback principles; control components; industrial compensators; Routh, Nyquist, Bode, and root locus methods; controller design; continuous and discrete time control. Three lecture hours and one-half laboratory hour a week for one semester. Prerequisite: Mechanical Engineering 344 and admission to an appropriate major sequence in engineering.
- 365K. Finite Element Method.** Introduction and application of the finite element method in engineering analysis and design problems; demonstration of techniques using commercial codes. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 319 and Mathematics 427K with a grade of at least C in each, and admission to an appropriate major sequence in engineering.
- 365L. Industrial Design for Production.** Current techniques for making transitions from theoretical concepts to cost effective designs suitable for manufacturing. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 338 and admission to an appropriate major sequence in engineering.
- 366J. Mechanical Engineering Design Methodology.** Structured methodologies for designing mechanical systems; reverse engineering/redesign projects and conceptual design projects. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 302, 330, 130L, 335, 336, 136L, 338, 339, 139L, 340, and 140L with a grade of at least C in each; Mechanical Engineering 333H, 333T, Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, or Petroleum and Geosystems Engineering 333T with a grade of at least C; and admission to an appropriate major sequence in engineering.
- 266K. Mechanical Engineering Design Project.** Creative design, analysis, selection, development, and fabrication of engineering components and systems. Development of team project with faculty adviser and sponsoring engineer. Two lecture hours a week for one semester, with additional hours to be arranged. Prerequisite: Mechanical Engineering 343, 344, 144L or 244L, 353, and 366J with a grade of at least C in each.
- 366L. Operations Research Models.** Formulation and solution-interpretation for operations research models requiring, for example, optimization, simulation, or analysis of Markov chains or queues. Applications include manufacturing design and control, routing and scheduling, plant location, inventory analysis, and management of queueing systems. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mathematics 408D and Mechanical Engineering 205 with a grade of at least C in each, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 266P. Design Project Laboratory.** Development of individual team project in association with faculty adviser and sponsoring project engineer. Four laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 343, 344, 144L or 244L, 353, and 366J with a grade of at least C in each.
- 366Q. Deterministic Methods for Operations Research.** Theory and algorithms for deterministic operations research methods. Algorithms for solving linear, integer, and nonlinear optimization models. Three lecture hours a week for one semester. Mechanical Engineering 366M and 366Q may not both be counted. Prerequisite: For engineering majors, admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 366R. Stochastic Methods for Operations Research.** Theory and algorithms for stochastic operations research methods. Algorithms related to stochastic processes: Markov chain analysis; queueing theory; stochastic inventory theory and decision analysis. Three lecture hours a week for one semester. Mechanical Engineering 366M and 366R may not both be counted. Prerequisite: For engineering majors, Mechanical Engineering 335 or the equivalent, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

- 367S. Simulation Modeling.** Basic concepts of discrete-event simulation. Statistical input and output analysis. Application of simulation software. Modeling of systems under uncertainty. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 205 with a grade of at least C, Mechanical Engineering 335 or the equivalent, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 368J. Computer-Aided Design.** Application of computers to design problems and simulation of mechanical systems; creation of interactive special applications programs. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 338 and admission to an appropriate major sequence in engineering.
- 369L. Introduction to Computational Fluid Dynamics.** Applied numerical analysis, including solution of linear algebraic equations and ordinary and partial differential equations; modeling of physical processes, including fluid flow and heat and mass transfer; use of general purpose computer codes, including commercial computational fluid dynamics software packages. Three lecture hours a week for one semester. Aerospace Engineering 347 and Mechanical Engineering 369L may not both be counted. Prerequisite: Credit or registration for Mechanical Engineering 330 and 339 and admission to an appropriate major sequence in engineering.
- 371K. Legal Aspects of Engineering Practice.** Legal considerations in the practice of engineering; specifications and contracts for equipment and engineering services. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 325L, 362K, 371K, 377K. Prerequisite: Upper-division standing and admission to an appropriate major sequence in engineering.
- 372J. Robotics and Automation.** Component technologies for precision machines based on dynamic modeling and motion programming: cams, linkages, planar manipulators. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 324 and admission to an appropriate major sequence in engineering.
- 372M. Mechanism Design.** Design of planar mechanisms for applications that require rigid body guidance, function generation, and path generation. Graphical and analytical techniques. Computer-aided design projects. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 324 and admission to an appropriate major sequence in engineering.
- 372N. Design of Smart Mechanisms.** Design of reprogrammable multiple-degree-of-freedom architectures. The course addresses various mechanical configurations and stresses the integrated design approach to sensing/actuation/control architecture and control software. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and consent of instructor.
- 373K. Basic Industrial Engineering.** Design and analysis of production systems, including plant layout and location, material flow, and flexible manufacturing. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 205 or the equivalent with a grade of at least C, Mechanical Engineering 335 or the equivalent, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 374C. Combustion Engine Processes.** Principles of internal combustion engines, fuels, carburetion, combustion, exhaust emissions, knock, fuel injection, and factors affecting performance. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 343 or consent of instructor, and admission to an appropriate major sequence in engineering.
- 374D. Automotive Engineering Laboratory.** Engines and emissions. Students use commercial engine-modeling software to explore effects of valve timing and intake tuning and conduct experiments with vehicle emissions, ignition timing, engine mechanisms, engine controls, and emissions control. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 374C and admission to an appropriate major sequence in engineering.
- 374F. Fire Science.** Analysis of the dynamics and consequences of fire in structures. Topics include combustion thermochemistry, premixed and diffusion flames, fluid mechanics of fire, human tenability in burning structures, and computer modeling of fires. Three lecture hours a week for one semester. Prerequisite: For engineering majors, upper-division standing and credit or registration for Mechanical Engineering 339 and 139L with a grade of at least C in each; for nonengineering majors, upper-division standing and written consent of instructor.
- 374L. Design of Thermal Systems.** Methodology and approach to design of thermal energy systems; component and system modeling; optimization, including economic considerations. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 339 or the equivalent, credit or registration for Mechanical Engineering 343, and admission to an appropriate major sequence in engineering.
- 374R. Design of Air Conditioning Systems.** Load calculations, design of thermal distribution systems, component selection and control. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 343.
- 374S. Solar Energy Systems Design.** Insolation characteristics and measurement, component design, solar energy system modeling, introduction to photovoltaic systems, cost analysis, and case studies. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 339 or the equivalent and admission to an appropriate major sequence in engineering.

- 375K. Production Engineering Management.** Introduction to production and inventory models; basic factory dynamics; analysis of variability; push-and-pull production control; sequencing and dispatching. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 205 or the equivalent with a grade of at least C, Mechanical Engineering 335 or the equivalent, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 177K, 277K, 377K. Projects in Mechanical Engineering.** Independent project carried out under the supervision of a faculty member in mechanical engineering. Student prepares a project proposal and a final report, each of which is evaluated by the faculty committee on individual projects. For 177K, three to five laboratory hours and one consultation hour with the faculty supervisor a week for one semester; for 277K, five to ten laboratory hours and one consultation hour with the faculty supervisor a week for one semester; for 377K, ten to fifteen laboratory hours and one consultation hour with the faculty supervisor a week for one semester. Only one of the following may be counted: Mechanical Engineering 325L, 362K, 371K, 377K. Prerequisite: A University grade point average of at least 2.50 and a grade point average in the major of at least 2.50; admission to an appropriate major sequence in engineering; and approval of project proposal by the faculty committee on individual projects.
- 378C. Electroceramics.** Bonding; crystal structures; defects; phase diagrams; glass ceramics; electrical, dielectric, magnetic, and optical ceramics. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 or the equivalent with a grade of at least C and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 378K. Mechanical Behavior of Materials.** Elastic deformation; viscoelasticity; yielding, plastic flow, plastic instability, strengthening mechanisms; fracture, fatigue, creep; significance of mechanical properties tests. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 336 and 136L with a grade of at least C in each, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 378P. Properties and Applications of Polymers.** Introduction to polymers as structural materials: polymerization, polymer structure, physical and mechanical properties, processing and fabrication. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 or the equivalent with a grade of at least C, Mechanical Engineering 326 or 326H or the equivalent with a grade of at least C, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 378S. Structural Ceramics.** Powder processing, powder characterization, forming techniques, densification, and development of microstructure; emphasis on understanding materials, selection, and microstructure–mechanical property relationships. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 or the equivalent with a grade of at least C, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.
- 679H. Undergraduate Honors Thesis.** Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Mechanical Engineering 679HA and enrollment in the Engineering Honors Program.
- 179M, 279M, 379M. Topics in Mechanical Engineering.** One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to an appropriate major sequence in engineering; additional prerequisites vary with the topic and are given in the *Course Schedule*.
- 379N. Engineering Acoustics.** Same as Electrical Engineering 363N. Principles of acoustics, with applications drawn from audio engineering, biomedical ultrasound, industrial acoustics, noise control, room acoustics, and underwater sound. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C.

DEPARTMENT OF PETROLEUM AND GEOSYSTEMS ENGINEERING

PETROLEUM AND GEOSYSTEMS ENGINEERING: PGE

LOWER-DIVISION COURSES

- 301. Engineering, Energy, and the Environment.** Enrollment limited to beginning students in petroleum and geosystems engineering. Overview of energy supply and demand. Studies subsurface engineering and engineering problem-solving methods, with an emphasis on fossil energy exploitation and geologic CO₂ storage. Includes aspects of basic petroleum geology. Two lecture hours and three laboratory hours a week for one semester. May not be counted by students with credit for Petroleum and Geosystems Engineering 102 and 203. Prerequisite: Geological Sciences 401 and 303 with a grade of at least C- in each.

- 305. Energy and the Environment.** The forms of current and potential energy sources, and how these might impact the earth's environment. Three lecture hours and one and one-half laboratory hours a week for one semester. May not be counted toward a degree in geological sciences, geosystems engineering and hydrology, or petroleum engineering.
- 310. Formulation and Solution of Geosystems Engineering Problems.** Introduction to mathematical equations typically encountered in petroleum and geosystems engineering; methods to solve equations graphically, analytically, and with numerical methods; applications of computers to problem solving. Three lecture hours a week for one semester. Prerequisite: Physics 303K and 103M and credit or registration for Mathematics 427K.
- 312. Physical and Chemical Behavior of Fluids I.** Principles of organic chemistry; phase behavior; properties of hydrocarbon gases and liquids and oil field waters; overview of laboratory phase behavior measurements; material balance calculations. Three lecture hours a week for one semester. Prerequisite: Chemistry 302.

UPPER-DIVISION COURSES

- 421K. Physical and Chemical Behavior of Fluids II.** Applications of thermodynamics and physical chemistry to petroleum and geosystems engineering. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Petroleum and Geosystems Engineering 326, and admission to an appropriate major sequence in engineering or consent of instructor.
- 322K. Transport Phenomena in Geosystems.** Applications of mass, heat, and momentum balances to fluid flow problems; shell balances; non-Newtonian fluids; transport processes through permeable media. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 306 and Mathematics 427K.
- 323K. Reservoir Engineering I: Primary Recovery.** Classification of subsurface reservoirs by type and recovery mechanism; reserve estimates based on material balance; steady-state and transient fluid flow in permeable reservoir rocks as applied to subsurface engineering problems. Three lecture hours a week for one semester. Petroleum and Geosystems Engineering 323K and 331 may not both be counted. Prerequisite: Petroleum and Geosystems Engineering 312 and credit or registration for Petroleum and Geosystems Engineering 424.
- 323L. Reservoir Engineering II: Secondary and Tertiary Recovery.** Introduction to reservoir displacement processes; water and gas injection; enhanced recovery. Three lecture hours a week for one semester. Petroleum and Geosystems Engineering 323 and 323L may not both be counted. Prerequisite: Petroleum and Geosystems Engineering 322K, 323K, 424, Mathematics 427K, and admission to the major sequence.
- 323M. Reservoir Engineering III: Numerical Simulation.** Mathematical equations governing fluid flow in reservoirs; numerical methods to solve the equations; numerical reservoir simulation; treatment of wells; history matching; a simulation project performed using a commercial simulator. Three lecture hours a week for one semester. Prerequisite: Petroleum and Geosystems Engineering 323L.
- 424. Petrophysics.** Properties of rocks; measurement and interpretation of petrophysical properties; application of petrophysics to subsurface engineering problems; interaction of resident fluids with rocks. Extensive written reporting. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: For petroleum engineering majors and geosystems engineering and hydrogeology majors, Petroleum and Geosystems Engineering 333T, credit or registration for Petroleum and Geosystems Engineering 322K, and admission to the major sequence; for others, consent of instructor.
- 325L. Cooperative Engineering.** This course covers the work period of petroleum engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Petroleum and Geosystems Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Petroleum and Geosystems Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Petroleum and Geosystems Engineering 325LY and appointment for a full-time cooperative work tour.
- 225M. Cooperative Engineering.** This course covers the work period of petroleum engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Petroleum and Geosystems Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Petroleum and Geosystems Engineering 225MA and appointment for a full-time cooperative work tour.
- 326. Thermodynamics and Phase Behavior.** Application of classical thermodynamics to the behavior of fluids, with emphasis on phase behavior of multicomponent mixtures. Three lecture hours a week for one semester. Prerequisite: For petroleum engineering majors and geosystems engineering and hydrogeology majors, Petroleum and Geosystems Engineering 312, Mathematics 427K, and admission to the major sequence; for others, consent of instructor.
- 430. Drilling and Well Completions.** Elements of rock mechanics, drilling fluids, factors affecting rate of penetration, and well completions, including casing and tubing design. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Credit or registration for Engineering Mechanics 319, Petroleum and Geosystems Engineering 322K, and admission to the major sequence.

- 333T. Engineering Communication.** Advanced technical communication skills, with emphasis on writing strategies for technical documents, oral presentations, and visual aids. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306.
- 334. Reservoir Geomechanics.** Basic stress and strain analysis; pore pressure and in situ stress estimation and measurement; deformation mechanisms in rock; rock fracture description and analysis; wellbore stresses and failure; wellbore stability analysis; fault stability analysis; depletion-induced reservoir deformation; and hydraulic fracturing. Emphasis on applications to petroleum engineering. Two lecture hours and three laboratory hours a week for one semester. Petroleum and Geosystems Engineering 432 and 334 may not both be counted. Prerequisite: Engineering Mechanics 319, Geological Sciences 416M, and admission to the major sequence.
- 337. Introduction to Geostatistics.** Basic probability and statistics, study of correlated variables, statistical interpolation and simulation, and global optimization. Emphasis is on the ways the results of these procedures are related to geology and fluid flow. Three lecture hours a week for one semester. Prerequisite: For petroleum engineering majors, Petroleum and Geosystems Engineering 310, Mathematics 408D or the equivalent, and admission to the major sequence; for others, Petroleum and Geosystems Engineering 210, and Mathematics 408D or the equivalent.
- 361. Advanced Reservoir Engineering.** Secondary recovery methods; computer simulation of reservoir performance; applications to field problems. Three lecture hours a week for one semester. Prerequisite: Petroleum and Geosystems Engineering 326 and 323K (or 331).
- 362. Production Technology and Design.** Analysis, specification, and characteristics of production systems; inflow performance; wellbore and tubing hydraulics; and artificial lift. Three lecture hours a week for one semester. Prerequisite: For petroleum engineering majors, credit or registration for Petroleum and Geosystems Engineering 430 and admission to the major sequence; for others, consent of instructor.
- 363. Petroleum Leasing Regulations and Practices.** Domestic and worldwide regulations associated with petroleum leasing, including offshore areas, and environmental provisions concerning petroleum exploration and production. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Petroleum and Geosystems Engineering 365 or the equivalent, and upper-division standing or consent of instructor.
- 364. Natural Gas Engineering.** Production, transportation, and storage of gas; metering and gauging; performance of wells; estimation of gas reserves; prevention of waste and utilization of natural gas. Three lecture hours a week for one semester. Prerequisite: For petroleum engineering majors, Petroleum and Geosystems Engineering 326, 323K (or 331), and 362 and admission to the major sequence; for others, upper-division standing and consent of instructor.
- 365. Resource Economics and Valuation.** Derivation of profitability criteria for earth resource investments, project analysis in terms of the interrelation of technical and economic factors, investment analysis in the presence of uncertainty, and project planning. Three lecture hours a week for one semester. Prerequisite: Admission to an appropriate major sequence in engineering or consent of instructor.
- 368. Fundamentals of Well Logging.** Principles, applications, and interpretation of well logs as used in exploration and evaluation of subsurface formations. Three lecture hours a week for one semester. Prerequisite: Geological Sciences 416M and Petroleum and Geosystems Engineering 424, and admission to an appropriate major sequence in engineering or consent of instructor.
- 371. Energy Finance.** Fundamentals of finance as applied to the petroleum industry, including petroleum project financing techniques, investigating sources of capital, and methods used to evaluate an oil company's financial performance. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Petroleum and Geosystems Engineering 365 or the equivalent, and admission to an appropriate major sequence in engineering or consent of instructor.
- 372. Advanced Drilling and Well Completions.** Applications of geomechanics in wellbore and near-wellbore problems encountered in drilling and completing high-pressure, high-temperature wells on land and water locations. Three lecture hours a week for one semester. Petroleum and Geosystems Engineering 372 and 379 (Topic: *Advanced Drilling and Well Completions*) may not both be counted. Prerequisite: Petroleum and Geosystems Engineering 430 and 334 (or 432).
- 373K. Geosystems Engineering Design and Analysis I.** Analysis and design of subsurface injection and extraction systems, project organization, fundamentals of operations research, oral and written reporting, graphical presentations and use of visual aids, use of computer-aided engineering, and impact of ethical and economic issues on design. Three lecture hours a week for one semester, with one additional hour a week to be arranged. Prerequisite: Petroleum and Geosystems Engineering 323L (or 323) or the equivalent, Petroleum and Geosystems Engineering 333T and 365, and admission to an appropriate major sequence in engineering or consent of instructor.
- 373L. Geosystems Engineering Design and Analysis II.** Team-oriented design projects involving the application of geologic and engineering methods to the solution of subsurface problems, using field case histories. Projects are selected for each student based on his or her petroleum engineering technical area option. Three lecture hours a week for one semester, with one additional hour a week to be arranged. Petroleum and Geosystems Engineering 373L and 374 may not both be counted. Prerequisite: For petroleum engineering majors, Petroleum and Geosystems Engineering 323K (or 331), 362, 368, and 373K; for others, upper-division standing and consent of instructor.

- 176, 276, 376. Special Problems in Petroleum and Geosystems Engineering.** Independent investigation of an advanced subject in petroleum and geosystems engineering, for superior students only. Conference course. Prerequisite: Admission to an appropriate major sequence in engineering and written consent of instructor.
- 377. Deepwater Operations.** Overview of various technical, logistical, and managerial elements that are functionally integrated in deepwater operations, with emphasis on applications in the Gulf of Mexico. Three lecture hours a week for one semester. Prerequisite: Upper-division standing in the Cockrell School of Engineering.
- 378. Applied Reservoir Characterization.** Reservoir modeling using software tools for statistical analysis of reservoir data; variogram analysis and modeling; spatial interpolation (kriging); tools for data integration in kriging; stochastic simulation of rock-types (lithology), pay thickness/porosity, and permeability; inputting geological models into flow simulation; uncertainty assessment. Three lecture hours a week for one semester. Prerequisite: Petroleum and Geosystems Engineering 323K (or 331), 337, and Geological Sciences 416M.
- 379. Studies in Petroleum and Geosystems Engineering.** Special courses or seminars on recent developments in engineering. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to an appropriate major sequence in engineering or consent of instructor.
- 679H. Undergraduate Honors Thesis.** Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Petroleum and Geosystems Engineering 679HA and enrollment in the Engineering Honors Program.

8. College of Fine Arts

Douglas Dempster, PhD, *Dean*
 Kenneth Hale, MFA, *Associate Dean*
 D. Rachel Martin, BFA, *Assistant Dean*
<http://www.utexas.edu/finearts/>

GENERAL INFORMATION

HISTORY AND MISSION

The College of Fine Arts was established by the state legislature in 1937; in the decades since then, the college has grown with the University to become a leading center for arts study. Both students and faculty members of the College of Fine Arts have regularly received national and international recognition for their achievements; such recognition indicates the degree of academic and artistic excellence to which the college is dedicated.

The College of Fine Arts strives to prepare students for the practice, study, criticism, and teaching of the arts; to lead in developing the arts through research and the creation of new works; and to provide performances and exhibitions that deepen the understanding of the arts, expand audiences, and develop a better quality of life in the University, community, state, and nation. The college prepares students and audiences for the coming decades by emphasizing cultural diversity and technological advancement and by exploring the interrelationships among all the arts.

FACILITIES

The Office of the Dean of the College of Fine Arts is located in the E. William Doty Fine Arts Building, at the corner of 23rd and Trinity streets. General inquiries about the college should be directed to this office. The mailing address is The University of Texas at Austin, Office of the Dean, College of Fine Arts, 1 University Station D1400, Austin TX 78712.

Within the college are three academic units—the Department of Art and Art History, the Sarah and Ernest Butler School of Music, and the Department of Theatre and Dance. Inquiries about a particular unit should be directed to that unit.

TEXAS PERFORMING ARTS

Texas Performing Arts, one of the nation's most well-respected University-based arts centers, serves the campus and the Austin community at large through a diverse schedule of world-class fine arts performances, educational activities, and collaborative campus and community partnerships.

Texas Performing Arts presents an international season of music, theatre, dance, and conversation in multiple venues, as well as the best in touring Broadway and concert attractions. As a university-based arts center, Texas Performing Arts is also committed to serving the academic mission of the College of Fine Arts by supporting the work of students, faculty members, and staff members on the stage and in classrooms, studios, production shops, and administrative offices.

COMPUTER FACILITIES

In addition to the computer facilities available to all students at the University, the College of Fine Arts maintains facilities with special hardware and software for its own undergraduate and graduate majors. These include a central computer laboratory and learning resource center located in the Fine Arts Library, computer laboratories and media-enhanced classrooms in each

of the three academic units, and extensive wireless Internet coverage throughout the college.

Because of the rapidly growing importance of computers in College of Fine Arts curricula, students are strongly encouraged to come to the University with their own computers. Students should contact the area of academic interest for more information.

FINE ARTS LIBRARY

Located in the E. William Doty Fine Arts Building, the Fine Arts Library provides a broad range of services and materials for students in art, theatre, dance, and music, as well as audiovisual materials in other subject areas. Services include information and research assistance, instruction, circulation and reserves, and media and technology support. The Fine Arts Library is wireless and offers computing hardware and software to support the study of the fine arts. Students may borrow media equipment, including digital cameras and CD players, and reserve seminar and group study rooms. Lockers and carrels are also available.

The art collection includes materials on most art and design movements and schools, photography, and art education. Artists of most periods and nationalities and studies of their work are represented, as are most media and techniques.

The theatre and dance collection includes materials on performance, especially play production, theatrical design, playwriting, theatre education, and dance. Materials on other types of theatrical presentations, such as magic, circuses, and pantomime, are also included. The Fine Arts Library holds texts of major plays written in English or translated into English, with contemporary plays collected most heavily. The Perry-Castañeda Library also holds texts of plays in English and other languages, with emphasis on plays as a literary form and on literary criticism.

The music collection includes materials on performance, composition, history, ethnomusicology, music education, and music therapy. Most historical periods and geographical areas are covered in both classical and popular idioms, and while the emphasis is on the Western classical tradition, many other musics are represented. Tens of thousands of scores are available for both study and performance, and over 40,000 CDs are available for listening.

The audiovisual collection includes documentary and feature films, including popular movies, foreign films, Academy Award winners, and film festival winners on DVDs and VHS tapes. Other media formats

include 16-mm films, audiocassettes, interactive media/CD-ROMs, and slides.

Special collections include materials from playwright and actor Sam Shepard, materials from the Austin Theatre Alliance—Paramount and State Theatres, and the Historical Music Recordings Collection, which includes over 200,000 items.

STUDY ABROAD

The University offers many opportunities for students to study abroad. Among these is the Learning Tuscan program, which offers instruction by University faculty members at the Santa Chiara Study Center in Castiglione Fiorentino, near Florence. More information is available from the undergraduate advising office in the Department of Art and Art History.

The Butler School of Music offers an opera program in Salzburg, Austria. More information is available from the undergraduate advising office in the Butler School of Music.

Another international opportunity is the Institute for Digital Performing Arts program, which takes place in Costa Rica during the summer. More information is available from the undergraduate advising office in the Department of Theatre and Dance.

Maymester Abroad courses in fine arts are offered for five weeks in May and June. More information is available from the Study Abroad Office at <http://www.utexas.edu/student/abroad/>.

FINANCIAL ASSISTANCE AVAILABLE THROUGH THE COLLEGE

Students in the College of Fine Arts are eligible for a variety of scholarships and awards. Most scholarship aid in the college is offered through the academic units (art and art history, music, and theatre and dance). For information about scholarship application procedures and deadlines, the student should contact the academic unit of interest.

STUDENT SERVICES AND ACADEMIC ADVISING

OFFICE OF THE DEAN, STUDENT AFFAIRS

In the College of Fine Arts, the Office of the Dean, Student Affairs offers a variety of student services, including general academic advising, maintenance of student records, evaluation of the student's academic

standing and progress toward a degree, and information about programs in which students may study abroad. Students should contact the Office of the Dean, Student Affairs for answers to questions about degree requirements or other College of Fine Arts or University policies and regulations. This office is also a good source of general information and referral.

DEPARTMENTAL ADVISING

Each academic unit in the college (art and art history, music, and theatre and dance) has an undergraduate advising office with a faculty advising coordinator and one full-time staff adviser. Questions about advising policies and procedures should be directed to those offices.

A student enrolled in the College of Fine Arts is required to meet with a designated adviser before registering for any semester or summer session. This meeting must take place during the official advising period, and the student's proposed schedule of classes must be approved by the adviser. Subsequent changes or corrections in the schedule must also have the adviser's approval.

CAREER ADVISING

Fine Arts Career Services, a division of the Office of the Dean, helps fine arts majors explore career options, plan for careers, and develop strategies for seeking jobs upon graduation. More information is available at <http://www.utexas.edu/finearts/careers/>. Career advising and planning services are also available from the Sanger Learning and Career Center in Jester Center.

The University makes no promise to secure employment for each graduate.

EDUCATION CAREER SERVICES

Education Career Services provides job placement services in education-related occupations at the elementary school, secondary school, and college level. Candidates for teacher certification should register with Education Career Services at the beginning of their student-teaching semester. Additional information is available on the Education Career Services Web site at <http://www.edb.utexas.edu/education/edServices/career/>.

ADMISSION AND REGISTRATION

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

Within the College of Fine Arts, the departmental advising offices and dean's office provide assistance to students who plan to attend the University. For information about a particular academic area, prospective students should consult the advising office in the Department of Art and Art History, the Butler School of Music, or the Department of Theatre and Dance. They should consult the Office of the Dean, Student Affairs for general information and for answers to questions about degree requirements. Because of the variety of degree options available in the college, prospective students are encouraged to visit the campus and meet with an academic adviser or admissions coordinator. An appointment should be arranged in advance.

SPECIAL ADMISSION REQUIREMENTS IN THE COLLEGE OF FINE ARTS

To major in any field in the College of Fine Arts, a student must be admitted to the University. He or she must also meet the following special requirements.

DEPARTMENT OF ART AND ART HISTORY

To major in the Department of Art and Art History, a student must have the approval of the Art and Art History Admissions Committee. Information about admission requirements, procedures, and deadlines is available from the office of undergraduate studies in the department or online at <http://www.finearts.utexas.edu/aah/>.

Students admitted to the design major must pass annual performance reviews to continue in the major.

SARAH AND ERNEST BUTLER SCHOOL OF MUSIC

To major in music, a student must pass an audition conducted by the Butler School of Music. At the discretion of the school, a student who fails an audition may be allowed to reaudition at a later date. Information about audition requirements, procedures, dates, and deadlines is available from the undergraduate student office in the Butler School or online at <http://www.music.utexas.edu/>.

DEPARTMENT OF THEATRE AND DANCE

Admission to programs in the Department of Theatre and Dance requires the approval of the Theatre and Dance Admissions Committee. Information about admission requirements, procedures, and deadlines is available from the undergraduate advising office in the department or online at <http://www.finearts.utexas.edu/tad/>.

STUDENTS TRANSFERRING FROM ANOTHER COLLEGE OR UNIVERSITY

A student who begins study in the fine arts at another institution should consult the transfer adviser in the departmental undergraduate advising office (art and art history, music, theatre and dance) before applying to the University.

Transfer credit evaluation. Most credit accepted from another college or university is evaluated by the Office of Admissions in terms of equivalent courses at the University of Texas at Austin. For some transferred courses, especially in the fine arts, credit is accepted but no specific University equivalency is assigned. If, for example, a student has completed twelve semester hours of transferable coursework in studio art at another institution, the Office of Admissions may accept the work only as twelve semester hours of unspecified credit in art. The same will often be true for courses in theatre and dance and music.

Unspecified transfer credit outside the student's major is evaluated by the Office of the Dean, Student Affairs during the degree audit process described on page 248. For unspecified transfer credit within the student's major, however, the student must seek a transfer evaluation from the designated adviser in art and art history, music, or theatre and dance. The adviser will identify courses in the major that are equivalent to University courses and forward his or her written recommendation to the Office of the Dean, Student Affairs.

Transfer credit in music performance may not be counted toward a degree in music until the student has completed additional music performance coursework at the University.

STUDENTS TRANSFERRING WITHIN THE UNIVERSITY

A student may transfer from another division of the University to the College of Fine Arts in accordance with the procedures and policies given in *General Information*. However, a student seeking admission to any department of the college must also satisfy the special admission requirements described above.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

APPROVALS REQUIRED

Before registering for any semester or summer session, a student in the College of Fine Arts must obtain written approval of the proposed schedule of classes from his or her designated adviser.

PREREQUISITES

The student must also meet the prerequisite for each course in which he or she enrolls. Prerequisites are given in the section "Courses" in chapters 2 through 16 and often appear in the *Course Schedule*. A student who registers for or adds a class without having met the prerequisite may be dropped from the class.

FINE ARTS REGISTRATION REQUIREMENTS

In addition to individual course prerequisites, there are special registration requirements for certain courses and areas of study in the College of Fine Arts.

SARAH AND ERNEST BUTLER SCHOOL OF MUSIC

1. A student with transferred college credit in music theory must take a diagnostic examination in music theory. The results of the examination determine the level of music theory for which the

student is advised to register.

2. Before beginning upper-division coursework in the major instrument, students majoring in music performance (including those pursuing the pedagogy option) must pass a full faculty jury examination in the major instrument and must be admitted to upper-division standing in that instrument.
3. Before beginning upper-division coursework in the major area, a student majoring in composition or music studies must obtain the approval of a designated committee composed of faculty members from that major.
4. Fulfillment of the music performance requirement signifies the attainment of a given level of artistic performance, rather than the completion of a specific number of semester hours of credit. At the discretion of the faculty, a student may be required to repeat any course in music performance; in such a case, the course may be repeated for credit. No music performance requirement is fulfilled unless approval of the faculty has been obtained.
5. A student who receives a grade lower than a C- in any music performance course may not register for that course during the next semester or summer session until the requests of other students for such work have been met.
6. A student whose degree plan requires a piano proficiency of Music 210K must continue with group piano classes in consecutive semesters until the requirement is fulfilled. In exceptional cases, a student with permission from the group piano supervisor may enroll in private instruction Piano 201 until the Music 210K proficiency has been reached. The student may not enroll in private instruction Piano 202 until the Music 210K proficiency has been completed.

DEPARTMENT OF THEATRE AND DANCE

A student must enroll in an appropriate production or performance laboratory course, under the supervision of a Department of Theatre and Dance faculty member, in any semester he or she wishes to participate in a production sponsored by the department. A student majoring in the Department of Theatre and Dance must consult his or her adviser to determine the appropriate course. Nonmajors who wish to enroll in production or performance laboratory courses must consult the undergraduate advising office of the department.

ACADEMIC POLICIES AND PROCEDURES

CLASS ATTENDANCE AND ABSENCES

Regular and punctual attendance is required at all classes, laboratories, practice hours, and other activities for which the student is registered.

Absences from scheduled practice hours, rehearsals, and laboratories will be excused only for serious and substantiated reasons, and the final grade in the course may be lowered for unexcused absence. Absence from a theatre, dance, or music rehearsal, crew meeting, or performance may be deemed sufficient reason for giving the student a grade of *F* for the semester's work in the course concerned.

If an instructor indicates that a student has fallen below a passing grade in a course because of excessive absences, the dean, upon written recommendation of the instructor, may drop the student from that course and assign a grade of *F* for the semester.

SPECIAL REGULATIONS OF THE COLLEGE

Studio and design courses. Students retain copyright to all two-dimensional, three-dimensional, time-based, and electronic artwork created in the Department of Art and Art History; they grant a nonexclusive license to exhibit, display, reproduce, perform, or adapt these works at the discretion of the faculty. Works left in any departmental facility at the end of any semester or summer session may be removed or destroyed at the discretion of the faculty.

Music performances. A student majoring in the Butler School of Music must consult his or her faculty adviser before participating in any public performance.

HONORS

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

SPECIAL HONORS IN ART HISTORY

The Honors Program in Art History gives outstanding art history majors an opportunity to undertake an advanced research and writing project under the supervision of a faculty member. The notation “Special Honors in Art History” appears on the transcript of each graduate who completes the program.

ADMISSION TO THE PROGRAM

The honors program is available to qualified art history majors pursuing the degree of Bachelor of Arts in Art. At the beginning of the senior year, an interested art history major should apply to the honors adviser for admission to the program. The criteria for admission are

1. Completion of at least ninety semester hours of college credit.
2. A University grade point average of at least 3.00.
3. A grade point average of at least 3.50 in all art history courses attempted, both at the University and elsewhere.
4. Completion of at least fifteen semester hours in art history. If the hours in art history were not earned at the University, admission is at the discretion of the honors adviser.
5. Approval of the honors adviser, who is responsible for maintaining the high standards for admission to and completion of the program.

GRADUATION WITH SPECIAL HONORS IN ART HISTORY

To complete the program, students must meet the following requirements by the end of the semester in which they graduate.

1. Graduation as an art history major.
2. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.
3. A University grade point average of at least 3.00.

4. A grade point average of at least 3.50 in all art history courses taken at the University.
5. Completion of Art History 375 with a grade of at least *B*.
6. Approval of the honors adviser.
7. Completion of Art History 379H with a grade of *A*. This conference course, in which the student researches and writes a thesis, may not be counted toward the minimum number of hours of art history required for the degree.

To enroll in Art History 379H, the student must have the consent of the honors adviser. Consent is based on a written prospectus for the student’s honors thesis and a letter of support from the art history faculty member who will supervise the thesis. The prospectus and the letter of support must be submitted to the honors adviser by the end of the semester preceding the semester in which the student plans to take Art History 379H. The student may develop the honors project and prepare the prospectus either in Art History 376 or in another art history course:

- a. With the approval of the honors adviser, the student must complete the independent study course Art History 376 with an art history faculty member who agrees to supervise the student’s work. Art History 376 may be counted toward the degree as elective art history credit. The student must earn a grade of at least *B* in order to progress to Art History 379H.
 - b. The student may also base the prospectus on a project undertaken in another art history course in which he or she earned a grade of at least *B*.
8. Submission of a departmental honors degree audit application to the Office of the Dean of the College of Fine Arts. This degree audit application may be submitted when the student is admitted to the honors program; it must be on file when the student applies for graduation. Failure to meet this requirement will preclude graduation with special honors in art history.

CERTIFICATE OF RECOGNITION IN MUSIC PERFORMANCE

This certificate is offered to encourage undergraduate music students who are not music performance majors to pursue the intensive study of their instrument beyond the minimum requirements for their degree. The area of performance is indicated on the certificate.

ELIGIBILITY

To apply for a Certificate of Recognition in Music Performance, a student must be enrolled as an undergraduate music major pursuing the Bachelor of Music degree or the Bachelor of Arts in Music degree. He or she must be enrolled in principal instrument course 260.

PROCEDURE

A student who meets the eligibility criteria must submit a petition to the appropriate music performance jury for permission to audition before the Butler School of Music faculty—that is, to perform at a full faculty jury examination. This petition may be submitted during any semester in which the student is enrolled in principal instrument course 260. Ordinarily, the student may not audition for the full faculty before the conclusion of his or her second semester of principal instrument course 260. If the petition is approved, the student may audition at a full faculty jury examination.

If the student obtains approval at the full faculty jury examination, then he or she must present a certificate recital during the following academic year. The student may also enroll in Music 420R rather than principal instrument course 260 for the semester in which the certificate recital is to be given. A certificate recital must be equivalent to the junior recital required of a performance major and must offer a repertoire equivalent to that of an upper-division performance major. The recital is heard by the faculty of the student's principal instrument, who vote to approve or disapprove the granting of a Certificate of Recognition in Music Performance. If approval is given by the division faculty, the certificate is issued by the Butler School and signed by both the student's music performance instructor and the director of the school.

STUDENT ORGANIZATIONS

University-wide organizations are described in chapter 1. In each of the units of the College of Fine Arts are various student organizations, including honor societies, professional associations, and service organizations. For information about current organizations and their eligibility requirements, contact the appropriate unit.

The Fine Arts Council is the official student organization of the college.

GRADUATION

SPECIAL REQUIREMENTS OF THE COLLEGE

All students must fulfill the general requirements for graduation given in chapter 1. Students in the College of Fine Arts must also fulfill the following requirements.

RESIDENCE

General requirements on coursework to be taken in residence are given in chapter 1. Unless an exception is approved by the adviser and the dean, a student in the College of Fine Arts must also complete in residence the last eighteen semester hours in the major subject that are counted toward the degree.

GRADE POINT AVERAGE

All University students must have a grade point average of at least 2.00 to graduate. In addition, a student in one of the following majors must meet special grade point requirements.

Studio art. A student majoring in studio art must have a grade point average of at least 2.50 for all upper-division studio art courses taken in residence at the University.

Design. A student majoring in design must have a grade point average of at least 2.50 for all upper-division design courses taken in residence at the University.

Art history. A student majoring in art history must have a grade point average of at least 2.50 for all upper-division art history courses taken in residence at the University.

Music business. A student majoring in music business must have a grade point average of at least 3.00 for all upper-division courses in the Butler School of Music (excluding ensemble) taken in residence at the University.

Recording technology. A student majoring in recording technology must have a grade point average of at least 3.00 for all upper-division courses in the Butler School of Music (excluding ensemble) taken in residence at the University.

Bachelor of Arts in Music. A student pursuing the Bachelor of Arts in Music must have a grade point average of at least 2.50 in all upper-division courses in the Butler School of Music (excluding ensemble) taken in residence at the University.

Bachelor of Arts in Theatre and Dance. A student pursuing the Bachelor of Arts in Theatre and Dance must have a grade point average of at least 2.50 in all upper-division courses undertaken in the Department of Theatre and Dance.

Teacher certification in art, theatre arts, or music. A student pursuing teacher certification must meet certain grade point average requirements during the course of the certification program. For information, consult the teacher certification officer, College of Education.

BUTLER SCHOOL OF MUSIC SPECIAL REQUIREMENTS

ENSEMBLE REQUIREMENT

Ensembles that may be used to fulfill the following requirements are designated by the Butler School. For information, the student should contact the undergraduate advising office of the school. With the approval of the designated adviser, a student may enroll in more than one ensemble in a semester, but no more than one ensemble a semester may be used to fulfill this requirement.

Bachelor of Music

Students seeking this degree with a major in music business or recording technology must complete in residence at least four long-session semesters of ensemble approved by the Butler School; students seeking the Bachelor of Music with any other major must complete in residence at least eight long-session semesters of approved ensemble. Transfer students must complete an approved ensemble each long-session semester in residence until they have met the ensemble requirement or until they graduate, whichever comes first. A transfer student may count toward this requirement two semesters of transferred ensemble approved by the Butler School.

The ensemble requirement is waived for music studies majors during the student teaching semester.

Bachelor of Arts in Music

Students seeking this degree must complete in residence at least four long-session semesters of ensemble approved by the Butler School. Transfer students must complete an approved ensemble each long-session semester in residence until they have completed four semesters of ensemble or until they graduate, whichever comes first. A transfer student may count toward this requirement one semester of transferred ensemble approved by the Butler School.

RECITAL REQUIREMENT FOR MUSIC STUDIES MAJORS

Before the end of his or her last semester of study on the principal instrument, a music studies major must present either the recital required for a Certificate of Recognition in Music Performance (described on page 246–247) or a community performance approved by the music studies faculty and the student's instructor in the principal instrument.

RECEIVING AN OFFICIAL DEGREE AUDIT

At registration periods, each student normally receives an advising audit that summarizes his or her progress toward a degree. An official degree audit, however, is the required statement from the Office of the Dean, Student Affairs of the student's official standing in a College of Fine Arts degree program.

Official degree audits are printed and reviewed by the Office of the Dean, Student Affairs for students with a major in the College of Fine Arts who have completed at least sixty semester hours of coursework. The degree audit is mailed to the student, and the student is advised to retain this official degree audit for his or her records. If a student changes his or her catalog, principle instrument, major, or any degree option that affects the requirements of his or her degree program, a new official degree audit will be printed, reviewed, and mailed to the student.

The official degree audit provides an accurate statement of the requirements, but the student is responsible for meeting all deadlines, knowing the requirements, and registering for courses that fulfill all the requirements for the degree as stated in a catalog under which he or she is entitled to graduate. Before registering, the student should seek an official ruling from the Office of the Dean, Student Affairs if in doubt about any requirement.

APPLYING FOR GRADUATION

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must file a graduation application form with the Office of the Dean, Student Affairs. This should be done at the beginning of the semester in which the student intends to graduate; it must be done by the deadline to apply for an undergraduate degree, which is given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

An official degree audit must be on file when the student submits the graduation application. Because the application process includes a review of all remaining degree requirements, candidates for graduation are encouraged to apply as early in the semester as possible. A student who applies for graduation but does not receive the degree must submit a new application in the semester he or she subsequently intends to graduate.

The student must be registered at the University for the semester or summer session in which the degree is to be granted. This requirement may be fulfilled by registering for courses in residence or by registering in absentia. For information about registration in absentia, the student should consult the Office of the Dean, Student Affairs no later than the second week of the semester in which he or she intends to graduate.

Credit received by examination, correspondence, or transfer does not fulfill the residence requirement. Students planning to receive credit by any of these means must consult the Office of the Dean, Student Affairs before the semester in which they intend to graduate for a ruling about whether the credit may be applied toward the degree and for information about the procedures and deadlines involving credit by examination, correspondence, and transfer.

No degree will be conferred unless all requirements have been fulfilled and all deadlines met.

TEACHER CERTIFICATION

To be recommended for a certificate to teach in Texas public schools, an undergraduate or graduate student must complete a University of Texas at Austin approved program for teacher preparation. The University maintains approved programs for art, theatre arts, and music, and students interested in one of these teaching areas ordinarily pursue the degree program in visual art studies, theatre studies, or music studies. For information about current teacher certification standards and

the requirements for admission to the Professional Development Sequence, the student should contact the teacher certification officer in the College of Education, George I. Sánchez Building 216, and the appropriate faculty adviser in art and art history, music, or theatre and dance.

DEGREES

DEGREES OFFERED

The College of Fine Arts offers a wide variety of degree programs. For undergraduate students who seek professional training in the arts or who feel the need for intensive training in their chosen art, the college offers the degrees of Bachelor of Fine Arts and Bachelor of Music. These degrees require that approximately two-thirds of the coursework be completed in the major area.

The student who wants a broad education with an emphasis in the arts may pursue the degree of Bachelor of Arts in Art, Bachelor of Arts in Music, or Bachelor of Arts in Theatre and Dance. These degrees require that approximately a third of the coursework be completed in the major area.

DEPARTMENT OF ART AND ART HISTORY

The Department of Art and Art History offers academic programs in art history, design, studio art, and visual art studies. There is a full range of art history instruction in ancient, medieval, Renaissance, baroque, and modern art, as well as in art from non-Western areas (African, Asian, Islamic, Latin American, Mesoamerican, Native American, and Oceanic).

Students in design focus on the connection between design and related disciplines, emphasizing the relationships the designer shares with others. Through in-depth investigation of social, cultural, technological, and aesthetic dimensions of design, students have the opportunity to increase their cognitive skills; develop critical analytical, research, and organizational skills; and gain facility with the technologies of design.

Studio art instruction is given in ceramics, drawing, metals, painting, photography, printmaking (intaglio, lithography, serigraphy), sculpture, and transmedia (digital-time art, video art, performance art). Visual art studies provides instruction in art criticism, philosophy, and current trends in art education, with an emphasis on teaching methods, instructional sites, and art materials and production techniques. The program

provides students with options in teacher certification and community art programs.

The University's extensive resources for art research include the Fine Arts Library, the Blanton Museum of Art, the Perry-Castañeda Library, and specialized collections such as the Harry Ransom Humanities Research Center, the Classics Library, the Architecture and Planning Library, and the Benson Latin American Collection. While at the University, students also have access to the large permanent collection and traveling exhibitions.

Programs of study leading to the following undergraduate degrees are offered in the Department of Art and Art History:

- ▶ Bachelor of Arts in Art

Art history

Studio art

- ▶ Bachelor of Fine Arts

Design

Studio art

Visual art studies

Students who plan to pursue certification to teach art in Texas public schools or to focus on community art programs and administration should follow the visual art studies program.

SARAH AND ERNEST BUTLER SCHOOL OF MUSIC

The instructional programs in the Butler School of Music are intended to meet a broad range of needs. Faculty members recognized for their professional and scholarly excellence teach courses extending from the traditional to the experimental, from the Western tradition to musics of diverse cultures from around the world, from individual instruction to more than twenty vocal and instrumental ensembles.

Physical facilities include two connected music buildings and the Performing Arts Center. Within the Performing Arts Center are the Kate Broocks Bates Recital Hall, the Nancy Lee and Perry R. Bass Concert Hall, and the Ralph and Ruth McCullough Theatre, which are used for performances by students, faculty members, and guest artists. Also available are the academic recital hall and organ recital hall, as well as general and specialized studios such as chamber music rooms; harp studios; organ practice rooms; percussion studios; the choral, orchestra, and band rehearsal rooms; and the digital keyboard laboratory. Also available to music students are libraries including manuscripts, rare editions, and performance collec-

tions; a recording studio; a medieval and Renaissance instrument collection; an electronic and computer music center; a music education laboratory; and over one hundred individual practice modules.

Programs of study leading to the following undergraduate degrees are offered in the Butler School of Music:

- ▶ Bachelor of Arts in Music

- ▶ Bachelor of Music

Composition

Jazz composition

Double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone

Jazz performance

Double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone

Music business

Music performance

Voice, piano, organ, harp, harpsichord, and orchestral instruments

Music studies

Students who plan to pursue certification to teach music in Texas public schools should follow the music studies program.

Recording technology

DEPARTMENT OF THEATRE AND DANCE

The Department of Theatre and Dance serves students in all principal areas of theatre, drama, and dance. Students may choose programs of study leading to a variety of academic and professional goals.

The facilities of the department are among the best available to university programs in the United States. In addition to the performance areas, studios, and shops of Texas Performing Arts, the department has the B. Iden Payne Theatre, a flexible-space theatre, a laboratory theatre, an extensive costume collection, four dance studios, a drafting studio, and a creative drama room adjoining the classrooms and rehearsal studios in the F. Loren Winship Drama Building. Of special interest to students pursuing theatre research is the Performing Arts Collection, part of the Harry Ransom Humanities Research Center, which contains one of the world's most important collections of theatre material.

Programs of study leading to the following undergraduate degrees are offered in the Department of Theatre and Dance:

- ▶ Bachelor of Arts in Theatre and Dance

- ▶ Bachelor of Fine Arts

Dance

Theatre studies

Students who plan to pursue certification to teach theatre arts in Texas public schools should follow the theatre studies program.

APPLICABILITY OF CERTAIN COURSES

PHYSICAL ACTIVITY COURSES

Physical activity courses (PED) are offered by the Department of Kinesiology and Health Education. A limited number of these courses may be counted as electives toward degrees in the College of Fine Arts, but only at the discretion of the dean. All physical activity courses are counted among courses for which the student is enrolled, and the grades are included in the grade point average. For further information, contact the Office of the Dean, Student Affairs.

BIBLE COURSES

Bible courses may be counted as lower-division electives in College of Fine Arts degree programs that have room for such electives. No more than twelve semester hours of such work may be counted toward any degree offered by the University.

COURSES TAKEN ON THE PASS/FAIL BASIS

Regulations concerning courses taken on the pass/fail basis are given in *General Information*. For most degree programs in the College of Fine Arts, a very limited and restricted amount of coursework may be taken on the pass/fail basis. To be assured that a course taken on this basis will apply to the degree, the student must consult the Office of the Dean, Student Affairs before enrolling in the course.

CREDIT BY EXAMINATION, CORRESPONDENCE, AND TRANSFER

Credit that a student in residence earns by examination, correspondence, or extension will not be counted toward a degree in the College of Fine Arts unless specifically approved in advance by the dean.

Credit that the student earns at another institution while enrolled in residence at the University also will not be counted toward a degree in the college unless approved in advance by the dean.

A student planning to take coursework at another institution while not enrolled in residence at the University should also seek a ruling from the Office of the Dean, Student Affairs as to whether the credit may be applied toward a degree and for information about procedures and deadlines. This ruling should be obtained before registering for the coursework.

No more than 10 percent of the semester hours required for any degree offered in the College of Fine Arts may be completed by correspondence.

BACHELOR OF FINE ARTS

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2. The specific requirements for the Bachelor of Fine Arts consist of prescribed work, major requirements, and electives. In some cases, a course required for a major in the Bachelor of Fine Arts may also be counted toward the core curriculum; these courses are identified below.

STUDIO ART MAJOR

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Studio art: Sixty semester hours, consisting of
 - a. Studio Art 303K, 303L, 304K, and 304L.
 - b. Twelve semester hours, consisting of three hours from each of the following four areas:
 1. Area A: Drawing, life drawing, painting
 2. Area B: Intaglio, lithography, photography, serigraphy
 3. Area C: Digital-time art, performance art, video art
 4. Area D: Ceramics, metals, sculpture
 - c. Thirty-six additional semester hours of studio art, of which at least twenty-four hours must be upper-division.
2. Art history: Twelve semester hours, consisting of Art History 302, 304, and six semester hours of upper-division coursework in art history. Three semester hours of this coursework may also be counted toward the visual and performing arts requirement of the core curriculum.

ELECTIVES

Six semester hours chosen from courses either within or outside the Department of Art and Art History. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BFA with a major in studio art: 120 semester hours as outlined above.

DESIGN MAJOR**PRESCRIBED WORK**

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Studio art: Twelve semester hours, consisting of Studio Art 303K, 303L, 304K, and 304L.
2. Design: Forty-five semester hours, consisting of Design 370 with a grade of at least C and approval of the design faculty; Design 371 with a grade of at least C and approval of the design faculty; and thirty-nine additional hours of design, of which at least twenty-four must be upper-division. Approval of the design faculty is required before the student may begin upper-division design courses. A student with transfer credit in design must have approval of the design faculty before taking upper-division design courses at the University.
3. Art history: Twelve semester hours, consisting of Art History 302, 304, and six semester hours of upper-division coursework in art history. Three semester hours of this coursework may also be counted toward the visual and performing arts requirement of the core curriculum.

ELECTIVES

Nine semester hours chosen from courses either within or outside the Department of Art and Art History. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BFA with a major in design: 120 semester hours as outlined above.

VISUAL ART STUDIES MAJOR

The major in visual art studies is a preprofessional academic program recommended for students seeking teacher certification (early childhood through grade twelve) in art or planning to pursue undergraduate or graduate training for visual art careers in community art programs. Students seeking teacher certification must adhere to current state requirements in addition to the degree requirements described in this catalog. Students should contact the College of Education for current state certification requirements.

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Studio art: Thirty-six semester hours, consisting of
 - a. Studio Art 303K, 303L, 304K, and 304L.
 - b. Twelve semester hours, consisting of three hours from each of the following four areas:
 1. Area A: Drawing, life drawing, painting
 2. Area B: Intaglio, lithography, photography, serigraphy
 3. Area C: Digital-time art, performance art, video art
 4. Area D: Ceramics, metals, sculpture
 - c. Twelve additional semester hours of coursework in studio art, all of which must be upper-division.
2. Art history: Twelve semester hours, consisting of Art History 302, 304, and six semester hours of upper-division coursework in art history. Three semester hours of this coursework may also be counted toward the visual and performing arts requirement of the core curriculum.
3. Visual art studies: Twelve semester hours of coursework in visual art studies.

MINOR

Twelve semester hours approved by the visual art studies adviser.

APPROVED ELECTIVES

Six semester hours of coursework approved by the visual art studies adviser. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BFA with a major in visual art studies: 120 semester hours as outlined above.

THEATRE STUDIES MAJOR

The major in theatre studies is a preprofessional academic program recommended for students seeking teacher certification in theatre arts. Students seeking teacher certification must adhere to current state requirements in addition to the degree requirements described in this catalog. Students should contact the College of Education for current state certification requirements.

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Theatre and dance core: Eighteen semester hours, consisting of Theatre and Dance 311, 313C, 314C, 314P, 317C, and 317D.
2. Theatre studies emphasis: At least thirty-three semester hours, consisting of
 - a. Acting and directing: Theatre and Dance 313D, 323C, and 323D.
 - b. Design and technical production: Theatre and Dance 314M and nine semester hours chosen from topics of Theatre and Dance 354T. These nine hours must include one course in each of the following three areas: costume, lighting, and scenery.
 - c. Theatre studies: Theatre and Dance 326C, 326D, and 326E.
 - d. Theatre and Dance 351T (Topic: *Creative Drama II*).
3. Nine additional semester hours of coursework in theatre and dance, of which at least six hours must be upper-division, with no more than three hours in production courses.

APPROVED ELECTIVES

Eighteen semester hours of coursework approved by the theatre studies adviser. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BFA with a major in theatre studies: 120 semester hours as outlined above.

DANCE MAJOR**PRESCRIBED WORK**

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Theatre and dance core: Fifteen semester hours, consisting of Theatre and Dance 311, 312M, 314P, 317M, and 317N.
2. Dance technique: To fulfill the degree requirements in dance technique, the student must achieve a suitable level of proficiency and obtain the approval of the dance faculty. At the discretion of the dance faculty, a student may be required to repeat specific dance technique courses in addition to those required for the degree. The student must be registered for dance technique each long-session semester in residence.
 - a. Contemporary dance technique: Eighteen semester hours, consisting of two semesters of Theatre and Dance 312C, two semesters of 312D, and two semesters of 322E.
 - b. Ballet technique: Eighteen semester hours, consisting of two semesters of Theatre and

Dance 312F, two semesters of 312G, and two semesters of 322J.

3. Movement composition: Theatre and Dance 312N.
4. Dance performance and repertory: Two semesters of Theatre and Dance 222P.
5. Somatics/anatomy: Four semester hours, consisting of Theatre and Dance 112 and 352.
6. Dance emphasis: Twenty-one semester hours, consisting of
 - a. Eleven semester hours, consisting of Theatre and Dance 332M, 332N, 232P, and 332R.
 - b. Dance emphasis electives: Ten semester hours chosen from Theatre and Dance 212P, 112T, 212T, 312T, 232Q, 332S, 152T, 252T, and 352T.

To continue in this degree program, the student must pass an annual evaluation by the dance faculty. Students whose progress in dance technique is judged unsatisfactory by the faculty will be dismissed from the program.

ELECTIVES

Elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BFA with a major in dance: 125 semester hours as outlined above.

BACHELOR OF MUSIC

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2. The specific requirements for the Bachelor of Music consist of prescribed work, major requirements, and electives. In some cases, a course required for a major in the Bachelor of Music may also be counted toward the core curriculum; these courses are identified below.

VOICE PERFORMANCE MAJOR

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course*

Schedule. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance: Twenty-six semester hours, consisting of four semesters of Voice 210, two semesters of Voice 362, Music 420R, Music 460R, Music 210K and approval of the faculty, and Music 223J.
2. Music literature and music theory: Music 605, 411, 612, 313M¹, 313N, 321J, 330L, and three hours chosen from Music 334,² 337, 342, 343J, and 379K.
3. Diction: Music 111E, 311F, 311G, and 311J.
4. Music pedagogy: Music 460PA.
5. Music ensemble: Two semesters of Ensemble 103P and at least eight semester hours of music ensemble courses as explained in "Butler School of Music Special Requirements," page 248.

ELECTIVES

Two semester hours chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in voice performance: 120 semester hours as outlined above.

PIANO PERFORMANCE MAJOR

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance: With the recommendation of the faculty, given in advance, students may choose either of the following two options.
 - a. Thirty-two semester hours, consisting of four semesters of Piano 312, two semesters of Piano 362, Music 420R, Music 460P, Music

1. When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag/substantial writing component portion of the core curriculum English composition requirement.

2. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

460R, and Music 222J or 223J]. This option is normally suggested for students who wish to emphasize performance.

- b. Thirty-two semester hours, consisting of four semesters of Piano 312, two semesters of Piano 260, Piano 362, Music 460P, Music 460R, Music 366P, and Music 222J or 223J. This option is normally suggested for students who wish to emphasize pedagogy.
2. Music literature and music theory: Music 605, 411, 612, 313M,¹ 313N, 321J, 325M, and 330L; two semesters of Music 259N; and three hours chosen from Music 334,² 337, 342, 343J, and 379K.
3. Music ensemble: Eight semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

ELECTIVES

Three semester hours to be chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in piano performance: 120 semester hours as outlined above.

ORGAN OR HARPSICHORD PERFORMANCE MAJOR

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance: Twenty-eight semester hours, consisting of four semesters of major instrument course 312, two semesters of major instrument course 362, Music 420R, Music 460R, and Music 222J or 223J].
2. Music literature and music theory: Music 605, 411, 612, 313M,¹ 313N, 321J, 325L, 325M, 330L, and three semester hours chosen from Music 334,² 337, 342, 343J, and 379K.

3. Music ensemble: Two semesters of Music 259N and eight semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

ELECTIVES

Four semester hours chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in organ or harpsichord performance: 120 semester hours as outlined above.

HARP PERFORMANCE MAJOR

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance: Twenty-eight semester hours, consisting of four semesters of Harp 312, two semesters of Harp 362, Music 420R, Music 460R, and Music 222J].
2. Music literature and music theory: Music 605, 411, 612, 313M,¹ 313N, 321J, and 330L; three semester hours chosen from Music 334,² 337, 342, 343J, and 379K; and two courses chosen from the following: Music 214C, 325L, 325M, 226J, and 226K.
3. Music ensemble: Two semesters of Music 259N and eight semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

ELECTIVES

Four to six semester hours to be chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

1. When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag/substantial writing component portion of the core curriculum English composition requirement.

2. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in harp performance: 120 semester hours as outlined above.

ORCHESTRAL INSTRUMENT PERFORMANCE MAJOR

This program is offered in the following instruments: violin, viola, violoncello, double bass, flute, oboe, clarinet, bassoon, saxophone, trumpet, French horn, euphonium, trombone, tuba, percussion, and guitar.

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance:
 - a. Thirty semester hours, consisting of four semesters of major instrument course 312, two semesters of major instrument course 362, Music 420R, Music 460R, Music 222J, and Music 210K and approval of the faculty.
 - b. For violin majors, proficiency in viola equivalent to Viola 201 and approval of the faculty.
 - c. For euphonium majors, proficiency in trombone equivalent to Trombone 201 and approval of the faculty.
2. Music literature and music theory:
 - a. Music 605, 411, 612, 313M,¹ 313N, 321J, 226J, and 330L.
 - b. Two semesters of either Music 259N or 259P.
 - c. One of the following options, chosen with the consent of the undergraduate adviser:
 1. Two additional semesters of Music 259N or 259P.
 2. One semester of Music 334,² 342, or 379K.
 - d. Music 334,² 337, 342, 343J, or 379K.
3. Music ensemble: Eight semester hours of music ensemble courses as explained in "Butler School of Music Special Requirements," page 248.

ELECTIVES

Two or three semester hours chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in orchestral instrument performance: 120 semester hours as outlined above.

JAZZ PERFORMANCE MAJOR

This program is offered in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone.

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance:
 - a. Piano majors: Twenty-four semester hours, consisting of three semesters of Piano 212, two semesters of Piano 212J and approval of the faculty, two semesters of Piano 362J, and Music 420J and 460J.
 - b. Drum set majors: Twenty-four semester hours, consisting of two semesters of Percussion 212, two semesters of Drum Set 212J and approval of the faculty, two semesters of Drum Set 362J, Music 210J and approval of the faculty, and Music 420J and 460J.
 - c. Majors in other instruments: Twenty-four semester hours, consisting of two semesters of major instrument course 212, two semesters of major instrument course 212J and approval of the faculty, two semesters of major instrument course 362J, Music 420J and 460J, and Music 210J and approval of the faculty.
2. Music literature and music theory: Music 605, 411, 612, 313M,¹ 313N, 316M, 321J, 226J, 228G, 228J, 228L, 328M, 330L, and 343J; majors in in-

1. When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag/substantial writing component portion of the core curriculum English composition requirement.

2. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

struments other than piano must also complete Music 228K.

3. Music ensemble: Eight semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

ELECTIVES

Two to four semester hours chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in jazz performance: 120 semester hours as outlined above.

COMPOSITION MAJOR

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance: At least fourteen semester hours, consisting of four semesters of principal instrument course 210, two semesters of principal instrument course 260 and approval of the faculty, and Music 222J or 223J. Proficiency in Piano 202, second semester, and approval of the faculty are required if the principal instrument is not piano.
2. Music literature and music theory: Music 605, 411, 612, 313M,¹ 313N, 321J, 325L, 325M, 226J, 226K, 330L, 164L, and three semester hours chosen from Music 334,² 337, 342, 343J, and 379K.
3. Composition: Music 214C, two semesters of 224G, at least two semesters of 224J and approval of the music theory and composition faculty, 329E, and 329G. Fulfillment of this requirement signifies the completion of original compositions of a quality and a quantity sufficient to present the composition recital described below. At the discretion of the music theory and composition faculty, a student may be required to complete

more than two semesters of Music 224J.

4. Recital: Music 160C. Upon approval of the music theory and composition faculty, a composition major must present a recital of his or her works. The recital must be approximately thirty minutes in length and must consist of works approved by the student’s composition instructor. It is normally given during the student’s last semester of Music 224J. It is graded by a jury of designated music theory and composition faculty members. The student must receive from the jury an average grade of at least B- for the recital; if the average grade is less than B-, the student, upon approval of the music theory and composition faculty, must present another composition recital.
5. Music ensemble: Eight semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

ELECTIVES

Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in composition: 120 semester hours as outlined above.

JAZZ COMPOSITION MAJOR

This program is offered in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone.

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance:
 - a. Piano principals: Seventeen semester hours, consisting of three semesters of Piano 210, two semesters of Piano 212J and approval of the faculty, one semester of Piano 362J, and

1. When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag/substantial writing component portion of the core curriculum English composition requirement.

2. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

Music 420J.

- b. Principals in other instruments: Seventeen semester hours, consisting of two semesters of principal instrument course 210, two semesters of principal instrument course 212J and approval of the faculty, one semester of principal instrument course 362J, Music 420J, and Music 210J and approval of the faculty.

Each student must also complete a recital of compositions and/or arrangements. This recital is given in the senior year and must be approved by the jazz faculty.

2. Music literature, music theory, and composition: Music 605, 411, 612, 313M,¹ 313N, 214C, 316M, 321J, 226J, 228G, 228J, 228L, 328M, 330L, 343J, and three semesters of 228P; principals in instruments other than piano must also complete Music 228K.
3. Music ensemble: Eight semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

ELECTIVES

One or three semester hours chosen from courses either within or outside the Butler School. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in jazz composition: 120 semester hours as outlined above.

MUSIC STUDIES MAJOR

The major in music studies is a preprofessional academic program recommended for students seeking teacher certification in music or intending to pursue graduate preparation for careers in areas such as music and human learning, music therapy, music management, music merchandising, music publishing, and community music development. Students seeking teacher certification must adhere to current state requirements in addition to the degree requirements described in this catalog. Students should contact the College of Education for current state certification requirements.

PRESCRIBED WORK

Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

MAJOR REQUIREMENTS

1. Performance: Twelve to fourteen semester hours, consisting of four semesters of principal instrument course 210; two semesters of principal instrument course 260 and approval of the faculty; and Music 210K, or equivalent proficiency, and approval of the faculty. Music 210K or equivalent proficiency is required of all music studies majors, regardless of principal instrument. In addition to these requirements, the student must make a recital appearance as described on page 248.
2. Music theory and literature: Music 605, 411, 612, 313M,¹ 313N, and 330L; two semester hours chosen from Music 226G, 226J, and 226N; and Music 321J, 334,² 337, 342, 343J, or 379K. The choice of upper-division music literature course must be approved by the student's adviser.
3. Conducting: Four semester hours, consisting of either Music 222J and 222K or Music 223J and 223K.
4. Choral or instrumental music techniques, literature, and performance practices: Seventeen semester hours in one of the following areas of emphasis.
 - a. Choral music emphasis:
 1. Music 354C, 354F, 255V, and 356G.
 2. Music 354D or three semester hours approved by the music studies adviser.
 3. Two semester hours chosen from Music 255D (strings), 255E (brasses), and 255F (woodwinds).
 4. One semester hour chosen from Music 115D (violin), 115E (trumpet), 115F (clarinet), 115G, and 155C. The course used to fulfill this requirement must involve the study of a family of instruments different from that used to fulfill the preceding requirement.
 - b. Instrumental music emphasis: Music 354C or 354F; Music 155C, 255D, 255E, 255F, and 356J; and, with the approval of the music studies adviser, four semester hours chosen from Mu-

1. When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag/substantial writing component portion of the core curriculum English composition requirement.

2. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

sic 115D, 115E, 115F, and 255M.

5. Music ensemble: Eight semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

APPROVED ELECTIVES

Eight to ten semester hours of coursework approved by the music studies adviser. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in music studies: 120 semester hours as outlined above.

MUSIC BUSINESS MAJOR

Students in this major must choose either the commercial or the nonprofit option.

PRESCRIBED WORK

1. Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
2. Business foundations: Accounting 310F and Management Information Systems 302F.
3. Business electives: Six semester hours chosen from Finance 320F, Legal Environment of Business 320F, Management 320F, Marketing 320F, and courses in communication studies.

MAJOR REQUIREMENTS

1. Performance:
 - a. Piano principals: Twelve semester hours, consisting of two semesters of Piano 210, two semesters of Piano 210 or 212J and approval of the faculty, and two semesters of Piano 260 and approval of the faculty.
 - b. Principals in other instruments: Fourteen semester hours, consisting of two semesters of principal instrument course 210, two semesters of principal instrument course 210 or 212J and approval of the faculty, two semesters of principal instrument course 260 and approval of the faculty, and Music 201N and approval of

the faculty.

2. Music theory and literature:
 - a. Music 605, 411, 612, 313M,¹ 313N, 222J or 223J, 330L, 339M, 339N, 347M, 677P, and three additional semester hours chosen from Music 316M, 226G, 226J, 226K, 226N, 329E, 334,² 337, 342, 343J, 347N, and 379K. Only students pursuing the nonprofit option may choose Music 347N to fulfill requirement 2a.
 - b. Students who choose the commercial option must also complete Music 347N.
3. Music ensemble: Four semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

ELECTIVES

To be chosen from courses either within or outside the Butler School of Music:

1. For students who choose the commercial option: Three or five semester hours.
2. For students who choose the nonprofit option: Six or eight semester hours.

Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in music business: 120 semester hours as outlined above.

RECORDING TECHNOLOGY MAJOR

PRESCRIBED WORK

1. Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
2. Mathematics: Mathematics 408D.
3. Physics: Either Physics 303K and 303L or Physics 317K and 317L. These courses may also be used to fulfill part I of the science and technology requirement of the core curriculum.

MAJOR REQUIREMENTS

1. Performance:
 - a. Piano principals: Twelve semester hours,

1. When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag/substantial writing component portion of the core curriculum English composition requirement.

2. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

consisting of two semesters of Piano 210, two semesters of Piano 210 or 212J and approval of the faculty, and two semesters of Piano 260 and approval of the faculty.

- b. Principals in other instruments: Fourteen semester hours, consisting of two semesters of principal instrument course 210, two semesters of principal instrument course 210 or 212J and approval of the faculty, two semesters of principal instrument course 260 and approval of the faculty, and Music 201N and approval of the faculty.
2. Music theory and literature: Music 605, 411, 612, 313M,¹ 313N, 316M, 316N, 222J or 223J, 330L, 335M, 335N, 336C, 345, and 677P.
3. Music ensemble: Four semester hours of music ensemble courses as explained in “Butler School of Music Special Requirements,” page 248.

ELECTIVES

1. Music and business electives: Five semester hours chosen from a list of approved courses.
2. Additional electives: Three or five semester hours chosen from courses either within or outside the Butler School of Music.

Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BMusic with a major in recording technology: 120 semester hours as outlined above.

BACHELOR OF ARTS IN ART

CORE CURRICULUM

All students must complete the University’s core curriculum, described in chapter 2. The specific requirements for the Bachelor of Arts in Art consist of prescribed work, major requirements, and electives. In some cases, a course required for a major in the Bachelor of Arts in Art may also be counted toward the core curriculum; these courses are identified below.

STUDIO ART MAJOR

PRESCRIBED WORK

1. Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
2. Foreign language: Six semester hours beyond course 507, 508K, or the equivalent in one foreign language.
3. Social and behavioral sciences: Six semester hours chosen from the following areas: anthropology, economics, geography, government, history, linguistics, psychology, and sociology. A course counted toward this requirement may not also be counted toward any core curriculum requirement.
4. General culture: Three semester hours chosen from the following areas: architecture, classics (including classical civilization, Greek, Latin), comparative literature, humanities, philosophy, and interdisciplinary fields outside the Department of Art and Art History such as American studies, African and African American studies, Asian studies, Latin American studies, Mexican American studies, and women’s and gender studies. The student is encouraged to choose coursework of a multicultural nature. Courses outside the Department of Art and Art History that are crosslisted with courses in the department may not be used to fulfill this requirement. A course used to fulfill this requirement may not also be counted toward any core curriculum requirement.
5. Science, technology, and mathematics: Six semester hours of coursework. Courses must be chosen from computer science, mathematics, and the fields of study included in the science and technology, part I, requirement of the core curriculum. A course counted toward this requirement may not also be counted toward any core curriculum requirement.

MAJOR REQUIREMENTS

1. Studio art: Thirty semester hours, consisting of Studio Art 303K, 303L, 304K, 304L, and eighteen additional semester hours of studio art, of which at least twelve hours must be upper-division.

1. When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag/substantial writing component portion of the core curriculum English composition requirement.

2. Art history: Twelve semester hours, consisting of Art History 302, 304, and six hours of upper-division coursework in art history. Three semester hours of this coursework may also be counted toward the visual and performing arts requirement of the core curriculum.

ELECTIVES

Fifteen semester hours chosen from courses either within or outside the Department of Art and Art History. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BA Art with a major in studio art: 120 semester hours as outlined above.

ART HISTORY MAJOR

PRESCRIBED WORK

1. Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
2. Foreign language: Fifteen to nineteen semester hours, consisting of
 - a. Nine semester hours beyond course 507, 508K, or the equivalent in one foreign language.
 - b. One of the following:
 1. Six additional hours of upper-division coursework in the foreign language used to fulfill requirement 2a.
 2. Up to ten semester hours, consisting of course 506 and either 507 or 508K, or the equivalent, in a second foreign language.
3. Social and behavioral sciences: Six semester hours chosen from the following areas: anthropology, economics, geography, government, history, linguistics, psychology, and sociology. A course counted toward this requirement may not also be counted toward any core curriculum requirement.
4. General culture: Three semester hours in one of

the following areas:

- a. Architecture
- b. Classics, including classical civilization, Greek, Latin (but excluding any courses in Greek or Latin that are used to fulfill the language requirement)
- c. Music
- d. Philosophy
- e. Radio-television-film
- f. Theatre and dance
- g. Programs of special concentration, such as women's and gender studies and Latin American studies

A course used to fulfill requirement 4 may not also be counted toward any core curriculum requirement.

MAJOR REQUIREMENTS

1. Studio Art 303K.
2. Art history: Thirty semester hours, consisting of
 - a. Art History 302 and 304.
 - b. Twelve semester hours of upper-division art history, consisting of three hours in each of the following four areas:
 1. Ancient
 2. Medieval/Early Modern
 3. Modern
 4. Non-Western: African, Asian, Islamic, Latin American, Mesoamerican, Native American, Oceanic
 - c. Art History 375.
 - d. Nine additional semester hours of art history. Three semester hours of the coursework counted toward requirement 2 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

ELECTIVES

Seventeen to twenty-one semester hours chosen from courses either within or outside the Department of Art and Art History. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BA Art with a major in art history: 120 semester hours as outlined above.

BACHELOR OF ARTS IN THEATRE AND DANCE

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2. The specific requirements for the Bachelor of Arts in Theatre and Dance consist of prescribed work and major requirements. In some cases, a course required for the Bachelor of Arts in Theatre and Dance may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

1. Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
2. Foreign language: Six semester hours beyond course 507, 508K, or the equivalent in one foreign language.
3. General culture: Three semester hours chosen from the following areas: architecture, classics (including classical civilization, Greek, Latin), comparative literature, humanities, philosophy, and interdisciplinary fields outside the Department of Theatre and Dance such as American studies, African and African American studies, Asian studies, Latin American studies, Mexican American studies, and women's and gender studies. The student is encouraged to choose coursework of a multicultural nature. Courses outside the Department of Theatre and Dance that are crosslisted with theatre and dance courses may not be used to fulfill this requirement. A course used to fulfill this requirement may not also be counted toward any core curriculum requirement.

MAJOR REQUIREMENTS

1. Theatre and dance core: Twenty-seven semester hours, consisting of the following courses: Theatre and Dance 311; three semester hours chosen from 302T³, 306, 313C, 152T, 252T, and 352T; three semester hours chosen from 312M, 314C, and 323C; two semesters of 314P; either 317C and

317D or 317M and 317N; and two semesters of 324P.

Students considering graduate study should consult their advisers about the most appropriate choice of courses.

2. Additional courses in theatre and dance: Twenty-one semester hours of coursework in the Department of Theatre and Dance, of which at least fifteen must be in upper-division courses.
3. Approved concentration and electives: At least six semester hours of coursework in the approved concentration and electives must be upper-division, and at least nine semester hours must be from outside the Department of Theatre and Dance.
 - a. Approved concentration: Twelve semester hours in a concentration of courses within or outside the Department of Theatre and Dance approved by the student's designated adviser.
 - b. Electives: Nine semester hours of coursework within or outside the Department of Theatre and Dance. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BATD: 120 semester hours as outlined above.

BACHELOR OF ARTS IN MUSIC

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2. The specific requirements for the Bachelor of Arts in Music consist of prescribed work, major requirements, minor, and electives. In some cases, a course required for the Bachelor of Arts in Music may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK

1. Students must complete two courses with a writing flag or substantial writing component. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
2. Foreign language: Six semester hours beyond course 507, 508K, or the equivalent in one foreign language.

3. Theater and Dance 302T may also be used to fulfill the visual and performing arts requirement of the core curriculum.

3. General culture: Three semester hours chosen from the following areas: architecture, classics (including classical civilization, Greek, Latin), comparative literature, humanities, philosophy, and interdisciplinary fields outside the Butler School of Music such as American studies, African and African American studies, Asian studies, Latin American studies, Mexican American studies, and women's and gender studies. The student is encouraged to choose coursework of a multicultural nature. Courses outside the Butler School of Music that are crosslisted with music courses may not be used to fulfill this requirement. A course used to fulfill this requirement may not also be counted toward any core curriculum requirement.

MAJOR REQUIREMENTS

1. Performance: At least eight semester hours, consisting of four semesters of principal instrument course 210 and approval of the faculty. Students whose principal instrument is not piano must also complete Music 201N to the satisfaction of the faculty.
2. Music: Music 605, 411, 612, 313M,¹ 313N, 330L, and either 334,² 342, or 379K.
3. Concentration: Twelve additional semester hours, of which at least eight must be upper-division, in a concentration of music courses approved by the coordinator of the Bachelor of Arts in Music program.
4. Music ensemble: Four semester hours of music ensemble courses as explained in "Butler School of Music Special Requirements," page 248.

MINOR

Twelve semester hours of coursework outside the Butler School of Music. The minor must be approved by the coordinator of the Bachelor of Arts in Music program and must include at least six hours of upper-division coursework.

ELECTIVES

Six to eight semester hours of electives. At least three hours must be in upper-division coursework outside the Butler School of Music; courses that are crosslisted with music courses may not be counted toward this requirement. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

TOTAL MINIMUM REQUIREMENTS

For the BAMusic: 120 semester hours as outlined above.

ADVANCEMENT TO UPPER-DIVISION STANDING

To advance to upper-division standing in the program, the student must meet the following requirements.

1. Upper-division standing at the University.
2. A grade point average of at least 2.50 for all coursework taken in residence at the University.
3. Completion of the following courses or their equivalents with a grade point average of at least 2.50: Music 201N, 605A, 605B, 411A, 411B, 612A, 612B, 313M, and 313N. (Music 201N is required only for students whose principal instrument is not piano.)
4. Approval of the coordinator of the Bachelor of Arts in Music program.

1. When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag/substantial writing component portion of the core curriculum English composition requirement.

2. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

FINE ARTS

FINE ARTS: F A

LOWER-DIVISION COURSES

- 001. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various fine arts disciplines. One lecture hour a week for one semester.
- 301C. Freshman Seminar.** Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.
- 102D, 202D, 302D. Connecting Internship Experience.** Supervised internship experience related to interdisciplinary themes of a Bridging Disciplines Program. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 102D, three hours of fieldwork a week for one semester; for 202D, six hours of fieldwork a week for one semester; for 302D, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines Programs research coordinator, may be repeated once for credit. Prerequisite: Admission to the Bridging Disciplines Programs.
- 110, 210, 310. Topics in the Fine Arts.** Interdisciplinary studies within the fine arts or including the fine arts and other areas. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary.
- 118C, 218C, 318C. Forum Seminar Series.** Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.
- 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Fine Arts.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the College of Fine Arts. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. Exploring the Fine Arts.** Open to all University students except those in the College of Fine Arts. An interdisciplinary introduction to the fine arts: their basic concepts, meaning, aesthetics, and role in society. Three lecture hours a week for one semester, with field trips as required. May not be counted toward a degree in the College of Fine Arts. Prerequisite: Upper-division standing or consent of instructor.
- 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Fine Arts.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the College of Fine Arts. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 140, 240, 340. Fine Arts Internship.** Restricted to fine arts students. At least ten internship hours a week, and, for each semester hour of credit earned, at least one lecture hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, a University grade point average of at least 2.50, and consent of instructor.
- 150, 250, 350. Special Topics in the Fine Arts.** Special interdisciplinary studies within the fine arts or including the fine arts and other areas. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary.
- 160, 260, 360. Advanced Topics in the Fine Arts.** Advanced interdisciplinary studies within the fine arts or including the fine arts and other areas. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing or consent of instructor.

175, 375, 675. Independent Studies: Art, Drama, or Music. Independent study or research within the fine arts or between the fine arts and other disciplines. Individual instruction. May be repeated for credit. Prerequisite: Upper-division standing, a grade point average of at least 3.00, consent of instructor, and consent of the dean of the College of Fine Arts.

DEPARTMENT OF ART AND ART HISTORY

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ART HISTORY: ARH

LOWER-DIVISION COURSES

- 301 (TCCN: ARTS 1301). Introduction to the Visual Arts.** The visual elements, their nature, functions, and relationships in painting, sculpture, and architecture. Three lecture hours or two lecture hours and one discussion hour a week for one semester.
- 302 (TCCN: ARTS 1303). Survey of Ancient through Medieval Art.** A study of the major monuments of architecture, sculpture, painting, and metalwork from the ancient period through the end of the Middle Ages. Three lecture hours or two lecture hours and one discussion hour a week for one semester.
- 303 (TCCN: ARTS 1304). Survey of Renaissance through Modern Art.** A study of the major monuments of architecture, sculpture, painting, and metalwork from the Renaissance to the present. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: For studio art majors, credit or registration for Art History 301; for others, none.
- 304. Issues in Visual Culture.** Aspects of visual culture during the period when art history became an academic discipline in the West (nineteenth and twentieth centuries). The ways in which art has been studied as well as produced. The cultural significance of visual traditions. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: A major in the Department of Art and Art History.
- 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Art History.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Art and Art History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 325. Survey of Ancient Near Eastern Art.** Same as Middle Eastern Studies 320 (Topic 4: *Survey of Ancient Near Eastern Art*). The art of Mesopotamia, Anatolia, Syria, and Persia to the Islamic period. Three lecture hours a week for one semester. Prerequisite: For art history majors, Art History 302; for visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.
- 327J. Greek Architecture.** Architecture of mainland Greece, Asia Minor, and Magna Graecia from the Dark Ages to the end of the Hellenistic period, ca. 1000 to 30 BC. Three lecture hours a week for one semester.
- 327L. Ancient Greek Art.** The art of the ancient Greek world from the Bronze Age through the Hellenistic period. Discussion of the significance of the art in its original context. Three lecture hours a week for one semester.
- 327M. Hellenistic Art and Architecture.** Art of the Hellenistic period, from the reign of Alexander the Great to the beginning of the Roman Empire, ca. 336 to 31 BC. Three lecture hours a week for one semester.
- 327N. Roman Imperial Art.** Same as Classical Civilization 340 (Topic 2: *Roman Art*). Public art of the Roman Empire from Augustus to late antiquity, ca. 31 BC to AD 350. Three lecture hours a week for one semester. Prerequisite: For art history majors, Art History 302; for visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.
- 327P. Roman Architecture.** Republican and imperial Roman architecture. Three lecture hours a week for one semester.
- 327R. Art in the Everyday Life of Ancient Romans.** Art and architecture from the archaeological sites of Pompeii, Herculaneum, and Ostia as indices of Roman culture, 100 BC to AD 250. Three lecture hours a week for one semester.
- 329J. Byzantine Art.** Same as Religious Studies 357 (Topic 2: *Byzantine Art*). Examination of early Christian and medieval art and architecture in the eastern Roman empire, including related traditions (Coptic, Armenian, Georgian, Crusader, Norman). Three lecture hours a week for one semester.
- 329K. Early Medieval Art.** Architecture, sculpture, painting, and metalwork in western Europe from the third to the eleventh century. Three lecture hours a week for one semester.
- 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Art History.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Art and Art History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329R. Romanesque Art and Architecture.** Form and function of religious art in twelfth-century Europe. Three lecture hours a week for one semester.

- 330G. Art at Court: The Gothic Period.** Changing manifestations of Gothic art and architecture at selected court centers, 1140 to 1400. Three lecture hours a week for one semester.
- 331K. Early Italian Renaissance Art.** Florentine and central Italian painting, sculpture, and architecture of the fifteenth century. Three lecture hours a week for one semester.
- 331L. High Renaissance Art.** Major works of art and architecture in Florence, Rome, and Venice in the early sixteenth century. Three lecture hours a week for one semester.
- 331M. Mannerist and Early Baroque Art.** The art of western Europe from about 1520 to 1590. Emphasis on art in Italy, but developments in the northern countries are also considered. Three lecture hours a week for one semester.
- 332K. Northern Renaissance Art, 1350–1500.** Northern European art from the International Style to van Eyck and Hieronymus Bosch. Three lecture hours a week for one semester.
- 332L. Northern Renaissance Art, 1500–1600.** Art and cultural development in the sixteenth century; artists include Dürer, Grünewald, Holbein, and Brueghel. Three lecture hours a week for one semester.
- 333K. Italian Baroque Art.** The art of Italy in the seventeenth and eighteenth centuries; includes the sixteenth-century sources from which Roman baroque developed. Three lecture hours a week for one semester.
- 333L. The Age of Rembrandt and Rubens: Northern Baroque Art.** Northern European art in the seventeenth century, stressing the Netherlands and Flanders. Three lecture hours a week for one semester.
- 334. Eighteenth-Century European Art.** European painting, sculpture, and architecture as social and political events from the age of absolutism to the French Revolution. Three lecture hours a week for one semester.
- 335N. European Art, 1789–1848.** European painting and sculpture as social and political events from the French Revolution to the revolutionary crises of midcentury. Three lecture hours a week for one semester.
- 335P. European Art, 1848–1900.** European painting and sculpture as social and political events from the revolutions of 1848 to the turn of the century. Three lecture hours a week for one semester.
- 337K. Twentieth-Century European Art to 1940.** Major movements in the development of modern European painting and sculpture. Three lecture hours a week for one semester.
- 338L. Art since 1930: Modernism and Mass Modernity.** Avant-garde activity, primarily painting, photography, and film, in the United States and Europe from 1930 to 1970. Three lecture hours a week for one semester.
- 338M. Art and Culture: 1968 and After.** Artistic and critical activity in the United States and Europe from 1968 to the present. Three lecture hours a week for one semester.
- 339J. American Art: Colonial Era to the Civil War.** Painting, sculpture, architecture, and decorative arts from 1665 to 1860. Three lecture hours a week for one semester.
- 339K. American Art: Civil War to the Armory Show.** Painting, sculpture, architecture, and decorative arts from 1860 to 1920. Three lecture hours a week for one semester.
- 339L. Twentieth-Century American Art to the 1950s.** Art in the United States from the Armory Show through abstract expressionism. Three lecture hours a week for one semester.
- 339M. American Art since 1960.** Survey of major movements from 1958 to 1985, from pop art to graffiti art and new expressionism. Three lecture hours a week for one semester.
- 341K. Modern Art of Mexico.** Same as Latin American Studies 327 (Topic 2: *Modern Art of Mexico*). Art of the nineteenth and twentieth centuries, particularly muralism and its sources, surrealism, and later movements. Three lecture hours a week for one semester. Art History 341K and Latin American Studies 322 (Topic: *Modern Art of Mexico*) may not both be counted.
- 341L. Modern Latin American Art.** Same as Latin American Studies 327 (Topic 1: *Modern Latin American Art*). Development and sources of twentieth-century art in the Caribbean and Central and South America. Three lecture hours a week for one semester. Art History 341L and Latin American Studies 322 (Topic: *Modern Latin American Art*) may not both be counted.
- 346. Traditional Arts of Africa and Oceania.** Art in Australia, Melanesia, Polynesia, and sub-Saharan Africa from earliest times to the present. Three lecture hours a week for one semester.
- 347K. Art and Archaeology of Ancient Peru.** Same as Latin American Studies 327 (Topic 6: *Art and Archaeology of Ancient Peru*). The growth of civilization in South America from the earliest decorated textiles, pottery, and ceremonial buildings to the imperial Inca style. Three lecture hours a week for one semester. Art History 347K and Latin American Studies 322 (Topic: *Art and Archaeology of Ancient Peru*) may not both be counted.
- 347L. Mesoamerican Art.** Same as Latin American Studies 327 (Topic 3: *Mesoamerican Art*). Mesoamerican art and architectural styles, with emphasis on the function of art in culture. Three lecture hours a week for one semester.
- 347M. Maya Art and Architecture.** Same as Latin American Studies 327 (Topic 5: *Form and Meaning in Classic Maya Art*). The development and function of art and architectural form in the classic Maya culture. Three lecture hours a week for one semester.
- 359. Topics in Feminism and Gender.** An introduction to feminist and gender theories in relation to issues concerning visual representation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
- 360L. Topics in the History of Photography.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 361. Topics in Latino and Chicano Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 361L. Topics in Ancient Near Eastern Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 362. Topics in Greek and Roman Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

- 362R. Topics in the Art of Late Antiquity.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 363. Topics in Medieval Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 364. Topics in Renaissance Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 365. Topics in Baroque Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 366J. Topics in Nineteenth-Century Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 366N. Topics in Twentieth-Century Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
Topic 1: Contemporary Latin American Art, 1960 to the Present. Same as Latin American Studies 327 (Topic 4: *Contemporary Latin American Art, 1960 to the Present*). Painting, sculpture, media art, and environments. Art History 366N (Topic 1) and Latin American Studies 322 (Topic: *Contemporary Latin American Art, 1960 to the Present*) may not both be counted.
- 366P. Topics in Modernism.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 367. Topics in the Art of North America.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For art history majors, Art History 302; for visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.
Topic 3: Modernism in American Design and Architecture. Same as American Studies 330. A historical survey of artifacts, buildings, and urban environments, focusing on responses to machine-age civilization. American Studies 325 (Topic: *Modernism in American Design and Architecture*) and Art History 367 (Topic 3) may not both be counted.
- 370. Topics in Pre-Columbian Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
- 372. Topics in the Art of Asia.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
Topic 2: Introduction to Japanese Art.
- 374. Special Topics in the History of Art.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
Topic 1: American Painting to 1860. Same as American Studies 325 (Topic 2: *American Painting to 1860*).
Topic 2: American Painting, 1860–1913. Same as American Studies 325 (Topic 3: *American Painting, 1860–1913*).
- 375. Art Historical Methods.** Restricted to art history majors. Art historical investigation; practical research techniques. Three lecture hours a week for one semester. Prerequisite: Upper-division standing in art history and consent of the departmental undergraduate adviser.
- 376. Reading Tutorial in Art History Problems.** Individual projects to be completed under faculty supervision. Independent study. May be repeated for credit. Prerequisite: For majors in the Department of Art and Art History, six semester hours of upper-division art history, a grade point average of at least 3.00, and consent of instructor and the chair of the department; for others, a grade point average of at least 3.00 and consent of instructor and the chair of the department.
- 379H. Thesis Course for Departmental Honors.** Individual conference course in which student researches and writes a thesis. Independent study. Prerequisite: Admission to the Honors Program in Art History and approval of the honors adviser.

DESIGN: DES

LOWER-DIVISION COURSES

- 310. Introduction to Design.** Intensive study of the discipline of design and its theories, methods, history, and economic and societal factors. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and written consent of the design faculty.
- 311J. Design Technologies I.** Study of design technologies and their effect on design methods through a focus on tools and lens media. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and written consent of the design faculty.
- 311K. Design Technologies II.** Introduction to the microcomputer as an integrator of visual information; its applications to organizational systems in the design process. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 310 and 311J with a grade of at least C in each.
- 312. Visual Syntax in Communication.** Exploration of the fundamental visual elements and their organization through a study of typography and human perception. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 310 and 311J with a grade of at least C in each.
- 313. Design History Laboratory.** Critical investigation of historical issues, with emphasis on the dynamic relationship between the modern movement and contemporary design. Three lecture hours and five laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 310 and 311J with a grade of at least C in each.

UPPER-DIVISION COURSES

- 320. Design Theory and Method.** Critical study of design methodologies and theories. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Design 311K, 312, and 313 with a grade of at least C in each, and written consent of the design faculty.

- 321. Images in Communication.** Development of coherent visual statements constructed of images generated by multiple media. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Design 311K, 312, and 313 with a grade of at least C in each, and written consent of the design faculty.
- 322. Design and the Social Environment.** Communication projects selected from the public sector. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Design 311K, 312, and 313 with a grade of at least C in each, and written consent of the design faculty.
- 340. Design Systems.** Development of flexible, integrated visual systems. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 320, 321, and 322 with a grade of at least C in each.
- 341. Advanced Issues in Visual Syntax.** Exploration of linguistic relationships involved in the development of typographic messages. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 320, 321, and 322 with a grade of at least C in each.
- 342. Design and Persuasion.** Investigation of historical models; the role of words, context, and audience; and the effect of media. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 320, 321, and 322 with a grade of at least C in each.
- 350. Special Design Topics.** Study of professional-level contemporary topics. Eight laboratory hours a week for one semester. Offered in the fall semester only. May be repeated for credit when the topics vary. Prerequisite: Design 340, 341, and 342 with a grade of at least C in each, and written consent of the design faculty.
- 351. Design Perspectives.** Students create advanced design projects and present them for critique by visiting critics. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Design 340, 341, and 342 with a grade of at least C in each, and written consent of the design faculty.
- 370. Senior Project in Design.** Planning, execution, and presentation of a project approved by the design faculty. Eight laboratory hours a week for one semester. Offered in the spring semester only. With consent of the design faculty, may be repeated for credit. Prerequisite: Design 350 and 351 with a grade of at least C in each, and written consent of the design faculty.
- 371. Design Practicum.** Practical experience through an internship; lectures on professional ethics and responsibilities. One lecture hour and ten laboratory hours a week for one semester. Offered in the spring semester only. With consent of the design faculty, may be repeated for credit. Prerequisite: Design 350 and 351 with a grade of at least C in each.
- 376. Independent Study: Design.** Individual projects to be completed under faculty supervision. The equivalent of eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Fifteen semester hours of upper-division coursework in design, a grade point average in upper-division design of at least 3.00, and consent of the chair of the department.

STUDIO ART: ART

LOWER-DIVISION COURSES

- 303K (TCCN: ARTS 1316). Drawing Foundations.** Drawing concepts and skills in various media. Eight laboratory hours a week for one semester. May be taken for credit only once. Studio Art 301K and 303K may not both be counted. Prerequisite: A major in the Department of Art and Art History.
- 303L. Digital Foundations.** Introduction to digital, multimedia, and other time-based art. Eight laboratory hours a week for one semester. May be taken for credit only once. Studio Art 301L and 303L may not both be counted. Prerequisite: A major in the Department of Art and Art History.
- 304K (TCCN: ARTS 1311). Two-Dimensional Foundations.** A basic course in the visual dynamics of two-dimensional art forms. Eight laboratory hours a week for one semester. May be taken for credit only once. Studio Art 302K and 304K may not both be counted. Prerequisite: A major in the Department of Art and Art History.
- 304L (TCCN: ARTS 1312). Three-Dimensional Foundations.** A basic course in three-dimensional form and space. Eight laboratory hours a week for one semester. May be taken for credit only once. Studio Art 302L and 304L may not both be counted. Prerequisite: A major in the Department of Art and Art History.
- 310K (TCCN: ARTS 2346). Beginning Ceramics.** Restricted to art and art history majors. Exploration of various techniques, subjects, and expressive possibilities in the medium of clay. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 311K (TCCN: ARTS 2316). Painting I.** Restricted to art and art history majors. Introduction to painting techniques, composition, and exploration of personal expression. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 313K (TCCN: ARTS 2326). Beginning Sculpture.** Restricted to art and art history majors. Introduction to the processes involved in the production of object-oriented sculpture using direct methods of hot and cold construction. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 313M. Topics in Three-Dimensional Art.** Restricted to art and art history majors. Study of specific techniques or problems. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 314K (TCCN: ARTS 2341). Beginning Metals and Jewelry.** Restricted to art and art history majors. Introduction to the medium of metals, with emphasis on basic fabricating and forming techniques in jewelry, metalwork, and small sculpture. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

- 315K (TCCN: ARTS 1317). Beginning Drawing.** Restricted to art and art history majors. Exploration of various methods, subjects, and expressive possibilities in drawing. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 316K (TCCN: ARTS 2323). Beginning Life Drawing.** Restricted to art and art history majors. Problems in drawing and construction of the human figure in selected media. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 316T. Introduction to Transmedia.** Restricted to art and art history majors. Introduction to the theory and practice of time-based art, including digital time-art, performance, and video art. Two lecture hours and six laboratory hours a week for one semester. May be taken for credit only once. Studio Art 316T and 316V may not both be counted. Studio Art 316T and 317C may not both be counted. Studio Art 316T and 318C may not both be counted. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 316V. Transmedia: Video Art I.** Restricted to art and art history majors. Introduction to the basics of video art production, narrative, and nonnarrative video structural forms, including history, theory, camera techniques, montage, and digital editing. Two lecture hours and six laboratory hours a week for one semester. May be taken for credit only once. Studio Art 316T and 316V may not both be counted. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 317C. Transmedia: Performance Art I.** Restricted to art and art history majors. Introduction to the history, theory, and practice of performance art and its application in a variety of contexts, including theatrical, gallery, and the workaday world. Two lecture hours and six laboratory hours a week for one semester. May be taken for credit only once. Studio Art 316T and 317C may not both be counted. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 317K (TCCN: ARTS 2356). Beginning Photography.** Restricted to art and art history majors. An introduction to still photography, including basic technical skills and concepts. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 318C. Transmedia: Digital Time-Art I.** Restricted to art and art history majors. Introduction to time-based art, with emphasis on the exploration of digital technologies, including motion graphics, video, animation, and sound. Two lecture hours and six laboratory hours a week for one semester. May be taken for credit only once. Studio Art 316T and 318C may not both be counted. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 319G. Beginning Printmaking: Serigraphy.** Restricted to art and art history majors. Fundamental instruction in the theories, techniques, and practice of serigraphy. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 319K. Beginning Printmaking: Intaglio.** Restricted to art and art history majors. Introduction to the art of printmaking, primarily intaglio techniques such as etching, soft ground, aquatint, and assemblage. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 319M. Beginning Printmaking: Lithography.** Restricted to art and art history majors. Fundamental instruction in the theories, techniques, and shop practices of lithography. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Studio Art.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Art and Art History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 319T. Topics in Studio Art: Laboratory.** Restricted to art and art history majors. Intensive study of various disciplines of studio art. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

UPPER-DIVISION COURSES

- 320K. Art Studio for Nonart Majors.** Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward a degree in art and art history. Prerequisite: Upper-division standing.
- 320L. Art Studio for Nonart Majors.** Continuation of Studio Art 320K. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward a degree in art and art history. Prerequisite: Upper-division standing and Studio Art 320K with a grade of at least C.
- 321K. Painting II.** Restricted to art and art history majors. Problems in composition and exploration of personal expression. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 311K with a grade of at least C.

- 321M. Painting II: Figure Painting.** Restricted to art and art history majors. Problems in composition and exploration of personal expression with the life model. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 311K with a grade of at least C.
- 322K. Intermediate Drawing.** Restricted to art and art history majors. Continuation of Studio Art 315K. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 315K with a grade of at least C.
- 323K. Intermediate Sculpture.** Restricted to art and art history majors. Exploration of the concepts and processes involved in the production of object-oriented sculpture, with emphasis on indirect methods of mold-making and casting. Encourages individual direction. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 313K with a grade of at least C.
- 323M. Advanced Topics in Three-Dimensional Art.** Restricted to art and art history majors. Study of specific techniques or problems. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve additional semester hours of studio art coursework with a grade of at least C in each course.
- 323P. Issues in Sculpture.** Restricted to art and art history majors. Topics related to the field of sculpture, from issue-based to media-based studies. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 313K with a grade of at least C.
- 323S. Installation Sculpture.** Restricted to art and art history majors. Exploration of the theories and methods involved in the production of installation sculpture through the investigation of form and space and of their function in transforming environmental, architectural, or invented sites. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 313K with a grade of at least C.
- 324M. Intermediate Metals.** Restricted to art and art history majors. Problems designed to encourage individual development in work with metals, incorporating metalsmithing and fabrication. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 314K with a grade of at least C.
- 325G. Intermediate Printmaking: Serigraphy.** Restricted to art and art history majors. Practice in the theories and techniques of multicolor serigraphy and photoserigraphy. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 319G with a grade of at least C.
- 325K. Intermediate Printmaking: Intaglio.** Restricted to art and art history majors. Instruction in the theories and techniques of intaglio printmaking, color, assemblage, stencil, viscosity, collography, photo process, and relief. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 319K with a grade of at least C.
- 325M. Intermediate Printmaking: Lithography.** Restricted to art and art history majors. Instruction in the theories and techniques of metal plate, multicolor, and stone lithography and photolithography. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 319M with a grade of at least C.
- 327D. Sculptural Ceramics.** Restricted to art and art history majors. Problems designed to encourage individual development in work with clay, exploring various handbuilding techniques and kiln firings. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 310K with a grade of at least C.
- 327E. Contemporary Vessels.** Restricted to art and art history majors. The study of pottery, including conceptual and functional approaches. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 310K with a grade of at least C.
- 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Studio Art.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Art and Art History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 334K. Digital Photography.** Restricted to art and art history majors. Introduction to digital image-making in the context of creating art, including digital technologies and a historical overview of traditional and digital photographic practices. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 317K with a grade of at least C.
- 335K. Intermediate Photography.** Restricted to art and art history majors. Practice in still photography, including materials and processes. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 317K with a grade of at least C.
- 336K. Color Photography.** Restricted to art and art history majors. Instruction in basic principles, materials, and techniques of color photography as an art form. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 317K with a grade of at least C.

- 336V. Transmedia: Video Art II.** Restricted to art and art history majors. Projects in video art and video installation art. Surveys contemporary video art, stylistic modes, ideology, and the history of the artist's video and its precedents in the avant-garde and structuralist filmmaking. Two lecture hours and six laboratory hours a week for one semester. May be repeated twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 316T or 316V with a grade of at least C.
- 337C. Transmedia: Performance Art II.** Restricted to art and art history majors. Projects in performance art with a concentration on the realization of more fully developed solo and collaborative projects. Two lecture hours and six laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 316T or 317C with a grade of at least C.
- 338C. Transmedia: Digital Time-Art II.** Restricted to art and art history majors. Projects in time-based art, with emphasis on the exploration of digital technologies, including motion graphics, video, animation, and sound. Two lecture hours and six laboratory hours a week for one semester. May be repeated twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 316T or 318C with a grade of at least C.
- 339K. Watercolor Painting.** Restricted to art and art history majors. Problems and instruction in the use of watercolor. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Two of the following courses, with a grade of at least C in each: Studio Art 311K, 315K, 316K.
- 341K. Painting III.** Restricted to art and art history majors. Continuation of Studio Art 321K. Eight laboratory hours a week for one semester. May be repeated twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 321K or 321M with a grade of at least C.
- 341M. Painting III: Figure Painting.** Restricted to art and art history majors. Continuation of Studio Art 321M. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 321M with a grade of at least C.
- 346K. Intermediate Life Drawing.** Restricted to art and art history majors. Advanced problems in drawing and construction of the human figure. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 316K with a grade of at least C.
- 354C. Computer Art Media.** Restricted to art and art history majors. Principles, techniques, and practices of digital arts for studio artists. Two lecture hours and six laboratory hours a week for one semester. May be repeated for credit when the topics or instructors vary. Prerequisite: Upper-division standing and Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- Topic 1: Digital Photography.** Introduction to digital image making in the context of making art.
- 355. Studio Projects.** Restricted to art and art history majors. Study of specific techniques or problems. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course.
- Topic 1: Design Issues.**
- Topic 2: Installation of Film Art.**
- Topic 3: Monoprinting and Relief Printing.**
- 356K. Advanced Color Photography.** Restricted to art and art history majors. Continuation of Studio Art 336K. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 336K with a grade of at least C.
- 356V. Transmedia: Video Art III.** Restricted to art and art history majors. Advanced study of video art and video installation art. Two lecture hours and six laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 336V with a grade of at least C.
- 357C. Transmedia: Performance Art III.** Restricted to art and art history majors. Advanced study of performance art with a concentration on the realization of more fully developed solo and collaborative projects. Two lecture hours and six laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 337C with a grade of at least C.
- 358C. Transmedia: Digital Time-Art III.** Restricted to art and art history majors. Advanced study of time-based art, with emphasis on the exploration of digital technologies, including motion graphics, video, animation, and sound. Two lecture hours and six laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 338C with a grade of at least C.
- 359K. Advanced Digital Photography.** Restricted to art and art history majors. Advanced study of digital image-making in the context of creating art, including digital technologies and the historical developments of wet processes in black and white, color, and digital photography. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 334K with a grade of at least C.

- 361J. Painting IV: Figure Painting.** Restricted to art and art history majors. Continuation of Studio Art 341M. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 341M with a grade of at least C.
- 361K. Painting IV.** Restricted to art and art history majors. Continuation of Studio Art 341K. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 341K or 341M with a grade of at least C.
- 363K. Advanced Sculpture.** Restricted to art and art history majors. Advanced research in the theory, technology, and methods involved in the production of sculpture, with emphasis on individual direction. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 323K with a grade of at least C.
- 363S. Advanced Installation Sculpture.** Restricted to art and art history majors. Advanced research in the theory, technology, and methods involved in the production of installation sculpture, with emphasis on individual direction. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 323S with a grade of at least C.
- 364M. Advanced Metals.** Restricted to art and art history majors. Emphasis on the development of a personal vision and an individual approach to the use of metal. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 324M with a grade of at least C.
- 365G. Advanced Printmaking: Serigraphy.** Restricted to art and art history majors. Advanced practice in the art of serigraphy, with emphasis on independent research. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 325G with a grade of at least C.
- 365K. Advanced Printmaking: Intaglio.** Restricted to art and art history majors. Advanced practice in the art of printmaking, involving independent research. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 325K with a grade of at least C.
- 365M. Advanced Printmaking: Lithography.** Restricted to art and art history majors. Advanced instruction in the theories and techniques of metal plate, multicolor, and stone lithography and photolithography. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 325M with a grade of at least C.
- 366K. Advanced Life Drawing.** Restricted to art and art history majors. Problems in drawing and construction of the human figure. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 346K with a grade of at least C.
- 368N. Advanced Drawing.** Restricted to art and art history majors. Continuation of Studio Art 322K. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 322K with a grade of at least C.
- 372K. Advanced Photography.** Restricted to art and art history majors. Advanced practice in still photography. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 335K with a grade of at least C.
- 376. Independent Study: Studio Art.** Restricted to art and art history majors. Individual projects to be completed under faculty supervision. The equivalent of eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Completion of at least fifteen semester hours of upper-division coursework in studio art, a grade point average of at least 3.00 in upper-division coursework in the major, and consent of the chair of the department.
- 377D. Advanced Sculptural Ceramics.** Restricted to art and art history majors. Continuation of Studio Art 327D. Emphasis on the development of a personal vision and an individual approach to the use of clay. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 327D with a grade of at least C.
- 377E. Advanced Contemporary Vessels.** Restricted to art and art history majors. Continuation of Studio Art 327E. Additional focus on personal and technical development. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 327E with a grade of at least C.

- 379K. Advanced Watercolor Painting.** Restricted to art and art history majors. Problems and instruction in the use of watercolor, gouache, and tempera. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 339K with a grade of at least C.
- 179S, 379S. Advanced Topics in Studio Art: Lecture.** Restricted to art and art history majors. Intensive advanced study of various disciplines of studio art. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For 179S, upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; concurrent enrollment in Studio Art 279T; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course; for 379S, upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course.
- 279T, 379T. Advanced Topics in Studio Art: Laboratory.** Restricted to art and art history majors. Intensive advanced study of various disciplines of studio art. The equivalent of five or eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For 279T, upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; concurrent enrollment in Studio Art 179S; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course; for 379T, upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course.
- Topic 1: Beyond Traditional Media.**

VISUAL ART STUDIES: VAS

UPPER-DIVISION COURSES

- 320. Exploring Objects, Spaces, and Meaning.** Open to all students. Focuses on a broad range of historical and contemporary works, artifacts, and environments, and their implications for understanding imagery and objects in visual and material culture. Three lecture hours a week for one semester. May not be repeated for credit.
- 221C. Children's Artistic Development I.** Theory and content for the development of perceptual, aesthetic, critical, studio, and art-historical skills. Two lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Visual Art Studies 121D.
- 121D. Children's Artistic Development I: Laboratory.** Practice in the development of perceptual, aesthetic, critical, studio, and art-historical skills. Four laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Visual Art Studies 221C.
- 222C. Children's Artistic Development II.** Continuation of Visual Art Studies 221C. Advanced theory and content for the development of perceptual, aesthetic, critical, studio, and art-historical skills. Two lecture hours a week for one semester. Prerequisite: Visual Art Studies 221C and 121D with a grade of at least C in each and concurrent enrollment in Visual Art Studies 122D.
- 122D. Children's Artistic Development II: Laboratory.** Continuation of Visual Art Studies 121D. Advanced practice in the development of art skills. Four laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Visual Art Studies 222C.
- 330. Introduction to Visual Art Studies.** Restricted to art and art history majors. An introduction to visual art studies: philosophy, current trends, instructional methods, evaluation, advocacy, and careers in art, museums, and cultural or social agencies. Three lecture hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.
- 241C. Learners and Instructional Sites for Visual Art Studies.** Restricted to art and art history majors. Instructional procedures, observations, and evaluation of early childhood through grade twelve classroom and community-based art instruction. Two lecture hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 141D.
- 141D. Learners and Instructional Sites for Visual Art Studies: Laboratory.** Restricted to art and art history majors. Four laboratory hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 241C.
- 251C. Art Materials, Techniques, and Processes.** Restricted to art and art history majors. Exploration and application of basic materials, techniques, and processes in art production used in early childhood through grade twelve classroom and community-based art instruction. Two lecture hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 151D.
- 151D. Art Materials, Techniques, and Processes: Laboratory.** Restricted to art and art history majors. Four laboratory hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 251C.
- 261C. Criticism and Conversation about Art.** Restricted to art and art history majors. Individual and professional evaluations of visual imagery, artifacts, and artistic production in a variety of settings. Two lecture hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 161D.
- 161D. Criticism and Conversation about Art: Laboratory.** Restricted to art and art history majors. Four laboratory hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 261C.

- 370C. Visual Art Careers.** Lectures, discussions, and writing assignments. Theory and practice of art careers beyond the college campus. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 370D. Community-Based Careers in Art.** Restricted to art and art history majors. Introduction to administration, policies, and careers in community-based art organizations. Three lecture hours a week for one semester. Prerequisite: Visual Art Studies 330, 241C, 141D, 251C, 151D, 261C, and 161D with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 370E.
- 370E. Art and Community Activism.** Restricted to art and art history majors. Examination of art educators as change agents in the community in relation to history, theory, and pedagogy. Three lecture hours a week for one semester. Prerequisite: Visual Art Studies 330, 241C, 141D, 251C, 151D, 261C, and 161D with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 370D.
- 271C. Topics in Visual Art Studies.** Lectures on selected topics in visual art. Two lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and concurrent enrollment in Visual Art Studies 171D.
- 171D. Topics in Visual Art Studies: Laboratory.** Two laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and concurrent enrollment in Visual Art Studies 271C.
Topic 1: The Human Figure in Art: Laboratory.
- 372. Seminar in Community-Based Art Education.** Restricted to art and art history majors. Seminar to support the observation, documentation, analysis, and evaluation of a service-learning experience. Three lecture hours a week for one semester. Prerequisite: Visual Art Studies 330, 241C, 141D, 251C, 151D, 261C, 161D, 370D, and 370E with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 975.
- 975. Internship in Community-Based Art Education.** Restricted to art and art history majors. Supervised service-learning experience in a museum of art, community-based art organization, private school, or cultural or social agency. At least thirty-five hours of fieldwork a week for one semester. Hours to be arranged by the student and approved by instructor. Offered on the pass/fail basis only. Prerequisite: Visual Art Studies 330, 241C, 141D, 251C, 151D, 261C, 161D, 370D, and 370E with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 372.
- 376. Independent Study: Visual Art Studies.** Individual projects to be completed under faculty supervision. Individual instruction. May be repeated for credit. Prerequisite: Completion of twelve semester hours of upper-division coursework in the Department of Art and Art History, a grade point average in upper-division coursework in the Department of Art and Art History of at least 3.00, and consent of the chair of the department.

- 379S. Advanced Topics in Visual Art Studies: Lecture.** Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For majors in the Department of Art and Art History, upper-division standing; for others, upper-division standing and consent of instructor.

SARAH AND ERNEST BUTLER SCHOOL OF MUSIC

The University of Texas at Austin is an institutional member of the National Association of Schools of Music, approved for both its undergraduate and its graduate degrees in music. The requirements for entrance and for graduation given in this catalog are in accordance with the published regulations of the association.

AREAS OF STUDY

The College of Fine Arts offers courses in several areas of music. The undergraduate courses available in music performance, music literature, music studies, and music theory are listed below; complete descriptions of all music courses begin on page 276.

MUSIC PERFORMANCE

Before the first semester or summer session in which they will be enrolled, new and transfer students must file an Application for Instruction in Music Performance. The card indicates the faculty member to whom the student has been assigned.

All students enrolled in a music performance course must fill out a Music Performance and Jury Report at the end of each semester or summer session for each course taken.

Students who receive a grade below C- in any music performance course may not register for that course the next semester until the requests of other students for such work have been met.

Some of the following courses may be repeated for credit on the recommendation of the appropriate music performance jury.

- 101G. *Beginning Music Performance.*
 201J. *Beginning Class Piano for Nonmusic Majors.*
 201K. *Second-Semester Class Piano for Nonmusic Majors.*
 201M. *Beginning Music Performance: Class Piano.*
 201N. *Beginning Music Performance: Second-Semester Class Piano.*

- 201S. *Beginning Music Performance: Class Harp.*
 201T. *Beginning Music Performance: Second-Semester Class Harp.*
 210J. *Beginning Instruction in Music Performance: Third-Semester Class Piano.*
 210K. *Beginning Instruction in Music Performance: Fourth-Semester Class Piano.*
 111E. *English Diction and Phonetic Translation.*
 311F. *French for Musicians.*
 311G. *German for Musicians.*
 311J. *Italian for Musicians.*
 313. *Fundamentals of Music.*
 115T. *Lower-Division Reed Making.*
 219. *Diction.*
 420J. *Junior Jazz Recital.*
 420R. *Junior Recital.*
 222J. *Instrumental Conducting.*
 222K. *Instrumental Conducting.*
 223J. *Choral Conducting.*
 223K. *Choral Conducting.*
 229. *Diction.*
 159J. *Harp Repertoire.*
 259L. *Vocal Repertoire Coaching.*
 259N. *Chamber Music: Strings and Piano.*
 259P. *Chamber Music: Winds and Percussion.*
 259T. *Topics in Instrumental Technology.*
 160C. *Senior Composition Recital.*
 460J. *Senior Jazz Recital.*
 260M. *Pedagogy.*
 460P. *Pedagogy.*
 460R. *Senior Recital.*
 262. *Intermediate Instrumental Conducting.*
 263K. *Intermediate Choral Conducting.*
 366P. *Senior Piano Pedagogy Project.*
 176C, 276C, 376C. *Special Topics in Music Performance.*
 178C, 278C, 378C. *Independent Study: Music Performance.*

MUSIC LITERATURE

- 302L. *An Introduction to Western Music.*
 302P. *Introductory Topics in Western Music.*
 303M. *Introduction to Traditional Musics in World Cultures.*
 303N. *Introduction to Popular Musics in World Cultures.*
 303P. *Topics in Music of World Cultures.*
 307. *Topics in Popular Music.*
 313M. *History of Music I.*
 313N. *History of Music II.*
 330L. *History of Music III.*
 334. *The Music of the Americas.*

337. *Music for Radio and Television.*
 338. *Masterpieces of Music.*
 342. *Area Studies in Ethnomusicology.*
 343J. *History of Jazz.*
 376G. *Special Topics in Music Literature.*
 178G, 278G, 378G. *Independent Study: Music Literature.*
 379K. *Advanced Topics in Music Literature.*

MUSIC STUDIES

- 115D. *String Instrument Fundamentals.*
 115E. *Brass Instrument Fundamentals.*
 115F. *Woodwind Instrument Fundamentals.*
 115G. *Guitar Fundamentals.*
 354. *Musical Development of Children.*
 354C. *Children's Music Literature and Performance I.*
 354D. *Children's Music Literature and Performance II.*
 354F. *Music Performance, Listening, and Appreciation.*
 155C. *Techniques of Percussion Performance.*
 255D. *Techniques of String Performance.*
 255E. *Techniques of Brass Performance.*
 255F. *Techniques of Woodwind Performance.*
 255M. *Marching Band Techniques.*
 255V. *Techniques of Vocal Performance.*
 356G. *Choral Ensemble Literature and Performance.*
 356J. *Instrumental Ensemble Literature and Performance.*
 176M. *Special Topics in Music Studies.*
 178M, 278M, 378M. *Independent Study: Music Studies.*

MUSIC THEORY

605. *Musicianship.*
 606. *The Elements of Music.*
 411. *Ear Training and Sight-Singing.*
 612. *Structure of Tonal Music.*
 214C. *Beginning Composition.*
 218J. *Beginning Jazz Improvisation.*
 221J, 321J. *Musical Analysis.*
 221K. *Musical Analysis.*
 224G. *Intermediate Composition.*
 224J. *Advanced Composition.*
 325L. *Counterpoint.*
 325M. *Counterpoint.*
 226G. *Orchestration and Arranging.*
 226J. *Orchestration and Instrumentation.*
 226K. *Orchestration and Instrumentation.*
 226N. *Choral Arranging.*
 228G. *Jazz Theory I.*
 228J. *Intermediate Jazz Improvisation.*

- 228K. *Beginning Jazz Piano Techniques.*
 228L. *Jazz Theory II.*
 328M. *Studio Arranging.*
 228P. *Jazz Composition.*
 329E. *Introduction to Electronic Media.*
 329F. *Projects in Electronic Media.*
 329G. *Intermediate Electronic Composition.*
 329J. *Introduction to Computer Music.*
 329M. *Intermediate Computer Music.*
 164L. *Advanced Ear Training.*
 368L. *Review of Music Theory.*
 369P. *Senior Paper in Music Theory.*
 376J. *Special Topics in Music Theory.*
 178J, 278J, 378J. *Independent Study: Music Theory.*

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

MUSIC: MUS

LOWER-DIVISION COURSES

- 101G. Beginning Music Performance.** Class instruction in music performance for nonmusic majors and for music majors studying a secondary instrument. Sections are offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harpsichord, oboe, organ, percussion, recorder, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. Laboratory hours as required. May be repeated for credit when the instruments vary. Prerequisite: Ability to read music. Students studying guitar must provide their own six-string nylon (classical) guitar.
- 201J. Beginning Class Piano for Nonmusic Majors.** Open to all University students, except music majors, who have no experience in piano. Three class hours a week for one semester. May be repeated for credit.
- 201K. Second-Semester Class Piano for Nonmusic Majors.** Open to all University students, except music majors, who can fulfill the prerequisite. Three class hours a week for one semester. May be repeated for credit. Prerequisite: Music 201J completed the previous semester with a grade of at least C, or consent by audition; and consent of instructor.
- 201M. Beginning Music Performance: Class Piano.** Open only to music majors. Three laboratory hours a week for one semester. May be repeated for credit. Credit granted only when taken as a secondary instrument. Prerequisite: Ability to read music, and concurrent enrollment in Music 605A or consent of instructor. No experience on the instrument required; for those with experience, consent by audition required.
- 201N. Beginning Music Performance: Second-Semester Class Piano.** Open only to music majors. Continuation of Music 201M. Three laboratory hours a week for one semester. May be repeated for credit. Credit granted only when taken as a secondary instrument. Prerequisite: Music 201M completed the previous semester with a grade of at least C, or consent by audition.
- 201S. Beginning Music Performance: Class Harp.** Open to all University students who can fulfill the prerequisite. Three laboratory hours a week for one semester. May be repeated for credit. For music majors, credit granted only when taken as a secondary instrument. Prerequisite: Ability to read music and consent of instructor. No previous experience on the instrument required.
- 201T. Beginning Music Performance: Second-Semester Class Harp.** Open to all University students who can fulfill the prerequisite. Three laboratory hours a week for one semester. May be repeated for credit. For music majors, credit granted only when taken as a secondary instrument. Prerequisite: Music 201S completed the previous semester with a grade of at least C, or consent by audition.
- 302L (TCCN: MUSI 1306). An Introduction to Western Music.** Open to all University students except music majors. Information and techniques for the intelligent appreciation of music: its elements, basic forms, and major style periods from the Middle Ages to the present. Three lecture hours a week for one semester, with one laboratory hour a week as required.
- 302P. Introductory Topics in Western Music.** May not be counted by music majors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 303M. Introduction to Traditional Musics in World Cultures.** Same as Asian Studies 303M. Open to all University students. Art, sacred, and folk traditions of music in the cultures of Asia, Africa, the Pacific, Europe, and the Americas. Three lecture hours a week for one semester, with one laboratory hour a week as required.
- 303N. Introduction to Popular Musics in World Cultures.** Same as Asian Studies 303N. Open to all University students. Popular traditions of music in the cultures of Asia, Africa, the Pacific, Europe, and the Americas. Three lecture hours a week for one semester, with one laboratory hour a week as required.
- 303P. Topics in Music of World Cultures.** May not be counted by music majors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 605. Musicianship.** Study of the fundamentals of music for music majors through tonal harmony, ear training, sight-singing, keyboard drill, analysis, and composition of music. Three lecture hours and two laboratory hours a week for two semesters. Music 605 and 313 may not both be counted. Prerequisite: For 605A, either satisfactory completion of the audition required for admission to the Butler School of Music and registration in class piano as assigned by the Butler School of Music, or consent of instructor; for 605B, Music 605A with a grade of at least C, and registration in class piano as assigned by the Butler School of Music or consent of instructor.

- 205M. Acting for Voice Performance Majors I.** Fundamental techniques of acting for the lyric stage, theoretical and direct application of dramatic monologue, art song, and operatic literature. Includes ensemble participation in Butler Opera Center production. Two lecture hours a week for one semester, with additional hours to be arranged. Music 205M and Theatre and Dance 303V may not both be counted. Prerequisite: A major in voice performance in the Butler School of Music.
- 205N. Acting for Voice Performance Majors II.** Continuation of fundamental techniques of acting for the lyric stage, focusing on direct application of operatic solo literature, ensemble, and art song for performance. Includes ensemble participation in a Butler Opera Center production. Two lecture hours a week for one semester, with additional hours to be arranged. Music 205N and Theatre and Dance 303N may not both be counted. Prerequisite: Music 205M.
- 606. The Elements of Music.** A course in the fundamentals of music for nonmusic majors. Study of notation, and of the elements of rhythm, melody, and harmony; development of elementary aural skills; writing of simple compositions. Three lecture hours a week for two semesters. Prerequisite: For 606B, Music 606A.
- 307 (TCCN: MUSI 1310). Topics in Popular Music.** Open to all University students. Studies of the popular music of a selected culture or geographical area. Three lecture hours a week for one semester, with one laboratory hour a week as required. May be repeated for credit when the topics vary.
- Topic 1: Music of African Americans.** Same as African and African American Studies 317 (Topic 2: *Music of African Americans*).
- Topic 2: History of Rock Music.**
- Topic 3: Jazz Appreciation.**
- 210J. Beginning Instruction in Music Performance: Third-Semester Class Piano.** Open only to music majors. Continuation of Music 201N. Three laboratory hours a week for one semester. May be repeated for credit. Credit granted only when taken as a secondary instrument. Prerequisite: Music 201N completed the previous semester with a grade of at least C, or consent by audition.
- 210K. Beginning Instruction in Music Performance: Fourth-Semester Class Piano.** Open only to music majors. Continuation of Music 210J. Three laboratory hours a week for one semester. May be repeated for credit. Credit granted only when taken as a secondary instrument. Prerequisite: Music 210J completed the previous semester with a grade of at least C, or consent by audition.
- 411. Ear Training and Sight-Singing.** Material drawn from all musical styles. Two lecture hours and one laboratory hour a week for two semesters. Prerequisite: For 411A, Music 605B with a grade of at least C, and concurrent enrollment in Music 612A; for 411B, Music 411A with a grade of at least C and concurrent enrollment in Music 612B.
- 111E. English Diction and Phonetic Translation.** Open only to music majors. Study of English diction and phonetic translation specifically for musicians. Emphasis on the International Phonetic Alphabet. One lecture hour a week for one semester.
- 311F. French for Musicians.** Open only to music majors. French language and diction specifically for musicians. Three lecture hours a week for one semester.
- 311G. German for Musicians.** Open only to music majors. German language and diction specifically for musicians. Three lecture hours a week for one semester.
- 311J. Italian for Musicians.** Open only to music majors. Italian language and diction specifically for musicians. Three lecture hours a week for one semester.
- 612. Structure of Tonal Music.** Elements of tonal harmony and form; tonal analysis. Three lecture hours a week for two semesters, with one laboratory hour a week as required. Prerequisite: For 612A, Music 605B with a grade of at least C, concurrent enrollment in Music 411A, and registration in class piano as assigned by the Butler School of Music or consent of instructor; for 612B, Music 612A with a grade of at least C, concurrent enrollment in Music 411B, and registration in class piano as assigned by the Butler School of Music or consent of instructor.
- 313. Fundamentals of Music.** Designed to familiarize students who are not music majors with the meaning of musical notation and with the harmonic, melodic, and rhythmic structure of music. Three lecture hours and one laboratory hour a week for one semester. Music 605 and 313 may not both be counted.
- 313M. History of Music I.** The history of music from the beginning of notation to the eighteenth century. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Music 605 or consent of instructor.
- 313N. History of Music II.** The history of music from the eighteenth century to the early twentieth century. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Music 313M or consent of instructor.
- 214C (TCCN: MUSI 1286). Beginning Composition.** Introduction to contemporary composition through the analysis and writing of short studies and through supervised original projects. Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Concurrent enrollment in Music 411 and 612, or consent of instructor.
- 115D. String Instrument Fundamentals.** Beginning instruction in string instrument performance and pedagogy. This course is offered in the following instruments: double bass, viola, violin, and violoncello. Individual or class instruction in music performance. Laboratory hours as required. May not be repeated for credit on the same instrument. May not be taken by music majors in their principal instrument. Prerequisite: A major in music.
- 115E. Brass Instrument Fundamentals.** Beginning instruction in brass instrument performance and pedagogy. This course is offered in the following instruments: euphonium, French horn, trombone, trumpet, and tuba. Individual or class instruction in music performance. Laboratory hours as required. May not be repeated for credit on the same instrument. May not be taken by music majors in their principal instrument. Prerequisite: A major in music.

- 115F. Woodwind Instrument Fundamentals.** Beginning instruction in woodwind instrument performance and pedagogy. This course is offered in the following instruments: bassoon, clarinet, flute, oboe, and saxophone. Individual or class instruction in music performance. Laboratory hours as required. May not be repeated for credit on the same instrument. May not be taken by music majors in their principal instrument. Prerequisite: A major in music.
- 115G. Guitar Fundamentals.** Beginning instruction in guitar performance and pedagogy. Individual or class instruction in music performance. Laboratory hours as required. Prerequisite: A major in music or consent of instructor.
- 115T. Lower-Division Reed Making.** Individual instruction. May be repeated for credit. Prerequisite: Consent of instructor.
- 316M. Introduction to Audio Recording.** Fundamentals of modern multitrack audio recording, including analog and digital recording, microphones and microphone techniques, basic mixing and signal processing, technology, and terminology. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.
- 316N. Intermediate Audio Recording.** Intermediate techniques of modern multitrack audio recording, including stereo and remote location recording, intermediate microphone techniques, signal processing and automated mixing, and modern production techniques. Three lecture hours a week for one semester. Prerequisite: Music 316M or consent of instructor.
- 218J. Beginning Jazz Improvisation.** Study of basic jazz improvisational skills through performance of standard literature. Two class hours a week for one semester. Prerequisite: Music 605 or consent of instructor.
- 219. Diction.** French and English pronunciation for singers. Two lecture hours a week for one semester.
- 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Music.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Butler School of Music. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 420J. Junior Jazz Recital.** Preparation and performance of a half-hour public recital in the major jazz instrument. Individual instruction. Prerequisite: For jazz composition majors, course 212J in the major jazz instrument for two semesters, or the equivalent, and approval of the jazz faculty; for jazz performance majors, course 412J in the major jazz instrument for two semesters, or the equivalent, and approval of the jazz faculty.
- 420R. Junior Recital.** Preparation and performance of a half-hour public recital in the major instrument. Individual instruction. Prerequisite: Course 412 (or 410) in the major instrument for four semesters, or the equivalent, and approval of the faculty.
- 221J, 321J. Musical Analysis.** Detailed study of selected compositions from the tonal and post-tonal periods; analytical and compositional projects. Two or three lecture hours a week for one semester. Prerequisite: Music 411 and 612.
- 221K. Musical Analysis.** Continuation of Music 221J. Two lecture hours a week for one semester. Prerequisite: Music 221J.
- 222J. Instrumental Conducting.** Designed for those who have had no experience in conducting. Includes rudimentary use of baton, regular and irregular beat patterns, subdivisions and beat pattern variations as applied to simple instrumental literature, and practical experience in conducting instrumental groups. Two class hours a week for one semester. Prerequisite: Upper-division standing in music or consent of instructor.
- 222K. Instrumental Conducting.** Continuation of Music 222J. Further technical study in irregular meters, polyrhythmic and polymetrical patterns and scores; emphasis on expressive gestures, phrasal and compound beat conducting. Two class hours a week for one semester. Prerequisite: Music 222J or consent of instructor.
- 223J. Choral Conducting.** Designed for those who have had no experience in conducting. Includes regular and irregular beat patterns, subdivisions and beat pattern variations as applied to simple choral literature, and practical experience in conducting vocal groups. Two class hours a week for one semester. Prerequisite: Upper-division standing in music.
- 223K. Choral Conducting.** Continuation of Music 223J. Further technical study in irregular meters, polyrhythmic and polymetrical patterns and scores; emphasis on expressive gestures, phrasal and compound beat conducting. Two class hours a week for one semester. Prerequisite: Music 223J or consent of instructor.
- 224G. Intermediate Composition.** Continuation of Music 214C. The equivalent of two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Music 214C with a grade of at least B, and approval of the music theory and composition faculty.
- 224J. Advanced Composition.** Continuation of Music 224G for composition majors only. The equivalent of two lecture hours and one laboratory hour a week for one semester. With consent of the music theory and composition faculty, may be repeated for credit. Prerequisite: Music 224G with a grade of at least B, and approval of the music theory and composition faculty.
- 325L. Counterpoint.** Development of contrapuntal skill in sixteenth-century style and in related late-twentieth-century styles; the teaching of counterpoint, including Fuxian species. Three lecture hours a week for one semester. Prerequisite: Music 411 and 612.
- 325M. Counterpoint.** Analysis of eighteenth-century inventions, fugues, and passacaglias; development of contrapuntal skills in twentieth-century styles that draw on these historical models; the teaching of counterpoint. Three lecture hours a week for one semester.
- 226G. Orchestration and Arranging.** Techniques of instrumentation, arranging, and orchestration for band, orchestra, and chamber ensembles. Two lecture hours a week for one semester. Prerequisite: Music 411 and 612.

- 226J. Orchestration and Instrumentation.** Study of the characteristics of individual instruments; writing for various combinations; study of scores of different periods; listening to recordings and live performances. Two lecture hours a week for one semester. Prerequisite: Music 411 and 612.
- 226K. Orchestration and Instrumentation.** Continuation of Music 226J. Two lecture hours a week for one semester. Prerequisite: Music 226J.
- 226N. Choral Arranging.** Techniques of voicing and arranging for choirs, vocal ensembles, and vocal chamber groups. Two lecture hours a week for one semester. Prerequisite: Music 411 and 612.
- 228G. Jazz Theory I.** Study of the elements of jazz and popular styles, with emphasis on written theory and keyboard skills. Two lecture hours a week for one semester. Prerequisite: Music 201N and 605, or consent of instructor.
- 228J. Intermediate Jazz Improvisation.** Continuation of Music 218J. Two class hours a week for one semester. Prerequisite: Music 201N, 605, 218J, and 228G; or consent of instructor.
- 228K. Beginning Jazz Piano Techniques.** Designed for music majors (pianists and nonpianists) seeking basic skills in chord notation, chord interpretation and voicing, voice leading, and chord and scale relationships for improvisation. Three laboratory hours a week for one semester. Prerequisite: Music 210K and 612, or consent of instructor.
- 228L. Jazz Theory II.** Continuation of the concepts taught in Music 228G, with an emphasis on ear training, harmonic motion of jazz, and harmonic embellishment. Two lecture hours a week for one semester. Prerequisite: Music 228G.
- 328M. Studio Arranging.** Techniques of composing and arranging for standard jazz and popular music instrumental combinations in varied styles. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Music 612 and 228G, or consent of instructor.
- 228P. Jazz Composition.** Individual instruction in the creative process of composition, involving the melodic, harmonic, and rhythmic components of various jazz styles. May be repeated for credit. Prerequisite: Music 328M or consent of instructor.
- 229. Diction.** Italian and German pronunciation for singers. Two lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 329E. Introduction to Electronic Media.** Introduction to the fundamentals of recording, tape editing, and electronic music synthesis. One and one-half lecture hours and eight laboratory hours a week for one semester. Prerequisite: Consent of instructor.
- 329F. Projects in Electronic Media.** Continuation of Music 329E for nontheory and noncomposition majors. One and one-half lecture hours and eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Music 329E and consent of instructor.
- 329G. Intermediate Electronic Composition.** Continuation of Music 329E for music theory or composition majors. One and one-half lecture hours and eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Music 329E and consent of instructor.
- 329J. Introduction to Computer Music.** An introduction to the basic concepts of digital music synthesis and signal processing. One and one-half lecture hours and eight laboratory hours a week for one semester. Prerequisite: Music 329E and consent of instructor.
- 329M. Intermediate Computer Music.** Continuation of Music 329J. One and one-half lecture hours and eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Music 329J and consent of instructor.
- 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Music.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Butler School of Music. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330L. History of Music III.** The history of music from the early twentieth century to the present. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Music 313N or consent of instructor.
- 334. The Music of the Americas.** Studies of both indigenous and borrowed traditions in the popular, folk, and art music of the Americas from the colonial period to the present. Three lecture hours a week for one semester, with one laboratory hour a week as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- Topic 1: Music of Mexico and the Caribbean.** Same as Latin American Studies 326 (Topic 1: *Music of Mexico and the Caribbean*). Latin American Studies 322 (Topic: *Music of Mexico and the Caribbean*) and Music 334 (Topic 1) may not both be counted.
- Topic 2: Music of Latin America.** Same as Latin American Studies 326 (Topic 2: *Music of Latin America*). Latin American Studies 322 (Topic: *Music of Latin America*) and Music 334 (Topic 2) may not both be counted.
- Topic 3: Music of Brazil and Argentina.** Same as Latin American Studies 326 (Topic 3: *Music of Brazil and Argentina*). Latin American Studies 322 (Topic: *Music of Brazil and Argentina*) and Music 334 (Topic 3) may not both be counted.
- Topic 4: Music of the Andean Countries.** Same as Latin American Studies 326 (Topic 4: *Music of the Andean Countries*). Latin American Studies 322 (Topic: *Music of the Andean Countries*) and Music 334 (Topic 4) may not both be counted.
- 335M. Fundamentals of Digital Audio Workstations.** An overview of the history and theory behind digital audio and digital audio recording, including stand-alone and computer-based digital audio workstations. Three lecture hours a week for one semester. Prerequisite: Music 316N or consent of instructor.

- 335N. Advanced Digital Audio Workstations.** Includes advanced editing, MIDI control surfaces, use of Beat Detective application, surround and synchronization, advanced mixing, plug-ins, third-party digital audio workstation add-ons, soft synthesizers and samplers, and digital mastering techniques and practices. Three lecture hours a week for one semester. Prerequisite: Music 335M or consent of instructor.
- 336C. Computer Audio Production.** Desktop music production, including the history of computer music, MIDI and specialized digital audio for multimedia production, loop-based music, contemporary production styles, and music production environments. Three lecture hours a week for one semester. Prerequisite: Music 335N or consent of instructor.
- 337. Music for Radio and Television.** Survey of music history and trends; application to broadcasting; problems of music programming; copyright and clearance. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and consent of instructor.
- 338. Masterpieces of Music.** Study of the works of specific composers or of specific genres in the Western musical tradition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted by music majors. Prerequisite: Music 302L or consent of instructor.
- 339M. Introduction to the Music Business and Entrepreneurship.** An overview of the dynamics and business challenges of the contemporary music performance world, with an emphasis on the study of the rapidly changing musical culture and an increasingly competitive and diversified marketplace. Guest lecturers include professional conductors, directors of large performance venues, classical and pop music performers, music critics, songwriters, music publishers, entertainment law attorneys, and record producers. Three lecture hours a week for one semester. Music 339M and 376C (Topic: *Business of Music*) may not both be counted. Prerequisite: Upper-division standing in music.
- 339N. Music Entrepreneurship.** Further exploration of the dynamics and business challenges of the contemporary music performance world, with emphasis on entrepreneurial savvy, communication skills, fluency with emerging technologies, commitment to audience education, public advocacy for music, and the future health and growth of musical culture. Three lecture hours a week for one semester. Prerequisite: Upper-division standing in music and Music 339M.
- 342. Area Studies in Ethnomusicology.** Studies of the musical traditions of selected cultures or geographical areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
Topic 3: Musics of India. Same as Anthropology 324L (Topic 13: *Musics of India*) and Asian Studies 361 (Topic 11: *Musics of India*). Prerequisite: Upper-division standing.
Topic 5: Black Perspectives in Jazz. Same as African and African American Studies 374 (Topic 10: *Black Perspectives in Jazz*). Prerequisite: Upper-division standing.
Topic 6: Musics of East and Southeast Asia. Same as Asian Studies 361 (Topic 15: *Musics of East and Southeast Asia*). Prerequisite: Upper-division standing.
- 343J. History of Jazz.** Survey of the history of jazz from its origins to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing in music or consent of instructor.
- 345. Advanced Audio Recording.** Contemporary audio recording and production styles. Advanced techniques for specific recordings and musical styles, including ensemble recording in a multitrack environment. Three lecture hours a week for one semester. Prerequisite: Music 336C or consent of instructor.
- 347M. Music Copyright and Publishing.** Recording, music publishing, and personal management agreements and how they affect the artist and writer. Includes negotiation considerations, deal points, record company economics and profitability, intellectual property rights, publishing and the control and exploitation of publishing rights in music property, publishing activities, performing rights organizations, catalog sales and acquisitions, publisher and songwriter relations, and royalty accounting. Three lecture hours a week for one semester. Prerequisite: Upper-division standing in music.
- 347N. Topics in the Business of Music and the Arts.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing in music and Music 347M.
- 354. Musical Development of Children.** The processes of musical development in young children. Topics include music in multicultural contexts, music in the cognitive and social development of young children, and special issues concerning music and exceptional children. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 354C. Children's Music Literature and Performance I.** Literature, materials, and music performance activities appropriate for young children. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Music 605 or 313, upper-division standing in music studies, or consent of instructor.
- 354D. Children's Music Literature and Performance II.** Continuation of Music 354C. Three lecture hours a week for one semester. Prerequisite: Music 354C or consent of instructor.
- 354F. Music Performance, Listening, and Appreciation.** Techniques and materials for the development of skill in composition, arranging, performance, and aural discrimination; problems related to the adolescent voice. Three lecture hours and one laboratory hour a week for one semester.
- 155C. Techniques of Percussion Performance.** Percussion performance techniques for individual and ensemble settings, including appropriate literature and rehearsal procedures. Two laboratory hours a week for one semester. Prerequisite: Upper-division standing in music studies.
- 255D. Techniques of String Performance.** String instrument performance techniques for individual and ensemble settings, including appropriate literature and rehearsal procedures. Two lecture hours a week for one semester. Prerequisite: Upper-division standing in music studies.

- 255E. Techniques of Brass Performance.** Brass instrument performance techniques for individual and ensemble settings, including appropriate literature and rehearsal procedures. Two lecture hours a week for one semester. Prerequisite: Upper-division standing in music studies.
- 255F. Techniques of Woodwind Performance.** Woodwind instrument performance techniques for individual and ensemble settings, including appropriate literature and rehearsal procedures. Two lecture hours a week for one semester. Prerequisite: Upper-division standing in music studies.
- 255M. Marching Band Techniques.** Literature, materials, and techniques of the marching band. Two lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing in music studies.
- 255V. Techniques of Vocal Performance.** Technique of individual and ensemble singing practiced through the study of vocal literature. Two lecture hours a week for one semester. Prerequisite: Upper-division standing in music studies.
- 356C. Choral Ensemble Literature and Performance.** Choral music literature; rehearsal and performance techniques for choirs and small ensembles. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing in music studies or consent of instructor.
- 356J. Instrumental Ensemble Literature and Performance.** Study of the literature and of performance and rehearsal techniques for heterogeneous instrumental ensembles. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing in music studies and Music 210K.
- 159J. Harp Repertoire.** Study and performance of the harp repertoire. One laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.
- 259L. Vocal Repertoire Coaching.** Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.
- 259N. Chamber Music: Strings and Piano.** The equivalent of two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Music 411, 612, and consent of instructor.
- 259P. Chamber Music: Winds and Percussion.** The equivalent of two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Music 411, 612, and consent of instructor.
- 259T. Topics in Instrumental Technology.** Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
- 160C. Senior Composition Recital.** Open only to music composition majors. Preparation and performance of a thirty-minute public recital of the student's original compositions. Individual instruction.
- 460J. Senior Jazz Recital.** Open only to jazz performance majors. Preparation and performance of a one-hour public recital in the major jazz instrument. Individual instruction. Prerequisite: Music 420J and approval of the jazz faculty.
- 260M. Pedagogy.** An intensive study of repertoire and methods, designed for students planning to specialize in teaching. May be repeated for credit when the topics vary.
- Topic 1: Woodwind Instruments.** The equivalent of two laboratory hours a week for one semester. Prerequisite: Two semesters of instrument course 260 and approval of the faculty in one of the woodwind instruments.
- Topic 2: Brass Instruments.** The equivalent of two laboratory hours a week for one semester. Prerequisite: Two semesters of instrument course 260 and approval of the faculty in one of the brass instruments.
- Topic 3: Piano.** Offered in the summer session only, in conjunction with the High School Piano Performance Workshop; meets four hours a day for two weeks. May be repeated for credit. May not be substituted for Music 460PA or 460PB. Prerequisite: Piano 412 or consent of instructor.
- Topic 4: Strings.** The equivalent of two laboratory hours a week for one semester. Prerequisite: Two semesters of instrument course 260 and approval of the faculty in one of the string instruments.
- Topic 5: Group Piano.** The development of skills in teaching group piano. Examination of methods and materials used in keyboard instruction and for improvisation, sight-reading, and score reading. Two lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing in music and consent of instructor.
- 460P. Pedagogy.** Designed primarily for students planning teaching careers. This course is offered in harp, piano, strings, woodwinds, brass, percussion, and voice. Methods of individual and class instruction through the use of music literature and the teaching repertoire. Practice teaching and laboratory for diagnostic and corrective methods are required. Two lecture hours a week for two semesters. Upon recommendation of the faculty, Music 460P and two semesters of instrument course 260 and approval of the faculty in the student's instrument may be substituted for instrument course 462 and Music 460R. Prerequisite: For 460PA, instrument course 462 and approval of the faculty, and consent of instructor; for 460PB, Music 460PA.
- 460R. Senior Recital.** Open only to music performance majors. Preparation and performance of a one-hour public recital in the major instrument. Individual instruction. Prerequisite: For performance majors approved to pursue a pedagogy emphasis, approval of the faculty; for other performance majors, Music 420R and approval of the faculty.
- 262. Intermediate Instrumental Conducting.** Problems and interpretation of larger band and orchestral works; analytical study of musical form as it relates to conducting; a synthesis of musical understanding and expansion of comprehensive musicianship through conducting problems. Two class hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Music 222K or consent of instructor.
- Topic 1: Band.**
- Topic 2: Orchestra.**

- 263K. Intermediate Choral Conducting.** Problems and interpretation of larger choral works. Analytical study of musical form as it relates to conducting. A synthesis of musical understanding and expansion of comprehensive musicianship through conducting problems. Two class hours a week for one semester. May be repeated for credit. Prerequisite: Music 223K or consent of instructor.
- 164L. Advanced Ear Training.** Further development of techniques taught in Music 411, with emphasis on aural recognition of larger musical forms and of music of contemporary style. One lecture hour a week for one semester. Prerequisite: Upper-division standing in music and Music 411 and 612.
- 366P. Senior Piano Pedagogy Project.** Open only to senior piano performance majors pursuing the pedagogy option. Students complete a research paper on a piano pedagogy topic, such as methodology, skills development, or repertoire. Individual instruction. Prerequisite: Upper-division standing and Music 460P with a grade of at least B.
- 368L. Review of Music Theory.** An intensive review of the skills and concepts required for the study of music theory at the graduate level. Three lecture hours a week for one semester. May not be counted toward a graduate degree. Prerequisite: Upper-division or graduate standing in music.
- 369P. Senior Paper in Music Theory.** Writing of a major paper on a topic in music theory approved by the instructor. The equivalent of three lecture hours a week for one semester. Prerequisite: Music 221K with a grade of at least B, at least seven semester hours of upper-division coursework in music theory, and consent of instructor.
- 176C, 276C, 376C. Special Topics in Music Performance.** For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 376G. Special Topics in Music Literature.** Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 376J. Special Topics in Music Theory.** Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 176M. Special Topics in Music Studies.** One class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 677P. Internship and Final Project.** Restricted to seniors. Practical experience in the music and recording industry related to the student's area of interest within the music business, recording technology, or electronic media. Comprehensive final project addresses entrepreneurship, as well as technical and business elements of the music and recording industry. Forty hours a week for one semester. Prerequisite: Completion of the program requirements for enrollment in an internship course and consent of the program director.
- 178C, 278C, 378C. Independent Study: Music Performance.** Individual projects to be completed under faculty supervision. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the director of the school.
- 178G, 278G, 378G. Independent Study: Music Literature.** Individual projects to be completed under faculty supervision. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the director of the school.
- 178J, 278J, 378J. Independent Study: Music Theory.** Individual projects to be completed under faculty supervision. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the director of the school.
- 178M, 278M, 378M. Independent Study: Music Studies.** Individual projects to be completed under faculty supervision. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the director of the school.
- 379K. Advanced Topics in Music Literature.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Two or more topics may be taken concurrently. Prerequisite: Music 612 and 313N, or upper-division standing and consent of instructor.
- Topic 1: Topics in Keyboard Literature.**
Topic 2: Piano Literature, Eighteenth Century to the Present.
Topic 5: Topics in Instrumental Chamber Music.
Topic 6: Topics in Symphonic Tradition.
Topic 7: Topics in Instrumental Concerto.
Topic 8: Topics in the Art Song.
Topic 9: Topics in Opera and Music Drama.
Topic 10: Topics in Mass and Motet.
Topic 11: Topics in Choral Music.
Topic 12: Topics in Cantata and Oratorio.
Topic 13: Topics in Modern Music.
Topic 14: Special Topics in the Western Musical Tradition.
Topic 17: Topics in Instrumental Wind Music.

ENSEMBLE: ENS

LOWER-DIVISION COURSES

- 103L. Opera Laboratory.** Performance and instruction in operatic theatre. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

- 103P. Butler Opera Center Ensemble.** Open to any University student who can qualify by audition. Instruction and performance in operatic acting, vocal coaching, and stage direction. Four laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit.
- 105. Sight-Reading.** Designed to develop and improve sight-reading skills in piano performance. Three laboratory hours a week for one semester. May be repeated for credit. Open to any University student who can qualify by audition.
- 106. Accompanying.** Designed for pianists, organists, and harpsichordists to improve ensemble playing and to give training in the technique of vocal and instrumental accompanying. One and one-half to three laboratory hours a week as required for one semester. May be repeated for credit. Open to any University student who can qualify by audition.
- 107J. Jazz Orchestra.** Advanced jazz ensemble. Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.
- 107K. Large Instrumental Ensemble.** Offered under various topics according to instrumentation, including Symphony Band, Symphony Orchestra, and Wind Ensemble. Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.
- 207L. Longhorn Band.** In the spring semester, this organization divides into multiple performing ensembles. Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.
- 107S. Small Instrumental Ensemble.** Offered under various topics according to instrumentation. Two laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.
- 109C. Choral Ensemble.** Offered under various topics according to ensemble composition, including University Chorus and Women's Chorus. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.
- 109K. Chamber Singers.** Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.
- 109L. Concert Chorale.** Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.
- 109P. Pop Choral Ensemble.** Offered under various topics, including Longhorn Singers and Varsity Singers. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

PERFORMANCE

The abbreviations used for performance courses are included in Appendix B.

LOWER-DIVISION COURSES

- 201. Lower-Division Music Performance: Secondary.** Individual instruction in music performance for nonmusic majors and for music majors studying a secondary instrument. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, oboe, organ, percussion, piano, recorder, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. May be repeated for credit. Prerequisite: The ability to read music, and, for most instruments, an audition. For Guitar 201, at least two years of classical guitar lessons. For Piano 201, at least one year of piano lessons.
- 202. Lower-Division Piano: Secondary.** Individual instruction beyond Music 210K. May be repeated for credit when the topics vary. Prerequisite: Consent by audition.
- 210. Lower-Division Music Performance: Principal.** Individual instruction in the principal instrument for students pursuing the Bachelor of Arts in Music or the Bachelor of Music with a major in music studies, music theory, composition, music literature, or music performance. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. May be repeated for credit. Prerequisite: For Organ 210, Piano 201 or the equivalent.
- 212, 312, 412. Lower-Division Music Performance: Major.** Individual instruction in music performance for students majoring in music performance or music performance pedagogy. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, and violoncello. May be repeated for credit.
- 212J, 312J, 412J. Lower-Division Music Performance: Improvisation.** Individual instruction in improvisation for students majoring in jazz composition or jazz performance. This course is offered in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone. May be repeated for credit.

UPPER-DIVISION COURSES

- 251. Upper-Division Music Performance: Secondary.** Individual instruction in music performance for nonmusic majors and for music majors studying a secondary instrument. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, recorder, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. May be repeated for credit. Prerequisite: Course 201 in the secondary instrument for four semesters, or the equivalent, and approval of the area faculty.
- 260. Upper-Division Music Performance: Principal.** Individual instruction in the principal instrument for students pursuing the Bachelor of Arts in Music or the Bachelor of Music with a major in music studies, music theory, composition, music literature, or music performance. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. May be repeated for credit. Prerequisite: Course 210 in the principal instrument for four semesters, or the equivalent, and approval of the music faculty.
- 262, 362, 462. Upper-Division Music Performance: Major.** Individual instruction in music performance for students majoring in music performance. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. May be repeated for credit. Prerequisite: For Voice 462, Voice 210 for four semesters, or the equivalent, and approval of the music faculty; for other instruments, course 412 in the major instrument for four semesters, or the equivalent, and approval of the music faculty.
- 262J, 362J, 462J. Upper-Division Music Performance: Improvisation.** Individual instruction in improvisation for students majoring in jazz composition and jazz performance. This course is offered in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone. May be repeated for credit. Prerequisite: For jazz composition majors, course 212J for two semesters, or the equivalent, and approval of the appropriate music faculty; for jazz performance majors, course 412J for two semesters, or the equivalent, and approval of the appropriate music faculty.

DEPARTMENT OF THEATRE AND DANCE

Registration with a member of the department faculty is required of students planning to major in the Department of Theatre and Dance and of those enrolling in courses that require faculty permission.

All students majoring in the department are required to act in productions or to serve on technical crews as scheduled by the faculty of the department.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

THEATRE AND DANCE: T D

LOWER-DIVISION COURSES

- 301 (TCCN: DRAM 1310). Introduction to Theatre.** Open to all University students except majors in the Department of Theatre and Dance. A study of theatrical texts and practices of the past and present. Three lecture hours a week for one semester; attendance at all major productions of the department is required.
- 102T, 202T, 302T. Topics in Dance Technique for Nondance Majors.** Fundamental study of principles and vocabulary of dance. Three lecture hours a week for one semester. May be repeated for credit. May not be counted toward the Bachelor of Fine Arts degree with a major in dance.
- 303. Fundamentals of Acting.** Not open to theatre and dance majors. Basic principles of acting and practical work in scenes from plays. Three lecture hours a week for one semester. Theatre and Dance 303 and 313C may not both be counted.
- 303C (TCCN: DRAM 2336). Training the Speaking Voice.** Not open to theatre and dance majors. Fundamental principles of vocal production and speech. Three lecture hours a week for one semester.
- 303V. Acting for Voice Performance Majors I.** Fundamental inquiry into the acting process. Three lecture hours a week for one semester. Prerequisite: A major in voice performance in the Butler School of Music.
- 303W. Acting for Voice Performance Majors II.** Techniques for playing and shaping action within scene structures. Three lecture hours a week for one semester. Prerequisite: Theatre and Dance 303V.
- 306. Introduction to Improvisational Drama.** General introduction to improvisational activities with application to the theatre. Three lecture hours a week for one semester.
- 311. Languages of the Stage.** Introduction to the ways that performance communicates meaning, as a foundation for further study in theatre and dance. Three lecture hours a week for one semester. Prerequisite: A major in the Department of Theatre and Dance or consent of instructor.
- 111T, 211T, 311T. Introductory Topics in Theatre and Dance.** Restricted to theatre and dance majors. Introductory topics in theatre and dance, including basic research methods, contemporary and local performance, the role of the artist in society, the philosophy of a fine arts education, and the exploration of campus resources. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary.

- 112. Freshman Movement and Physical Conditioning.** Principles and techniques of physical conditioning. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 312C. Contemporary Dance Technique.** Intensive study of principles, technique, and vocabulary of contemporary dance. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 312D. Intermediate Contemporary Dance Technique.** Intensive study of intermediate-level theory, technique, and vocabulary of contemporary dance. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 312F. Ballet Technique.** Intensive study of principles, technique, and vocabulary of ballet. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 312G. Intermediate Ballet Technique.** Study of intermediate-level theory, technique, and vocabulary of ballet as a supporting style. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 312M. Movement Improvisation.** Exploration and study of elements of movement design. Three hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance.
- 312N. Movement Composition.** Continuation of Theatre and Dance 312M. Three hours a week for one semester, with additional laboratory hours as required. Prerequisite: Theatre and Dance 312M or consent of instructor.
- 112P, 212P, 312P. Fundamental Projects in Dance Performance and Repertory.** Preparation and performance laboratory related to production. At least six laboratory hours a week for one semester; additional laboratory hours may be required for rehearsals and performances. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 112T, 212T, 312T. Topics in Dance Technique.** For each semester hour of credit earned, at least one lecture hour a week for one semester, and additional laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 313C (TCCN: DRAM 1351). Acting I.** Fundamental inquiry into the acting process; improvisational approaches to the playing of dramatic action. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance or consent of instructor.
- 313D (TCCN: DRAM 1352). Acting II.** Fundamental techniques of character analysis and portrayal. Introduction of published text. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance and Theatre and Dance 313C, or consent of instructor.
- 313E (TCCN: DRAM 2351). Acting III.** Personalization of character explored through various theatrical styles. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance and Theatre and Dance 313D with a grade of at least B, or consent of instructor.
- 113P, 213P, 313P. Projects in Acting and Directing.** Preparation and performance laboratory related to production. For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Consent of the acting/directing faculty.
- 314C (TCCN: DRAM 1330). Design for Performance.** Introduction to the techniques, practices, and processes in costume, lighting, scenic, and sound design. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance or consent of instructor.
- 314M (TCCN: DRAM 2331). Technical Theatre.** Introduction to the techniques, practices, and processes in technical theatre. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance or consent of instructor.
- 314P. Production Laboratory.** Three hours a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance or consent of instructor.
- 315. Playwriting I.** The study and practice of writing plays. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.
- 317C (TCCN: DRAM 2361). Theatre History through the Eighteenth Century.** Three lecture hours a week for one semester.
- 317D (TCCN: DRAM 2362). Theatre History since the Eighteenth Century.** Three lecture hours a week for one semester.
- 317M. Dance History I.** An exploration of world dance as an expression of cultural identity and change. Three lecture hours a week for one semester. Prerequisite: Theatre and Dance 311.
- 317N. Dance History II.** Continuation of Theatre and Dance 317M. Three lecture hours a week for one semester. Prerequisite: Theatre and Dance 317M or consent of instructor.
- 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Theatre and Dance.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Theatre and Dance. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 121P, 221P, 321P. Festival Project and Production.** Students initiate, develop, and/or participate in an approved departmental major festival project or production under the supervision of a faculty member. For each semester hour of credit earned, at least one lecture hour a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
- 322. Dance Pedagogy.** Techniques and materials used in the teaching of dance. Two lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Upper-division standing and consent of instructor.
- 322E. Advanced Contemporary Dance Technique.** Intensive study of advanced theory, technique, and style of contemporary dance. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 322J. Advanced Ballet Technique.** Study of advanced theory, technique, and vocabulary of ballet as a supporting style. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 122P, 222P, 322P. Projects in Dance Performance and Repertory.** Preparation and performance laboratory related to production. At least six laboratory hours a week for one semester; additional laboratory hours may be required for rehearsals and performances. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.
- 323C. Directing I.** Study and practice of the fundamentals of stage directing: composition, picturization, movement, gesture, and unit structure. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing and a major in the Department of Theatre and Dance, or consent of instructor.
- 323D. Directing II.** Dramatic and environmental analysis of full-length plays. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Theatre and Dance 323C or consent of instructor.
- 323E. Directing III.** Theory and techniques of play directing, with practical applications in projects and scenes. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing, Theatre and Dance 323D, and consent of instructor.
- 123P, 223P, 323P. Advanced Projects in Acting and Directing.** For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of the acting/directing faculty.
- 324. Design and Technology for Performance.** Exploration of aspects of design and technology in performance, including costume, lighting, scenery, and sound. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit. Prerequisite: Theatre and Dance 314C, 314M, and consent of instructor.
- 124P, 224P, 324P. Advanced Production Laboratory.** One, two, or three hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit. Prerequisite: Two semesters of Theatre and Dance 314P, and a major in the Department of Theatre and Dance or consent of instructor.
- 325. Playwriting II.** Emphasis on the form and writing of the full-length play or equivalent. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Theatre and Dance 315, and consent of instructor.
- 125P, 225P, 325P. Projects in Playwriting.** For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 326. Dramatic Activities for the Classroom.** Theory, materials, and practice, including story dramatization, storytelling, puppets, pantomime, shadow plays, role-playing, and theatre games. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing.
- 326C. Theatre Studies: Creative Drama.** Theory and practice of creative drama for children, both as an art form and as a process for emphasizing creative expression and aesthetic growth. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing and consent of instructor.
- 326D. Theatre Studies: Theatre for Young Audiences.** Theory and practice of all phases of play production for young audiences. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing.
- 326E. Theatre Studies: Directing the Young Performer.** Introduction to the theory and practice of directing and producing theatre with young performers, with emphasis on appropriate literature. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing, Theatre and Dance 323C, and consent of instructor.
- 126P, 226P, 326P. Projects in Theatre Studies.** For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 127P, 227P, 327P. Projects in History, Criticism, and Performance Studies.** For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Theatre and Dance.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Theatre and Dance. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

- 332M. Choreography.** Advanced study of the principles and practices of choreography. Three hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Theatre and Dance 322M and 332M may not both be counted. Prerequisite: Upper-division standing, Theatre and Dance 312N, and consent of instructor.
- 332N. Choreography: Design for Dance and Movement Theatre.** Continuation of Theatre and Dance 332M. Three hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Theatre and Dance 322N and 332N may not both be counted. Prerequisite: Theatre and Dance 332M.
- 332P. Advanced Projects in Dance Performance and Repertory I.** At least six laboratory hours a week for one semester, with additional hours as required. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 222P, a major in the Department of Theatre and Dance, and consent of the dance faculty.
- 332Q. Advanced Projects in Dance Performance and Repertory II.** At least six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 232P (or 332P), a major in the Department of Theatre and Dance, and consent of the dance faculty.
- 332R. Dance Pedagogy Theory.** Principles, techniques, and materials used in the teaching of dance. Three lecture hours and one and one-half laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, a major in the Department of Theatre and Dance, and consent of the dance faculty.
- 332S. Dance Pedagogy Practicum.** Practical application techniques and materials used in the teaching of dance. Four and one-half laboratory hours a week for one semester, with additional hours as required. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 332R, a major in the Department of Theatre and Dance, and consent of the dance faculty.
- 351S. Seminar in Theatre and Dance.** Three lecture hours a week for one semester. Prerequisite: Completion of at least ninety semester hours of coursework, a major in the Department of Theatre and Dance, and consent of instructor.
- 151T, 251T, 351T. Topics in Theatre and Dance.** For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 352. Experiential Anatomy.** Principles and techniques of physical conditioning with practical applications to injury prevention for dance and theatre practitioners. Six laboratory hours a week for one semester, with additional hours to be arranged. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 232P (or 332P), a major in the Department of Theatre and Dance, and consent of the dance faculty.
- 152P, 252P, 352P. Projects in Dance Movement Studies.** For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 152T, 252T, 352T. Topics in Dance and Movement.** For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 353T. Topics in Acting and Directing.** Topics in acting (including voice/speech and movement) and directing. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, a major in the Department of Theatre and Dance, and Theatre and Dance 313E with a grade of at least *B* or consent of the acting/directing faculty.
- 154P, 254P, 354P. Projects in Design and Technology.** Individual projects in theatre design and technology. For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Consent of instructor.
- 354T. Topics in Design and Technology.** Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
- Topic 1: Costume and Makeup Crafts.**
Topic 2: Fabric Painting and Dyeing.
Topic 3: Mask Making.
Topic 4: Millinery.
Topic 5: Scenery Technology I.
Topic 6: Costume Rendering.
Topic 7: Drawing for Theatre Designers.
Topic 8: Painting.
Topic 9: Robotic Lighting.
- 355T. Topics in Playwriting.** Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 356T. Topics in Theatre Studies.** Topics in theatre studies, including creative drama, theatre for children and youth, and theatre with young adults. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- Topic 1: Puppetry.**
- 357T. Topics in History, Criticism, and Performance Studies.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- Topic 1: Latin American Theatre and Drama.** Same as Latin American Studies 322 (Topic 13: *Latin American Theatre and Drama*).

9. John A. and Katherine G. Jackson School of Geosciences

Sharon Mosher, PhD, *Dean*

Phil Bennett, PhD, *Associate Dean, Academic Affairs*

<http://www.jsg.utexas.edu/>

GENERAL INFORMATION

As civilization enters an era of increasing challenge, it is imperative that leaders, professionals, and citizens be well educated, competently and realistically able to address issues of local to global scope. With regard to the origin, history, structure, and processes of the planet Earth, and the use and management of its resources, the John A. and Katherine G. Jackson School of Geosciences aims to provide such an education. The objective of every natural science, including geological sciences, is to understand the realm of physical nature. Geological sciences, or geosciences, is a synthetic subject that examines the Earth through such traditional subdisciplines as geophysics, hydrogeology, paleontology, petrology, stratigraphy, and structural geology. Geoscientists also draw upon discoveries from mathematics, geography, archaeology, engineering, and the other sciences to meld an approach that is interdisciplinary, yet uniquely geological.

The need for well-educated geoscientists in industry, government, and education promises a bright future for geoscience professionals in the coming decades. As the human population expands, it is essential to develop sufficient resources and to maintain a livable environment. Geoscientists understand the dynamics of the Earth and its systems—the occurrence of natural resources and the diverse time scales of natural and human-induced change.

The Jackson School offers the Bachelor of Arts in Geological Sciences, the Bachelor of Science in Environmental Science, the Bachelor of Science in Geological

Sciences, and, in partnership with the Cockrell School of Engineering, the Bachelor of Science in Geosystems Engineering and Hydrogeology. Whichever degree they pursue, geological sciences students must take courses in the Jackson School, the College of Natural Sciences, and the College of Liberal Arts. These units work together to meet students' individual needs and to ensure that they receive a superior education.

Students seeking the Bachelor of Arts in Geological Sciences (BAGeoSci) must complete courses in the natural sciences, the social and behavioral sciences, and the humanities. This diversity of subjects provides an opportunity to learn about basic differences in outlook among different disciplines, the ways questions are raised and answered, and the ways the answers are validated and made relevant in practical use. The requirements of this degree are given on pages 292–293. Another option for outstanding students interested in geology is the Bachelor of Arts, Plan II, offered by the College of Liberal Arts. This broad liberal arts honors program emphasizes the humanities but also permits a concentration in science that is equivalent to a major. The BA, Plan II, is described on pages 343–346.

A plan of study for the Bachelor of Science in Geological Sciences (BSGeoSci) includes courses required by the University and required and elective courses in geological sciences (preceded by their prerequisite courses). Taken together, these courses make up an *option*, a degree plan with a particular concentration or emphasis. Thus, individuals may develop intellectually challenging yet quite different plans of study according to their personal interests and goals. The requirements of the BSGeoSci are given on pages 295–296.

The Bachelor of Science in Environmental Science, offered by the College of Liberal Arts, the College of Natural Sciences, and the Jackson School, is designed for students interested in an interdisciplinary scientific perspective on environmental issues, analysis, and management. Students pursuing the degree in the Jackson School major in geological sciences. The requirements of this degree are given on pages 294–295.

The curriculum leading to the Bachelor of Science in Geosystems Engineering and Hydrogeology (BSGEH) is designed to teach students the geological and engineering principles needed to solve subsurface resource development and environmental problems. This degree is described on pages 298–300.

Every university seeks to enrich the education of its student body generally. Study of geosciences enhances a liberal arts or arts and sciences education. Geosciences uses experiments and observations to explore origins and processes, whether of the Earth itself, of geologic phenomena, or of the history of life. It operates in the conventional three dimensions of space and in the fourth dimension of deep geologic time. Both in the laboratory and in the field, it examines the Earth on all scales, from atomic nuclei, to a hand sample of rock, to an entire landscape, to continents and oceans, to the planet as a whole.

JACKSON SCHOOL ACADEMIC PROGRAMS

The University and the Jackson School offer the following programs to supplement the degree plans mentioned above.

UNDERGRADUATE RESEARCH

The University offers an opportunity for undergraduates to participate in state-of-the-art research, for University credit, with eminent scientists. If qualified, the student may also earn special departmental honors for exceptional research and may receive recognition through participation in the Bridging Disciplines Programs, described in chapter 2, or the annual Undergraduate Research Forum sponsored by the College of Natural Sciences. Additional information about undergraduate research is available from the Jackson School Undergraduate Student Services Office.

CERTIFICATE IN COMPUTATIONAL SCIENCE AND ENGINEERING

The transcript-recognized Certificate in Computational Science and Engineering is described on page 8. The Jackson School sponsors this program along with the

Cockrell School of Engineering, the College of Liberal Arts, and the College of Natural Sciences.

UTEACH-NATURAL SCIENCES

The Jackson School participates in UTeach-Natural Sciences, an innovative teacher preparation program offered by the Colleges of Natural Sciences and Education that allows students to pursue middle grades and secondary school teacher certification within a four-year mathematics, science, or computer science degree program. While learning the subject matter of their majors, students also learn how to teach. Upon completing the program, students graduate with a bachelor's degree and are recommended for a middle grades or secondary school teaching certificate. The UTeach-Natural Sciences program invites students to explore their interest in teaching as early as the freshman year. Through courses taught by some of Texas's most respected secondary school math and science teachers, students learn quickly whether they are suited to the profession.

A description of the UTeach-Natural Sciences curriculum is given on pages 512–513; more information is available at the UTeach-Natural Sciences Office. In the Jackson School, the BSGeoSci, option V (teaching), prepares students to seek teacher certification.

PROGRAM ASSESSMENT ACTIVITIES

Students in the Jackson School are required to participate in assessment activities related to maintaining accreditation with the Southern Association of Colleges and Schools, in addition to their required coursework. Students are exempted from participation only in extenuating circumstances and with the prior approval of the undergraduate faculty adviser and the Undergraduate Student Services Office.

Undergraduates must attend a series of two *Critical Thinking Events*, offered in the fall for second-year students and in the spring for third-year students. These one-day sessions are required for second-year students to proceed to upper-division coursework and for third-year students to enroll in the field courses Geological Sciences 660A and 660B.

FINANCIAL ASSISTANCE

Through the Geology Foundation, the Jackson School makes available to its students a number of scholarship funds established by individuals, foundations, and

industrial or research organizations. Scholarships are awarded entirely on the basis of academic performance and standing. Grants, when available, may be awarded on the basis of demonstrated financial need, without regard to grade point average. Information is available from the Undergraduate Student Services Office. The Geology Foundation also offers a student loan program, and students may seek additional assistance through the University's Office of Student Financial Services.

CAREER SERVICES

The Jackson School offers career planning and job placement assistance for students. The Career Services staff offers interview tips and can help with career planning, résumé writing, job search techniques, and business and professional etiquette.

Career Services also helps graduates and students about to graduate seek full-time or part-time jobs and internships. The staff posts job opportunities throughout the year and hosts recruiters who offer on-campus interviews for three or four weeks twice a year. During the interview periods, companies sponsor information sessions on campus. The Career Services office also offers résumé referral for students and employers. The Jackson School of Geosciences Career Fair, which brings students and employers together every fall, provides another forum for geosciences students to learn about different career opportunities.

Career services for students who plan to teach are provided by Education Career Services in the College of Education and by UTeach-Natural Sciences.

Career Services and the Undergraduate Student Services Office can help students choose majors or careers, find internships, and plan for employment or graduate study. However, the University makes no guarantee to secure employment for each graduate.

ADMISSION AND REGISTRATION

ADMISSION

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

Students admitted to the University with deficien-

cies in high school units must remove the deficiencies as prescribed in *General Information*.

ADMISSION TO THE ENVIRONMENTAL SCIENCE PROGRAM¹

Students must be admitted to the Bachelor of Science in Environmental Science degree program, and can apply for admission after completing the following requirements:

The student must earn a grade of at least C- in Biology 311C, Chemistry 301, and Mathematics 408C or 408N; and a grade of at least B- in Geological Sciences 401 or 303. To be competitive for admission, the student must have a grade point average of at least 2.75 in these four courses.

Applications are evaluated after the end of each fall and spring semester. Students whose applications are denied may reapply through the supplemental admission process the following semester. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the Jackson School of Geosciences Undergraduate Student Services Office for information about the application process and application deadlines.

More information about the degree program is given on pages 294–295.

ACADEMIC ADVISING

The Undergraduate Student Services Office and faculty members advise students in the Jackson School, including those not seeking a degree in geological sciences and those who have not yet selected a major.

Academic advising begins after the twelfth class day in the fall and spring semesters and after the fourth class day in the summer session. Students are encouraged to meet with an adviser as early as possible, because procrastination may prevent their timely registration.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transferring from one division of the University to another, and auditing a course. The *Course Schedule*, published

1. Final approval is pending for the Bachelor of Science in Environmental Science.

before registration for each semester and summer session, contains registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

ACADEMIC POLICIES AND PROCEDURES

REPETITION OF A COURSE

A student may not enroll in any course in the Jackson School more than twice, even if the course is needed to meet degree requirements, without first obtaining written consent in the Undergraduate Student Services Office. The symbol *Q* or *W* counts as an enrollment unless it has been approved by the Undergraduate Student Services Office for nonacademic reasons.

HONORS

University-wide honors are described in chapter 1 and in *General Information*. Students who meet the following requirements may also graduate with departmental honors.

DEPARTMENTAL HONORS PROGRAM

The Jackson School offers a departmental honors program to its majors. Minimum requirements for the completion of this program are (1) a cumulative University grade point average of at least 3.00, and a grade point average in geological sciences of at least 3.50; (2) completion of Geological Sciences 171H, 172H, and 173H with a grade of at least *B-* in each; (3) completion of Geological Sciences 379H, *Honors Tutorial Course*, with a grade of at least *B-*; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree. The statement "Special Honors in Geological Sciences" appears on the transcript of each student certified as having completed the honors program.

Students who wish to participate in the program should apply to the departmental honors adviser when they have completed sixty semester hours of coursework, including at least twelve semester hours of upper-division coursework in geological sciences.

GRADUATION

SPECIAL REQUIREMENTS OF THE JACKSON SCHOOL

All students must fulfill the general requirements for graduation given in chapter 1 of this catalog. Students in the Jackson School must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. For the Bachelor of Arts in Geological Sciences, these sixty hours must include at least eighteen hours in geological sciences.
2. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. Options I, II, III, and IV of the BSGeoSci require at least eighteen hours of upper-division coursework in geological sciences to be completed in residence; option V requires at least twelve hours.
3. An Air Force, Army, or Naval Reserve Officer Training Corps (ROTC) student who elects the basic and/or advanced program in air force science, military science, or naval science will not be approved for graduation until the student's government contract is completed or the student is released from the ROTC.

CORRESPONDENCE AND EXTENSION COURSES

During a long-session semester in which they are enrolled at the University, geosciences students are not allowed to take courses by correspondence or extension at the University or at another school or in residence at another school. Exceptions to this policy are considered only in extremely rare circumstances. To request an exception, a student must submit a Concurrent Enrollment Petition to the Undergraduate Student Services Office in advance. No more than 30 percent of the semester hours required for any degree offered in the Jackson School may be earned by correspondence.

APPLYING FOR A DEGREE

An electronic degree audit is created for each student each semester; the student should view the audit through IDA, the University's Interactive Degree Audit system. The degree audit tells the student the courses

he or she must take and the requirements he or she must fulfill to receive the degree. Although the degree audit normally provides an accurate statement of requirements, the student is responsible for knowing and meeting the requirements of the degree as stated in a catalog under which he or she is eligible to graduate. (Rules on graduation under a particular catalog are given in chapter 1.) If in doubt about any requirement, the student should seek an official ruling in the Undergraduate Student Services Office before registering.

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must file a graduation application form in the Undergraduate Student Services Office. This should be done during the first week of classes, if possible, and certainly no later than the deadline published in the academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

DEGREES

APPLICABILITY OF CERTAIN COURSES

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses and Kinesiology 119 may not be counted toward a degree in the Jackson School. However, they are counted as courses for which the student is enrolled, and the grades are included in the grade point average.

ROTC COURSES

The Departments of Air Force Science, Military Science, and Naval Science maintain ROTC units on campus. Information about each program is available from the chair of the department concerned.

Nine semester hours of coursework in air force science, military science, or naval science may be counted toward any degree in the Jackson School. Such credit may be used only as electives or to fulfill the writing requirement, and only by students who are commissioned by the University ROTC program.

BIBLE COURSES

No more than twelve semester hours of Bible courses may be counted toward a degree.

BACHELOR OF ARTS IN GEOLOGICAL SCIENCES

The Bachelor of Arts in Geological Sciences (BAGeoSci) is a classical arts and sciences degree that gives students a great deal of flexibility in their choice of upper-division geological sciences courses. It also provides for a minor made up of four courses in another field, including two upper-division courses. These choices let students combine their interests in liberal arts and geosciences to prepare for professions such as business, journalism, resource management, public policy, law, and medicine. Students who plan to become professional geoscientists should pursue one of the BSGeoSci degree options.

A total of 120 semester hours is required. Thirty-six hours must be in upper-division courses. At least sixty hours, including eighteen hours of upper-division coursework, must be completed in residence at the University; at least twenty-four of the last thirty hours must be completed in residence at the University. As long as these residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the semester hours required for the degree), or, with the approval of the dean, by work transferred from another institution.

The coursework counted toward the degree may include no more than thirty-six hours in any one field of study in the College of Liberal Arts or the College of Natural Sciences; and no more than thirty-six hours in any other single college or school of the University, including the Jackson School.

No coursework to be counted toward the degree may be taken on the pass/fail basis.

All students must complete the University's core curriculum, described in chapter 2. The specific requirements for the Bachelor of Arts in Geological Sciences consist of prescribed work, major and minor requirements, and electives. In addition, the student must fulfill the University requirements for graduation given in chapter 1 and the requirements of the Jackson School given above.

PRESCRIBED WORK

1. *Writing*: Two courses that carry a writing flag. Courses with a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

2. *Foreign language*: Four semesters, or the equivalent, in a single foreign language. The foreign language requirement is the attainment of a certain proficiency, rather than the completion of a specified number of hours. Any part of the requirement may be fulfilled by credit by examination. To achieve proficiency in a foreign language as rapidly as possible, qualified students are urged to take intensive foreign language courses. Information about these courses is available from the departments that offer them. Courses used to fulfill the foreign language requirement must be language courses; literature-in-translation courses, for example, may not be counted.
3. *Social science*: Three semester hours in social science, in addition to the course counted toward the social and behavioral sciences requirement of the core curriculum. The course must be chosen from the following fields; it must be in a different field from the course used to fulfill the core curriculum social and behavioral sciences requirement.
 - a. Anthropology
 - b. Economics
 - c. Geography
 - d. Linguistics
 - e. Psychology
 - f. Sociology
4. *Natural science*: Six semester hours in natural sciences, in addition to the courses counted toward the science and technology requirements of the core curriculum. Courses must be chosen from the following fields; no more than three hours may be in either the history of science or the philosophy of science.
 - a. Astronomy
 - b. Biology
 - c. Chemistry
 - d. Marine science
 - e. Nutrition
 - f. Physical science
 - g. Physics
 - h. Mathematics
 - i. Computer science
 - j. Experimental psychology
 - k. Physical anthropology
 - l. Physical geography
 - m. Philosophy (courses in logic)
 - n. History of science and philosophy of science
 - o. Other fields approved by the dean
5. *General culture*: Three semester hours in addition to the course counted toward the visual and performing arts requirement of the core curriculum. Courses in the following fields may be used:
 - a. Architecture
 - b. Classical civilization, Greek, Latin
 - c. Art history, design, ensemble, fine arts, instruments, music, studio art, theatre and dance, visual art studies
 - d. Philosophy (excluding courses in logic)
 - e. Approved interdisciplinary courses including, but not limited to, those in programs of special concentration cutting across specific departments, schools, or colleges. Lists of approved courses are available in the Undergraduate Student Services Office.

THE BA MAJOR AND MINOR

With the exception of courses that carry a writing flag, a course taken to fulfill the requirements under “Prescribed Work” above may not also be counted toward fulfillment of the major and minor requirements.

Residence requirements for the major. At least eighteen semester hours of coursework in geological sciences, including six hours of upper-division coursework, must be completed in residence at the University.

Course requirements for the major. Geological Sciences 401 or 303, 404C or 405, 416K, 416M, 420K, and enough additional upper-division coursework in geological sciences to make a total of thirty-two semester hours; six semester hours in biology; Chemistry 301 and 302; and three semester hours in physics.

Minor. Twelve semester hours, of which at least six must be in upper-division coursework, in any one of the following disciplines: anthropology, astronomy, biology, business, computer science, chemistry, education, engineering, geography, mathematics, and physics. Other disciplines may be chosen with submission and approval of a petition through the Undergraduate Student Services Office.

ELECTIVES

In addition to the core curriculum, the prescribed work, and the major and minor, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve semester hours of Bible and no more than nine hours of air force science, military science, or naval science.

MINIMUM SCHOLASTIC REQUIREMENTS

The student must earn a cumulative grade point average of at least 2.00 in all courses taken at the University of Texas at Austin (including credit by examination, correspondence, and extension) for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded. In addition, the student must earn a grade point average of at least 2.00 in geological sciences courses taken at the University and counted toward the major requirement.

The student must earn a grade of at least *C-* in each semester of each course used to fulfill any of the requirements for the degree.

For more information about grades and the grade point average, see *General Information*.

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE²

The Bachelor of Science in Environmental Science degree program is designed for students interested in an interdisciplinary scientific perspective on environmental and sustainability issues, analysis, and management. The degree program provides the broad foundation in physical, life, and social sciences needed for a career or graduate study in environmental science and related fields such as climate change, ecology, and conservation. Students who complete the program successfully will be able to assess environmental issues critically from multiple perspectives; to perform field, laboratory, and computer analyses; and to conduct original research. The program is designed to prepare graduates for careers in local, state, and federal government laboratories and nonprofit agencies, environmental consulting firms, environmental education and outreach agencies, and universities and other research settings. The degree is offered by the Jackson School with a major in geological sciences, by the College of Liberal Arts with a major in geographical

sciences, and by the College of Natural Sciences with a major in biological sciences. The degree programs share common prescribed work, but each major has its own specific requirements. Students may earn only one Bachelor of Science in Environmental Science degree from the University.

Students must apply for admission to the degree program after completing prerequisite coursework. To be competitive for admission, students should have a grade point average of at least 2.75. More information about admission requirements is given on page 290.

The BSEnviroSci curriculum consists of 126 semester hours of coursework. All students must complete the University's core curriculum, described in chapter 2. The specific degree requirements consist of prescribed work and major requirements. In some cases, a course that is required for the degree may also be counted toward the core curriculum.

A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills another requirement may also be used to fulfill the writing requirement if the course carries a writing flag.

PRESCRIBED WORK

1. *Mathematics*: Mathematics 408C, or 408N and 408S.
2. *Chemistry*: Chemistry 301 or 301H; 302 or 302H; and 204.
3. *Physics*: Physics 317K and 117M, or another four-hour calculus-based physics sequence.
4. *Biological sciences*: Biology 311C and 311D, or 315H.
5. *Ecology*: Biology 373 and 373L, or Marine Science 320 and either 120L or 152T (Topic: *Marine Ecology*).
6. *Geological sciences*: Geological Sciences 401 or 303, 346C, and an approved geological sciences course in sustainability.
7. *Geography*: Geography 335N.
8. *Field experience*: One course in each of the following areas:
 - a. *Introductory field seminar*: Environmental Science 311.
 - b. *Senior field/research experience*: Environmental Science 371, Biology 377 (with prior approval of the faculty adviser), 478T.
9. *Research methods*: Environmental Science 331.
10. *Environmental and sustainability themes*: One course in each of the following thematic areas:

2. Final approval is pending for the Bachelor of Science in Environmental Science.

- a. *Environmental and sustainability policy, ethics, and history*: Geography 334, 336C, 340D, 342C, 356C, 356T (approved topics), Philosophy 325C.
 - b. *Geographic information systems*: Geography 360G, 462K, Geological Sciences 327G.
 - c. *Climates and oceans*: Biology 456L, Geography 333K, 356T (approved topics), Geological Sciences 371C (approved topics), 377P, Marine Science 320, 440, 354Q, 354T, 367K. Marine Science 320 may not be used to satisfy both requirement 5 and requirement 10.
 - d. *Environmental economics, sustainability, and business*: Economics 304K, 330T.
11. Environmental Science 141 and 151.

MAJOR REQUIREMENTS

The following thirty-six semester hours of coursework are required; these hours must include at least twelve hours of approved upper-division work in geological sciences.

1. Geological Sciences 404C or 405, 416K, 416M and 420K.
2. Mathematics 408D or 408M.
3. Four semester hours of physics in one of the following second-semester sequences: Physics 316 and 116L, 317L and 117N, 303L and 103N.
4. One of the following courses on climate and water: Geological Sciences 371C (approved topics), 376E, 476K, 476M, 376S, 377P. The same course may not be used to satisfy both requirement 4 of the major requirements and requirement 10 of the prescribed work.
5. Nine semester hours of upper-division elective coursework in geological sciences.
6. Two courses that carry a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
7. Enough additional coursework to make a total of 126 semester hours.

SPECIAL REQUIREMENTS

Students must fulfill the University-wide graduation requirements given in chapter 1 and the requirements of the Jackson School given earlier in this chapter. They must also earn a grade of at least C- in each mathemat-

ics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

BACHELOR OF SCIENCE IN GEOLOGICAL SCIENCES

The Bachelor of Science in Geological Sciences serves as a professional degree for students planning careers as geologists, geophysicists, or teachers, as well as for those planning to pursue graduate work in the geosciences or a profession such as law or business. Careers are available in the petroleum and related energy industries, resource evaluation, mineral exploration, geologic hazard monitoring, environmental control and reclamation, building foundation evaluation, groundwater contamination studies, soil testing, regional planning, watershed management, climate modeling, and college or secondary school teaching. Graduates may also work in state or federal agencies, in universities or museums, with consulting firms, or with service companies to the energy and mineral industries.

Students seeking the Bachelor of Science in Geological Sciences degree must choose one of five options—I, general geology; II, geophysics; III, hydrogeology; IV, environmental science and sustainability; or V, teaching.

In addition to the prescribed work outlined below, all students must complete the University's core curriculum, described in chapter 2. In some cases, a course that is required for the BSGeoSci may also be counted toward the core curriculum; these courses are identified below.

PRESCRIBED WORK COMMON TO ALL OPTIONS

1. Two courses that carry a writing flag. Courses with a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Courses 506 and 507 (or the equivalent) in a single foreign language, or as much of this coursework as required by the student's score on the appropriate language placement test. Students in the environmental science and sustainability option are exempt from this requirement; those in the teaching option must fulfill a different foreign language requirement, given with the other requirements below.

For students who enter the University with fewer than two high school units in a single foreign language, the first two semesters in a language may not be counted toward the total number of semester hours required for the degree.

3. Thirty-six semester hours of upper-division coursework must be completed in residence at the University. For students in options I, II, III, and IV, at least eighteen of these hours must be in geological sciences; for students in option V, at least twelve hours must be in geological sciences. For all students, at least twelve of the thirty-six hours must be outside geological sciences.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: GENERAL GEOLOGY

1. Mathematics 408C and 408D, or 408K, 408L, and 408M. Mathematics 408C or 408K also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
2. Physics 301, 101L, 316, and 116L; or Physics 303K, 103M, 303L, and 103N.
3. Chemistry 301, 302, and 204. Together, the courses that meet requirements 2 and 3 also meet parts I and II of the science and technology requirement of the core curriculum.
4. Geological Sciences 401 or 303, 404C or 405, 416K, 416M, 420K, 426P, 428, 660 (completed in residence), and enough additional approved upper-division coursework in geological sciences to make a total of fifty-two semester hours.
5. Twelve semester hours chosen from a list of approved courses in aerospace engineering, architectural engineering, astronomy, biology, chemical engineering, chemistry, civil engineering, computer science, engineering mechanics, geography, marine science, mathematics, mechanical engineering, petroleum and geosystems engineering, and physics. Geological Sciences 325K may also be counted toward requirement 5.

This requirement is intended to function as an unspecified minor. Courses used to fulfill the requirement do not have to be taken in the same field of study, but they should form a self-reinforcing sequence related to geological sciences. Courses not on the list of approved courses will be considered upon petition to the undergraduate faculty adviser.

6. Enough additional coursework to make a total of 126 semester hours.

OPTION II: GEOPHYSICS

1. Mathematics 408C and 408D, or 408K, 408L, and 408M; 427K; and 427L. Mathematics 408C or 408K also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
2. Physics 301, 101L, 315, 115L, 316, and 116L.
3. Chemistry 301 and 302. Together, the courses that meet requirements 2 and 3 also meet parts I and II of the science and technology requirement of the core curriculum.
4. Geological Sciences 325J, *Introduction to Geoscience Computation*.
5. Geological Sciences 401 or 303, 416K, 416M, 420K, 325K, 428, 354, 465K, 366M, six hours in approved field/research courses, and three additional hours of approved upper-division coursework in geological sciences. The field/research requirement may be met by several courses, including Geological Sciences 348K, 660, 376L, 679G, and approved off-campus geophysics field courses.
6. Six semester hours chosen from a list of approved courses in aerospace engineering, astronomy, chemistry, civil engineering, computer science, electrical engineering, geography, mathematics, mechanical engineering, petroleum and geosystems engineering, and physics.

This requirement is intended to function as an unspecified minor. Courses used to fulfill the requirement do not have to be taken in the same field of study, but they should form a self-reinforcing sequence related to geological sciences.

Courses not on the list of approved courses will be considered upon petition to the undergraduate faculty adviser.

7. Enough additional coursework to make a total of 126 semester hours.

OPTION III: HYDROGEOLOGY

1. Mathematics 408C and 408D, or 408K, 408L, and 408M; and 427K. Mathematics 408C or 408K also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
2. Physics 301, 101L, 316, and 116L; or Physics 303K, 103M, 303L, and 103N.
3. Chemistry 301, 302, and 204.
4. Biology 311C. Together, the courses that meet requirements 2 and 3 also meet parts I and II of the science and technology requirement of the core curriculum; Biology 311C may also be used to meet part II of that requirement.
5. The following coursework in geological sciences:
 - a. Geological Sciences 401 or 303, 416K, 416M, 420K, 428, 476K, 476M, and 376S.
 - b. One of the following: Geological Sciences 660A and 660B, 376L and 660B, or 679J.
 - c. Three upper-division courses in hydrogeology or a related area, chosen from Geological Sciences 325K, 376E, 377P, and other approved courses.
 - d. Six additional hours of upper-division coursework in geological sciences.
6. Six semester hours chosen from a list of approved courses in biology, chemistry, civil engineering, geography, marine science, mathematics, mechanical engineering, and petroleum and geosystems engineering.

This requirement is intended to function as an unspecified minor. Courses used to fulfill the requirement do not have to be taken in the same field of study, but they should form a self-reinforcing sequence related to geological sciences. Courses not on the list of approved courses will be considered upon petition to the undergraduate faculty adviser.

7. Enough additional coursework to make a total of 126 semester hours.

OPTION IV: ENVIRONMENTAL SCIENCE AND SUSTAINABILITY

1. Mathematics 408C and 408D, or 408K, 408L, and 408M. Mathematics 408C or 408K also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
2. Physics 301, 101L, 316, and 116L.
3. Chemistry 301, 302, and 204. Together, the courses that meet requirements 2 and 3 also meet parts I and II of the science and technology requirement of the core curriculum.
4. Geological Sciences 401 or 303, 404C or 405, 416K, 416M, 420K, 422K, 428, and 346C.
5. Geological Sciences 660 or both 476K and 376L. This requirement must be completed in residence.
6. Geological Sciences 327G or Geography 360G.
7. Biology 311C, 311D, 325, 373, and 373L.
8. At least three semester hours chosen from a list of approved courses in sustainability and policy. The following may be used: Geological Sciences 341, Biology 359, 375, 478T; other courses will be considered upon petition to the undergraduate faculty adviser.
9. At least three semester hours chosen from a list of approved courses in water and climate. The following may be used: Geological Sciences 371C, 376E, 476M, 376S, 377P, Geography 366K; other courses will be considered upon petition to the undergraduate faculty adviser.
10. At least six semester hours in upper-division elective courses.
11. Enough additional coursework to make a total of 126 semester hours.

OPTION V: TEACHING

This option is designed to fulfill the course requirements for composite science certification as a middle grades or secondary school teacher in Texas with geological sciences as the primary teaching field; composite certification requires twenty-four semester hours of coursework in the primary field, twelve hours in a second field, and six hours each in two additional fields.

Completion of the required courses does not guarantee teacher certification. To graduate and be recommended for certification, the student must have a cumulative University grade point average of at least 2.50 and must pass the final teaching portfolio review. Information about the portfolio review and additional certification requirements is available from the UTeach-Natural Sciences academic adviser.

1. In place of the foreign language requirement above, either two years of high school coursework in a single foreign language or course 506 (or the equivalent) in a foreign language.
2. Mathematics 408C. This course also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
3. History 329U or Philosophy 329U.
4. Geological Sciences 401 or 303, 404C or 405, 416K, 416M, 420K or 320L, 335, and enough additional upper-division coursework in geological sciences to make a total of at least twenty-eight semester hours.
5. To meet the requirements of composite certification, the student must complete the following courses. In meeting this requirement, the student also fulfills parts I and II of the science and technology requirement of the core curriculum.
 - a. Biology 311C and 311D.
 - b. Chemistry 301 and 302.
 - c. Physics 302K, 102M, 302L, and 102N; or 301, 101L, 316, and 116L; or an equivalent sequence.
 - d. Enough additional approved coursework in biology, chemistry, or physics to provide the required twelve semester hours in a second field.
6. Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic: *Research Methods—UTeach*), or Physics 341 (Topic: *Research Methods—UTeach*).
7. Astronomy 303, 307, or 367M; and Marine Science 307.
8. Eighteen semester hours of professional development coursework, with a grade of at least C in each course: Curriculum and Instruction 650S, UTeach-Natural Sciences 101, 110, 350, 355, 360, 170.
9. Students seeking middle grades certification must complete the following courses, with a grade of at least C in each course: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; and Curriculum and Instruction 339E.
10. Enough additional coursework to make a total of 128 semester hours.

BACHELOR OF SCIENCE IN GEOSYSTEMS ENGINEERING AND HYDROGEOLOGY

Geosystems engineers and hydrogeologists are concerned with the development and use of engineering approaches in the management of natural resources from the Earth's surface and subsurface, environmental restoration of subsurface sites, and other processes related to the earth sciences. This degree program, offered in partnership by the Cockrell School of Engineering and the Jackson School, is designed to teach students the geological and engineering principles needed to solve subsurface resource development and environmental problems. The curriculum includes a fundamental sequence of engineering and geological sciences courses in such areas as multiphase fluid flow, physical and chemical hydrology, heat and mass transfer, field methods, and engineering design. This interdisciplinary systems approach, combining engineering and geological sciences, is increasingly required to address complex real-world problems such as characterization and remediation of aquifers. The degree program is designed to prepare graduates for employment with environmental, water resource management, and energy companies in addition to many government agencies. Better-qualified graduates of the program may pursue graduate study in subsurface environmental engineering, petroleum engineering, geology, and related fields.

The objective of the degree program is to prepare graduates for successful careers in subsurface environmental engineering (including carbon dioxide

sequestration), oil and gas production and services, and similar fields. Graduates are expected to understand the fundamental principles of science and engineering behind the technology of geosystems engineering and hydrogeology, so that their education will not become outdated and so that they will be capable of self-instruction after graduation. They should also be prepared to serve society by applying the ideals of ethical behavior, professionalism, and environmentally responsible stewardship of natural resources.

Containing the following elements, the technical curriculum provides both breadth and depth in a range of topics:

- ▶ A combination of college-level mathematics and basic sciences (some with experimental work) that includes mathematics through differential equations, physics, chemistry, and geology.
- ▶ Basic engineering and geologic topics that develop a working knowledge of fluid mechanics, strength of materials, transport phenomena, material properties, phase behavior, and thermodynamics.
- ▶ Engineering and geosciences topics that develop competence in characterization and evaluation of subsurface geological formations and their resources using geoscientific and engineering methods, including field methods; design and analysis of systems for producing, injecting, and handling fluids; application of hydrogeologic and reservoir engineering principles and practices for water and energy resource development and management; contamination evaluation and remediation methods for hydrologic resources; and use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty.
- ▶ A major capstone design experience that prepares students for engineering and hydrogeologic practice, based on the knowledge and skills acquired in earlier coursework and incorporating engineering and geological standards and realistic constraints.
- ▶ A general education component that complements the technical content of the curriculum.

CURRICULUM

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum, described in chapter 2. In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given on pages 170–171.

In the process of fulfilling the following degree requirements, students must also complete a course that carries an independent inquiry flag, a course that carries a quantitative reasoning flag, and two courses that carry a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are provided by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in chapter 2.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given on pages 161–162. Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill nontechnical elective requirements must be approved by the petroleum and geosystems engineering faculty and the geological sciences faculty before the student registers for them.

Students must fulfill the foreign language requirement given on page 171. They must also remove any admission deficiencies in mathematics as described in *General Information*. A suggested arrangement of courses by semester is given on pages 198–199.

COURSES	SEM HRS
Basic Sequence Courses	
▶ Chemistry 301, 302 (Chemistry 301 may be used to fulfill part II of the science and technology requirement of the core curriculum.)	6
▶ Engineering Mechanics 306, 319	6
▶ Geological Sciences 303, 416K, 416M	11
▶ Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
▶ Petroleum and Geosystems Engineering 310, 312, 322K, 333T (Petroleum and Geosystems Engineering 333T carries a writing flag.)	12
▶ Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill part I of the science and technology requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
▶ Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum)	3
▶ Undergraduate Studies 302 or 303 (may be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag)	3
TOTAL	61

COURSES	SEM HRS
Major Sequence Courses	
▶ Geological Sciences 420K, 428, 468K, 476K, 376L, 376S	22
▶ Petroleum and Geosystems Engineering 323K, 323L, 323M, 424, 326, 365, 368, 373L	25
▶ Civil Engineering 357	3
TOTAL	50
Remaining Core Curriculum Courses	
▶ English 316K (humanities)	3
▶ American and Texas government	6
▶ American history	6
▶ Visual and performing arts	3
▶ Social and behavioral sciences	3
TOTAL	21
MINIMUM REQUIRED	132

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ENVIRONMENTAL SCIENCE: EVS

LOWER-DIVISION COURSE

311. Field Seminar in Sustainability. Designed for students pursuing a Bachelor of Science in Environmental Science. Introduces field observation and analysis of environmental processes and sustainability issues. Topics include ecology, hydrogeology, marine science, climate science, energy, and campus sustainability. Two lecture hours and four laboratory or field laboratory hours a week for one semester. Prerequisite: Consent of instructor.

UPPER-DIVISION COURSES

331. Research Methods for the Environmental Sciences. Designed for students pursuing a Bachelor of Science in Environmental Science. Topics include experimental design, statistical analysis and modeling, and ethics. Students develop and conduct an independent research project during the laboratory portion of the course. Two lecture hours and four laboratory or field laboratory hours a week for one semester. Prerequisite: Environmental Science 311 with a grade of at least C-, and consent of instructor.

141. Environmental Science Professionalism I. Examines the fundamental, nontechnical aspects of environmental science and sustainability practices through the use of case studies and projects that use interdisciplinary approaches. Subjects may include the importance of interdisciplinary collaboration in addressing and assessing environmental science processes, the development of professional opportunities across disciplines, understanding professional responsibilities, applying ethical principles, the balance of multidisciplinary demands in professional practice, and the need for lifelong learning. One lecture hour a week for one semester. Prerequisite: Senior standing, Environmental Science 311 and 331, and admission to an environmental science major.

151. Environmental Science Professionalism II. Examines the fundamental, nontechnical aspects of environmental science and sustainability practices. Focuses on the use of interdisciplinary communication for addressing and assessing environmental science processes, the challenges posed by communicating across disciplines, the development of professional communication and public speaking skills, effective presentation of research, the ethics and practices of peer research review, and effective communication of the effects of environmental science in a global society. One lecture hour a week for one semester. Prerequisite: Environmental Science 141.

171, 271, 371, 471. Research Experience. Designed for students pursuing a Bachelor of Science in Environmental Science. Supervised study of selected topics in environmental science, by individual arrangement with the instructor. Conference course. May be repeated for credit when the topics vary. May not be substituted for any required environmental sciences course. Prerequisite: Written consent of instructor.

GEOLOGICAL SCIENCES: GEO

LOWER-DIVISION COURSES

401 (TCCN: GEOL 1403). Physical Geology. Nature, properties, and distribution of crustal materials; surficial processes; internal processes; origin of continents, oceans, and ocean basins; mineral and fuel resources. Three lecture hours and two hours of laboratory or fieldwork a week for one semester. Only one of the following may be counted: Geological Sciences 401, 303, 312K, 420H.

302C. Climate: Past, Present, and Future. Designed for non-science majors. Principal factors that determine Earth's climate, evidence of climate change, causes of climate change, natural climatic variations and human-induced changes, prediction of climate in the next one hundred years, and uncertainties in climate prediction. Three lecture hours and one and one-half laboratory hours a week for one semester.

- 302D. Age of Dinosaurs.** An exploration of the general principles of natural history, focusing on the natural history of dinosaurs. An introduction to the basics of geology, anatomy, paleontology, and evolutionary theory, followed by the application of this knowledge, in tracing the evolutionary history of Dinosauria. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the fall semester only. May not be counted toward a degree in geological sciences.
- 302E. Earth, Wind, and Fire.** Designed for nonscience majors. Geologic phenomena that affect everyday life, including global warming, earthquakes, volcanism, desertification, river and coastline flooding and erosion, groundwater, mineral resources, and plate tectonics. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the fall semester only. May not be counted toward a degree in geological sciences.
- 302K. Selected Topics in Geological Sciences.** Designed for nonscience majors. The impact of geological processes on human activity; geologic topics of popular interest. Three lecture hours and one and one-half laboratory hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward a degree in geological sciences.
- 302M. The Age of Mammals.** Introductory-level course on paleontology and natural history for nonscience majors. Basic geological processes, fossilization, and the fossil record. Overview of the “tree of life.” Summary of the evolution and diversification of mammals, an introduction to interactions between physical and biological processes, and the impact of climate change and human activities on mammalian communities. Laboratory component focuses on the mammalian skeleton and common Texas mammals. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the spring semester only. May not be counted toward a degree in geological sciences.
- 302P. Sustaining a Planet.** Restricted to freshmen and sophomores. Examines sustainability and the environment from the perspective of multiple disciplines. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the spring semester only. May not be counted toward a degree in geological sciences.
- 303. Introduction to Geology.** Mineral and rock composition of Earth; measurement of geologic time; origin and evolution of life; Earth’s interior; plate tectonics; depositional environments and processes; ancient climates; humans, earth resources, and the environment. Two lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Geological Sciences 401, 303, 312K, 420H.
- 404C. Plate Tectonics and Earth History.** Application of plate tectonics to the origin and history of Earth’s crust and the origin, evolution, and distribution of living organisms. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 404C and 405 may not both be counted. Prerequisite: Geological Sciences 401 or 303 with a grade of at least C-.
- 405 (TCCN: GEOL 1404). Life through Time.** The history and development of life, and the processes of change from the early Precambrian era to the present. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Geological Sciences 404C and 405 may not both be counted. Prerequisite: Geological Sciences 401 or 303 with a grade of at least C-.
- 305E. Energy and the Environment.** A survey of all forms of current and potential sources of energy, and how these might impact Earth’s environment. Three lecture hours and one and one-half laboratory hours a week for one semester. May not be counted toward a degree in geological sciences, geosystems engineering and hydrogeology, or petroleum engineering.
- 307 (TCCN: GEOL 1345). Introduction to Oceanography.** Same as Marine Science 307. Introduction to the sciences of oceanography: geological, physical, and biological. Two lecture hours and two laboratory hours a week for one semester. May not be counted toward the Bachelor of Arts degree with a major in geological sciences, the Bachelor of Science in Geological Sciences (Option I), the Bachelor of Science in Geological Sciences (Option II), or the Bachelor of Science in Geological Sciences (Option III).
- 110C, 210C, 310C. Conference Course.** Supervised study of selected topics in geological sciences, by individual arrangement with the department and the instructor. May be repeated for credit when the topics vary. May not be substituted for any required geological sciences course. Some topics are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Written consent of instructor.
- 211. Emerging Scholars in Geological Sciences.** Introduction to research areas in the geological sciences, with emphasis on the skills needed for success in graduate school and the professional workplace. Four laboratory hours a week for one semester. Offered irregularly. Offered on the pass/fail basis only. May not be substituted for any required geological sciences course. Prerequisite: Written consent of instructor.
- 114G. Geophysics Colloquium.** Open to non-geological sciences majors, but registration priority is given to geological sciences majors. Exploration of a variety of problems in modern geophysics. Two lecture hours a week for one semester, and at least one weekend field trip. May be repeated for credit. Offered on the pass/fail basis only. Geological Sciences 110C (Topic: *Geophysics Colloquium*) and 114G may not both be counted.

- 416K. Earth Materials.** Introduction to minerals, mineral study techniques, igneous and metamorphic rocks and ore deposits, and formation processes. Three lecture hours and four laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Geological Sciences 401 or 303 with a grade of at least C-, Chemistry 301 with a grade of at least C-, and credit with a grade of at least C- or registration for Chemistry 302.
- 416M. Sedimentary Rocks.** Description and interpretation of sedimentary rocks in hand specimen and thin section; characteristics of sedimentary rocks deposited in different environments. Three lecture hours and four laboratory hours a week for one semester with two additional one-day field trips. Prerequisite: Geological Sciences 401 or 303 with a grade of at least C-.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Geological Sciences.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad office. Credit is recorded as assigned by the study abroad adviser in the Department of Geological Sciences. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 420F. Classic Geology in Scotland.** Introduction to the founding concepts of geology. Students use advanced field technologies while studying the geology of Scotland on all scales of size. The equivalent of four lecture hours a week for one semester, including field exercises in a variety of geological settings. Prerequisite: Geological Sciences 401, 303, or other coursework in geology.
- 420H. Honors Introductory Geology.** An accelerated introductory course on the composition, structure, and history of Earth. Three lecture hours and two laboratory hours a week for one semester, and several all-day field trips. Normally offered in the fall semester only. Only one of the following may be counted: Geological Sciences 401, 303, 312K, 420H. Prerequisite: Consent of instructor.
- 420K. Introduction to Field and Stratigraphic Methods.** For geological sciences majors. Field observation of geological processes and study of the mineralogy, petrology, stratigraphy, paleontology, and structural geology of central Texas. Two lecture hours and three laboratory hours a week for one semester, and six weekend field trips. Geological Sciences 420K and 320L may not both be counted. Prerequisite: Geological Sciences 416K and 416M with a grade of at least C- in each.
- 320L. Introductory Field Geology.** Study of geologic features and processes in the field, designed for nongeologists; emphasizes regional geology of central Texas and techniques of geologic mapping. The equivalent of three lecture hours a week for one semester. Normally offered between the spring semester and the summer session only. Offered on the pass/fail basis only. Geological Sciences 420K and 320L may not both be counted. May not be counted toward the Bachelor of Arts in Geological Sciences or the following options within the Bachelor of Science in Geological Sciences: general geology, geophysics, hydrogeology, environmental science and sustainability. Prerequisite: Geological Sciences 401 or 303 or consent of instructor.
- 422K. Paleobiology.** Systematics, biostratigraphy, paleoecology, and evolution of fossil organisms. Three lecture hours and four laboratory hours a week for one semester, with two additional one-day field trips. Normally offered in the fall semester only. Prerequisite: Biology 301M or 311D with a grade of at least C-, Geological Sciences 404C or 405 with a grade of at least C-, and Geological Sciences 416M with a grade of at least C-.
- 322S. Development and Evolution of the Vertebrate Skeleton.** Designed for majors in geological sciences and associated fields of natural history. Introduction to the organization and development of the vertebrate skeleton; survey of vertebrate history. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Upper-division standing.
- 322V. Morphology of the Vertebrate Skeleton.** Identification of skeletal elements from the major vertebrate taxa, and aspects of skeletal functional morphology, with emphasis on extant taxa. Topics include the skeletal systems of fish, amphibians, reptiles, birds, and mammals. Three lecture hours and four laboratory hours a week for one semester. Normally offered in the fall semester only, in alternate years. Geological Sciences 322V and 389R may not both be counted. Prerequisite: One of the following: Geological Sciences 404C, 405, or the equivalent, or three semester hours of coursework in biology, or consent of instructor.
- 325J. Programming in Fortran and MATLAB.** Restricted to geosciences majors. Fortran for students without knowledge of a computer programming language: survey of all variable types, loops, arrays, subroutines, and functions; overview of UNIX and MATLAB. Two lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Mathematics 408D or the equivalent.

- 325K. Computational Methods.** Sampling and aliasing. Review of sinusoids and wave terminology, complex numbers and complex sinusoids, vectors and matrices, the discrete Fourier transform, convolution, the convolution theorem, linear digital filters and transfer functions, random variable concepts and statistics, and least squares estimation. MATLAB is used for homework problems and examples. Two lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Geological Sciences 325J, or an equivalent college-level course in an appropriate programming language and consent of instructor.
- 426P. Igneous and Metamorphic Petrology.** Mineralogy, geochemistry, and processes of magmatism and metamorphism. Three lecture hours and four laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 416K with a grade of at least C-, and credit with a grade of at least C- or registration for either Physics 301 and 101L or 303K and 103M.
- 327G. Geographic Information System and Global Positioning System Applications in Earth Sciences.** For geological sciences majors only. Theory and practice of geographic information system (GIS) and Global Positioning System (GPS) technologies, and their applications to problems in earth sciences. Laboratories and field trips provide hands-on experience with the collection, mapping, and analysis of geologic and other field data using GPS equipment and GIS software. Topics include map projections; datums and reference frames; cartographic principles; remotely sensed data (satellite and aerial photos, image radar); vector- and raster-based image formats; geospatial data resources; GIS software applications; surveying principles; GPS constellation and data structure; differential GPS; data logging schemes; GPS postprocessing software; integration of GPS and GIS in mapmaking; extant GIS applications in geology and hydrogeology. Three lecture hours and two laboratory hours a week for one semester, and two weekend field trips. Geological Sciences 327G and 371C (Topic: *Geographic Information System and Global Positioning System Applications in Earth Sciences*) may not both be counted. Prerequisite: Geological Sciences 420K with a grade of at least C-, and consent of instructor.
- 428. Structural Geology.** Description, classification, and origin of Earth structures. Solution of problems by descriptive geometry, geologic maps, and contouring. Three lecture hours and three laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: For students pursuing the Bachelor of Science in Geological Sciences, Geological Sciences 420K with a grade of at least C-, Physics 301 and 101L or 303K and 103M with a grade of at least C- in each, and credit with a grade of at least C- or registration for Mathematics 408C or 408K (or 308K); for those pursuing the Bachelor of Arts with a major in geological sciences, Geological Sciences 420K with a grade of at least C-, three semester hours of coursework in mathematics (other than Mathematics 301, 316K, and 316L) with a grade of at least C-, and Physics 302K or 303K with a grade of at least C-; for others, consent of instructor.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Geological Sciences.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Geological Sciences. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329W. Hydrogeology Cooperative (Geological Sciences).** This course covers the work period of geological sciences students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. The student must submit a final report to the supervising instructor at the conclusion of the program. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Application to become a member of the Hydrogeology Cooperative (Geological Sciences) Program and consent of the geological sciences undergraduate adviser.
- 330K. Petroleum Geology: Basin and Trend Analysis.** Attributes of the subsurface environment; fundamentals of petroleum generation, migration, entrapment, and producibility; and interpretation methods used in petroleum exploration. Two lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 416M with a grade of at least C-, and Physics 303L or 316.
- 331K. Petrology and Plate Tectonics.** Sedimentation, metamorphism, igneous activity, and deformation patterns at rift zones, subduction zones, and transform margins. Three lecture hours a week for one semester. Offered irregularly, as shown in the *Course Schedule*. Prerequisite: Geological Sciences 428 with a grade of at least C-.
- 335. Geology and Mineral Resources of Texas.** Geologic history of the region; local rocks, fossils, and mineral resources; influence of physiography, surface and subsurface water supplies, and energy and mineral resource production on the state economy. Three lecture hours and two laboratory hours a week for one semester; local field trips may also be required. Normally offered in the fall semester only. May not be counted toward the following options within the Bachelor of Science in Geological Sciences: general geology, geophysics, hydrogeology, environmental science and sustainability. Prerequisite: Upper-division standing, Geological Sciences 401 or 303, and Geological Sciences 404C or 405.

- 338T. Marine Tectonics.** Tectonic processes within the dynamic Earth, with a focus on oceanic structures. Subjects may include fundamentals of plate tectonics; plate motion, driving forces, and mantle convection; evolution of triple junction and plate margins; plate reconstructions; earthquakes and focal mechanisms; structure and geochemistry of the Earth's interior; mantle structure and tomography; rheology and deformation mechanisms in mantle and crust; heat flow, gravity, the geoid, and paleomagnetism; hotspots and mantle plumes; seafloor spreading and oceanic spreading ridges; oceanic transform faults and fracture zones; and subduction zones, volcanic island arcs, and marginal seas. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following may be counted: Geological Sciences 338T, 371C (Topic: *Tectonics I*), 381T, 391 (Topic: *Tectonics I*). May not be substituted for any required geological sciences course. Prerequisite: Upper-division standing, and Geological Sciences 428 with a grade of at least C- or consent of instructor.
- 339T. Continental Tectonics.** Tectonic processes, with a focus on continental lithospheric structures. Subjects may include convergent margins, subduction zones, magmatic arcs, and foreland structures; collisional orogenesis, arc-continent collisions, continent-continent collision, and mountain building; formation of supercontinents; uplift and exhumation; orogenic collapse and extensional tectonics; continental rifting and passive margins; transform margins; and the effect of tectonics on climate and oceanic circulation. Three lecture hours a week for one semester. Normally offered in the fall semester only. Only one of the following may be counted: Geological Sciences 339T, 371C (Topic: *Tectonics II*), 382T, 391 (Topic: *Tectonics II*). May not be substituted for any required geological sciences course. Prerequisite: For geological sciences majors, upper-division standing and Geological Sciences 428 with a grade of at least C-; for others, consent of instructor.
- 340T. Geoclimatology.** Examination of the climate records encoded in sedimentary archives through geologic time. Three lecture hours a week for one semester. May not be substituted for any required geological sciences course. Geological Sciences 340T and 371C (Topic: *Geoclimatology*) may not both be counted. Prerequisite: For geological sciences majors, upper-division standing, and Chemistry 302 and Geological Sciences 416K and 416M with a grade of at least C- in each; for others, upper-division standing, Chemistry 302 and Geological Sciences 416K and 416M with a grade of at least C- in each, and consent of instructor.
- 341. Mineral Resources, Society, and the Environment.** Nature and origin of mineral resources; their discovery, extraction, and uses; and their relationship to global history, economics, and the environment. Three lecture hours and one laboratory hour a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 416K with a grade of at least C-.
- 341G. Geomicrobiology.** Geologic and hydrologic controls on subsurface microbial growth, metabolism, and community structure; the geochemical consequences of microbial processes in subsurface settings; and the influence of geology on microbial ecology. Three lecture hours a week for one semester. Normally offered in the fall semester only, in alternate years. May not be substituted for any required geological sciences course. Geological Sciences 341G and 381G may not both be counted. Prerequisite: For geological sciences majors, upper-division standing; for others, upper-division standing and consent of instructor.
- 344K. Marine Mining and Minerals.** Same as Marine Science 344K. Overview of seafloor mineral deposits, their exploration and mining. Three lecture hours a week for one semester. Offered irregularly, as shown in the *Course Schedule*. May not be counted toward the Bachelor of Science in Geological Sciences degree. Prerequisite: Geological Sciences 401 or 303, 416K, and 416M.
- 344U. Quantitative Seismic Interpretation.** Seismic inversion, a tool for reservoir characterization, post- and pre-stack modeling, rock physics and fluid replacement modeling, wavelet estimation and post-stack inversion, AVO and pre-stack inversion, multiattribute regression and neural network, and net pay estimation. Extensive hands-on training with three-dimensional seismic and well-log data. Three lecture hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Upper-division standing.
- 346C. Introduction to Physical and Chemical Hydrogeology.** Basic concepts of fluid flow, surface and subsurface hydrology, aqueous geochemistry, and fluid-rock interaction. Additional topics include isotope hydrogeology, evolution of seawater, and mineral-solution equilibrium. Three lecture hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Chemistry 302 with a grade of at least C-.
- 347G. Climate System Modeling.** Studies the basic theory of climate system modeling using state-of-the-art regional climate models in a variety of applications. Subjects may include paleoclimate study and future climate prediction based on greenhouse gas increases. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following maybe counted: Geological Sciences 347G, 371C (Topic: *Climate System Modeling*), 387G, 391 (Topic: *Climate System Modeling*). May not be substituted for any required geological sciences course. Prerequisite: Upper-division standing, basic knowledge of UNIX, and programming experience in Fortran.
- 347K. Gems and Gem Minerals.** Crystallography, occurrence, and identification of gem minerals and materials; artificial gems; simple cutting and polishing; history of gems and gemology. Three lecture hours and two laboratory hours a week for one semester. May not be counted toward a degree in geological sciences. Prerequisite: For earth science teachers, consent of instructor; for others, Geological Sciences 401 or 303, and Chemistry 301 or one year of high school chemistry.

- 347P. Climate System Physics.** Discussion of first-order principles and processes that govern the thermodynamical structure and energy distribution of the atmosphere, ocean, land, and cryosphere and their interaction with the dynamic aspect of the climate system. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following may be counted: Geological Sciences 347P, 371C (Topic: *Climate System Physics*), 387P, 391 (Topic: *Climate System Physics*). May not be substituted for any required geological sciences course. Prerequisite: Upper-division standing and Mathematics 408D and Physics 303K with a grade of at least C- in each.
- 348K. Marine Geology and Geophysics Field Course.** Same as Marine Science 348 (Topic 2: *Marine Geology and Geophysics Field Course*). Hands-on, team-based instruction in the collection and processing of marine geological and geophysical data along the Gulf of Mexico coast. Includes classroom, laboratory, and field components in Austin and at sea. Offered between the spring semester and the summer session; limited class meetings may begin in April. Geological Sciences 348K and 397F may not both be counted. Fulfills the field experience requirement for some geological sciences degree programs. Students should contact the department for information before registering. Prerequisite: For geological sciences majors, upper-division standing, Geological Sciences 420K or 320L with a grade of at least C-, and consent of instructor; Geological Sciences 416M and 465K are recommended; for others, upper-division standing, Marine Science 307 and 354F with a grade of at least C- in each, and consent of instructor.
- 354. Physics of Earth.** How history, composition, temperature, kinematics, and dynamics of Earth are inferred from geophysical observations of all types. Three lecture hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 354 and 384D may not both be counted. Prerequisite: For students in the geophysics option, Geological Sciences 465K and 365P; for others, a major in geological sciences and completion of the calculus and physics courses required for the major.
- 358K. Volcanology.** Ash deposits, lava flows, eruption processes; prediction and mitigation of volcanic hazards. Three lecture hours and two laboratory hours a week for one semester. Offered irregularly, as shown in the *Course Schedule*. Prerequisite: Geological Sciences 426P or upper-division standing in geological sciences.
- 660. Field Geology.** Methods of geologic mapping with topographic maps and aerial photographs. Field studies include measuring sections, interpretation of stratigraphy, structure, environments of deposition of various sedimentary rocks, and the origin and petrology of igneous and metamorphic rocks. Given for six weeks each summer in Colorado, New Mexico, and other western states. Normally offered in the summer session only. Prerequisite: Eighteen semester hours of coursework in geological sciences, including Geological Sciences 420K and 428 with a grade of at least C- in each.
- 661. Geophysics Field Camp.** Field studies for geophysics majors, including seismic, magnetic, electrical, gravity, and other techniques; related data processing and interpretation. Each half requires three consecutive weeks of fieldwork. Geological Sciences 661A is offered either between the spring semester and the summer session or in the summer session; Geological Sciences 661B is offered in the summer session. Students may take Geological Sciences 661 for University credit while enrolled in the Los Alamos National Laboratory SAGE program. Prerequisite: Completion of eighteen semester hours of coursework in geological sciences, including Geological Sciences 420K, 465K, and 365P with a grade of at least C- in each.
- 465K. Seismic Exploration.** Seismic theory, including body and surface waves, attenuation, rays, reflection and transmission coefficients, principles of synthetic seismogram calculations, seismic imaging principles, reflection data processing methods, rock physics overview, seismic attributes overview, and seismic exploration field methods. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 427L and Physics 315 and 115L.
- 365N. Geophysical Data Processing.** Fourier transforms of continuous functions, linear digital filter design and applications, frequency domain filtering, and spectral analysis and applications. Three lecture hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 325K or the equivalent.
- 365P. Potential Field Applications in Geophysics.** Introduction to the theory, measurement, and application of gravity and magnetic and electric fields to exploration and global-scale problems. Three lecture hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 365P and 383P may not both be counted. Prerequisite: Mathematics 427K, 427L, Physics 315, and 115L with a grade of at least C- in each.
- 366M. Mathematical Methods in Geophysics.** Vectors and matrices, linear algebra, complex variables and contour integration, integral transforms, partial differential equations of geophysics (Laplace, Poisson, and acoustic wave equations), and simple solutions. Three lecture hours a week for one semester. Normally offered in the fall semester only. Geological Sciences 366M and 380J may not both be counted. Prerequisite: Mathematics 427L and credit or registration for Geological Sciences 325K.
- 468K. Geophysics for Geological Sciences Majors.** A survey of seismic, magnetic, gravitational, and other geophysical tools and their application to exploration and global-scale problems. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. May not be counted toward the Bachelor of Science in Geological Sciences, Option II. Prerequisite: Mathematics 408D and either Physics 303L and 103N or 316 and 116L, with a grade of at least C- in each.

- 370K. Sedimentology.** Processes of sediment formation, transportation, and deposition; textures, structures, and facies of sedimentary rocks. Three lecture hours a week for one semester, and two one-day field trips. Offered irregularly. Prerequisite: Geological Sciences 420K with a grade of at least C-.
- 171C, 271C, 371C. Conference Course.** Supervised study of selected topics in geological sciences, by individual arrangement with the department and instructor. May be repeated for credit when the topics vary. May not be substituted for any required geological sciences course. Prerequisite: Written consent of instructor.
- 171H. Research Methods.** Preparation for independent research projects through exposure to current research programs, facilities, personnel, and projects in the Jackson School of Geosciences. Includes selecting research topics, mentors, and supervisors; preparing research proposals; conducting research activities; and presenting research results. The equivalent of one lecture hour a week for one semester. Prerequisite: Completion of sixty semester hours of college coursework, including at least eight hours of upper-division coursework in geological sciences; consent of the honors adviser; and admission to the Geological Sciences Honors Program or consent of instructor.
- 171T, 271T, 371T. Undergraduate Seminar in Geological Sciences.** For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. May not be substituted for any required geological sciences courses. Prerequisite: Upper-division standing and a major in the Jackson School of Geosciences, or consent of instructor. Additional prerequisites may vary with the topic.
- 172H. Research Methods.** Preparation for independent research projects through exposure to current research programs, facilities, personnel, and projects in the Jackson School of Geosciences. Includes selecting research topics, mentors, and supervisors; preparing research proposals; conducting research activities; and presenting research results. The equivalent of one lecture hour a week for one semester. Prerequisite: Geological Sciences 171H, and admission to the Geological Sciences Honors Program or consent of instructor.
- 173H. Research Methods.** Preparation for independent research projects through exposure to current research programs, facilities, personnel, and projects in the Jackson School of Geosciences. Includes selecting research topics, mentors, and supervisors; preparing research proposals; conducting research activities; and presenting research results. The equivalent of one lecture hour a week for one semester. Prerequisite: Geological Sciences 171H and 172H, and admission to the Geological Sciences Honors Program or consent of instructor.
- 376E. Environmental Isotope Geochemistry.** The application of the isotope and trace element geochemistry of natural waters and sediments to studies of the hydrologic cycle. Stable, radiogenic, and cosmogenic isotopes are used as tracers of the evolution of groundwater, surface water, and ocean water. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Offered irregularly. Prerequisite: Upper-division standing in geological sciences; and consent of instructor or the following courses: Chemistry 302, 204, Geological Sciences 416K, 416M, 346C, Mathematics 408D, and Physics 303L and 103N or 316 and 116L.
- 476K. Groundwater Hydrology.** Introduction to subsurface hydrology, emphasizing geological controls on groundwater flow; quantitative methods of analyzing aquifer systems; regional hydrology; water quality and pollution. Three lecture hours and one laboratory hour a week for one semester, with several local field trips. Normally offered in the fall semester only. Prerequisite: Geological Sciences 346C or Mathematics 408D with a grade of at least C-, or consent of instructor.
- 376L. Field Methods in Groundwater Hydrology.** Introduction to field methods, including geophysics, pump tests, stream gauging, well-logging, water sampling, and mapping. An intensive three-week course meeting eight hours a day, Monday through Friday, and four hours on Saturday: lectures, laboratory exercises, and field exercises; nightly homework involving map exercises, reduction of field data, report preparation; Saturdays devoted to report presentation, review sessions, and local field trips. Offered between the spring semester and the summer session. Prerequisite: Geological Sciences 476K with a grade of at least C-, or consent of instructor.
- 476M. Chemical Hydrogeology.** An introduction to aqueous geochemistry and contaminant hydrogeochemistry; topics include basic thermodynamics, kinetics, rock-water interactions, and solute transport. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 346C, 476K, or 376S with a grade of at least C-.
- 376S. Physical Hydrology.** Modern conceptual and methodological approaches to hydrological science: qualitative assessment of hydrological processes, quantitative representation, approaches to measurement, and treatment of uncertainty. Major components of the hydrological cycle—precipitation, snow and snowmelt, infiltration, soil moisture, evapotranspiration, and runoff—and their link to the coupled-earth system. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Geological Sciences 346C or Mathematics 408D with a grade of at least C-.

- 376T. High-Temperature Geochemistry.** Restricted to geosciences majors. Study of the composition, origin, and chemical and physical evolution of Earth and its interior. Examines the links between the fields of geochemistry and tectonics, igneous petrology, geophysics, and other areas of inquiry. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Mathematics 408D or the equivalent.
- 377P. Physical Climatology.** Investigates the nature of Earth's climate and examines the physical processes that maintain the climate system. Prerequisite: Upper-division standing; and Mathematics 408D, Physics 303K, Geography 301K, and Computer Science 303E, or their equivalents.
- 679G. Special Studies in Geophysics.** Special research projects, field studies, or geophysical/industrial internship. Assigned reading with written and oral report. Three lecture hours a week for two semesters. May be used instead of Geological Sciences 660 in fulfilling the requirements for the Bachelor of Science in Geological Sciences (Option II). Prerequisite: A University grade point average of at least 3.00, or a grade point average in geosciences courses of at least 3.00 and consent of instructor.
- 379H. Honors Tutorial.** Supervised research project resulting in an honors thesis with an oral defense. Conference course. May be counted as three of the six geological sciences senior elective hours. Prerequisite: Upper-division standing, admission to the Geological Sciences Honors Program, and completion of Geological Sciences 171H, 172H, and 173H with a grade of at least B- in each; or consent of the departmental honors adviser.
- 679J. Internship in Hydrogeology.** Special hydrogeological studies under the joint supervision of industry professionals and faculty members. Students present a written report. Forty hours a week for one semester. May be used in place of Geological Sciences 660 in fulfilling the requirements for the Bachelor of Science in Geological Sciences (Option III). Prerequisite: Geological Sciences 476K with a grade of at least C-, a grade point average in geological sciences of at least 3.00, and consent of instructor.
- 279K, 379K. Special Studies in Advanced Geological Sciences.** Special emphasis on recent developments. Conference course. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of coursework in advanced geological sciences, a grade point average in geological sciences of at least 3.00, a University grade point average of at least 3.00, and consent of instructor.
- 479M. Mammalogy.** Surveys the biology and evolutionary history of mammals. Introduction to the diversity of living mammals through the study of mammalian ecology, behavior, morphology, and taxonomy. Laboratory work focuses on the characters diagnosing the major mammalian clades and identifying the common recent mammals of Texas using skins and recent osteological specimens. Fossils and the fossil record of mammals. Three lecture hours and three laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Upper-division standing in biology, geological sciences, or anthropology.

10. School of Information

Andrew P. Dillon, PhD, *Dean*
 Mary Lynn Rice-Lively, PhD, *Associate Dean*
 Mary Carla Criner, PhD, *Assistant Dean*
<http://www.ischool.utexas.edu/>

The School of Information offers the Master of Science in Information Studies and the Doctor of Philosophy. Details are given in the graduate catalog about these programs and about the requirements for admission to graduate study.

In addition to the graduate courses described in the graduate catalog, the faculty has approval to offer the undergraduate courses listed below in the academic years 2010–2011 and 2011–2012. For undergraduates who are interested in a thorough introduction to information studies, the faculty has designed a curriculum that consists of four courses: two lower-division and two upper-division, including one required core course, for a total of at least twelve semester hours. Students who complete these requirements receive a certificate from the School of Information documenting their achievement. The curriculum is designed to complement many undergraduate degree programs; with the approval of his or her major college, a student may count the courses toward the requirements of the minor.

Not all courses are taught each semester and summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course; if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

INFORMATION STUDIES: INF

LOWER-DIVISION COURSES

- 304D. Introduction to Information Studies.** Overview of the information field as it relates to the technology-based world culture. Topics may include the idea of information, information in relation to technology and culture, information technology in education, information literacy and the “digital divide,” information and communication technology, information and gender, public information policy, and information organization and preservation. Three lecture hours a week for one semester. Only one of the following may be counted: Information Studies 304D, 304W, 318D. Prerequisite: Lower-division standing.
- 304W. Introduction to Information Studies.** Overview of the information field as it relates to the technology-based world culture. Topics may include the idea of information, information in relation to technology and culture, information technology in education, information literacy and the “digital divide,” information and communication technology, information and gender, public information policy, and information organization and preservation. Web-based instruction; no class meetings. Only one of the following may be counted: Information Studies 304D, 304W, 318D. Prerequisite: Lower-division standing.
- 312. Information in Cyberspace.** Basic skills in using the Internet as a medium for information, research, communication, and multimedia resources: e-mail, ftp, World Wide Web, file compression, use of search engines, and Web publishing; introduction to larger issues such as governance, ethics, and freedom of expression. Web-based instruction; no class meetings.

- 315E. Information and Culture.** Examines information as a cultural phenomenon. Topics may include e-commerce, privacy and secrecy, censorship, information as a commodity, Internet culture, access to cultural heritage, and control of the cultural record. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Information Studies 315E and 315W may not both be counted unless the topics vary.
- 315W. Information and Culture.** Examines information as a cultural phenomenon. Topics may include e-commerce, privacy and secrecy, censorship, information as a commodity, Internet culture, access to cultural heritage, and control of the cultural record. Web-based instruction; no class meetings. May be repeated for credit when the topics vary. Information Studies 315E and 315W may not both be counted unless the topics vary.

UPPER-DIVISION COURSES

- 322T. Children's Literature.** Evaluation, selection, and proper and creative use of books and other media with children. Three lecture hours a week for one semester. Information Studies 322T and 322W may not both be counted. Prerequisite: Upper-division standing.
- 322W. Children's Literature.** Evaluation, selection, and proper and creative use of books and other media with children. Web-based instruction; no class meetings. Information Studies 322T and 322W may not both be counted. Prerequisite: Upper-division standing.
- 327E. Information and People.** Study of how individuals and groups create meaning. Explores research topics concerning people and communication, including information literacy, organizations and innovation, knowledge management, and identifying information needs. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Information Studies 327E and 327W may not both be counted unless the topics vary. Prerequisite: Upper-division standing.
- 327W. Information and People.** Study of how individuals and groups create meaning. Explores research topics concerning people and communication, including information literacy, organizations and innovation, knowledge management, and identifying information needs. Web-based instruction; no class meetings. May be repeated for credit when the topics vary. Information Studies 327E and 327W may not both be counted unless the topics vary. Prerequisite: Upper-division standing.
- 331C. Beyond Google.** A general introduction to information searching and evaluating information in digital, print, visual, and aural formats. Three lecture hours a week for one semester. Information Studies 331C and 331W may not both be counted. Prerequisite: Upper-division standing.
- 331W. Beyond Google.** A general introduction to information searching and evaluating information in digital, print, visual, and aural formats. Web-based instruction; no class meetings. Information Studies 331C and 331W may not both be counted. Prerequisite: Upper-division standing.
- 343C. Information Organization and Access.** Basic aspects of representing and organizing information resources in digital information settings. Introduces the fundamentals of identifying informational objects, including description, content indication, and metadata. Three lecture hours a week for one semester. Information Studies 343C and 343W may not both be counted. Prerequisite: Upper-division standing.
- 343W. Information Organization and Access.** Basic aspects of representing and organizing information resources in digital information settings. Introduces the fundamentals of identifying informational objects, including description, content indication, and metadata. Web-based instruction; no class meetings. Information Studies 343C and 343W may not both be counted. Prerequisite: Upper-division standing.
- 350E. Information Technology.** Design and use of information technologies, including interface design, trends in information technology development, usability, information retrieval, immersive media, and information architecture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Information Studies 350E and 350W may not both be counted unless the topics vary. Prerequisite: Upper-division standing.
- Topic 1: Technologies of the Book.** Additional prerequisite: Consent of the School of Information.
- 350G. Information in Society.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 350W. Information Technology.** Design and use of information technologies, including interface design, trends in information technology development, usability, information retrieval, immersive media, and information architecture. Web-based instruction; no class meetings. May be repeated for credit when the topics vary. Information Studies 350E and 350W may not both be counted unless the topics vary. Prerequisite: Upper-division standing.

11. College of Liberal Arts

Randy L. Diehl, PhD, *Dean*
 Richard R. Flores, PhD, *Senior Associate Dean, Academic Affairs*
 Esther L. Raizen, PhD, *Associate Dean, Research*
 Marc A. Musick, PhD, *Associate Dean, Student Division*
 James A. Southerland Jr., MPA, *Assistant Dean, Business Affairs*
 Kathleen M. Aronson, PhD, *Assistant Dean, Development and Alumni Relations*
 Joseph TenBerge, BA, *Assistant Dean, Information Technology and Facilities*
 Kimberly Krieg, BS, *Assistant Dean, Student Division*
<http://www.utexas.edu/cola/>

GENERAL INFORMATION

ARTS AND SCIENCES EDUCATION

The academic program offered cooperatively by the College of Liberal Arts and the College of Natural Sciences provides what is sometimes referred to as a “liberal arts” or an “arts and sciences” education. No matter what area of knowledge a student intends to specialize in, the program of study will require courses in both colleges. The colleges work together to ensure that the individual interests and needs of the students pursuing an arts and sciences program are met.

Guidelines for developing a coherent plan of study are provided by major requirements, by sequential prerequisites, and by optional patterns of emphasis. Departmental majors, areas of specialization, and interdepartmental programs are designed to enable every student to study at least one field in depth. These programs are sufficiently broad in scope to allow students in the same major to develop quite different plans of study in pursuit of their individual interests and goals. Each student should choose courses that are intellectually challenging and that contribute to his or her long-term objectives.

Arts and sciences students are required to take a certain number of courses in the natural sciences, the social and behavioral sciences, and the humanities. Consequently, whatever their fields of study, they have the opportunity to learn something about the basic differences in the ways questions are raised and answered in several fields of inquiry, and about the

techniques for validating the answers and putting the results to use. At the same time, they may gain some of the philosophical and historical perspectives that illuminate and give form to general or specialized knowledge and help to reveal its relevance.

Both teachers and students sometimes make the assumption that independent and creative study is exclusively for the gifted. In fact, the primary requirement is that the student be highly motivated, although he or she must also demonstrate ability. The departments that make up the two arts and sciences colleges encourage all qualified students to work independently in special honors courses and seminars and in conference, studio, or laboratory work. The student is free to define a major, to determine whether a given assignment will be an adventure or a chore, free to develop its latent possibilities or merely satisfy its explicit demands. True creativity presupposes more than a gift for innovation; it requires an unceasing commitment to thinking and working at one’s highest level.

As competence is gained in a chosen field, the mind should be progressively sharpened, disciplined, and enriched. The student who leaves arts and sciences studies with an enhanced understanding of self and humankind, of cultural and historical heritage, of the world and the universe, and of the moral values that make it possible to live a meaningful life, will have made the most of education, having gained something over and above the objective of vocational preparedness.

SCHOLARSHIPS AWARDED THROUGH THE COLLEGE OF LIBERAL ARTS

Special scholarships established by individuals and foundations are open to undergraduates in the College of Liberal Arts. Financial assistance is also available in many College of Liberal Arts departments, centers, and programs for specific undergraduate majors.

Students with financial need should apply for aid through the Office of Student Financial Services. The Study Abroad Office also administers a number of awards designed to help qualified students participate in international programs.

Information on College of Liberal Arts scholarships is given at <http://www.utexas.edu/cola/student-affairs/Programs/Scholarships.php>. Information on scholarships awarded through individual departments, centers, and programs is published on their Web sites.

UTEACH-LIBERAL ARTS

UTeach-Liberal Arts is a professional teacher preparation program for liberal arts students pursuing degrees in Arabic, Chinese, economics, English, French, history, geography, German, government, Japanese, Latin, Russian, and Spanish. Students may seek certification to teach middle or high school grades for the following certification areas:

1. History, grades eight through twelve
2. Language arts and reading, grades four through eight or eight through twelve
3. Languages other than English, grades six through twelve
4. Social studies, grades four through eight or eight through twelve

UTeach-Liberal Arts offers a four-semester program for undergraduate students and a three-semester program for postbaccalaureate students. Admission into the program is required. Undergraduate students may enter the program as early as the second semester of their freshman year.

UTeach-Liberal Arts students benefit from an innovative program that emphasizes a practical, hands-on field experience in local public school classrooms combined with intensive coursework. The program provides students with an excellent firsthand glimpse into the world of teaching. Other key features of the program are mentorship and seminar instruction, cohort support, discipline-specific pedagogical preparation, literacy training, and innovative use of technology. More information about UTeach-Liberal Arts and the

admission process is available online at <http://www.utexas.edu/cola/progs/uteach/>.

PROGRAM IN COMPARATIVE LITERATURE

The program in comparative literature approaches the study of literature from a variety of viewpoints rather than from the viewpoint of a single language or nation. Courses in literary history, practical criticism, and critical theory stress the relationship between literature and other disciplines in the humanities, the arts, and the social sciences. The program offers both the doctoral and the master's degree and sponsors courses on both the graduate and the undergraduate level. All comparative literature courses are conducted in English.

To introduce undergraduates to the field of study, the comparative literature faculty has designed a cluster of courses in critical thinking and world literature. These courses concentrate on writing and thinking critically, with a focus on literary texts drawn from around the world, in the context of an interdisciplinary and international program. The twelve-hour cluster complements many majors in liberal arts; with the approval of the student's major department, it may be used to fulfill the minor requirement. More information is available from the comparative literature program.

TRANSCRIPT-RECOGNIZED CERTIFICATE PROGRAMS

The College of Liberal Arts offers three certificate programs, which are open to all degree-seeking University undergraduates. Undergraduates who complete certificate requirements in conjunction with their degree requirements or within one year after earning the degree receive recognition on the University transcript; students in integrated undergraduate/graduate programs must complete certificate requirements within one year after they complete their undergraduate degree requirements. A maximum of nine hours of certificate coursework may be taken after the student has earned the undergraduate degree. At least half of the required certificate coursework must be completed in residence at the University; some programs may require more work in residence.

A student may not earn a certificate in the same field as his or her major, and at least one certificate course must be outside the requirements of the major. However, certificate courses outside the major may be counted toward other degree requirements.

Students should apply for the certificate when

they apply for graduation or when they complete the certificate program, whichever is later. Transcript recognition is awarded at the end of that semester or summer session.

Students outside the College of Liberal Arts should contact their dean's office for permission to complete a certificate program and for the applicability of certificate requirements toward their individual degrees. Students in the College of Liberal Arts may complete certificate programs offered through other colleges. These are described in chapter 1 and in the chapter for each college that offers a transcript-recognized certificate program. Certificate programs that do not lead to transcript recognition are also described in their colleges' chapters.

CERTIFICATE IN COMPUTATIONAL SCIENCE AND ENGINEERING

The certificate in computational science and engineering is described on page 8.

CORE TEXTS AND IDEAS CERTIFICATE

The certificate program in core texts and ideas is designed to provide a coherent path through the University's core curriculum with an integrated, interdisciplinary sequence of courses on great works of philosophy, literature, science, and the arts that emphasizes debates about fundamental questions of enduring human concern. The program provides a grounding in the major ideas that have shaped the Western world and gives students the opportunity to study Eastern works as well. Students complete courses in four required areas and two elective areas. The four required areas are the philosophy and literature of the ancient world, especially Greece; basic texts of major world religions; the history of political philosophy; and the principles that formed the basis for the founding of the United States. Elective areas include philosophy, the arts, history, literature, and the history and philosophy of science and mathematics.

The certificate program requires eighteen hours of coursework, including at least twelve hours completed in residence. Students must fulfill the following requirements:

1. The requirements of an undergraduate major.
2. The following twelve hours of coursework:
 - a. Philosophy and literature of the ancient world: Core Texts and Ideas 301, *Ancient Philosophy and Literature*
 - b. History of political philosophy: Core Texts

and Ideas 302, *Classics of Social and Political Thought*; or 303, *Competing Visions of the Good Life*

- c. Basic texts of major world religions: Core Texts and Ideas 304, *World Religions: Traditions and Texts*
 - d. Principles of the founding of the United States: Government 312P, *Constitutional Principles: Core Texts*; or 312R, *Constitutional Principles: Equality*
3. Six additional hours of coursework chosen from a list of approved electives available from the academic adviser in the Thomas Jefferson Center for Core Texts and Ideas.

All courses must be taken on the letter-grade basis. Each semester a list of approved alternatives to the courses in the four required areas is available from the academic adviser in the Thomas Jefferson Center for the Study of Core Texts and Ideas.

INDIGENOUS STUDIES CERTIFICATE

The main goal of the indigenous studies certificate program is to encourage active intellectual and community engagement with indigenous peoples and cultures. The program allows undergraduate students to develop interdisciplinary expertise in indigenous studies and comparative approaches to their primary field of interest. Each student develops a specialization within the program that is tailored to his or her academic and professional development. Students concentrate their studies in two of the following eight strands: Mayan culture, Mesoamerica, indigenous arts, indigenous peoples of Latin America, indigenous peoples in the United States and Canada, indigenous peoples of the Americas, indigenous politics and human rights, and indigenous writing and language.

Courses the student has completed at the time of application to the program may be counted toward the certificate. Upon completion of the course requirements, the student writes a three- to four-page essay that describes his or her intellectual work in the program and how the experience contributed to his or her academic career at the University.

The certificate program requires eighteen hours of coursework, including at least nine hours completed in residence. Students must fulfill the following requirements:

1. The requirements of an undergraduate major.
2. Three hours in a lower-division introductory or foundational course with indigenous studies

content, such as English 314V (Topic 5: *Native American Literature and Culture*), History 317L (Topic: *Introduction to Native American History*), or other courses from an approved list.

3. Six hours of approved coursework in each of two of the following eight strands: Mayan culture, Mesoamerica, indigenous arts, indigenous peoples of Latin America, indigenous peoples in the United States and Canada, indigenous peoples of the Americas, indigenous politics and human rights, indigenous writing and language.
4. An approved upper-division capstone course in indigenous studies chosen from courses on an approved list.
5. At least three courses must be taken in a field of study outside of the student's major department.

Each semester a list of approved courses that meet the requirements above is available in the Department of Anthropology undergraduate advising office.

TEXAS IP CERTIFICATE

The Texas Interdisciplinary Plan (Texas IP) Certificate allows students to pursue an integrated course of study with a focus on the development and application of critical thinking skills. The curriculum is designed to complement the student's major with an interdisciplinary sequence of courses that may encompass the humanities, the social sciences, the natural sciences, and the arts. Students have the opportunity to present an original work in a capstone seminar. Those who plan to pursue the certificate should apply to the program adviser for admission no later than the end of their sophomore year. More information about the Texas IP Certificate is given at <http://www.utexas.edu/tip/TexasIP/>.

The certificate program requires eighteen hours of coursework, including at least nine hours completed in residence. Students must meet the following requirements:

1. *Critical Thinking Seminar*: One of the following courses: Liberal Arts 302, Philosophy 311, Natural Sciences 301C (*Research Methods*), 302, 311, Undergraduate Studies 303 (*Thinking About Thinking across the Disciplines*).
2. *Critical Writing Seminar*: Rhetoric and Writing 309K or 309S. Selected courses in the Department of Rhetoric and Writing may be substituted on a petition basis.
3. Three additional courses, including at least three semester hours of upper-division coursework,

from an interdisciplinary topic area prescribed by the Texas Interdisciplinary Plan; or, with approval of the Texas IP Faculty Advisory Panel, a three-course interdisciplinary topic area designed by the student.

4. *Senior Capstone Seminar*: Liberal Arts 371 or Natural Sciences 371.

In the College of Liberal Arts, a student whose major includes a minor may use the Texas IP curriculum as the minor if he or she completes the Texas IP coursework and if the minor is not specified by the major department. Final approval of the Texas IP minor coursework rests with the College of Liberal Arts associate dean for academic affairs or the associate dean's authorized representative.

In the College of Natural Sciences, the Texas IP Certificate may be used to complement any major. Some certificate courses will also fulfill degree requirements established by the student's major department and given later in this chapter; however, some of the eighteen hours required for the certificate may be in addition to the number of hours required for the degree.

CONCENTRATIONS

A concentration allows students to pursue a program of interdisciplinary specialization in addition to the major. Within the general requirements for the degree of Bachelor of Arts and the requirements of the major, a student may also complete a concentration in one of the following programs offered by the College of Liberal Arts.

Courses required for a concentration may also be counted toward the requirements of the Bachelor of Arts, Plan I, when applicable. Students in other degree programs and colleges should check with their dean's offices about course applicability and restrictions. The following concentrations are not recognized on the student's transcript.

CULTURAL STUDIES

Students who wish to enter the cultural studies concentration should consult the undergraduate adviser in the Américo Paredes Center for Cultural Studies.

The concentration is designed to complement the student's major, with courses drawn from the humanities, the social sciences, and the arts. With the approval of his or her dean and the cultural studies adviser, a student outside the College of Liberal Arts may complete a concentration in cultural studies.

The student must fulfill the following requirements:

1. Completion of the requirements of a major.
2. Two of the following courses: Anthropology 305, 325L, Mexican American Studies 307, Communication 309, Radio-Television-Film 314, Music 342, Theatre and Dance 357T.
3. Cultural Studies 340.
4. Three additional courses from a group of cultural studies–related courses prescribed by the Cultural Studies Curriculum Committee.
5. Two additional courses from a group of supporting courses prescribed by the Cultural Studies Curriculum Committee.

SCIENCE, TECHNOLOGY, AND SOCIETY

The goal of this concentration is to prepare students to use emerging technologies humanely and critically; to participate thoughtfully in public discourse about scientific and technological innovation; and to understand the consequences of public and private decisions about scientific advancements and technologies. The concentration is designed to allow students to gain experience in analyzing historical, philosophical, rhetorical, economic, political, aesthetic, and scientific practices and methods of inquiry. Students have the opportunity to explore the social impacts of rapid scientific and technological change. The program integrates approaches from the liberal arts, social sciences, and humanities with new developments in science and technology. The science, technology, and society concentration focuses on several key areas, including nanotechnology, gaming, surveillance, mobile technologies, e-society, education, health care, and computer-mediated communication.

The program of study is designed to complement the major by helping the student to gain a richer and more profound understanding of the dynamic relationships among science, technology, culture, and the individual. The concentration is open to liberal arts majors and, with the approval of their deans, to students in other colleges and schools.

The student must fulfill the following requirements:

1. A departmental major or the equivalent.
2. Eighteen semester hours of coursework, consisting of Science, Technology, and Society 319 or 321; Science, Technology, and Society 331; nine hours of related coursework; and a capstone seminar, Science, Technology, and Society 360. A

list of related courses that will fulfill this requirement is available from the science, technology, and society adviser; courses that are not on the list may be used with written consent of the adviser.

WESTERN CIVILIZATION AND AMERICAN INSTITUTIONS

The concentration in western civilization and American institutions is designed to complement departmental specialization with an integrated sequence of courses that emphasizes a multidisciplinary approach to the major ideas of western civilization and their impact on the development of the institutions of the United States. Students who wish to enter the concentration should consult the faculty adviser. With the approval of his or her dean and the western civilization and American institutions adviser, a student outside the College of Liberal Arts may complete the concentration.

The student must fulfill the following requirements:

1. Completion of the requirements of a major.
2. Three semester hours of Government 335M, *Topics in Political Thought*, chosen from a list of topics approved by the western civilization and American institutions faculty adviser.
3. Fifteen additional semester hours of coursework in western civilization and American institutions, chosen in consultation with the faculty adviser for the concentration, from a list prescribed by the western civilization and American institutions faculty committee.

CAREER SERVICES

Liberal Arts Career Services (LACS) provides career assistance to current and newly graduated liberal arts students. The goal of the office is to connect College of Liberal Arts students with postgraduate and experiential learning opportunities throughout the world.

Through job search advising, résumé critiques, mock interviews, credit-based classes, and a variety of workshops and programs, LACS helps students develop the skills needed to succeed in the job search and in the workplace. LACS also provides comprehensive prelaw advising services, including application assistance and review and law school admission advising.

To connect students to the workplace, LACS manages job and internship postings, provides job and internship fairs and events, and manages an on-campus

interviewing program involving a variety of employers and opportunities. Students have access to career management tools and resources with an online recruiting system, LiberalArts@Work. LACS maintains a resource room with books, DVDs, company literature, and job postings.

Hundreds of companies are assisted by LACS each year through computer-based résumé searches, information sessions, and on-campus interviewing. Résumé books for a variety of career fields are available to employers at no charge.

As a complement to the assistance available from LACS, the University's Sanger Learning and Career Center provides career services to all students. The center offers professional assistance to students in choosing or changing their majors or careers, and planning for graduate study.

For liberal arts students who have completed a teacher certification program, Education Career Services in the College of Education assists with the education job search. Certification candidates must register with Education Career Services, George I. Sánchez Building 294, at the beginning of their student-teaching semester. The office also assists those who wish to find teaching jobs at the college level or in private schools, community colleges, or overseas schools in which certification is not required.

The University makes no promise to secure employment for each graduate.

ADMISSION AND REGISTRATION

ADMISSION

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

THE BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE¹

Students must be admitted to the Bachelor of Science in Environmental Science degree program; they may apply for admission after completing the following requirements: The student must earn a grade of at least C- in Biology 311C, Chemistry 301, and Mathematics 408C or 408N; and a grade of at least B- in Geological Sciences 401 or 303. To be competitive for admission,

the student must have a grade point average of at least 2.75 in these four courses.

Applications are evaluated after the end of each fall and spring semester. Students whose applications are denied may reapply through the supplemental admission process the following semester. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the College of Liberal Arts Student Advising Office, Dorothy Gebauer Building 2.200, for information about the application process and application deadlines. Once admitted to the degree program, students will be advised in the Department of Geography and the Environment.

More information about the degree program is given on pages 346–347.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

ACADEMIC ADVISING

The assistant dean for the Student Division, under the guidance of the associate dean, oversees advising activity for all students in the College of Liberal Arts. The Student Division provides administrative and logistical support for all operations relating to students, including adviser training, official degree checks, and graduation certification.

Liberal Arts advisers embrace the idea that advising is teaching, and foster student development through partnerships and practices dedicated to student success. Advisers work with students to identify and achieve academic and life goals and establish a timely graduation plan, encourage critical thinking strategies, and stimulate intellectual and cultural development. In

1. Final approval is still pending for the Bachelor of Science in Environmental Science.

these ways, advisers teach the value of a liberal arts education for engaged, self-directed learners.

Departmental advisers work directly with their students regarding course selection. They also initiate petitions affecting the major or minor; encourage co- and extracurricular activities, including study abroad; and administer honors programs.

Students who have not yet declared a major work directly with Student Division advisers, who guide students through the process of selecting courses and exploring majors. Student Division advisers also work with students on withdrawing from classes, appeals for exceptions to standard policies and procedures, graduation applications, certifying all graduates' academic programs, and nonacademic issues.

Every student in the college has access to appropriate advisers throughout his or her academic career. In addition, students can create and view their own advising audits using IDA, the Interactive Degree Audit. The advising audit is produced for advising purposes only and is not an official degree audit.

ACADEMIC POLICIES AND PROCEDURES

REPETITION OF A COURSE

A student in the College of Liberal Arts may not repeat any course in which he or she has earned a grade of C or better.

HONORS

University-wide honors are described in chapter 2 and in *General Information*. In addition, the College of Liberal Arts provides recognition through the Dean's Honor List and the Plan I Honors Programs. Students may also graduate with departmental honors and earn membership in one or more of the honorary scholastic societies open to undergraduates.

DEAN'S HONOR LIST

The Dean's Honor List, prepared at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered; a grade of *F* in any course makes the student ineligible, regardless of other grades.

The Honor List is divided into five groups; according to the number of grade points they earn, students are listed under one of the following classifications:

- ▶ Summa cum Laude (67 or more grade points)
- ▶ Cum Laude Ampla et Magna (61–66 grade points)
- ▶ Magna cum Laude (58–60 grade points)
- ▶ Ampla cum Laude (55–57 grade points)
- ▶ Cum Laude (52–54 grade points)

LIBERAL ARTS HONORS PROGRAMS, PLAN I

Liberal Arts Honors Programs coordinates the various honors opportunities available to Plan I students in the college: the Freshman Honors Program, the departmental honors programs, and the Liberal Arts Honors Program. This array of choices is designed for students who seek flexibility and choice in their honors work and for those who want to pursue an honors degree in a particular discipline.

The Freshman Honors Program gives selected students access to honors sections of lower-division introductory courses. Each student admitted to the program is required to take an active part in two courses in the first year: Liberal Arts Honors 102H, *The Idea of the Liberal Arts*, and one designated honors writing course. The program serves as a preparation for departmental honors programs and for the upper-division Liberal Arts Honors Program. Students must apply to the Freshman Honors Program when they apply to the University. Admission decisions are based on the applicant's demonstrated commitment to the liberal arts, test scores, high school records, and an application essay.

The upper-division Liberal Arts Honors Program offers challenging and intensive interdisciplinary courses taught by distinguished faculty members. Students who have completed at least sixty semester hours of coursework and have earned a University grade point average of at least 3.50 are eligible to enroll in these courses. There is no application process.

The requirements for graduation with liberal arts honors are (1) graduation from the College of Liberal Arts with any degree other than the Bachelor of Arts, Plan II; (2) a University grade point average of at least 3.50 at graduation; (3) completion of at least three upper-division liberal arts honors (LAH) courses with grades of *A* in two of the courses and a grade of at least *B* in the third; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree. The statement "Liberal

Arts Honors” appears on the academic record of each graduate who fulfills these requirements. The student may earn both liberal arts honors and special honors in his or her major department.

The three upper-division liberal arts honors courses required for graduation with liberal arts honors may be used, with a fourth LAH course, to fulfill the twelve-hour minor requirement for the Bachelor of Arts, Plan I, unless the work in the minor is specified by the student’s major department.

DEPARTMENTAL HONORS PROGRAMS

Most departments in the College of Liberal Arts offer honors programs to their majors. Minimum requirements for departmental honors are (1) a University grade point average of at least 3.00; (2) a three-semester-hour thesis or research project, or a reasonable equivalent, with a grade of at least *B*; (3) completion, with a grade point average of at least 3.50, of the coursework required for a major in the field; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree. Each department may establish additional or more rigorous requirements.

The statement “Special Honors in (name of field)” appears on the transcript of each graduate certified as having completed the honors program.

African and African Diaspora Studies Honors Program

Majors who plan to seek special honors in African and African diaspora studies should apply to the undergraduate adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors are (1) African and African American Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half; (2) satisfactory performance on an oral presentation of the honors thesis; (3) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

American Studies Honors Program

Majors who plan to seek special honors in American studies should apply to the honors adviser for admission to the honors program at least two semesters be-

fore they expect to graduate. A University grade point average of at least 3.00 is required for admission. In addition to the requirements of the major, requirements for graduation with special honors are (1) American Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Ancient History and Classical Civilization Honors Program

Majors who plan to seek special honors in ancient history and classical civilization should apply to the honors adviser for admission to the honors program at least one full academic year before they expect to graduate. A University grade point average of at least 3.00 is required for admission, as is a grade point average of at least 3.50 in all coursework required for the major that the student has completed. The requirements for graduation with special honors, which are in addition to the requirements of the major, are (1) Ancient History and Classical Civilization 679H, *Honors Tutorial Course*, with a grade of at least *A-* in each half; the student’s thesis topic must be approved by the director of ancient history and classical civilization; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Anthropology Honors Program

Majors who plan to seek special honors in anthropology should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate; the applicant must be recommended by the faculty member who will supervise the honors work. A University grade point average of at least 3.00 and a grade point average in anthropology of at least 3.50 are required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Anthropology 679H, *Honors Tutorial Course*, with a grade of *A* in each half; (2) satisfactory performance on a comprehensive oral examination centered on the thesis completed in Anthropology 679H; (3) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in resi-

dence at the University of at least sixty semester hours of coursework counted toward the degree.

Arabic Language and Literature Honors Program

Majors who plan to seek special honors in Arabic language and literature should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than the beginning of their last year before graduation. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Arabic 679H, *Honors Tutorial Course*, with a grade of A in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Asian American Studies Honors Program

Ethnic studies majors who plan to seek special honors in Asian American studies should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the concentration, are (1) Asian American Studies 679H, *Honors Tutorial Course*, with a grade of A in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the concentration in Asian American studies and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Asian Cultures and Languages Honors Program

Majors who plan to seek special honors in Asian cultures and languages should apply to the honors adviser by April 15 for admission to the honors program the following fall. Requirements for admission are completion of sixty semester hours of coursework at the University, a University grade point average of at least 3.00, and a grade point average of at least 3.50 in Asian cultures and languages. Students must complete at least nine hours of upper-division coursework in the Department of Asian Studies before applying for admission to the honors program. Honors students should be enrolled in Asian Studies 378, *Senior Seminar in Asian Studies*, no later than the semester in which they begin the honors thesis coursework. The require-

ments for graduation with special honors, which are in addition to the requirements for the major, are (1) Asian Studies 378, *Senior Seminar in Asian Studies*, with a grade of at least B; (2) Asian Studies 678H, *Honors Tutorial Course*, with a grade of at least B in 678HA and a grade of A in 678HB; (3) a University grade point average of at least 3.00, and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Asian Studies Honors Program

Majors who plan to seek special honors in Asian studies should apply to the honors adviser by April 15 for admission to the honors program the following fall. Requirements for admission are completion of sixty semester hours of coursework at the University, a University grade point average of at least 3.00, and a grade point average in Asian studies of at least 3.50. Students must complete at least nine hours of upper-division coursework in the Department of Asian Studies before applying for admission to the honors program. Honors students should be enrolled in Asian Studies 378, *Senior Seminar in Asian Studies*, no later than the semester in which they begin the honors thesis coursework. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Asian Studies 378, *Senior Seminar in Asian Studies*, with a grade of at least B; (2) Asian Studies 678H, *Honors Tutorial Course*, with a grade of at least B in 678HA and a grade of A in 678HB; (3) a University grade point average of at least 3.00, and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Classical Archaeology Honors Program

Majors who plan to seek special honors in classical archaeology should apply to the honors adviser for admission to the honors program at least one full academic year before they expect to graduate. A University grade point average of at least 3.00 is required for admission, as is a grade point average of at least 3.50 in all coursework required for the major that the student has completed. The requirements for graduation with special honors, which are in addition to the requirements of the major, are (1) Classical Civilization 679H, *Honors Tutorial Course*, with a grade of at least A- in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework re-

quired for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Classics Honors Program

Majors who plan to seek special honors in Greek, special honors in Latin, or special honors in classics should apply to the honors adviser for admission to the honors program at least one full academic year before they expect to graduate. A University grade point average of at least 3.00 and a grade point average in Greek (for Greek majors), Latin (for Latin majors), or Greek, Latin, and classical civilization combined (for classics majors) of at least 3.50 are required for admission. The requirements for graduation with special honors, which are in addition to the requirements of the major, are (1) Greek 679H, Latin 679H, or Classical Civilization 679H, *Honors Tutorial Course*, with a grade of at least A- in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Czech Language and Culture Honors Program

Majors who plan to seek special honors in Czech language and culture should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 and a grade point average in Czech of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Czech 679H, *Honors Tutorial Course*, with a grade of at least B in each half; in this course, the student must complete a paper judged Acceptable for Honors; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Economics Honors Program

Majors who plan to seek special honors in economics must apply to the honors adviser for admission to the honors program before the first registration period for the first semester of their senior year. Students are encouraged to apply by the beginning of the first semester of their sophomore year, so that they will be eligible to take an honors section of Economics 420K.

A University grade point average of at least 3.00 and a grade point average in economics of at least 3.50 are required for admission. Before a student registers for Economics 378H, the student's thesis proposal must be approved first by the supervising instructor and then by the honors adviser. The requirements for graduation with special honors are (1) at least thirty-four semester hours in economics; (2) Economics 378H, *Honors Tutorial Course I*, and 379H, *Honors Tutorial Course II*, with a grade of at least B in each; (3) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

English Honors Program

Majors who plan to seek special honors in English should apply for admission to the honors program prior to their junior year. Application forms and information about the program are available in the English Advising Office, Parlin Hall 114, and on the Department of English Web site, <http://www.utexas.edu/cola/depts/english/>.

The requirements for graduation with special honors are (1) completion of the requirements for a major in English, except that English 679HB is substituted for the research seminar; (2) completion of three or more upper-division English honors courses with grades of at least B; these courses may be counted toward the requirements of the major; two of these courses must be completed prior to enrolling in English 679HA; (3) English 679H, *Honors Tutorial Course*, with a grade of at least B+ in 679HA and a grade of at least A- in 679HB, resulting in the presentation and defense of a thesis judged to be worthy of honors; (4) a University grade point average of at least 3.33 and a grade point average of at least 3.66 in the coursework required for the major and for honors; and (5) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

French Honors Program

Majors who plan to seek special honors may apply to the honors adviser for admission to the honors program during the semester in which they will complete sixty semester hours of coursework. To enter the program, a student must have completed at least sixty semester hours of coursework, including twelve hours of upper-division coursework in French. These twelve hours must include at least one course numbered 330 or above.

A University grade point average of at least 3.00 and a grade point average in French of at least 3.50 are also required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) French 379H, *Honors Tutorial Course*, with a grade of at least B; (2) satisfactory performance on an honors examination; (3) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Geography Honors Program

Majors who plan to seek special honors in geography should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 and a grade point average in geography of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Geography 679H, *Honors Tutorial Course*, with a grade of at least A- in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

German Honors Program

Majors who plan to seek special honors in German should apply to the honors adviser for admission to the honors program upon completion of thirty semester hours; they must apply no later than upon completion of ninety semester hours. Admission is by means of a special examination; a University grade point average of at least 3.00 is also required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) German 679H, *Honors Tutorial Course*, with a grade of at least A- in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Government Honors Program

Majors who plan to seek special honors in government should apply to the honors adviser for admission to the honors program in the spring semester of their junior year. A University grade point average of at least 3.00

is required for admission. The requirements for graduation with special honors are (1) thirty-three semester hours of government, including Government 679H, *Honors Tutorial Course*, with a grade of at least B in each half; (2) regular participation in honors seminars; (3) satisfactory performance on a comprehensive oral or written honors examination; (4) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (5) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Hebrew Honors Program

Majors who plan to seek special honors in Hebrew should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than a year before they expect to graduate. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Hebrew 679H, *Honors Tutorial Course*, with a grade of A in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

History Honors Program

History majors who plan to seek special honors in history should apply to the honors adviser for admission to the honors program in the fall semester of the junior year. Application forms and information about the program are available in the History Undergraduate Advising Office, Garrison Hall 1.140. The requirements for graduation with special honors, which are in addition to the requirements of the major, are (1) History 347L, *Seminar in Historiography*, normally taken in the spring semester of the junior year; this course may be counted toward the thirty hours in history required for the major; (2) History 679H, *Honors Tutorial Course*, with a grade of at least B in each half; (3) satisfactory performance on an oral examination centered on the thesis completed in History 679HB; (4) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (5) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree. Normandy

Scholar Program (NSP) students may substitute an approved upper-division NSP history course for the History 347L requirement.

Humanities Honors Program

Majors who plan to seek special honors in humanities should apply to the humanities adviser for admission to the honors program no later than the first semester of the junior year. The requirements for graduation with special honors are (1) a major in humanities; (2) Humanities 679H, *Honors Tutorial Course*, with a grade of A in both 679HA and 679HB; (3) a grade of “Recommended for Special Honors” on an oral examination, conducted and graded by faculty members qualified in the student’s area of work, covering the thesis completed in Humanities 679H and a reading list; (4) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (5) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

International Relations and Global Studies Honors Program

Majors who plan to seek special honors in international relations and global studies should apply to the honors adviser for admission to the honors program at least one full academic year before they expect to graduate. A University grade point average of at least 3.00 is required for admission, as is a grade point average of at least 3.50 in all coursework required for the major that the student has completed. The requirements for graduation with special honors are (1) International Relations and Global Studies 678H, *Honors Tutorial Course*, with a grade of A in each half; (2) satisfactory defense of the honors thesis completed in International Relations and Global Studies 678HB; (3) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree. The requirements for special honors are in addition to the requirements of the major, except that International Relations and Global Studies 678H may be counted toward the major in place of International Relations and Global Studies 378, the capstone research course.

Islamic Studies Honors Program

Majors who plan to seek special honors in Islamic studies should apply to the honors adviser for admission to

the honors program at the beginning of their third year; they must apply no later than the beginning of their last year before graduation. A University grade point average of at least 3.00 is required for admission to the honors program. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Islamic Studies 679H, *Honors Tutorial Course*, with a grade of A in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Italian Honors Program

Majors who plan to seek special honors in Italian may apply to the honors adviser for admission to the honors program during the semester in which they will complete sixty semester hours of coursework. To enter the program, a student must have completed at least sixty semester hours of coursework, including twelve hours of upper-division coursework in Italian. These twelve hours must include Italian 365, Italian 375, or Italian Civilization 360. A University grade point average of at least 3.00 and a grade point average in Italian of at least 3.50 are also required for admission. The requirements for graduation with special honors, which are in addition to the requirements of the major, are (1) Italian 379H, *Honors Tutorial Course*, with a grade of at least B; (2) satisfactory performance on an honors examination; (3) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Jewish Studies Honors Program

Majors who plan to seek special honors in Jewish studies should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than the beginning of their last year before graduation. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Jewish Studies 679H, *Honors Tutorial Course*, with a grade of A in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of

coursework counted toward the degree.

Latin American Studies Honors Program

Majors who plan to seek special honors in Latin American studies should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 and a grade point average in Latin American content coursework of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Latin American Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half; in this course, the student writes a thesis that must be approved for honors by both the student's supervisor and the honors adviser; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Linguistics Honors Program

Upper-division linguistics majors who plan to seek special honors in linguistics should apply to the undergraduate honors adviser for admission to the honors program no later than the beginning of their last year. A University grade point average of at least 3.50 or, in exceptional cases, approval of the undergraduate adviser is required for admission. The requirements for graduation with special honors, which are in addition to the requirements of the major, are (1) Linguistics 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours counted toward the degree.

Mexican American Studies Honors Program

Ethnic studies majors who plan to seek special honors in Mexican American studies should apply to the undergraduate adviser for admission to the honors program no later than two semesters before they expect to graduate. The requirements for admission are a University grade point average of at least 3.00 and a grade point average at least 3.50 in the coursework required for the concentration in Mexican American studies. The requirements for graduation with special honors are (1) thirty-nine semester hours of coursework in Mexican American studies, including Mexican American Studies 679H; (2) a grade of *A* in Mexican American

Studies 361 or 362; (3) Mexican American Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half; (4) satisfactory performance on an oral presentation centered on the honors thesis completed in Mexican American Studies 679H; (5) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the concentration and for honors; and (6) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Middle Eastern Studies Honors Program

Middle Eastern studies majors who plan to seek special honors in Middle Eastern studies should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Middle Eastern Studies 679H, *Honors Tutorial Course*, with a grade of *A* in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Persian Language and Literature Honors Program

Majors who plan to seek special honors in Persian language and literature should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than the beginning of their last year before graduation. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Persian 679H, *Honors Tutorial Course*, with a grade of *A* in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Philosophy Honors Program

Majors who plan to seek special honors in philosophy should apply to the undergraduate adviser for admission to the honors program at least two semesters before they expect to graduate. Completion of at least nine semester hours of upper-division coursework in

philosophy is required for admission, in addition to a University grade point average of at least 3.00 and a grade point average in philosophy of at least 3.50.

The requirements for graduation with special honors are (1) Philosophy 371H or 375M, with a grade of at least *B*; (2) Philosophy 679H, *Honors Tutorial Course*, with a grade of at least *B* in both 679HA and 679HB; (3) satisfactory performance on an oral examination centered on the thesis completed in Philosophy 679H; (4) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (5) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Philosophy 371H or 375M may be counted toward the requirements of the major; Philosophy 679H is taken in addition to the requirements of the major.

Plan II Honors Program: Special Honors

Plan II students who plan to seek special honors in Plan II should apply to the director of the Plan II Honors Program for enrollment in Tutorial Course 660H, *Thesis Course*, at least two semesters before they expect to graduate. A University grade point average of at least 3.50 is required. The requirements for graduation with special honors are (1) Tutorial Course 660H with a grade of *A* in each half, or a departmental equivalent with a grade of *A*; (2) satisfactory performance on an oral honors examination centered on the thesis completed in Tutorial Course 660H; (3) a University grade point average of at least 3.50; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Portuguese Honors Program

The Portuguese Honors Program offers selected Portuguese majors more advanced and independent study than is possible under the regular degree plan. Students interested in this program should contact the department honors adviser prior to their senior year. A University grade point average of at least 3.00 and a grade point average in Portuguese of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) either Portuguese 378H and 379H with a grade of *A* in each, or two sections of Portuguese 379H with a grade of *A* in each; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Portuguese 378H, *Honors Seminar*, is offered as an

organized course, while 379H, *Honors Thesis*, is offered by individual instruction. Students who choose to take two semesters of Portuguese 379H conduct individual research on a literary, linguistic, or cultural topic in the first semester and complete an honors thesis in the second semester. The student's research and writing are supervised by a department faculty member. Students who choose to take Portuguese 378H and 379H study a literary, linguistic, or cultural topic in the first semester; in the second semester, they complete an honors report under faculty supervision.

Portuguese 378H may be counted toward the requirements of the major; Portuguese 379H is taken in addition to the major requirements.

Psychology Honors Program

Prospective candidates for special honors in psychology should apply to the honors adviser for admission to the honors program during the junior year. The application deadline is one week before the first registration period for the semester in which the student wants to enter the program. Requirements for admission are (1) a major in psychology; (2) a University grade point average of at least 3.25 and a grade point average in psychology of at least 3.50; (3) completion of the following before entering the honors program: Psychology 301 or the equivalent with a grade of at least *C*, Psychology 418 with a grade of at least *C*, and two additional psychology courses; and (4) consent of the honors adviser. The requirements for graduation with special honors are (1) thirty-three semester hours of psychology, including Psychology 458, 158H, 359H, and 379H; the student must earn grades of at least *B* in Psychology 359H, *Honors Research I*, and 379H, *Honors Research II*; (2) a University grade point average of at least 3.25 and a grade point average in all psychology courses of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Religious Studies Honors Program

Majors who plan to seek special honors in religious studies should apply to the honors adviser for admission to the honors program by the end of their junior year. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors are (1) thirty-three semester hours of religious studies coursework, including completion of all major requirements; (2) Religious Studies 679HA, *Honors Tutorial Course*, with a grade of at least *B*; (3) Religious Studies 679HB, *Honors Tutorial Course*, with a grade of *A*; in this course, the student completes an

honors thesis, which must be approved by the chair of the Department of Religious Studies; (4) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (5) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Russian, East European, and Eurasian Studies

Honors Program

Majors who plan to seek special honors in Russian, East European, and Eurasian studies should apply to the honors adviser for admission to the honors program during the junior year or the first semester of the senior year. The application deadline is one week before the first registration period for the semester in which the student wants to enter the program. Requirements for graduation with special honors are (1) Russian, East European, and Eurasian Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree. Russian, East European, and Eurasian Studies 679H is taken in addition to the requirements of the major.

Russian Language and Culture Honors Program

Majors who plan to seek special honors in Russian language and culture should apply to the honors adviser for admission to the honors program at least two semesters before they expect to graduate. The requirements for admission are a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major. The requirements for graduation with special honors are (1) Russian 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half; in this course, the student must complete a paper judged Acceptable for Honors; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Scandinavian Studies Honors Program

Majors who plan to seek special honors in Scandinavian studies should apply to the honors adviser for admission to the honors program upon completion of thirty semester hours; they must apply no later than upon completion of ninety semester hours. Admission is

by means of a special examination; a University grade point average of at least 3.00 is also required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Scandinavian 679H, *Honors Tutorial Course*, with a grade of at least *A-* in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Sociology Honors Program

Majors who plan to seek special honors in sociology should apply to the honors adviser by October 1 for admission to the honors program the following spring; they should apply by April 1 for admission the following summer or fall. Requirements for admission are completion of sixty semester hours of coursework, a University grade point average of at least 3.00, and a grade point average in sociology of at least 3.50. Students must complete Sociology 302 and either 317L or an approved equivalent before applying for admission to the honors program; they should be enrolled in Sociology 317M and 379M no later than the semester in which they begin the honors thesis coursework. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Sociology 679H, *Honors Tutorial Course*, with a grade of at least *A-* in each half; (2) satisfactory performance on an oral defense of the senior thesis completed in the second half of Sociology 679H; (3) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Spanish Honors Program

The Spanish Honors Program offers selected Spanish majors more advanced and independent study than is possible under the regular degree plan. Students interested in this program should contact the department honors adviser prior to their senior year. A University grade point average of at least 3.00 and a grade point average in Spanish of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) either Spanish 378H and 379H with a grade of *A* in each, or two sections of Spanish 379H with a grade of *A* in each; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and

for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Spanish 378H, *Honors Seminar*, is offered as an organized course, while 379H, *Honors Thesis*, is offered by individual instruction. Students who choose to take two semesters of Spanish 379H conduct individual research on a literary, linguistic, or cultural topic in the first semester and complete an honors thesis in the second semester. The student's research and writing are supervised by a department faculty member. Students who choose to take Spanish 378H and 379H study a literary, linguistic, or cultural topic in the first semester; in the second semester, they complete an honors report under faculty supervision.

Spanish 378H may be counted toward the requirements of the major; Spanish 379H is taken in addition to the major requirements.

Turkish Language and Literature Honors Program

Majors who plan to seek special honors in Turkish language and literature should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than the beginning of their last year before graduation. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) Turkish 679H, *Honors Tutorial Course*, with a grade of A in each half; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Urban Studies Honors Program

Majors who plan to seek special honors in urban studies should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than a year before they expect to graduate. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors are in addition to the requirements for the major; however, honors students may substitute Urban Studies 679H for Urban Studies 370. The requirements are (1) grades of at least A- in both halves of Urban Studies 679H, *Honors Tutorial Course*; (2) a University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors; and

(3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

SCHOLASTIC HONORARY SOCIETIES

In addition to Alpha Lambda Delta and Phi Eta Sigma, honor societies for qualified freshman students in all academic fields, the University sponsors chapters of the following national organizations for which College of Liberal Arts students are eligible.

- ▶ *Alpha Epsilon Delta*. National honorary premedical fraternity for students who have completed at least three semesters of premedical work.
- ▶ *Alpha Kappa Delta*. National honorary sociology fraternity.
- ▶ *Delta Phi Alpha*. National honorary German fraternity.
- ▶ *Dobro Slovo*. National honorary Slavic fraternity.
- ▶ *Eta Sigma Phi*. National honorary classical languages fraternity.
- ▶ *Gamma Theta Upsilon*. National honorary geography fraternity.
- ▶ *Kappa Kappa Psi*. National honorary band fraternity.
- ▶ *Mortar Board*. National honorary society for seniors.
- ▶ *Omicron Delta Epsilon*. National honorary economics fraternity.
- ▶ *Omicron Delta Kappa*. National honorary leadership fraternity.
- ▶ *Phi Alpha Theta*. National honorary history fraternity.
- ▶ *Phi Beta Kappa*. National honorary society recognizing academic achievement in the arts and sciences.
- ▶ *Phi Kappa Phi*. National honor society open to students in all academic fields.
- ▶ *Pi Delta Phi*. National honorary French fraternity.
- ▶ *Pi Sigma Alpha*. National honorary political science fraternity.
- ▶ *Psi Chi*. National honorary psychology fraternity.
- ▶ *Sigma Delta Pi*. National honorary Spanish fraternity.
- ▶ *Sigma Tau Delta*. National honorary English society.
- ▶ *Tau Beta Sigma*. National honorary band society.

GRADUATION

SPECIAL REQUIREMENTS OF THE COLLEGE OF LIBERAL ARTS

All students must fulfill the general requirements for graduation given in chapter 1. Students in the College of Liberal Arts must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. For the Bachelor of Arts, Plan I, the Bachelor of Science in Environmental Science, and the Bachelor of Science in Psychology, these sixty hours must include at least eighteen hours in the major. For the Bachelor of Arts, Plan II, thirty of these sixty hours must be taken in the College of Liberal Arts or the College of Natural Sciences.
2. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. Additional requirements of the College of Liberal Arts are given later in this chapter with the requirements of the college's four degrees.
3. Students may not complete degree requirements at another institution of higher education during the semester in which the degree is to be conferred.

RECEIVING A DEGREE AUDIT AND APPLYING FOR GRADUATION

An official degree audit lists all the requirements of the student's major, according to a catalog under which the student is eligible to graduate. The audit also includes any requirements that are specific to the student's individual program. It is the official statement by the Office of the Dean, Student Division, of the student's progress toward a degree. Students are required to have an official degree check appointment with a Dean's Office, Student Division adviser one semester before the semester in which the degree is to be conferred. It is strongly recommended that students schedule regular degree check appointments with the Student Division advisers once they have completed ninety semester hours of coursework.

The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the requirements for the degree as stated in a catalog under which he or she is entitled

to graduate and for registering so as to fulfill these requirements. The student should seek an official ruling in the Student Division before registering if in doubt about any requirement.

A student may schedule an official degree check once he or she has completed ninety hours of coursework and has officially declared a major and minor or concentration in the Student Division. A student in the College of Liberal Arts is required to declare a major by the time he or she has completed sixty semester hours of coursework. The student may submit an Official Declaration of Major and Minor either online at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Declare-a-Major.php> or in the Student Division, Dorothy Gebauer Building 2.200.

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must file a graduation application form either online at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Graduation/Application.php> or in the Student Division. This should be done at the beginning of the last semester; it must be done by the deadline to apply for an undergraduate degree, which is given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

DEGREES

The College of Liberal Arts offers four degree programs: the Bachelor of Arts, Plan I; the Bachelor of Arts, Plan II; the Bachelor of Science in Environmental Science with a major in geographical sciences; and the Bachelor of Science in Psychology. The requirements of the Bachelor of Arts, Plan I, begin on page 329. The Bachelor of Arts, Plan II, a broad liberal arts honors program for outstanding students, is described on pages 343–346.

The Bachelor of Science in Environmental Science, offered by the College of Liberal Arts, the College of Natural Sciences, and the Jackson School of Geological Sciences, is designed for students interested in an interdisciplinary scientific perspective on environmental issues, analysis, and management. Students pursuing the degree through the College of Liberal Arts major in geographical sciences. The requirements for the degree are given on pages 346–348.

The Bachelor of Science in Psychology is designed to offer students a more extensive scientific program than the Bachelor of Arts with a major in psychology. The requirements for the BSPsy are given on pages 348–350.

A student may not earn more than one Bachelor of Arts degree from the University. A student may not earn more than one Bachelor of Science in Environmental Science degree from the University. A student may not earn both the Bachelor of Arts with a major in psychology and the Bachelor of Science in Psychology. A student may not earn both the Bachelor of Arts with an intercollege major in kinesiology and health and the Bachelor of Science in Kinesiology and Health.

The title of a graduate's degree appears on his or her diploma, but the major does not. Both the degree and the major appear on the graduate's University transcript.

APPLICABILITY OF CERTAIN COURSES

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses and Kinesiology 119 may not be counted toward a degree in the College of Liberal Arts. However, they are counted as courses for which the student is enrolled, and the grades are included in the grade point average.

ROTC COURSES

ROTC units are maintained on campus by the Departments of Air Force Science, Military Science, and Naval Science. Information about each program is available from the chair of the department.

Nine semester hours of designated University of Texas at Austin coursework in air force science, military science, or naval science may be counted toward any degree in the College of Liberal Arts. In general, this credit may be used only as electives or to fulfill the writing requirement. However, cross-listed courses may be used as appropriate to fulfill other degree requirements. A list of approved ROTC courses is available in the College of Liberal Arts, Student Division, Dorothy Gebauer Building 2.200.

CONFERENCE COURSES AND INTERSHIP COURSES

No more than six semester hours of credit earned in conference courses may be counted toward a single major in the College of Liberal Arts; no more than nine semester hours may be counted toward the degree.

No more than six semester hours of credit earned in internship courses may be counted toward a single

major in the College of Liberal Arts; no more than nine semester hours may be counted toward the degree.

In addition, no more than nine semester hours of conference courses and internship courses combined may be counted toward a single major in the College of Liberal Arts; no more than twelve hours of conference courses and internship courses combined may be counted toward the degree.

BIBLE COURSES

Bible courses may be counted as lower-division electives in College of Liberal Arts degree programs that have room for such electives. No more than twelve semester hours of Bible courses may be counted toward any degree offered by the University.

ADMISSION DEFICIENCIES

Students admitted to the University with deficiencies in high school units must remove them by the means prescribed in *General Information*. Contact the dean's office for further information.

CORRESPONDENCE AND EXTENSION COURSES

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree in the College of Liberal Arts unless specifically approved in advance by the dean. In very special circumstances, the dean may allow a student in residence to take one or more courses by extension or correspondence. No more than 30 percent of the semester hours required for any degree offered in the College of Liberal Arts may be taken by correspondence. For additional information about correspondence work by resident students, see *General Information*.

COURSES TAKEN ON THE PASS/FAIL BASIS

No more than nineteen semester hours of coursework completed on the pass/fail basis may be counted toward the Bachelor of Arts, Plan II; no more than sixteen hours of such coursework may be counted toward the other degrees in the college. In general, only electives may be taken on the pass/fail basis. Complete rules on registration on the pass/fail basis are given in *General Information*.

COURSES IN A SINGLE FIELD

No more than thirty-six hours may be counted in any one field of study, including the major, unless major requirements state otherwise. No more than thirty-six hours may be counted in any one college or school other than the College of Liberal Arts or the College of Natural Sciences.

BACHELOR OF ARTS, PLAN I

The requirements for the Bachelor of Arts under Plan I are designed to give each student flexibility in the selection of courses to meet individual needs.

A total of 120 semester hours is required. Thirty-six hours must be in upper-division courses. At least sixty hours, including eighteen hours of upper-division coursework, must be completed in residence at the University; at least twenty-four of the last thirty hours must be completed in residence at the University. Provided residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the hours required for the degree), or, with the approval of the dean, by work transferred from another institution. Up to sixteen semester hours of classroom and/or correspondence coursework may be taken on the pass/fail basis; this coursework may be counted only as electives.

All students must complete the University's core curriculum, described in chapter 2. The specific requirements for the Bachelor of Arts, Plan I, consist of prescribed work, major and minor requirements, and electives. In some cases, a course that fulfills one of these requirements may also be counted toward the core curriculum; these courses are identified below.

Courses in the major and minor may also be used to fulfill prescribed work requirements unless expressly prohibited. A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills another requirement may also be used to fulfill the writing requirement if the course carries a writing flag.

The student must fulfill the University requirements for graduation given in chapter 1 and the requirements of the College of Liberal Arts given earlier in this chapter. University graduation requirements include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded; for the

BA, Plan I, the student must also earn a grade point average of at least 2.00 in courses taken at the University and counted toward the major requirements. The student should also refer to the description of his or her major in the section "Majors and Minors" below, since some majors include higher minimum scholastic requirements.

More information about grades and the grade point average is given in *General Information*.

PRESCRIBED WORK

1. *Writing*: Two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. *Foreign language*: Four semesters or the equivalent in a single foreign language.

The foreign language requirement is the attainment of a certain proficiency, as well as the completion of a specified number of courses; however, the courses taken to gain proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

To achieve proficiency in a foreign language as rapidly as possible, qualified students are urged to take intensive foreign language courses. Information about these courses is available from the departments that offer them.

Courses used to fulfill the foreign language requirement must be language courses; literature-in-translation courses, for example, may not be counted.

3. *Social science*: Three semester hours chosen from a list of approved courses, in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum. The course(s) must be in a field of study taught in the College of Liberal Arts and must be in a different field of study from the course used to fulfill the social and behavioral sciences requirement of the core curriculum.

Courses on the approved list are primarily in anthropology, economics, geography, linguistics, psychology, and sociology, but not every course in these fields is approved. Courses that are approved to count toward any core curriculum area

other than social and behavioral sciences may not be counted toward this requirement.

The list is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

4. *Mathematics*: Three semester hours in mathematics, excluding Mathematics 301, 316K, and 316L. Some courses that fulfill this requirement may also be counted toward the mathematics requirement of the core curriculum.
5. *Natural science*: Six semester hours in natural sciences, in addition to the courses counted toward the science and technology requirements of the core curriculum. Courses used to fulfill this requirement must be chosen from the fields of study listed below; no more than three hours may be in either the history of science or the philosophy of science.

To satisfy the mathematics and science and technology requirements of the core curriculum and the mathematics and natural science requirements of the BA, Plan I, a student may count (1) no more than twelve hours in mathematics, computer science, and statistics and scientific computation combined; and (2) no more than nine hours in any single field of study.

- a. Astronomy
- b. Biology
- c. Chemistry
- d. Geological sciences
- e. Marine science
- f. Nutrition
- g. Physical science
- h. Physics
- i. Mathematics (excluding Mathematics 301), computer science, statistics and scientific computation
- j. Other alternative science courses approved by the dean
- k. Approved alternative courses in history of science and philosophy of science

Lists of approved courses in science and the history and philosophy of science are available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

6. *Cultural expression, human experience, and thought*: Three semester hours chosen from a list of approved courses. The course(s) must be in a field of study taught in the College of Liberal

Arts. A course counted toward any requirement of the core curriculum may not also be counted toward this requirement.

A list of approved courses is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

ELECTIVES

In addition to the core curriculum, prescribed work, and major and minor, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve hours of conference courses and internship courses combined as described on page 328; twelve hours of Bible; nine hours of designated coursework in air force science, military science, or naval science; sixteen hours completed on the pass/fail basis; thirty-six hours in any one field of study in the College of Liberal Arts or the College of Natural Sciences, unless major requirements state otherwise; and thirty-six hours in any other single college or school of the University.

MAJORS AND MINORS

Major requirements. The Bachelor of Arts, Plan I, requires the completion of all requirements for one major.

The number of semester hours required in the major varies with the field selected. Unless the requirements of the major state otherwise, a major consists of at least twenty-four but no more than forty-two semester hours, with at least twelve hours in upper-division courses. Of these twelve hours, six must be taken in residence. At least eighteen hours of coursework in the major, including six hours of upper-division coursework, must be completed in residence at the University.

Minors. Students in most majors must also fulfill the requirements of a minor. The minor consists of a specific number of semester hours of coursework completed outside the student's major field. The requirements of the minor are established by the major department and are given with the major requirements below. Additional restrictions may be imposed by the academic department(s) in which the student takes the courses used to fulfill the requirements of the minor; before planning to use a course to fulfill the minor requirement, the student should consult the department that offers the course.

The same courses may not be used to fulfill the requirements for both a major and a minor. Courses used to fulfill the requirements for a minor must be taken on the letter-grade basis, and six of the required semester hours must be taken in residence.

African and African Diaspora Studies

Major: Thirty-three semester hours of coursework in African and African American studies, including at least eighteen hours of upper-division coursework. The following courses are required:

1. African and African American Studies 301, *African American Culture*.
2. Two courses (at least six hours) in each of the following areas:
 - a. Africa
 - b. The African diaspora
3. One course (at least three hours) in each of the following areas:
 - a. Blacks in the United States: Expressive culture
 - b. Blacks in the United States: History, politics, and society
4. African and African American Studies 375, *Community Internship*.
5. African and African American Studies 376, *Senior Seminar*.
6. Six additional hours of coursework in African and African American studies.

A list of approved courses in each area is available from the undergraduate adviser.

American Studies

Major: The American studies major requires twenty-four semester hours of coursework: (1) American Studies 310; (2) American Studies 355 and 356; (3) nine hours chosen from topics of American Studies 370; and (4) six additional hours of American studies coursework.

Minor for American studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

Ancient History and Classical Civilization

Major: Thirty-three semester hours of coursework as described below. At least twenty-one of the thirty-three hours must be in upper-division coursework.

1. Six semester hours of premodern history, chosen from topics of Ancient History and Classical Civilization 310 and 330.
2. Nine semester hours of upper-division Greek his-

tory and/or Roman history, chosen from topics of Ancient History and Classical Civilization 325.

3. Nine semester hours of classical civilization, Greek, Latin, and/or topics of Ancient History and Classical Civilization 319 and 325. Coursework used to fulfill the foreign language requirement may not also be counted toward this requirement.
4. Six semester hours of upper-division coursework in Greek and/or Latin.
5. Ancient History and Classical Civilization 378.

Anthropology

Major: Thirty semester hours of anthropology, including at least eighteen hours of upper-division coursework, consisting of

1. Anthropology 301, 304, and either 302, 305, or 307.
2. At least three hours of upper-division coursework in each of the following areas. A list of the courses in each area is available from the anthropology adviser.
 - a. Theory: Anthropology 330C or an approved alternate course.
 - b. Methods: Anthropology 453, 662, 462M, or an approved alternate course.
 - c. Culture/geographic area.
3. Twelve additional hours, including at least nine hours of upper-division coursework.

Minor for anthropology majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

Arabic Language and Literature

Major: Twenty-four semester hours of upper-division coursework in Arabic language, literature, and culture, consisting of

1. Ten hours in language courses: Arabic 420K, 420L, 120C, and 120D.
2. Three hours in Arabic literature and culture chosen from Arabic 322 and 360K.
3. Three hours of Arab history and society: Arabic 372 or another approved course.
4. Eight additional hours of upper-division coursework in Arabic.

No more than six hours in Arabic 322, 360K, and 372 may be counted toward the major.

Minor for Arabic language and literature majors: Twelve semester hours, including at least six hours of upper-

division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required twelve hours must be taken in residence.

Asian Cultures and Languages

The Bachelor of Arts with a major in Asian cultures and languages is offered with specialization in Chinese, Japanese, Hindi/Urdu, Malayalam, Sanskrit, or Tamil. *Major:* Twenty-four semester hours, including twenty-one hours of upper-division coursework, in the language and culture of one of the following areas of specialization. A list of approved Asian studies courses related to the areas of specialization is available in the Department of Asian Studies.

1. *Chinese*
 - a. Chinese 322 or 340 (*Topic: Classical Chinese Poetry*).
 - b. Three hours chosen from Chinese 320L, 330, and 340.
 - c. Six additional hours of upper-division coursework in Chinese.
 - d. Asian Studies 378.
 - e. Nine additional hours in Asian studies courses related to China; at least six hours must be in upper-division coursework.
2. *Japanese*
 - a. Japanese 322 or 330.
 - b. Twelve additional hours of upper-division coursework in Japanese.
 - c. Asian Studies 378.
 - d. Six additional hours in Asian studies courses related to Japan; at least three hours must be in upper-division coursework.
3. *Hindi/Urdu*
 - a. Twelve hours of upper-division coursework in Hindi and/or Urdu.
 - b. Asian Studies 378.
 - c. Nine additional hours in Asian studies courses related to South Asia; at least six hours must be in upper-division coursework. Three hours of upper-division coursework in Hindi, Urdu, or Sanskrit may be counted toward this requirement.
4. *Malayalam*
 - a. Twelve hours of upper-division coursework in Malayalam.
 - b. Asian Studies 378.
- c. Nine additional hours in Asian studies courses related to South Asia; at least six hours must be in upper-division coursework. Three hours of upper-division coursework in Malayalam, Sanskrit, or Tamil may be counted toward this requirement.
5. *Sanskrit*
 - a. Twelve hours of upper-division coursework in Sanskrit.
 - b. Asian Studies 378.
 - c. Nine additional hours in Asian studies courses related to South Asia; six hours must be in upper-division coursework. Three hours of upper-division coursework in Sanskrit, Hindi, or Urdu may be counted toward this requirement.
6. *Tamil*
 - a. Twelve hours of upper-division coursework in Tamil.
 - b. Asian Studies 378.
 - c. Nine additional hours in Asian studies courses related to South Asia; six hours must be in upper-division coursework. Three hours of upper-division coursework in Tamil, Sanskrit, or Malayalam may be counted toward this requirement.

Minor for Asian cultures and languages majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Asian Studies

Major: Twenty-four semester hours of Asian studies coursework, at least eighteen of which must be upper-division, in one of the two areas of specialization, East Asia or South Asia, as listed below. Students specializing in East Asia must choose between the general track and the Taiwan track. A list of courses that fulfill the requirements of the areas of specialization is available in the Department of Asian Studies.

1. *East Asia*
 - a. General track
 1. At least three hours of East Asian history.
 2. A three-hour Asian studies course related to South Asia.
 3. Asian Studies 378.
 4. Fifteen additional hours in Asian studies

courses related to East Asia. It is recommended that students take these courses in more than one East Asian cultural area. Six hours of upper-division coursework in Chinese, Japanese, or Korean language may be counted toward this requirement.

5. In addition, students must complete two years of Chinese, Japanese, or Korean to fulfill the foreign language requirement. Courses counted toward the foreign language requirement may not also be counted toward the major.
- b. Taiwan track
1. At least three hours of Taiwanese history.
 2. A three-hour Asian studies course related to South Asia.
 3. Asian Studies 378.
 4. Fifteen additional hours in Asian studies courses related to East Asia, including at least six hours related to Taiwan, three hours related to China, three hours related to Japan, and three hours in upper-division Asian studies courses related to East Asia or in upper-division Chinese language courses.
 5. In addition, students must complete two years of Chinese language to fulfill the foreign language requirement. Students should focus on the traditional characters used in Taiwan in these courses. Courses counted toward the foreign language requirement may not also be counted toward the major.
2. South Asia
- a. At least three hours of South Asian history.
 - b. A three-hour Asian studies course related to East Asia.
 - c. Asian Studies 378.
 - d. Fifteen additional hours in Asian studies courses related to South Asia. Six hours of upper-division coursework in Hindi, Malayalam, Sanskrit, Tamil, or Urdu language may be counted toward this requirement.
 - e. In addition, students must complete two years of Hindi, Malayalam, Sanskrit, Tamil, or Urdu to fulfill the foreign language requirement. Courses counted toward the foreign language requirement may not also be counted toward the major.

Minor for Asian studies majors: Either (1) twelve semester hours, including at least six hours of upper-division

coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Classical Archaeology

Students majoring in classical archaeology must use Greek or Latin to fulfill the foreign language requirement. Coursework counted toward the foreign language requirement may not also be counted toward the major.

Major: Thirty-six semester hours of coursework, at least twenty-one of which must be upper-division, consisting of

1. Nine hours of coursework in classical archaeology consisting of Classical Civilization 307C, 307D, or 307K; 317; and 340.
2. Three hours of approved coursework in archaeological techniques and analysis. A list of approved courses is available in the Department of Classics.
3. Three hours of foreign study approved by the classical archaeology faculty adviser, to be provided by Classical Civilization 362 or another approved course.
4. Three hours of upper-division coursework in Greek history or Roman history, chosen from topics of Ancient History and Classical Civilization 325 and 378.
5. Three hours of upper-division coursework in ancient art history, chosen from Art History 325, 327J, 327L, 327M, 327N, 327P, 327R, 362, and other approved courses in ancient art history.
6. Six hours of upper-division coursework in either Greek or Latin.
7. Nine additional hours of coursework chosen from Anthropology 304, Middle Eastern Studies 320, and the areas listed in requirements 1 through 6.

Classics

Major: Twenty-four semester hours of coursework, at least eighteen of which must be upper-division, in Latin, Greek, and classical civilization; these twenty-four hours must include at least six hours of upper-division coursework in Latin, at least six hours of upper-division coursework in Greek, and at least three hours of upper-division coursework in classical civilization. All students must complete Greek 362, Greek 365,

or Latin 365. With the approval of the Department of Classics, specific courses outside the department may be counted as courses in classical civilization.

Minor for classics majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one field of study in the University other than Latin, Greek, and classical civilization; or (2) nine semester hours of coursework beyond 507 or the equivalent in a foreign language other than Latin or Greek, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Czech Language and Culture

Major: Twenty-four semester hours in Czech language and culture, including the following eighteen hours of upper-division coursework.

1. Czech 325 and 326.
2. Czech 330 and three additional hours of Czech literature chosen from
 - a. Czech 324 (Topic 1: Crime and Punishment and Czech Writers).
 - b. Czech 324 (Topic 2: Twentieth-Century Czech Fiction).
 - c. Czech 324 (Topic 3: Milan Kundera and World Literature).
3. Six additional hours in Czech and Slavic civilization, chosen from Czech 324, Polish 324, Russian 330, and Slavic 320, 321, 324, 325, and 356.

Coursework used to fulfill the foreign language requirement may not also be counted toward the major.

Minor for Czech language and culture majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Economics

All economics majors must earn grades of at least C- in either Mathematics 408C and 408D or Mathematics 408K and 408L. Mathematics 403K and 403L (and transfer equivalents) may not be substituted for the required math courses.

Major: Twenty-eight semester hours of economics, consisting of Economics 304K, 304L, 420K, 320L, 329, 341K, and nine additional hours of upper-division coursework. At least six of the additional hours of upper-division coursework must be in courses for

which a grade of at least C- in Economics 420K is a prerequisite. Economics 420K, 320L, 329, and 341K must be completed in residence. Economics majors must take Economics 420K at least two semesters prior to completion of the degree. Students may not enroll in Economics 420K more than twice. All economics majors must earn a grade of at least C- in each course counted toward fulfillment of the major requirements. A minimum grade point average of at least 2.00 in all courses taken at the University and counted toward the major is also required.

No student may register for more than ten semester hours of economics in any one semester without approval of an undergraduate adviser in the Department of Economics.

Minor for economics majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

English

Major: Thirty-three semester hours of English, including at least twenty-four semester hours of upper-division coursework consisting of the following:

1. English 314J, 314L, or 314V.
2. English 316K.
3. An upper-division course in literature or language prior to 1630.
4. An upper-division course in literature or language from 1630 to 1830.
5. An upper-division course in literature or language from 1830 to 1940.
6. An upper-division diverse perspectives course.
7. An upper-division single- or dual-author course.
8. An upper-division research seminar.
9. Nine additional semester hours of coursework in English, including at least six semester hours of upper-division coursework.

A list of courses that may be used to fulfill requirements 3–9 is available in the English Advising Office, Parlin Hall 114, and on the Department of English Web site, <http://www.utexas.edu/cola/depts/english/>.

The student must make a grade of at least C- in each course counted toward fulfillment of the major requirements. A minimum grade point average of 2.00 in courses taken at the University and counted toward the major is also required.

Students are discouraged from taking more than six hours of coursework in English in a semester. No student may take more than nine hours of coursework in English in a semester.

Minor for English majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

Ethnic Studies

The ethnic studies program is administered through the Center for Asian American Studies and the Center for Mexican American Studies. The directors and executive committees of these centers advise students, prescribe groups of courses that fulfill content requirements, and authorize course substitutions when appropriate. Students majoring in ethnic studies must choose one of two areas of concentration and meet the requirements of that concentration as outlined below.

Asian American Studies

1. Asian American Studies 301.
2. Twenty-one semester hours, including at least eighteen hours of upper-division coursework, chosen from a list of courses approved by the Advisory Committee of the Center for Asian American Studies. This coursework must include at least one three-hour course in each of the following groups:
 - a. Culture, literature, and media studies
 - b. Economics, history, and government
 - c. Anthropology, geography, and sociology
3. The minor: Twelve semester hours, including at least six hours of upper-division coursework, in any one field of study in the University. Six of the required hours must be taken in residence.

Mexican American Studies

1. Mexican American Studies 307, *Introduction to Mexican American Cultural Studies*; or 308, *Introduction to Mexican American Policy Studies*.
2. Twenty-one semester hours of upper-division coursework in Mexican American studies, including Mexican American Studies 350 and either 361 or 362. Any upper-division Spanish course may be substituted for Mexican American Studies 350.
3. Twelve additional semester hours of coursework in Mexican American studies.

Students must use Spanish to fulfill the foreign language requirement.

European Studies

Students majoring in European studies must use one of the following modern European languages to fulfill the foreign language requirement: Czech, Danish, Dutch, French, German, Greek, Italian, Norwegian, Polish, Portuguese, Serbian/Croatian, Spanish, or Swedish. In addition, majors must complete either (1) six hours of upper-division coursework in the same language used for the foreign language requirement, or (2) six hours of coursework, consisting of at least two courses, in a second modern European language. Courses used to fulfill these two requirements will not be counted toward the major.

Major: Twenty-four semester hours of coursework in European studies, at least eighteen of which must be upper-division, consisting of the following:

1. European Studies 305, *Introduction to European Studies*.
2. European Studies 350, *Governments and Politics of Western Europe*.
3. Three hours in each of the following three areas:
 - a. European Studies 306, *Introductory Topics in European Anthropology, Geography, History, and Sociology*; or 346, *Topics in European Anthropology, Geography, History, and Sociology*.
 - b. European Studies 307, *Introductory Topics in European Culture, Literature, Art, Music, and Media*; or 347, *Topics in European Culture, Literature, Art, Music, and Media*.
 - c. European Studies 308, *Introductory Topics in European Economics, Government, Business, and Policy*; or 348, *Topics in European Economics, Government, Business, and Policy*.
4. Six additional hours of European studies coursework.
5. European Studies 375, *Capstone Research in European Studies*, in which the student prepares a thesis.

No more than nine hours of coursework counted toward the major may focus on a single country or culture. No more than three hours of lower-division coursework may be counted toward requirements 3 and 4.

European studies majors must participate in an approved study abroad program or in an approved internship in Europe. A list of approved programs is available from the European studies faculty adviser.

Minor for European studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

French

Major: Twenty-four semester hours of upper-division French, including French 320E, 322E, 326K, and 326L; French 340C, 340P, or 340T; and six hours of French courses numbered 350 or above.

Minor for French majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Geography

Major: Thirty semester hours of geography, at least eighteen of which must be upper-division, including an eighteen-hour core requirement consisting of Geography 301C and one other course in physical geography; Geography 305 and one other course in human geography; and two geography courses in methods/techniques. In addition to the core geography requirement, the student must complete at least nine semester hours in one of the following tracks: (1) geographic information science, (2) cultural geography, (3) environmental resource management, (4) general geography (designed for students who do not wish to specialize at the undergraduate level), (5) urban geography, (6) earth science, and (7) landscape ecology and biogeography. Courses used to fulfill the core geography requirement may not be counted toward the completion of a track. Lists of courses that fulfill the core geography requirement and of courses in each track are available in the Department of Geography and the Environment.

Minor for geography majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

German

Major: Twenty-four semester hours of upper-division coursework in German, consisting of (1) German 328; (2) three additional semester hours in language, chosen from German 330C, 331L, and 336W; (3) nine semester hours in literature, culture, and linguistics, chosen from German 340C, 343C, 346L, and 347L; (4) six semester hours of topic seminars, chosen from German 363K, 369, and 373; and (5) three additional semester hours in German, chosen from German 340C, 343C, 346L, 347L, 348D, 356W, 363K, 366K, 369, and 373. Eighteen of the twenty-four hours must be taken in residence.

German 149T, 249T, and 349T may not be counted toward a major in German.

Minor for German majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Government

Major: Thirty semester hours of government, at least eighteen of which must be upper-division, including at least one upper-division course from each of three of the six fields into which the department's work is divided: (1) political theory, (2) American government and politics, (3) public and comparative law, (4) public policy, (5) comparative politics, and (6) international relations.

Government majors must also complete at least three semester hours in a tools course, chosen from Government 339L, *Research Methods in Government*; 341M, *Decision Theory*; 342N, *Public Choice*; and 350K, *Statistical Analysis in Political Science*.

Students may choose to satisfy the tools course requirement by completing one of the following non-government course options; these courses may not be counted toward the semester hours and grade point average required for the major.

- a. Three hours of statistics chosen from Statistics and Scientific Computation 305 and 306 and Mathematics 316.
- b. Three hours of logic, chosen from Philosophy 313, 313K, and 313Q, and Computer Science 313K. Plan II students may use Tutorial Course 310 to meet this requirement.
- c. Six hours of upper-division coursework in one foreign language. Courses taught in English may not be used.

All government majors must earn a grade of at least C- in each course counted toward fulfillment of the major requirements. A minimum grade point average of 2.00 in courses taken at the University and counted toward the major is also required.

No more than six hours of internship coursework may be counted toward the major, including transfer credit earned in internship courses at other institutions of higher education.

No student may register for more than nine semester hours of government in one semester without the

consent of an undergraduate adviser in the Department of Government.

Minor for government majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

Greek

Major: Fifteen semester hours of upper-division coursework in Greek, including Greek 362 or 365; and nine semester hours, including at least six hours of upper-division coursework, in Latin or classical civilization or a combination of the two.

Minor for Greek majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Hebrew Language and Literature

Major: Twenty-four semester hours of upper-division coursework in Hebrew, including Hebrew 321, *Hebrew Grammar*; 322, *Introduction to Hebrew Literature*; and 325, *Advanced Conversation and Composition*. No more than six hours in Hebrew 372, *Topics in Hebrew Culture*, and 374, *Hebrew Literature in Translation*, may be counted toward the major.

Minor for Hebrew language and literature majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required twelve hours must be taken in residence.

History

Major: Thirty semester hours of history, including at least fifteen hours of upper-division coursework. At least six hours of coursework must be in United States history, at least six must be in European history, and at least six must be in Latin American, African, Asian, or Middle Eastern history. At least three hours of non–United States history must be in upper-division coursework. All history majors must take History 350L or 350R as part of their thirty semester hours.

Minor for history majors: Twelve semester hours, including at least six hours of upper-division coursework, in

any one other field of study in the University. Six of the required twelve hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

Humanities

Major: Forty-two semester hours, including at least thirty hours of upper-division coursework, arranged by contract in consultation with the humanities adviser. None of these forty-two hours may be counted toward the core curriculum or the prescribed work for the Bachelor of Arts degree.

Students normally enter the program in the sophomore or junior year. In developing the contract, the student and the adviser define objectives, central subject areas, and a general plan of study, structured in accordance with the student's interests. With the approval of the humanities adviser, the student chooses one of the following tracks.

1. *Track One*
 - a. Nine hours in a single field of study in the College of Liberal Arts.
 - b. Nine hours in one or more other fields of study in the College of Liberal Arts.
 - c. Nine hours in any field or fields outside the College of Liberal Arts.
 - d. Nine additional hours in any field or fields at the University.
 - e. Six hours of upper-division coursework in humanities, including Humanities 370. Students in the Humanities Honors Program must use Humanities 679HA and 679HB to fulfill this requirement.
2. *Track Two*
 - a. Twelve hours in a single field of study in the College of Liberal Arts.
 - b. Nine hours in a second field of study in the College of Liberal Arts.
 - c. Fifteen additional hours in any field or fields at the University.
 - d. Six hours of upper-division coursework in humanities, including Humanities 370. Students in the Humanities Honors Program must use Humanities 679HA and 679HB to fulfill this requirement.

International Relations and Global Studies

Major: Thirty-nine semester hours of coursework, at least twenty-four of which must be upper-division, consisting of the following:

1. Fifteen hours in the following five core courses in the major:
 - a. International Relations and Global Studies 301, *Introduction to International Relations and Global Studies*.
 - b. Economics 301, *Introduction to Economics*, or 304K, *Introduction to Microeconomics*. Economics 301 is preferred; 304K is allowed as an option for students who are seeking an additional major or degree that requires 304K.
 - c. Geography 305, *This Human World: An Introduction to Geography*.
 - d. World history: A three-semester-hour course in world (non–United States) history, chosen from a list of approved courses available in the advising office.
 - e. A three-semester-hour course chosen from the following: Anthropology 302, *Cultural Anthropology*; Economics 304L, *Introduction to Macroeconomics*; Radio-Television-Film 312C, *Global Media*; Sociology 302, *Introduction to the Study of Society*. Another course may be used with the approval of the faculty adviser and the associate dean for academic affairs.
2. Government 360N, *Topics in International Relations*, or another upper-division government course on international relations and global studies approved by the faculty adviser and the associate dean for academic affairs.
3. Twelve hours of upper-division coursework in one of the following tracks. Courses must be chosen from a list of approved courses available in the advising office.
 - a. Culture, Media, and the Arts
 - b. International Security
 - c. Science, Technology, and Environment
 - d. International Political Economy
4. Six hours of upper-division coursework in a single foreign language.
5. International Relations and Global Studies 378, *Capstone Research in International Relations and Global Studies*. Students seeking special honors may substitute International Relations and Global Studies 678H, *Honors Tutorial Course*, for 378.

International relations and global studies majors must participate in an approved study abroad program. A list of approved programs is available from the faculty adviser. A student who graduated from an interna-

tional high school may petition to be excused from this requirement. Documentation is required, and the petition must be approved by the faculty adviser and the associate dean for academic affairs.

Minor for international relations and global studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in one of the following fields: Asian studies; European studies; Latin American studies; Middle Eastern studies; Russian, East European, and Eurasian studies; or a cultural area approved by the faculty adviser. Six of the required twelve hours must be completed in residence.

Islamic Studies

Major: Twenty-four semester hours of coursework in Islamic studies, including eighteen hours of upper-division coursework. The coursework consists of

1. Islamic Studies 310, *Introduction to Islam*.
2. Three hours chosen from Islamic Studies 311 (*Topic 2: Judaism, Christianity, and Islam: An Introduction*), Religious Studies 305, *Introduction to the Philosophy of Religion*, Religious Studies 310, *Introduction to the Study of Religion*.
3. Nine hours in Islamic Studies 340, *Topics in Islam*.
4. Six hours in Islamic Studies 372, *Topics in Islamic Cultures*.
5. Three additional hours of upper-division coursework in Islamic studies.

Students must complete the equivalent of at least two years in Arabic, Persian, Turkish, Urdu, or Yoruba. Credit used to fulfill this requirement may also be used to fulfill the foreign language requirement.

Minor for Islamic studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required twelve hours must be taken in residence.

Italian

Major: Twenty-four semester hours of upper-division coursework in Italian, including Italian 326K, 326L, 328, and 329. Italian Civilization 360 may be counted toward this requirement.

Minor for Italian majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign lan-

guage, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Jewish Studies

Major: Twenty-seven semester hours of coursework in Jewish studies, including Jewish Studies 304M or 304N, at least three additional hours of lower-division coursework, and eighteen hours of upper-division coursework. Students must complete six hours in each of the following areas:

1. Humanities and arts: Jewish Studies 363 and comparable courses identified by the faculty adviser.
2. History and social science: Jewish Studies 364, 365, and comparable courses identified by the faculty adviser.

Students are encouraged but not required to use Hebrew or Yiddish to fulfill the foreign language requirement.

Minor for Jewish studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required twelve hours must be taken in residence.

Latin

Major: Fifteen semester hours of upper-division coursework in Latin, including Latin 324 and at least three hours of Latin 365; and nine semester hours, including at least six hours of upper-division coursework, in Greek or classical civilization or a combination of the two.

Minor for Latin majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Latin American Studies

All students must take the following five core courses in the major:

1. Latin American Studies 301.
2. Government 328L.
3. Any anthropology, geography, economics, or sociology course cross-listed with Latin American studies.

4. Any upper-division history course cross-listed with Latin American studies on colonial Latin America or any of its nations before independence.
5. Any upper-division history course cross-listed with Latin American studies on modern Latin America or any of its nations since independence.

A list of courses that meet requirements 4 and 5 is available in the Latin American studies advising office. Spanish 322K or Portuguese 341 may be substituted for either the colonial or the modern Latin American history course (requirement 4 or 5), but not for both.

In addition, all Latin American studies majors must take twenty-one semester hours in a single discipline chosen from the following: anthropology, art history, business, economics, geography, government, history, sociology, Portuguese, and Spanish. A concentration in another area may be organized with the approval of the Undergraduate Program Committee of the Teresa Lozano Long Institute of Latin American Studies. The twenty-one hours must include at least twelve hours of Latin American content coursework and at least twelve hours of upper-division coursework.

Students must complete the equivalent of at least two years in Spanish or Portuguese. Credit used to fulfill this requirement may also be used to fulfill the foreign language requirement.

Linguistics

Major: Twenty-four semester hours of coursework in linguistics, consisting of Linguistics 306, 344K, 345, 372K, 372L, and nine additional hours of upper-division coursework in linguistics. Students should consult the undergraduate adviser for information about counting other courses toward the major requirements.

Minor for linguistics majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

Middle Eastern Studies

Major: Twenty-four semester hours of coursework in Middle Eastern studies, consisting of Middle Eastern Studies 301K and 301L and eighteen hours of upper-division coursework. Up to six hours in upper-division Middle Eastern language courses that are not cross-listed with Middle Eastern studies courses may be

counted toward the major. The courses counted toward the major may include no more than fifteen hours of upper-division Middle Eastern studies courses that are cross-listed with Islamic studies courses.

Students must complete the equivalent of at least two years of a Middle Eastern language (normally Arabic, Hebrew, Persian, or Turkish). Credit used to fulfill this requirement may also be used to fulfill the foreign language requirement.

Minor for Middle Eastern studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required hours must be taken in residence.

Persian Language and Literature

Major: Twenty-four semester hours of upper-division coursework in Persian, including Persian 322K and 322L and nine hours in Persian 329, *Topics in Persian Language and Literature*.

Minor for Persian language and literature majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required hours must be taken in residence.

Philosophy

Major: Twenty-seven semester hours of philosophy, at least eighteen of which must be upper-division, including

1. Three hours of symbolic logic: Philosophy 313, 313K, or 313Q.
2. Philosophy 329K or 329L. This course may also be counted toward requirement 3 or 4 below.
3. Three hours of ancient philosophy: Philosophy 301K or 329K.
4. Three hours of early modern philosophy: Philosophy 301L or 329L.
5. Six hours chosen from Philosophy 321K, 323K, 323M, 325K, and 332.

Minor for philosophy majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University.

Six of the required hours must be taken in residence.

Portuguese

Major: Each student must complete one of the following concentrations:

1. *Portuguese:* Twenty-seven semester hours of upper-division coursework in Portuguese, consisting of (1) Portuguese 362; (2) six hours of civilization/culture or linguistics chosen from the following: Portuguese 321, 341, 350K, 364L, and Portuguese Civilization 320E or 325E (only one Portuguese civilization course may be counted toward this requirement); and (3) eighteen hours of Luso-Brazilian literature chosen from Portuguese 327K, 327L, 327M, 328, 329, 352, and 375.
2. *Spanish and Portuguese:* Thirty semester hours of upper-division coursework in Spanish and Portuguese, consisting of (1) Spanish 327G; (2) Portuguese 362; (3) nine hours of Spanish literature, consisting of Spanish 325K or 325L, Spanish 326K or 326L, and Spanish 351 or a course numbered above 351; (4) nine hours of Luso-Brazilian literature chosen from Portuguese 327K, 327L, 327M, 328, 329, 352, and 375; (5) Spanish 322K or 328; and (6) three hours of Luso-Brazilian civilization and culture chosen from the following: Portuguese 341, 350K, Portuguese Civilization 320E, 325E.

Minor for Portuguese majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Psychology

Major: Twenty-eight semester hours of psychology, at least eighteen of which must be upper-division, including Psychology 301 and 418 with a grade of at least C in each. Students may take courses from a variety of areas within the field of psychology, including clinical psychology, cognition, developmental psychology, evolutionary psychology, language, neuroscience, perception, and social psychology.

Psychology majors must earn a grade of at least C in Psychology 418 to register for upper-division psychology courses. Students may not enroll in Psychology 418 more than twice.

Psychology 357 and 359 are offered on the pass/fail

basis only; they may not be counted toward the twenty-eight hours in psychology required for the major.

Minor for psychology majors: Twelve semester hours, including at least nine hours of upper-division coursework, in any one other field of study in the University. Six of the twelve hours must be taken in residence. No more than three of the twelve hours may also be counted toward any core curriculum or prescribed work requirement of the degree.

Religious Studies

Major: Thirty semester hours of religious studies coursework, of which at least eighteen hours must be upper-division. A single course may not be counted toward more than one of the following requirements. The thirty hours of coursework must include

1. At least three semester hours in each of the following areas. A list of courses in each area is available from the religious studies adviser.
 - a. Area I: Religions of Asia.
 - b. Area II: Religions of Europe, the Middle East, and Africa.
 - c. Area III: Religions of the Americas.
 - d. Area IV: Approaches to the study of religion and comparative studies of religion.
2. *Primary area:* Six additional hours of upper-division coursework in one of the areas listed in requirement 1 above. The student should choose the primary area in consultation with the religious studies adviser.
3. Religious Studies 375S, *Advanced Seminars in Religious Studies*.

Minor for religious studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

Rhetoric and Writing

Major: Twenty-seven semester hours of coursework in rhetoric and writing, including at least eighteen hours of upper-division work, consisting of

1. Rhetoric and Writing 306, *Rhetoric and Writing*.
2. Rhetoric and Writing 321, *Principles of Rhetoric*.
3. Each of the following courses (any topic):
 - a. Rhetoric and Writing 330C, *Advanced Studies in Digital Rhetoric*.

b. Rhetoric and Writing 330D, *History of Rhetoric*.

c. Rhetoric and Writing 330E, *Rhetorical Theory and Analysis*.

4. Twelve additional semester hours in rhetoric and writing, including six hours of upper-division coursework.

Minor for rhetoric and writing majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

Russian Language and Culture

Major: Twenty-four semester hours of upper-division coursework in Russian language and culture, including Russian 324 and 325. The student must complete at least one course in each of the following areas.

1. Russian linguistics or advanced Russian: Russian 326, 369.
2. Russian literature (original texts): A topic of Russian 329.
3. Russian literature (general surveys in translation): Russian 356, 360.
4. Russian and Slavic civilization (culture, film, and folklore): Czech 324, Polish 324, Russian 330, Slavic 320, 321, 324, 325, 356.

Minor for Russian language and culture majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence. Students who plan to do graduate work in Slavic studies are encouraged to minor in Czech, Polish, or Serbian/Croatian.

Russian, East European, and Eurasian Studies

Major: Twenty-four semester hours, including at least eighteen hours of upper-division coursework, chosen from a list of courses approved by the Advisory Committee of the Program for Russian, East European, and Eurasian Studies. The coursework must include

1. Russian, East European, and Eurasian Studies 301.
2. At least one three-semester-hour course in each of the following groups. At least one of these courses must focus on an area other than European Russia, such as Central Asia, Siberia, Eastern Europe, the Baltic states, or the Caucasus.

- a. Language, literature, and culture.
- b. History, economics, and government.
- c. Sociology, geography, and anthropology.

In addition, students must complete the equivalent of at least two years in a Slavic, Central Asian, or east European language, normally Russian, Czech, Polish, or Serbian/Croatian. Credit used to fulfill this requirement may also be used to fulfill the foreign language requirement.

Minor for Russian, East European, and Eurasian studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

Scandinavian Studies

Major: Twenty-four semester hours of Scandinavian, including eighteen upper-division hours, consisting of (1) Scandinavian 302; (2) at least nine hours of coursework in language and literature chosen from Scandinavian 323, 358, 369, and 373; and (3) at least nine hours of coursework in culture and society chosen from topics of Scandinavian 327 and 335. In addition, the student must use Danish, Norwegian, or Swedish to fulfill the foreign language requirement.

Minor for Scandinavian studies majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required hours must be taken in residence.

Sociology

Major: At least twenty-seven semester hours of coursework in sociology, including Sociology 302, 317L, 317M, and 379M. At least fifteen hours must be in upper-division courses. Sociology majors must earn grades of at least C in Sociology 302, 317L, and 317M. To enroll in Sociology 317M for a second time, a student must have the consent of a sociology undergraduate adviser. Students may not enroll in Sociology 317M more than twice.

In place of Sociology 317L, students may complete one of the following alternative courses with a grade of at least C: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. If the student com-

pletes one of these courses instead of Sociology 317L, that course is counted toward the twenty-seven hours required for the major and is included in the major grade point average.

Minor for sociology majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required hours must be taken in residence.

Spanish

Major: Each student must complete one of the following concentrations.

1. *Hispanic Studies:* Twenty-seven semester hours of upper-division coursework in Spanish, consisting of (a) Spanish 327G, 327W, and six additional hours in grammar, composition, and language chosen from Spanish 345L, 346, and 367K; only one section of 367K may be counted; (b) nine hours in literature, including Spanish 351 or a course numbered above 351; and (c) Spanish 322K or 328, and three additional hours in civilization chosen from Spanish 322K, 328, 350, and 350K.
2. *Literature:* Twenty-seven semester hours of upper-division coursework in Spanish, consisting of (a) Spanish 327G, 327W, and three additional hours in grammar, composition, and language chosen from Spanish 346 and 367K; (b) twelve hours in literature, consisting of either Spanish 325K or 325L; either 326K or 326L; 351; and either 365K or 375; (c) an additional three-hour literature course numbered above 351; and (d) Spanish 322K or 328.
3. *Hispanic Linguistics:* Twenty-seven semester hours of upper-division coursework in Spanish, consisting of (a) Spanish 327G, 327W, 345L, and 346; (b) twelve hours chosen from 353, 361E, 364L, 367K, and 368L; and (c) three hours in literature, chosen from Spanish 325K, 325L, 326K, and 326L.
4. *Language Teaching:* Twenty-seven semester hours of upper-division coursework in Spanish, consisting of (a) Spanish 327G, 327W, 345L, 346, 364L, and 367K (Topic 1: *Advanced Oral Expression for Teachers*); (b) six hours in literature, including Spanish 351 or a course numbered above 351; and (c) Spanish 322K or 328.

Minor for Spanish majors: Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division

coursework. Six of the required hours must be taken in residence.

Turkish Language and Literature

Major: Twenty-four semester hours of upper-division coursework in Turkish, including Turkish 320K and 320L.

Minor for Turkish language and literature majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required hours must be taken in residence.

Urban Studies

The urban studies program is administered by the Department of Geography and the Environment.

Major: Twenty-four semester hours of coursework, consisting of Urban Studies 301, 315, and 360; Urban Studies 370 or an approved equivalent course; and twelve additional hours of upper-division coursework in urban studies.

In addition, all urban studies majors must complete Mathematics 408C or 408K and Mathematics 316 or Statistics and Scientific Computation 305 with a grade of at least C- in each. Other comparable statistics courses may be used if approved in advance. Mathematics 403K and 403L may not be counted toward this requirement.

Minor for urban studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

Women's and Gender Studies

Major: Thirty semester hours of coursework, consisting of twenty-seven hours in women's and gender studies and a three-hour research methods course. The research methods course must be chosen from a list approved by the Center for Women's and Gender Studies. Of the twenty-seven hours in women's and gender studies, eighteen must be in upper-division coursework. It is recommended that six hours be taken in women's and gender studies courses from outside liberal arts. The twenty-seven hours must include the following:

1. Women's and Gender Studies 301, *Introductory Topics in Women's and Gender Studies*.

2. Six hours in Women's and Gender Studies 340, *Cross-Cultural Topics in Women's and Gender Studies*.
3. Three hours in feminist theory, chosen from a list of courses approved by the Center for Women's and Gender Studies.
4. Women's and Gender Studies 379L, *Internship in Women's and Gender Studies*, or 360, *Research and Thesis in Women's and Gender Studies*.
5. Women's and Gender Studies 379S, *Senior Seminar*.

Minor for women's and gender studies majors: Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

BACHELOR OF ARTS, PLAN II

The Plan II Honors Program is designed to provide a broad, liberal, and challenging education for a limited number of students whose high school class standing and admission test scores indicate strong academic potential and motivation. The enrollment in Plan II is limited; admission to the program is separate from and in addition to admission to the University. Application materials and information about deadlines are available online at <http://www.bealonghorn.utexas.edu/>. Transfer students may apply for admission, but an overall grade point average of at least 3.80 is required, and it is the policy of Plan II not to consider applicants who will have earned more than thirty semester hours of college credit at the time of proposed entry into the program.

The Plan II Honors Program includes the basic coursework required of Plan I students, but much of this work is done in small sections that are restricted to Plan II students and taught by professors selected for their excellent teaching records. Additional required courses explore the humanities, the natural sciences, and the social sciences and provide considerable opportunity for individual research, writing, and speaking. The remainder of the student's program is made up of approved electives.

The academic programs of most Plan II students include thirty-six semester hours or more of elective coursework. The student may use electives to pursue a second major in the College of Liberal Arts or the College of Natural Sciences. Dual degree programs are available in conjunction with most other undergraduate colleges.

Qualified students who are accepted into both the

Plan II Honors Program and the Cockrell School of Engineering may pursue a curriculum leading to both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering. Students interested in this dual degree program must apply both to Plan II and to the Cockrell School. Further information is available from the director of Plan II and from the Office of Student Affairs in the Cockrell School.

Qualified students who are accepted into both the Plan II Honors Program and the McCombs School of Business may pursue a curriculum leading to both the Bachelor of Arts, Plan II, and the Bachelor of Business Administration. Students interested in this dual degree program must apply both to Plan II and to the McCombs School of Business. Further information is available from the director of Plan II and from the McCombs School.

A dual degree program is also available that leads to the degrees of Bachelor of Arts, Plan II, and Bachelor of Architecture. Students must apply both to Plan II and to the School of Architecture. Additional information is available from the director of Plan II and from the School of Architecture.

In addition to the following requirements, the student must fulfill the University requirements for graduation given in chapter 1 and the requirements of the College of Liberal Arts given on page 327.

SPECIAL REQUIREMENTS

Students who fail to maintain a University grade point average of at least 3.25 will be considered for academic dismissal from Plan II. All students whose grade point average falls below 3.25 but not below 2.50 will be put on academic review. Students whose grade point average falls below 2.50 at any point after their first semester in Plan II will be dismissed from the program. In addition, any student who fails one of the following required courses will be dismissed from the program: English 603A, 603B, Philosophy 610QA, 610QB, Social Science 301, Tutorial Course 302, 603A, 603B, 357, 359T, 660HA, 660HB. Students may only register for Tutorial Course 660H or 359T if their University grade point average is 3.25 or higher. All of these stipulations may be appealed and exceptions may be made on a case-by-case basis by the director of Plan II in consultation with the associate director, assistant director, and academic advisers. A student who is academically dismissed from the Plan II program is eligible to continue to enroll in the College of Liberal Arts in another academic program if the student fulfills the academic requirements for the Bachelor of Arts,

Plan I, and the scholastic standards for continuance in the University given in *General Information*. Students in scholastic difficulty should discuss their problems with a Plan II academic adviser and the director.

CHOICE OF WORK

A degree program must include at least 120 semester hours, including at least thirty-six hours of upper-division coursework. Without special permission from the director and the dean, no more than thirty-six hours in one field of study in the College of Liberal Arts or the College of Natural Sciences and no more than thirty-six hours in courses offered in any other college or school may be counted toward the degree.

Plan II students may use credit by examination to fulfill certain program requirements. More information on testing policies and credit by examination is available from a Plan II academic adviser.

Tutorial Course 302 and two semesters of Tutorial Course 357 are required. Tutorial Course 660H is required of students seeking special honors in Plan II, students pursuing the Plan II degree alone, and students writing creative theses. In exceptional situations, students completing dual degree programs may be approved by the Plan II associate director to enroll in Tutorial Course 359T, *Essay Course*, in lieu of Tutorial Course 660H. Other requirements for the Bachelor of Arts, Plan II, are outlined below. All courses offered in the Plan II Honors Program are subject to approval by the Plan II Faculty Advisory Committee; in some areas the committee will prescribe certain courses for all students in the program. Current information on these matters is available in the Plan II office.

All students must complete the University's core curriculum, described in chapter 2. The following are the specific requirements of the Plan II program. In some cases, a course that is required for the BA, Plan II, may also be counted toward the core curriculum; these courses are identified below.

1. English 603 or Tutorial Course 603. Either course also meets the English composition and humanities requirements of the core curriculum.
2. Two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
3. Students must complete four semesters or the equivalent in a single foreign language.

The foreign language requirement is the attainment of a certain proficiency, as well as the completion of a specified number of courses; however, the courses taken to gain this proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

To achieve proficiency in a foreign language as rapidly as possible, qualified students are encouraged to take intensive foreign language courses. Information about these courses is available from the departments that offer them.

Courses used to fulfill the foreign language requirement must be language courses; literature-in-translation courses, for example, may not be counted.

4. Social Science 301. This course also meets the social and behavioral sciences requirement of the core curriculum.
5. Six semester hours of non–United States history in the same geographic area.
6. Eighteen semester hours of coursework as outlined below.

To satisfy the core curriculum and the mathematics and natural science requirement of the BA, Plan II, a student may count (1) no more than twelve hours in mathematics, computer science, and statistics and scientific computation combined; and (2) no more than nine hours in any single field of study.

- a. Mathematics 310P. This course also meets the mathematics requirement of the core curriculum. Students with credit for Mathematics 408C and 408D; 408K, 408L, and 408M; or 427L are exempt from this requirement.

Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward this requirement.

Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 or 303D without degree credit to remove their deficiency.

- b. A three-hour course in logic or modes of reasoning designated for Plan II students, currently Tutorial Course 310 or a section of Philosophy 313Q.
- c. Six hours of coursework in astronomy, biology, chemistry, geological sciences, physical science, or physics. This coursework may be used to fulfill the science and technology, part I, requirement of the core curriculum.

- d. Biology 301E and Physics 321. Either of these courses may also be used to fulfill the science and technology, part II, requirement of the core curriculum. In place of Biology 301E, students may complete Biology 311C and 311D. In place of Physics 321, they may complete six hours of upper-division coursework in chemistry or physics; the following courses may not be used: Chemistry 368, 369K, 371K, 375K, and 475K, and Physics 370C.

- e. Any remaining courses needed to provide eighteen hours of work must be chosen from the following fields. No more than three hours may be in the history of science or the philosophy of science. A list of approved alternative courses (items 10 and 11) is available in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

1. Astronomy
2. Biology
3. Chemistry
4. Geological sciences
5. Marine science
6. Nutrition
7. Physical science
8. Physics
9. Mathematics, computer science, and statistics and scientific computation
10. Other alternative science courses approved by the dean
11. Approved alternative courses in history of science and philosophy of science

7. Philosophy 610Q.
8. An approved three-hour course in art history, music history, or history of theatre and dance; or a three-hour upper-division course in classical civilization, humanities, literature, or philosophy.

ELECTIVES

In addition to the core curriculum and the preceding specific requirements, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve hours of conference courses and internship courses combined as described on page 328; twelve hours of Bible; nine hours of designated coursework in air force science, military science, or naval science; nineteen hours completed on the pass/fail basis; thirty-six hours in any one field of study in

the College of Liberal Arts or the College of Natural Sciences; and thirty-six hours in any other single college or school of the University.

ORDER OF WORK

The usual order of work for students in Plan II is outlined below, although it is possible to make exceptions when there is good reason for doing so. There is some variation in the order of work for students in premedical, pre dental, and dual degree programs, for teacher certification candidates, and for students concentrating in science. Students in these areas should consult the director or an academic adviser.

SUGGESTED FOUR-YEAR PLAN

First Year

Tutorial Course 603 or English 603.

Biology 301E, Mathematics 310P, and Philosophy 313Q or Tutorial Course 310.

Six semester hours of non–United States history.

Foreign language courses.

Tutorial Course 302.

A three-semester-hour elective.

Second Year

Philosophy 610Q.

Three semester hours in mathematics or natural science.

Government 310L and 312L.

Foreign language courses.

Social Science 301.

A three-semester-hour elective.

Third and Fourth Years

Three semester hours in the visual and performing arts.

Three semester hours of humanities or courses in the history of fine arts.

Six semester hours of American history.

Six semester hours of Tutorial Course 357.

Tutorial Course 359T or 660H.

Physics 321 and three additional hours of science.

Elective courses sufficient to make a total of at least 120 semester hours. Usually only upper-division courses are approved for third- and fourth-year students.

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE²

The Bachelor of Science in Environmental Science degree program is designed for students interested in an interdisciplinary scientific perspective on environmental and sustainability issues, analysis, and management. The degree program provides the broad foundation in physical, life, and social sciences needed for a career or graduate study in environmental science and related fields such as climate change, ecology, and conservation. Students who complete the program successfully will be able to assess environmental issues critically from multiple perspectives; to perform field, laboratory, and computer analyses; and to conduct original research. The program is designed to prepare graduates for careers in local, state, and federal government laboratories and nonprofit agencies, environmental consulting firms, environmental education and outreach agencies, and universities and other research settings. The degree is offered by the Jackson School of Geosciences with a major in geological sciences, by the College of Liberal Arts with a major in geographical sciences, and by the College of Natural Sciences with a major in biological sciences. The degree programs share common prescribed work, but each major has its own specific requirements. Students may earn only one Bachelor of Science in Environmental Science degree from the University.

Students must apply for admission to the degree program after completing prerequisite coursework. To be competitive for admission, students should have a grade point average of at least 2.75. More information about admission requirements is given on page 316.

The BSEnviroSci curriculum consists of 126 semester hours of coursework. All students must complete the University's core curriculum, described in chapter 2. The specific requirements consist of prescribed work, major requirements, and electives. In some cases, a course that is required for the degree may also be counted toward the core curriculum. In addition, for the major in geographical sciences, courses used to fulfill the University core curriculum requirements or the prescribed work below may also be counted toward the major requirements where applicable.

A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills another requirement may also be used to fulfill the writing requirement if the course carries a writing flag.

The student must fulfill the University require-

2. Final approval is pending for the Bachelor of Science in Environmental Science.

ments for graduation given in chapter 1 and the requirements of the College of Liberal Arts given earlier in this chapter. Graduation requirements include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded. In addition, a grade of at least *C-* is required in each mathematics and science course specifically required by the degree.

More information about grades and the grade point average is given in *General Information*.

PRESCRIBED WORK

1. *Mathematics*: Mathematics 408C, or 408N and 408S.
2. *Chemistry*: Chemistry 301 or 301H; 302 or 302H; and 204.
3. *Physics*: Physics 317K and 117M, or another four-hour calculus-based physics sequence.
4. *Biological sciences*: Biology 311C and 311D, or 315H.
5. *Ecology*: Biology 373 and 373L, or Marine Science 320 and either 120L or 152T (Topic: *Marine Ecology*).
6. *Geological sciences*: Geological Sciences 401 or 303, 346C, and an approved geological sciences course in sustainability.
7. *Geography*: Geography 335N.
8. *Field experience*: One course in each of the following areas:
 - a. Introductory field seminar: Environmental Science 311.
 - b. Senior field/research experience: Environmental Science 371, Geography 373F, 373K.
9. *Research methods*: Environmental Science 331.
10. *Environmental and sustainability themes*: One course in each of the following thematic areas:
 - a. Environmental and sustainability policy, ethics, and history: Geography 334, 336C, 340D, 342C, 356C, 356T (approved topics), Philosophy 325C.
 - b. Geographic information systems: Geography 360G, 462K, Geological Sciences 327G.
 - c. Climates and oceans: Biology 456L, Geography 333K, 356T (approved topics), Geological Sciences 371C (approved topics), 377P, Marine Science 320, 440, 354Q, 354T, 367K. Marine Science 320 may not be used to satisfy both requirement 5 and requirement 10.
 - d. Environmental economics, sustainability, and business: Economics 304K, 330T.
11. Environmental Science 141 and 151.

ADDITIONAL PRESCRIBED WORK

1. *Writing*: Two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. *Foreign language/culture*: One of the following foreign language/culture choices:
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from a list of approved courses available in the Student Division or from the undergraduate adviser.

Courses taken to attain a certain level of proficiency in a foreign language are not electives and cannot be taken on the pass/fail basis.

3. *Social science*: Three semester hours chosen from a list of approved courses, in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum. The course must be in a field of study taught in the College of Liberal Arts and must be in a different field of study from the course used to fulfill the social and behavioral sciences requirement of the core curriculum. Courses on the approved list are primarily in anthropology, economics, geography, linguistics, psychology, and sociology, but not every course in these fields is approved. Courses that are approved to count toward any core curriculum area other than social and behavioral sciences may not be counted toward this requirement.

The list is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

4. *Cultural expression, human experience, and thought*: Three semester hours of approved coursework. The course must be in a field of study taught in the College of Liberal Arts. A

course counted toward any requirement of the core curriculum may not also be counted toward this requirement.

A list of approved courses is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

MAJOR REQUIREMENTS

The following thirty semester hours of coursework are required; these hours must include at least eighteen hours of upper-division coursework.

1. Geography 301C and 304E.
2. Twenty-four additional hours of coursework in geography, selected from Geography 301K, 333C, 333K, 334C, 334K, 335C, 335K, 335N, 338C, 339, 346, 356T (approved topics), 357, 360G, 462K, 464K, 366C, 366K, 367K, 470C, and 476T (approved topics).
3. A grade point average of at least 2.00 in the thirty hours of geography coursework required for the major.

ELECTIVES

In addition to the core curriculum, prescribed work, additional prescribed work, and major requirements, the student must complete enough elective coursework to provide the 126 semester hours required for the degree. These 126 hours may include no more than twelve hours of conference courses and internship courses combined as described on page 328; twelve hours of Bible; nine hours of designated coursework in air force science, military science, or naval science; sixteen hours completed on the pass/fail basis; thirty-six hours in any one field of study offered in the College of Liberal Arts or the College of Natural Sciences, unless major requirements state otherwise; and thirty-six hours in courses offered in any other single college or school of the University.

BACHELOR OF SCIENCE IN PSYCHOLOGY

As an alternative to the Bachelor of Arts degree, the Bachelor of Science in Psychology is designed to offer students a more extensive scientific program that may better prepare them for graduate study or employment in research fields. Students interested in mathematics-based or physiology-based areas of psychology have the

opportunity to develop more breadth and depth in the fields that complement their area of interest within psychology. To accomplish this goal, the curriculum for the Bachelor of Science in Psychology puts more emphasis on natural sciences and less on language arts.

A student may not earn both the Bachelor of Arts with a major in psychology and the Bachelor of Science in Psychology.

A total of 120 semester hours is required. Thirty-six hours must be in upper-division courses. At least sixty hours, including eighteen hours of upper-division coursework, must be completed in residence at the University; at least twenty-four of the last thirty hours must be completed in residence at the University. Provided these residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the hours required for the degree), or, with the approval of the dean, by work transferred from another institution. Up to sixteen semester hours of classroom and/or correspondence coursework may be taken on the pass/fail basis; this coursework may be counted only as electives.

Students in this degree program may pursue any of the honors programs available to Bachelor of Arts, Plan I, students. These programs are described in the section "Liberal Arts Honors Programs, Plan I," which begins on page 317.

All students must complete the University's core curriculum, described in chapter 2. The specific requirements for the Bachelor of Science in Psychology consist of prescribed work, the major, the minor, and electives. Only in the following cases may a single course be counted toward more than one requirement:

1. A course that fulfills a core curriculum requirement may also be counted toward any specific requirement of the BSPsy unless otherwise stated below.
2. Courses counted toward the prescribed work may also be counted toward the major.
3. Up to three hours of coursework counted toward the prescribed work or toward the core curriculum may also be counted toward the minor.
4. A course that fulfills another requirement may also be used to fulfill the writing requirement if the course has a writing flag or a substantial writing component.

The student must fulfill the University requirements for graduation given in chapter 1 and the requirements in the sections "Special Requirements of the College of Liberal Arts," page 327, and "Applicability of Certain Courses," pages 328–329. University graduation

requirements include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded; for this degree, the student must also earn a grade point average of at least 2.00 in courses taken at the University and counted toward the major requirement.

More information about grades and the grade point average is given in *General Information*.

PRESCRIBED WORK

1. *Writing*: Two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. *Foreign language/culture*: Students must complete one of the following options:
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-hour foreign culture courses chosen from a list available in the college's Student Division and the Department of Psychology.

Courses taken to attain the required level of proficiency in a foreign language are not electives and may not be taken on the pass/fail basis.
3. *Social science*: Three semester hours chosen from a list of approved courses, in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum. The course must be in a field of study taught in the College of Liberal Arts and must be in a different field of study from the course used to fulfill the social and behavioral sciences requirement of the core curriculum.

Courses on the approved list are primarily in anthropology, economics, geography, linguistics, psychology, and sociology, but not every course in these fields is approved. Courses that are approved to count toward any core curriculum area other than social and behavioral sciences may not be counted toward this requirement.

The list is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

4. *Mathematics and natural science*: At least twenty-five semester hours of coursework as outlined below. Some of the courses that fulfill this requirement may also be counted toward the requirements of the core curriculum.
 - a. Mathematics 408C or 408K or a more advanced calculus course.
 - b. Mathematics 316 or a more advanced mathematics course in probability.
 - c. Sixteen to eighteen hours, consisting of two of the following sequences:
 - i. Biology 311C, 311D, and 325
 - ii. Chemistry 301, 302, and 204
 - iii. Computer Science 303E, 313E, and one of the following: Computer Science 323E, 324E, 326E, 327E, 329E
 - iv. Physics 317K, 117M, 317L, and 117N; or 301, 101L, 316, and 116L; or 303K, 103M, 303L, and 103N; or 302K, 102M, 302L, and 102N.
 - d. One of the following:
 - i. Three additional hours in mathematics. Mathematics 301, 302, 303D, 303F, 316K, and 316L may not be used to fulfill this requirement.
 - ii. Three hours in biology, chemistry, computer science, or physics. Only the courses listed in requirement 4c above and more advanced courses may be used to fulfill this requirement. No course may be counted both toward requirement 4c and toward requirement 4d.
5. *Cultural expression, human experience, and thought*: Three semester hours of approved coursework. The course must be in a field of study taught in the College of Liberal Arts. A course counted toward any requirement of the core curriculum may not also be counted toward this requirement.

A list of approved courses is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

THE MAJOR

Twenty-eight semester hours of psychology, including Psychology 301 and 418, each with a grade of at least C, and at least eighteen semester hours of upper-division coursework. Of these twenty-eight hours, eighteen hours, including Psychology 418 and at least six hours of upper-division coursework, must be completed in residence at the University. Also included in these twenty-eight hours must be at least six hours in each of the following two categories. A list of the courses in each area is available at <http://www.psy.utexas.edu/> and in the Department of Psychology Undergraduate Office.

1. Clinical/social/developmental/evolutionary psychology
2. Cognition/language/neuroscience/perception

Psychology majors must earn a grade of at least C in Psychology 418 to register for upper-division psychology courses. Students may not enroll in Psychology 418 more than twice.

Psychology 357 and 359 may not be counted toward the twenty-eight hours in psychology required for the major.

THE MINOR

Twelve semester hours, including at least nine hours of upper-division coursework, in any one field of study other than psychology. Six of the twelve hours must be taken in residence. No more than three of them may also be counted toward any prescribed work requirement for the degree or toward the core curriculum.

Additional restrictions may be imposed by the academic department in which the student completes the minor; before planning to use courses to fulfill the minor requirement, the student should also consult the department or program that offers them.

ELECTIVES

In addition to the core curriculum, prescribed work, major, and minor, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve hours of conference courses and internship courses combined as described on page 328; twelve hours of Bible; nine hours of designated coursework in air force science, military science, or naval science; sixteen hours completed on the pass/fail basis; thirty-six hours in any one field of study in the College of Liberal Arts or the College of Natural Sciences (including psychology); and thirty-six hours in any other single college or school of the University.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

LIBERAL ARTS

LIBERAL ARTS: L A

LOWER-DIVISION COURSES

- 001. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various liberal arts disciplines. One lecture hour a week for one semester.
- 101L. Introduction to the Liberal Arts.** Topics related to exploring the various disciplines in the College of Liberal Arts. One lecture hour a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Some sections are offered on the letter-grade basis only; these are identified in the *Course Schedule*.
- 302. Critical Thinking Seminar.** An examination of fundamental concepts in critical thinking, including the role of intellectual virtues, an analysis of the elements of thought, Socratic thinking, and the application of universal intellectual standards. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Liberal Arts 302 and Natural Sciences 302 may not both be counted. May not be repeated for credit.
- 104R. Community Service.** Restricted to recipients of the Rapoport Service Scholarship. Tutorial course, in which students submit reports based on service learning and appropriate supplementary reading. The equivalent of one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
Topic 1: Leadership, Ethics, and Society.
Topic 2: Civic Engagement and Civic Responsibility.
- 110. Internship.** Restricted to students in the College of Liberal Arts. Students work in a professional environment and apply analysis, communication, and other academic skills to practical work. The equivalent of one lecture hour and ten hours of fieldwork a week for one semester. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Completion of at least thirty semester hours of coursework, a University grade point average of at least 2.25, and consent of instructor.

UPPER-DIVISION COURSES

- 320. Internship.** Designed to establish the academic foundations of an internship course in the liberal arts. Students integrate knowledge derived from their academic studies with the experiences gained in an internship setting. The equivalent of three lecture hours and ten hours of fieldwork a week for one semester. May be repeated for credit. Prerequisite: Completion of at least thirty semester hours of coursework, a University grade point average of at least 2.25, and consent of instructor.
- 220L, 320L, 420L, 520L, 620L. Military Leadership Internship.** Restricted to students participating in an approved ROTC program. Field leadership training program. For each semester hour of credit earned, one week of full-time fieldwork. Some programs may also require classroom hours. Offered during the summer session only. Offered on the pass/fail basis only. No more than six semester hours of this course may be counted toward any degree. Prerequisite: Upper-division standing.
- 125, 225, 325. Topics in the Liberal Arts.** Analysis of topics in the philosophy and real-life application of the liberal arts. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Additional meeting times may be required. May be repeated for credit when the topics vary. Some sections are offered on the letter-grade basis only; these are identified in the *Course Schedule*. Prerequisite: Upper-division standing. Additional prerequisites vary with the topic and are given in the *Course Schedule*.
- 131R, 231R, 331R. Research Internship.** Restricted to students in the College of Liberal Arts. For every semester hour of credit earned, three hours of fieldwork a week for one semester. May be repeated for credit, but no more than six hours may be counted toward degree requirements. Prerequisite: Upper-division standing, a grade point average of at least 2.50, and written consent of instructor.
- 371. Texas Interdisciplinary Plan Seminar.** Restricted to students in the Texas Interdisciplinary Plan. An analysis of interdisciplinary themes within the arts and sciences through reading, research, discussion, and writing. Three lecture hours a week for one semester, with additional hours to be arranged. Liberal Arts 371 and Natural Sciences 371 may not both be counted. May not be repeated for credit. Prerequisite: Upper-division standing and consent of the Texas Interdisciplinary Plan adviser.

LIBERAL ARTS HONORS

LIBERAL ARTS HONORS: LAH

LOWER-DIVISION COURSES

- 102H, 202H, 302H. The Idea of the Liberal Arts.** Restricted to students in the Freshman Honors Program in the College of Liberal Arts. An overview of the liberal arts disciplines. One, two, or three class hours a week for one semester. Additional hours may be required. Offered on the pass/fail basis only.
- 305. Liberal Arts Freshman Honors Seminar.** Restricted to students in the Freshman Honors Program in the College of Liberal Arts. Intensive small class lecture or seminar course addressing basic issues in various liberal arts disciplines. Lectures, readings, discussions, examinations. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Humanities 305 and Liberal Arts Honors 305 may not both be counted unless the topics vary.
- Topic 1: Reacting to the Past.** Liberal Arts Honors 305 (Topic 1) and 305 (Topic: *Reacting to the Past*) may not both be counted.
- 112H. The Nature of Inquiry.** Designed for students who plan to enter a liberal arts departmental honors program. Introduction to the nature of research in liberal arts disciplines. One and one-half class hours a week for one semester. Prerequisite: Forty-five semester hours of coursework and consent of the liberal arts honors director.
- 316. Studies in the Liberal Arts.** Restricted to Plan I majors in the College of Liberal Arts. Intensive lecture or seminar course addressing topics in various liberal arts disciplines. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.
- 318Q. Supervised Research.** Individual instruction. Prerequisite: Consent of the liberal arts honors program adviser.

UPPER-DIVISION COURSES

- 350. Topics in the Liberal Arts.** Restricted to Plan I majors in the College of Liberal Arts. Intensive lecture course treating topics from a variety of disciplinary perspectives, taught by instructors from various departments. Lectures, readings, discussions, examinations. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 358Q. Supervised Research.** Individual instruction. Prerequisite: A University grade point average of at least 3.50 and consent of the liberal arts honors program adviser.
- 364H. The Enlightenment.** Restricted to Plan I majors in the College of Liberal Arts. Examination of the European Enlightenment, an intellectual movement centered in eighteenth-century France and England that cut across all disciplines and arts and that looked back to the Renaissance and forward to the modern world. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 365H. Great Books in Political Philosophy.** Restricted to Plan I majors in the College of Liberal Arts. An investigation of what it means to think “philosophically” about politics and morals, by reading and interpreting primary sources of political philosophy from more than twenty centuries. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 368H. Literature of the Hispanic World.** Restricted to Plan I majors in the College of Liberal Arts. An examination of the literature and culture of Spain and Spanish America, from the Middle Ages to the present. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 369H. Comparative Legal Systems.** Restricted to Plan I majors in the College of Liberal Arts. A comparison of legal traditions from Europe, English common law, and Asia. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 370H. The Birth of the Modern World, 1400–1700.** Restricted to Plan I majors in the College of Liberal Arts. An interdisciplinary course on European culture during the age of the Renaissance and Reformation. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 371H. Classics of Greek Philosophy.** Restricted to Plan I majors in the College of Liberal Arts. A close reading of major works in the philosophy of Plato and Aristotle, supported by background reading in the history and literature of ancient Greece. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 373H. Literature of the Western World: Continuities.** Restricted to Plan I majors in the College of Liberal Arts. Tradition and innovation of form and thought in literature from Homer to the twentieth century. Three lecture hours and one discussion hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 376H. The Rise of Modern America.** Restricted to Plan I majors in the College of Liberal Arts. The end of Reconstruction (1877) to the end of the war in Vietnam (1975)—industrialization, urbanization, immigration, nuclear energy, and global reach. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

- 377H. Ideas of the Twentieth Century.** Restricted to Plan I majors in the College of Liberal Arts. Central philosophical controversies of the twentieth century: ethics, politics, comparative religions, science and human nature. Three lecture hours and one discussion hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 378H. The Natural Sciences in the Liberal Arts Context.** Restricted to Plan I majors in the College of Liberal Arts. An attempt to understand contemporary developments in science by focusing on the history and philosophy of science. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 379H. Classical Asian Civilizations.** Restricted to Plan I majors in the College of Liberal Arts. An examination of the contributions of India and China to intellectual history. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.
- 679T. Honors Thesis.** Restricted to Plan I majors in the College of Liberal Arts. Supervised research, reading, and writing of a substantial paper on an interdepartmental subject. Conference course for two semesters. Offered on the letter-grade basis only. Prerequisite: For Liberal Arts Honors 679TA, upper-division standing, a grade point average of at least 3.50, and written consent of the director of the Liberal Arts Honors Program; for 679TB, Liberal Arts Honors 679TA.

DEPARTMENT OF AFRICAN AND AFRICAN DIASPORA STUDIES

AFRICAN AND AFRICAN AMERICAN STUDIES: AFR

LOWER-DIVISION COURSES

- 301. African American Culture.** Survey of African American culture in the United States. Three lecture hours a week for one semester.
- 310K. Introduction to Modern Africa.** Same as History 310. Introduction to modern Africa, with focus on colonial and post-colonial development in political organization, economics, sociolinguistics, and literature. Three lecture hours a week for one semester.
- 310L. Introduction to Traditional Africa.** Same as History 311K. Introductory, interdisciplinary course on the peoples and cultures of Africa. Three lecture hours a week for one semester.
- 317. Special Topics in African and African American Issues.** Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Music of African Americans.** Same as Music 307 (Topic 1: *Music of African Americans*). Three lecture hours a week for one semester, with one laboratory hour a week as required.
- Topic 5: Africa: A Visual Journey.** Same as History 306N (Topic 8: *Africa: A Visual Journey*). A broad introduction to key themes in African history and culture, from earliest times to the postindependence era. Designed around the video series *The Africans*. Three lecture hours a week for one semester.
- 317C. Special Topics in African Studies.** Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: The United States and Africa.** Same as History 317L (Topic 7: *The United States and Africa*). History of political, economic, and cultural relations between the United States and Africa from the early origins of the slave trade to the present. African and African American Studies 317 (Topic: *United States and Africa*) and 317C (Topic 1) may not both be counted. Partially fulfills legislative requirement for American history.
- 317D. Special Topics in Black United States Studies.** Three lecture hours or two lecture hours and one discussion hour a week for one semester, with one additional laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Introduction to African American History.** Same as History 317L (Topic 3: *Introduction to African American History*). Three lecture hours a week for one semester. African and African American Studies 317 (Topic: *Introduction to African American History*) and 317D (Topic 1) may not both be counted. Partially fulfills legislative requirement for American history.
- Topic 2: Anthropology of Race and Ethnicity: An Introduction.** Same as American Studies 315D and Anthropology 310L (Topic 2: *Anthropology of Race and Ethnicity: An Introduction*). Examines the social importance of race and ethnicity both in America and around the world. African and African American Studies 317D (Topic 2) and American Studies 315 (Topic: *Anthropology of Race and Ethnicity*) may not both be counted.
- 317E. Special Topics in the African Diaspora.** Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

317F. Special Topics in Black Expressive Culture. Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: African American Literature and Culture. Same as English 314V (Topic 1: *African American Literature and Culture*). Introduces key tools of literary analysis through the study of African American literature. Drawn from a variety of genres and periods, the texts indicate the range of African American experiences and how those experiences are influenced by issues such as class, ethnicity, gender, sexuality, and race. African and African American Studies 317 (Topic 1: *African American Literature and Culture*) and 317F (Topic 1) may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in African and African American Studies. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the John L. Warfield Center for African and African American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

320. Problems in African and African American Studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Introduction to the Study of African American English. Same as Linguistics 325. African American English: evolution, contemporary styles, comparison with other ethnic dialects; attitudes toward African American English, effects in education, controversy about dialect differences and intellectual abilities.

Topic 3: Race and the Criminal Justice System. Same as Anthropology 324L (Topic 38: *Race and the Criminal Justice System*). Social classes, ethnic and racial groups, and their distribution in the urban landscape.

321. The African Diaspora in the Americas. Same as Anthropology 324L (Topic 9: *The African Diaspora in the Americas*). Black cultures and societies in the New World, and their African heritage. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

321L. Sociology of Education. Same as Sociology 321L and Women's and Gender Studies 345 (Topic 23: *Sociology of Education*). Education as a societal institution, with emphasis on the United States educational system: how the system works; the effects of the system; recent changes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

321M. Race and Popular American Culture. Same as Radio-Television-Film 359 (Topic 2: *Race and Popular American Culture*) and Sociology 321M. The intersection of African American racial politics and the changing popular media industry, especially film, music, and television. Three lecture hours a week for one semester. African and African American Studies 321M and Sociology 321K (Topic: *Race and Popular American Culture*) may not both be counted. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing.

322. Introduction to African Prehistory. Same as Anthropology 324L (Topic 7: *Introduction to African Prehistory*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

323. The Male in African American Culture and Society. Same as Anthropology 324L (Topic 18: *The Male in African American Culture and Society*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in African and African American Studies. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the John L. Warfield Center for African and African American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

345. History of East Africa. Same as History 359P. A survey of the history of Kenya, Tanzania, and Uganda from prehistoric times to the postindependence era. Three lecture hours a week for one semester. African and African American Studies 345 and History 366N (Topic: *History of East Africa*) may not both be counted. Prerequisite: Upper-division standing.

345C. History of West Africa. Same as History 359R. A history of the West Africa region: the rise and fall of kingdoms, relations with Europe and Asia, the great revolutions of the nineteenth century, colonial administration, decolonization, and the search for economic development and political stability since independence. Three lecture hours a week for one semester. African and African American Studies 345C and History 366N (Topic: *History of West Africa*) may not both be counted. Prerequisite: Upper-division standing.

357C. African American History to 1860. Same as American Studies 321E and History 357C. Review of West African origins; New World settlement patterns, social life, and culture; discussion of the Atlantic slave trade, the development of capitalism and plantation slavery, and the origins of racism. Three lecture hours a week for one semester. American Studies 321 (Topic: *African American History to 1860*) and African and African American Studies 357C may not both be counted. Partially fulfills the legislative requirement in American History. Prerequisite: Upper-division standing.

- 357D. African American History since 1860.** Same as American Studies 321F, History 357D, and Urban Studies 353 (Topic 1: *African American History since 1860*). Survey of the history of African Americans in the United States from 1860 to the present: Emancipation, Reconstruction politics, migration and urbanization, and the evolution of African American culture; kinds of sources and methods valuable for analyzing African American life and culture. Three lecture hours a week for one semester. African and African American Studies 357D and American Studies 321 (Topic: *African American History Since 1860*) may not both be counted. Partially fulfills legislative requirement in American History. Prerequisite: Upper-division standing.
- 358C. Sociology of Entrepreneurship.** Same as Management 337 (Topic 16: *Sociology of Entrepreneurship*) and Sociology 358C. Examines the creation of entrepreneurial activities in the United States, including those of all racial and ethnic groups. Three lecture hours a week for one semester. African and African American Studies 358C and Sociology 321K (Topic: *Sociology of Entrepreneurship*) may not both be counted. Prerequisite: For management majors, one of the following courses with a grade of at least C, or two of the following courses with a grade of at least C in each: Management 336, 336H, Operations Management 335 (or Management 335), Operations Management 335H (or Management 335H); for others, sixty semester hours of college coursework.
- 359N. History of Africa since 1800.** Same as History 359N. Development of sub-Saharan Africa from the end of the slave trade to independence. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 361K. Performing Race: African American Literary Performance.** Study of the criticism and performance of modern African American drama. Three lecture hours a week for one semester. African and African American Studies 361K and 374 (Topic: *Performance of Dramatic Literature: African American Writers*) may not both be counted. Prerequisite: Upper-division standing.
- 365. Politics in Contemporary Africa.** Same as Government 365N (Topic 1: *Politics in Contemporary Africa*). Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 373. Independent Research.** Supervised individual research on a problem in African and African American studies. May be repeated for credit. Prerequisite: Upper-division standing, African and African American Studies 301, and written consent of the supervising faculty member; consent forms are available in the center office.
- 374. Special Topics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: African American Family.** Same as Social Work 360K (Topic 2: *African American Family*) and Women's and Gender Studies 340 (Topic 3: *African American Family*).
- Topic 5: States and Peasants.** Same as Government 365N (Topic 5: *States and Peasants*). Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 7: Black Movements in the Caribbean.** Same as History 350L (Topic 6: *Black Movements in the Caribbean*) and Latin American Studies 366 (Topic 4: *Black Movements in the Caribbean*). Prerequisite: Upper-division standing.
- Topic 10: Black Perspectives in Jazz.** Same as Music 342 (Topic 5: *Black Perspectives in Jazz*). Prerequisite: Upper-division standing.
- Topic 11: African American Performance History.** Prerequisite: Upper-division standing and consent of instructor.
- Topic 14: African Cinemas.** Prerequisite: Upper-division standing and consent of instructor.
- Topic 16: Racial and Ethnic Relations.** Contemporary racial and ethnic problems; emphasis on minority groups in the United States.
- Topic 25: Autobiography: A Modern Literary Species.** Same as Comparative Literature 323 (Topic 3: *Autobiography: A Modern Literary Species*) and Middle Eastern Studies 322K (Topic 25: *Autobiography: A Modern Literary Species*). Only one of the following may be counted: African and African American Studies 374 (Topic 25), English 379N (Topic 5: *Autobiography: A Modern Literary Species*), Middle Eastern Languages and Cultures 374 (Topic 2: *Autobiography: A Modern Literary Species*). Prerequisite: Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing.
- Topic 26: Self-Revelation in Women's Writing.** Same as Comparative Literature 323 (Topic 4: *Self-Revelation in Women's Writing*), Middle Eastern Studies 322K (Topic 26: *Self-Revelation in Women's Writing*), and Women's and Gender Studies 340 (Topic 14: *Self-Revelation in Women's Writing*). Only one of the following may be counted: African and African American Studies 374 (Topic 26), English 376L (Topic 9: *Self-Revelation in Women's Writing*), Middle Eastern Languages and Cultures 374 (Topic 3: *Self-Revelation in Women's Writing*). Prerequisite: Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing.
- Topic 27: Race and Sport in African American Life.** Same as Anthropology 324L (Topic 26: *Race and Sport in African American Life*) and Kinesiology 352K (Topic 6: *Race and Sport in African American Life*). Prerequisite: Upper-division standing.
- 374C. Advanced Topics in African Studies.** Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Nigeria: A History of Nation-Building. Same as History 350L (Topic 35: *Nigeria: A History of Nation-Building*). African and African American Studies 374 (Topic 18: *Nigeria: A History of Nation-Building*) and 374C (Topic 1) may not both be counted. Prerequisite: Upper-division standing.

Topic 2: Archaeology of African Thought. Same as Anthropology 324L (Topic 24: *Archaeology of African Thought*). Archaeological, historical, and ethnographic data as they relate to the foundations of contemporary African and African American societies. African and African American Studies 374 (Topic 22: *Archaeology of African Thought*) and 374C (Topic 2) may not both be counted. Prerequisite: Upper-division standing.

374D. Advanced Topics in Black United States Studies. Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Race and Beauty in American Culture. Same as History 350R (Topic 11: *Race and Beauty in American Culture*). African and African American Studies 374D (Topic 1) and History 350L (Topic 52: *Race and Beauty in American Culture*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 2: History of Black Entrepreneurship in the United States. Same as History 350R (Topic 12: *History of Black Entrepreneurship in the United States*). African and African American Studies 374D (Topic 2) and History 350L (Topic 53: *History of Black Entrepreneurship in the United States*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 3: Slavery in the United States. Same as History 350R (Topic 10: *Slavery in the United States*). Only one of the following may be counted: African and African American Studies 374 (Topic 21: *Slavery in the United States*), 374D (Topic 3), History 350L (Topic 39: *Slavery in the United States*). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 4: African Americans and the Media. Same as Journalism 340C (Topic 2: *African Americans and the Media*). African and African American Studies 374 (Topic 23: *African Americans and the Media*) and 374D (Topic 4) may not both be counted. Prerequisite: Upper-division standing.

Topic 5: Race, Sport, and Identity. Same as Sociology 322R. Explores the sociological significance of sport in relation to the construction of racialized identities. Focuses primarily but not exclusively on the black experience in sport, and examines the changing meanings given to sport throughout the twentieth century. Only one of the following may be counted: African and African American Studies 374 (Topic: *Race, Sport, and Identity*), 374D (Topic 5), Sociology 321K (Topic 8: *Race, Sport, and Identity*). Prerequisite: Upper-division standing and Sociology 302.

Topic 6: Black Americans and the South. Same as American Studies 370 (Topic 31: *Black Americans and the South*). Traces the post-Reconstruction conversation among black Americans over how to live in the South and make sense of its history of widespread racial violence, lynching, de jure segregation, civil rights struggles, and their legacies. Sources include authors such as Jean Toomer, Tayari Jones, and Natasha Trethewey, and fiction, speeches, newspaper accounts, photographs, paintings, poetry, and popular music, including jazz, blues, rock, rhythm and blues, and hip hop and rap. African and African American Studies 374 (Topic: *Black Americans and the South*) and 374D (Topic 6) may not both be counted. Prerequisite: Upper-division standing.

Topic 7: Slavery across Genres. Same as American Studies 370 (Topic 32: *Slavery across Genres*). Uses non-fictional and fictional narrative accounts of slavery in the United States to examine the political, social, cultural, economic, and psychological aspects of the institution of slavery at different historical moments. Sources may include authors such as Frederick Douglass, Toni Morrison, William Faulkner, Harriet Beecher Stowe, and Edward P. Jones; graphic novels; conceptual art; court records; and bills of sale. Prerequisite: Upper-division standing.

Topic 8: Psychology of Race and Racism. Same as Educational Psychology 362 (Topic 6: *Psychology of Race and Racism*). Educational Psychology 362 (Topic: *Psychology of Race and Racism*) and African and African American Studies 374D (Topic 8) may not both be counted. Prerequisite: Upper-division standing.

374E. Advanced Topics in the African Diaspora. Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: America, France, and the Problem of Race. Same as American Studies 370 (Topic 16: *America, France, and the Problem of Race*). How France and the United States address the contradictions between freedom and slavery, as well as each country's contributions to the development of ideologies of race. Prerequisite: Upper-division standing.

Topic 2: The Politics of Race and Violence in Brazil. Same as Anthropology 324L (Topic 37: *The Politics of Race and Violence in Brazil*) and Latin American Studies 324L (Topic 14: *The Politics of Race and Violence in Brazil*). Prerequisite: Upper-division standing.

- 374F. Advanced Topics in Black Expressive Culture.** Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: African American Literature through the Harlem Renaissance. Same as English 376R. A survey of African American writing, including autobiography, poetry, fiction, and drama. Authors may include Douglass, Jacobs, Frances E. W. Harper, Chestnutt, Du Bois, Hurston, and Hughes. Only one of the following may be counted: African and African American Studies 374 (Topic 2: *African American Literature through the Harlem Renaissance*), 374F (Topic 1), English 376M (Topic 1: *African American Literature through the Harlem Renaissance*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 2: African American Literature since the Harlem Renaissance. Same as English 376S. The development of African American poetry, drama, fiction, and nonfiction since the Harlem Renaissance. Authors may include Wright, Ellison, Baldwin, Malcolm X, Baraka, Morrison, Shange, and Charles Johnson. Only one of the following may be counted: African and African American Studies 374 (Topic 3: *African American Literature since the Harlem Renaissance*), 374F (Topic 2), English 376M (Topic 2: *African American Literature, 1940 to Present*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 3: Colonial and African-British Literature. Only one of the following may be counted: English 376L (Topic 4: *Colonial and African-British Literature*), African and African American Studies 374 (Topic 12: *Colonial and African-British Literature*), 374F (Topic 3). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 4: Contemporary Women Authors. Same as English 370W (Topic 2: *Contemporary Women Authors*) and Women's and Gender Studies 345 (Topic 15: *Contemporary Women Authors*). African and African American Studies 374 (Topic 13: *Contemporary Women Authors*) and 374F (Topic 4) may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 5: History of the Hip-Hop Generation. Same as History 373C. Explores the evolution of the hip-hop generation through the lens of music, culture, and politics of black America after the civil rights movement. Three lecture hours a week for one semester. African and African American Studies 374F (Topic 5) and History 365G (Topic: *History of the Hip-Hop Generation*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing, and concurrent enrollment in Curriculum and Instruction 373.

Topic 6: Writing Slavery. Same as English 376M (Topic 3: *Writing Slavery*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 7: Caribbean Literature. Same as Comparative Literature 323 (Topic 6: *Caribbean Literature*) and English 360L (Topic 2: *Caribbean Literature*). English 379N (Topic: *Caribbean Literature*) and African and African American Studies 374F (Topic 7) may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

- 375. Community Internship.** Internship in a community organization that facilitates the economic, political, and social development of Austin's African American community. Students participate in research projects under the supervision of a faculty member. Approximately eight hours of fieldwork a week for one semester. Additional lecture hours may be required. Prerequisite: Upper-division standing, African and African American Studies 301, and consent of instructor.

- 376. Senior Seminar.** Restricted to African and African diaspora studies majors. A capstone course focusing on black intellectual traditions. Three lecture hours a week for one semester. Prerequisite: African and African American Studies 301, completion of seventy-five semester hours of coursework, and consent of instructor.

- 679H. Honors Tutorial Course.** For honors candidates in African and African diaspora studies. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Prerequisite: For 679HA, admission to the African and African American Studies Honors Program no later than two semesters before expected graduation; for 679HB, African and African American Studies 679HA. A University grade point average of at least 3.00 and a grade point average in African and African American studies of at least 3.50 are required for admission to the African and African American Studies Honors Program.

YORUBA: YOR

LOWER-DIVISION COURSES

- 506. First-Year Yoruba I.** Not open to native speakers of Yoruba. Standard Yoruba of southwest Nigeria. Five lecture hours a week for one semester.
- 507. First-Year Yoruba II.** Not open to native speakers of Yoruba. Five lecture hours a week for one semester. Prerequisite: Yoruba 506 or the equivalent.

- 312K. Second-Year Yoruba I.** Oral expression, reading, and comprehension. Three lecture hours a week for one semester. Prerequisite: Yoruba 507 with a grade of at least C.
- 312L. Second-Year Yoruba II.** Oral expression, reading, and comprehension. Three lecture hours a week for one semester. Prerequisite: Yoruba 312K with a grade of at least C.

DEPARTMENT OF AMERICAN STUDIES

AMERICAN STUDIES: AMS

LOWER-DIVISION COURSES

- 310. Introduction to American Studies.** Same as History 315G. An interdisciplinary introduction to the historical exploration of American culture. Three lecture hours a week for one semester. American Studies 310 and History 306N (Topic 2: *Introduction to American Studies*) may not both be counted. Partially fulfills legislative requirement for American history.
- 311S. Introductory Seminar in American Studies.** Writing, reading, and discussion on an American studies topic, with emphasis on the evaluation of information, analytical reading, and critical writing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 315. Topics in American Life.** Interdisciplinary exploration of American cultural and intellectual life. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 315C. Movies Go To War, from World War I to Vietnam.** Same as Germanic Civilization 311 (Topic 2: *Movies Go To War, World War I to Vietnam*). Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 315 (Topic: *Movies Go To War, World War I to Vietnam*); 315C; Science, Technology, and Society 311 (Topic: *Movies Go To War, World War I to Vietnam*).
- 315D. Anthropology of Race and Ethnicity: An Introduction.** Same as Anthropology 310L (Topic 2: *Anthropology of Race and Ethnicity: An Introduction*) and African and African American Studies 317D (Topic 2: *Anthropology of Race and Ethnicity: An Introduction*). Examines the social importance of race and ethnicity both in America and around the world. Three lecture hours or two lecture hours and one discussion hour a week for one semester. American Studies 315 (Topic: *Anthropology of Race and Ethnicity*) and 315D may not both be counted.
- 315E. Introduction to Historical Archaeology.** Same as Anthropology 310L (Topic 4: *Introduction to Historical Archaeology*). A comprehensive survey of the methods, theories, and discoveries of historical archaeology, an interdisciplinary field that draws its theoretical and methodological foundations from anthropology, archaeology, and history. Three lecture hours or two lecture hours and one discussion hour a week for one semester. American Studies 315 (Topic: *Introduction to Historical Archaeology*) and 315E may not both be counted.
- 315F. Native American Literature and Culture.** Same as English 314V (Topic 5: *Native American Literature and Culture*). Studies Native American literature from different regions and cultures and considers this literary tradition in tribal national and United States national contexts. Three lecture hours a week for one semester. American Studies 315 (Topic: *Native American Literature and Culture*) and 315F may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in American Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321. Studies in American Societies.** A study of America through its geography, language, government, or cultures. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Native American Cultures of the Greater Southwest.** Same as Anthropology 322M (Topic 3: *Native American Cultures of the Greater Southwest*). Prerequisite: Upper-division standing.
- Topic 2: Language and Speech in American Society.** Same as Anthropology 325N, Linguistics 373 (Topic 2: *Language and Speech in American Society*), and Sociology 352M (Topic 3: *Language and Speech in American Society*). Prerequisite: Upper-division standing, and Anthropology 302, 305, 307, or Linguistics 306.
- Topic 3: Native American Cultures North of Mexico.** Same as Anthropology 336L. Prerequisite: Upper-division standing and Anthropology 302.
- Topic 4: America and the Holocaust.** Same as History 356R and Jewish Studies 365 (Topic 1: *America and the Holocaust*). Only one of the following may be counted: American Studies 321 (Topic 4), 370 (Topic: *America and the Holocaust*), History 350L (Topic: *America and the Holocaust*), 365G (Topic: *America and the Holocaust*), Jewish Studies 361 (Topic: *America and the Holocaust*), Liberal Arts Honors 350 (Topic: *America and the Holocaust*). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 321E. African American History to 1860.** Same as African and African American Studies 357C and History 357C. Review of West African origins; New World settlement patterns, social life, and culture; and discussion of the Atlantic slave trade, the development of capitalism and plantation slavery, and the origins of racism. Three lecture hours a week for one semester. American Studies 321 (Topic: *African American History to 1860*) and 321E may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

- 321F. African American History since 1860.** Same as African and African American Studies 357D, History 357D, and Urban Studies 353 (Topic 1: *African American History since 1860*). Survey of the history of African Americans in the United States from 1860 to the present: Emancipation, Reconstruction politics, migration and urbanization, and the evolution of African American culture; kinds of sources and methods valuable for analyzing African American life and culture. Three lecture hours a week for one semester. American Studies 321 (Topic: *African American History since 1860*) and 321F may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 321G. Native Americans in Texas.** Same as Anthropology 326C. Studies the history of Native Americans in Texas using concepts and evidence from anthropology, history, archaeology, historical geography, and Native American studies. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 321 (Topic: *Native Americans in Texas*), 321G, Anthropology 324L (Topic: *Native American in Texas*). Prerequisite: Upper-division standing.
- 322. Studies in American Writing.** A study of America through its literature, popular fiction, journalism, and folklore. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.
- Topic 3: Sport, Fitness, and Mass Media.** Same as Kinesiology 352K (Topic 5: *Sport, Fitness, and Mass Media*).
- 325. Studies in American Art.** An analysis of the social and aesthetic context of the arts in America. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.
- Topic 2: American Painting to 1860.** Same as Art History 374 (Topic 1: *American Painting to 1860*).
- Topic 3: American Painting, 1860–1913.** Same as Art History 374 (Topic 2: *American Painting, 1860–1913*).
- 327. Studies in Religion and Philosophy.** Interdisciplinary exploration of religion and philosophy in American culture. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites may vary with the topic.
- 328. American Culture and Social Life since 1945.** Same as History 356N. Study of postwar American culture and society, using novels, plays, movies, music, television, journalism, political thought, and social criticism; special attention to the 1950s. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 329. Environmental History of North America.** Same as History 350R (Topic 7: *Environmental History of North America*) and Urban Studies 353 (Topic 5: *Environmental History of North America*). The history of humanity's influence on the plants, animals, microlife, soils, water, and air of North America, and vice versa, from the arrival of the proto-Indians to the contemporary environmental crisis. Three lecture hours a week for one semester. American Studies 329 and History 350L (Topic 4: *Environmental History of North America*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in American Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330. Modernism in American Design and Architecture.** Same as Art History 367 (Topic 3: *Modernism in American Design and Architecture*). A historical survey of artifacts, buildings, and urban environments, focusing on responses to machine-age civilization. Three lecture hours a week for one semester. Prerequisite: For art history majors, Art History 302; for visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.
- 355. Main Currents of American Culture to 1865.** Same as History 355N. Traces the development of American culture and society from the colonial era until the end of the Civil War. Major themes include racial conflict, religion, slavery, the development of democracy, and cultural reform. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 356. Main Currents of American Culture since 1865.** Same as History 356K. Traces the development of American culture and society from the end of the Civil War to the present. Major themes include racial conflict, pluralism, religion, urban development and reform, modernism, government centralization, cultural radicalism, and the rebirth of conservatism. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 358. The United States, 1920–1941.** Same as History 355M. A history of political, economic, diplomatic, military, social, and cultural developments in the United States between the two world wars. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

370. Seminar in American Culture. Interdisciplinary seminar on themes in American life. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: American Cultural History of Alcohol and Drugs. Same as History 350R (Topic 5: *American Cultural History of Alcohol and Drugs*). Study of the American use and perception of drugs, including alcohol, and how they have changed over time. Examines significant shifts in American attitudes toward individualism and social control. American Studies 370 (Topic 1) and History 350L (Topic 2: *American Cultural History of Alcohol and Drugs*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 6: Gender-Based Discrimination. Same as Government 357M (Topic 1: *Gender-Based Discrimination*) and Women's and Gender Studies 345 (Topic 8: *Gender-Based Discrimination*). Studies the substance of laws that relate to gender-based roles, and the participation of women in the legal process. Prerequisite: Upper-division standing, a University grade point average of at least 3.50, six semester hours of lower-division coursework in government, and consent of department received prior to registering.

Topic 10: Leadership in America. Same as Government 370L (Topic 2: *Leadership in America*) and Women's and Gender Studies 345 (Topic 34: *Leadership in America*). Introduction to the concepts of leadership and the application of those concepts in public and political leadership. Prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, a University grade point average of at least 3.50, and consent of department received prior to registering.

Topic 13: The Culture of Cities. Same as Geography 356T (Topic 1: *The Culture of Cities*) and Urban Studies 354 (Topic 4: *The Culture of Cities*). Examines the social, geographical, and cultural evolution of the United States from a rural and small-town society to an urban and suburban nation. Subjects may include the segregation of public and private space; the formation of urban subcultures organized by gender, work, race, religion, and sexuality; social and spatial divisions between rich and poor and native-born and immigrant; and the increasing importance of "cultural capital" in reshaping urban politics and in conflicts over revitalization and gentrification. Prerequisite: Upper-division standing.

Topic 16: America, France, and the Problem of Race. Same as African and African American Studies 374E (Topic 1: *America, France, and the Problem of Race*). How France and the United States address the contradictions between freedom and slavery, as well as each country's contributions to the development of ideologies of race. Prerequisite: Upper-division standing.

Topic 17: Postmodern America. Postmodernity considered as a means of understanding major cultural transformations since 1945 in areas such as architecture, art, criticism, film, journalism, literature, music, philosophy, photography, and political thought. Prerequisite: Upper-division standing.

Topic 18: The Beats and American Culture, 1945 to 1990. Examines writers such as Kerouac, Ginsberg, and Burroughs during the immediate post-World War II era. Considers their historical origins, their representations of society and culture, and their influence from the 1960s through the 1980s on writers and artists in a variety of fields. Prerequisite: Upper-division standing.

Topic 19: The Cold War and American Childhood. Uses childhood as a focus for studying the cultural and political climate of the post-World War II era. Prerequisite: Upper-division standing.

Topic 20: Children's Literature and American Culture. Examines changes in American childhood using children's literature that covers several different time periods. Prerequisite: Upper-division standing.

Topic 21: Society, Culture, and Politics in the 1960s. Various social and cultural movements of the 1960s, including civil rights, the New Left, black power and other ethnic nationalisms, the peace movement, the black arts movement, guerrilla theater, psychedelic arts and the counterculture, women's liberation, gay liberation, the environmental movement, and the conservative movement. Prerequisite: Upper-division standing.

Topic 22: Deviance in America: An Alternative History. Same as History 350R (Topic 6: *Deviance in America: An Alternative History*). Examines movements and individuals outside the conventional mainstream and how they reflect American ideals and dilemmas. American Studies 370 (Topic 22) and History 350L (Topic 61: *Deviance in America: An Alternative History*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 23: Memory and Place. Same as Geography 356T (Topic 2: *Memory and Place*). Explores how cultural memory is produced in its various forms, from memorials, public art, and commodities to popular culture, rituals, and museums, and how public remembering is inevitably anchored in specific geographic places. Prerequisite: Upper-division standing.

Topic 24: Comparative Cultures of Beauty. Same as Asian American Studies 320 (Topic 2: *Comparative Cultures of Beauty*) and Women's and Gender Studies 345 (Topic 45: *Comparative Cultures of Beauty*). Examines the intersections of race, class, and culture in contemporary and historical constructions of beauty in American society; and how class, gender, and race may shape definitions of beauty. Prerequisite: Upper-division standing.

Topic 25: Immigrants, Amusements, and Consumer Culture. Same as Asian American Studies 320 (Topic 1: *Immigrants, Amusements, and Consumer Culture*). Studies the growth of consumer capitalism as it coincides with the migration and integration of immigrants into American society. Examines the emergence of consumer culture as a force that defines modern American society and traces its developments and current manifestations throughout the world. Prerequisite: Upper-division standing.

Topic 26: American Food. Same as Women's and Gender Studies 345 (Topic 41: *American Food*). Studies diverse American food cultures from a humanities perspective, exploring connections between global, national, and local communities. Uses scholarship in the field of food studies as well as cookbooks, novels, poetry, photographs, songs, documentaries, and oral histories to investigate the past and present of American food communities. Prerequisite: Upper-division standing.

Topic 27: Nature and Gender in America. Same as Women's and Gender Studies 345 (Topic 42: *Nature and Gender in America*). Study of the connections between nature and gender in American national narratives. Explores how Americans of differing classes, races, genders, sexual orientations, and ages have shaped and experienced changing ideas of America, wilderness, domestication, and society over time and in different regions of the country. Prerequisite: Upper-division standing.

Topic 28: Animals and American Culture. Same as History 350R (Topic 9: *Animals and American Culture*) and Women's and Gender Studies 345 (Topic 43: *Animals and American Culture*). Explores the role of animals in American history, culture, and society. American Studies 370 (Topic 28) and History 350L (Topic 60: *Animals and American Culture*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 29: Women Radicals and Reformers. Same as Women's and Gender Studies 345 (Topic 44: *Women Radicals and Reformers*). Traces traditions of women's radical activism and reform beginning with the Enlightenment and the American Revolution and continuing to the present, with concentration on the twentieth century. Prerequisite: Upper-division standing.

Topic 30: Women in Postwar America. Same as History 350R (Topic 8: *Women in Postwar America*) and Women's and Gender Studies 345 (Topic 37: *Women in Postwar America*). American Studies 370 (Topic 30) and History 350L (Topic 58: *Women in Postwar America*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 31: Black Americans and the South. Same as African and African American Studies 374D (Topic 6: *Black Americans and the South*). Traces the post-Reconstruction conversation among black Americans over how to live in the South and make sense of its history of widespread racial violence, lynching, de jure segregation, civil rights struggles, and their legacies. Sources include authors such as Jean Toomer, Tayari Jones, and Natasha Trethewey, and fiction, speeches, newspaper accounts, photographs, paintings, poetry, and popular music, including jazz, blues, rock, rhythm and blues, and hip hop and rap. American Studies 370 (Topic 31) and African and African American Studies 374 (Topic: *Black Americans and the South*) may not both be counted. Prerequisite: Upper-division standing.

Topic 32: Slavery across Genres. Same as African and African American Studies 374D (Topic 7: *Slavery across Genres*). Uses nonfictional and fictional narrative accounts of slavery in the United States to examine the political, social, cultural, economic, and psychological aspects of the institution of slavery at different historical moments. Sources may include authors such as Frederick Douglass, Toni Morrison, William Faulkner, Harriet Beecher Stowe, and Edward P. Jones; graphic novels; conceptual art; court records; and bills of sale. Prerequisite: Upper-division standing.

372. Conference Course. Supervised individual study of selected subjects in American studies. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

679H. Honors Tutorial Course. Individual readings and conferences in connection with an original research paper. Prerequisite: For 679HA, upper-division standing and admission to the American Studies Honors Program; for 679HB, American Studies 679HA.

DEPARTMENT OF ANTHROPOLOGY

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ANTHROPOLOGY: ANT

LOWER-DIVISION COURSES

301 (TCCN: ANTH 2301). Physical Anthropology. Human evolution, race, heredity, the organic basis of culture; culture history through the Paleolithic stage. The equivalent of three lecture hours a week for one semester.

- 302 (TCCN: ANTH 2351). Cultural Anthropology.** The concept of culture; social and political organization; language; the supernatural; elementary cultural theory. Three lecture hours a week or two lecture hours and one discussion hour a week for one semester.
- 304 (TCCN: ANTH 2302). Introduction to Archaeological Studies I: Prehistoric Archaeology.** Same as Archaeology 301. Anthropological study of prehistory, from human beginnings to the appearance of written records. Three lecture hours or two lecture hours and one discussion hour a week for one semester.
- 305. Expressive Culture.** How cultural assumptions affect how we tell and respond to different kinds of stories, including fairy tales, movies, and televised news. Three lecture hours or two lecture hours and one discussion hour a week for one semester.
- 307. Culture and Communication.** An introduction to the study of culture through communication and the theory of signs. Three lecture hours or two lecture hours and one discussion hour a week for one semester.
- 310L. Introductory Topics in Anthropology.** Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Introduction to Mesoamerican Archaeology. Same as Latin American Studies 310 (Topic 3: *Introduction to Mesoamerican Archaeology*). Introduction to ancient Mesoamerica from the time of emerging social inequality in the formative period until the Spanish conquest of Mexico-Tenochtitlán in the sixteenth century.

Topic 2: Anthropology of Race and Ethnicity: An Introduction. Same as American Studies 315D and African and African American Studies 317D (Topic 2: *Anthropology of Race and Ethnicity: An Introduction*). Examines the social importance of race and ethnicity both in America and around the world. American Studies 315 (Topic: *Anthropology of Race and Ethnicity*) and Anthropology 310L (Topic 2) may not both be counted.

Topic 3: Anthropology of Latin America. Same as Latin American Studies 310 (Topic 4: *Anthropology of Latin America*). Provides a framework for understanding contemporary concerns in Latin America.

Topic 4: Introduction to Historical Archaeology. Same as American Studies 315E. A comprehensive survey of the methods, theories, and discoveries of historical archaeology, an interdisciplinary field that draws its theoretical and methodological foundations from anthropology, archaeology, and history. American Studies 315 (Topic: *Introduction to Historical Archaeology*) and Anthropology 310L (Topic 4) may not both be counted.

Topic 5: Introduction to India. Same as Asian Studies 302K. Introduction to Indian civilization, past and present, including religion, literature, arts, philosophy, and history. Anthropology 310L (Topic 5) and History 306N (Topic: *Introduction to India*) may not both be counted.

318L. Mexican American Culture. Same as Mexican American Studies 318. Mexican American cultural distinctiveness in the areas of social organization, child rearing, food culture, folklore, language, and religion. Three lecture hours a week for one semester.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Anthropology. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Anthropology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

320L. Topics in Language, Culture, and Communication. Relationship of language to culture and society, and of folk classifications to principles of social organization and cognition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 3: Ethnography of Communication. History and overview of the ethnography of communication with a focus on theoretical and methodological issues. Prerequisite: Anthropology 302.

Topic 4: American Indian Languages and Cultures. Prerequisite: Anthropology 302.

Topic 5: Speech Play and Verbal Art. Prerequisite: Anthropology 302.

Topic 8: German and English: Historical Perspectives. Same as Classical Civilization 348 (Topic 8: *German and English: Historical Perspectives*), Germanic Civilization 327E (Topic 9: *German and English: Historical Perspectives*), and Linguistics 373 (Topic 8: *German and English: Historical Perspectives*). Only one of the following may be counted: Anthropology 320L (Topic 8), 320L (Topic 9: *The German Language: Historical Perspectives*), Classical Civilization 348 (Topic 9: *The German Language: Historical Perspectives*), German 369 (Topic 4: *The German Language: Historical Perspectives*), Linguistics 373 (Topic 9: *The German Language: Historical Perspectives*). Prerequisite: For English majors, completion of at least thirty semester hours of coursework, including English 316K or the equivalent; for others, upper-division standing.

Topic 9: The German Language: Historical Perspectives. Same as Classical Civilization 348 (Topic 9: *The German Language: Historical Perspectives*), German 369 (Topic 4: *The German Language: Historical Perspectives*), and Linguistics 373 (Topic 9: *The German Language: Historical Perspectives*). Only one of the following may be counted: Anthropology 320L (Topic 8: *German and English: Historical Perspectives*), 320L (Topic 9), Classical Civilization 348 (Topic 8: *German and English: Historical Perspectives*), Germanic Civilization 327E (Topic 9: *German and English: Historical Perspectives*), Linguistics 373 (Topic 8: *German and English: Historical Perspectives*). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics.

- Topic 10: Language, Culture, and Society in Latin America.** Prerequisite: Anthropology 302, 305, 307, or Linguistics 306; or consent of instructor.
- 322K. Southwestern Archaeology.** Prehistory of New Mexico, Arizona, Utah, and neighboring areas, from the earliest human occupation to the Spanish conquest. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 322M. Topics in Cultures of the World.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Perspectives on Japanese Culture.** Same as Asian Studies 372 (Topic 12: *Perspectives on Japanese Culture*). Prerequisite: Upper-division standing.
- Topic 3: Native American Cultures of the Greater Southwest.** Same as American Studies 321 (Topic 1: *Native American Cultures of the Greater Southwest*). Prerequisite: Upper-division standing.
- Topic 5: Indians of Mexico and Guatemala.** Same as Latin American Studies 324L (Topic 2: *Indians of Mexico and Guatemala*). Prerequisite: Upper-division standing.
- Topic 10: Mexican American Indigenous Heritage.** Same as Mexican American Studies 374 (Topic 23: *Mexican American Indigenous Heritage*). The prehistory, history, and contemporary racial understanding of Mexican Americans. Prerequisite: Upper-division standing.
- 324L. Topics in Anthropology.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 3: Primitive Technology.** Prerequisite: Upper-division standing.
- Topic 7: Introduction to African Prehistory.** Same as African and African American Studies 322. African and African American Studies 374 (Topic: *Introduction to African Prehistory*) and Anthropology 324L (Topic 7) may not both be counted. Prerequisite: Upper-division standing.
- Topic 8: Cultures of Southeast Asia.** Same as Asian Studies 361 (Topic 5: *Cultures of Southeast Asia*). Comparative study of the peoples of Indonesia, Burma, Thailand, Malaysia, and other countries. Prerequisite: Upper-division standing.
- Topic 9: The African Diaspora in the Americas.** Same as African and African American Studies 321. Black cultures and societies in the New World, and their African heritage. African and African American Studies 374 (Topic: *The African Diaspora in the Americas*) and Anthropology 324L (Topic 9) may not both be counted. Prerequisite: Upper-division standing.
- Topic 10: Colonialism and Nationalism.** Same as Asian Studies 361 (Topic 10: *Colonialism and Nationalism*). Prerequisite: Upper-division standing.
- Topic 13: Musics of India.** Same as Asian Studies 361 (Topic 11: *Musics of India*) and Music 342 (Topic 3: *Musics of India*). Prerequisite: Upper-division standing.
- Topic 16: Contemporary India.** Same as Asian Studies 361 (Topic 3: *Contemporary India*).
- Topic 17: Cultural Ecology.** Same as Geography 331K. Long-term patterns and processes of conversion of planet Earth to the human home, including the emergence of humans, the achievement of control over the food supply, the emergence of civilizations, and globalization. Anthropology 324L (Topic 17) and Urban Studies 354 (Topic 1: *Cultural Ecology*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 18: The Male in African American Culture and Society.** Same as African and African American Studies 323. African and African American Studies 374 (Topic: *The Male in African American Culture and Society*) and Anthropology 324L (Topic 18) may not both be counted. Prerequisite: Upper-division standing.
- Topic 23: History of Hindu Religious Traditions.** Same as Asian Studies 340 (Topic 4: *History of Hindu Religious Traditions*), History 364G (Topic 1: *History of Hindu Religious Traditions*), and Religious Studies 321. History of major doctrines, practices, and institutions that shaped the development of Hinduism; how religions adapt to social and cultural change and often provide the catalyst for change. Anthropology 324L (Topic 23) and History 366N (Topic 5: *History of Hindu Religious Traditions*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 24: Archaeology of African Thought.** Same as African and African American Studies 374C (Topic 2: *Archaeology of African Thought*). Archaeological, historical, and ethnographic data as they relate to the foundations of contemporary African and African American societies. Anthropology 324L (Topic 24) and African and African American Studies 374 (Topic 22: *Archaeology of African Thought*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 26: Race and Sport in African American Life.** Same as African and African American Studies 374 (Topic 27: *Race and Sport in African American Life*) and Kinesiology 352K (Topic 6: *Race and Sport in African American Life*). Prerequisite: Upper-division standing.
- Topic 29: Sacred and Ceremonial Textiles.** Same as Islamic Studies 372 (Topic 11: *Sacred and Ceremonial Textiles*). Textiles and material objects indigenous to the Islamic world, and what they reveal about the culture of various Islamic societies. Anthropology 324L (Topic 29) and Middle Eastern Studies 322K (Topic 24: *Sacred and Ceremonial Textiles*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 32: Colonial Latin American Archaeology.** Same as Latin American Studies 324L (Topic 13: *Colonial Latin American Archaeology*). Focuses on the Spanish colonies in Latin America.

- Topic 33: Geographical Information Systems and Remote Sensing for Archaeology and Paleontology.** Same as Geography 356T (Topic 3: *Geographical Information Systems and Remote Sensing for Archaeology and Paleontology*). Designed to give students interested in the fields of archaeology, physical anthropology, and paleontology a foundation in the use of geographical information systems (GIS) and the analysis of remotely sensed data from satellites and aerial photographs. Prerequisite: Upper-division standing.
- Topic 34: Iberian Prehistory and History.** The prehistory of Iberia and the historic development of the nation-states of Portugal and Spain. Anthropology 324L (Topic 34) and Latin American Studies 324L (Topic: *Iberian Prehistory and History*) may not both be counted. Prerequisite: Consent of instructor.
- Topic 35: Indigenous Rights and Autonomy in Mexico.** Explores the relationship between the Mexican government and the indigenous population. Anthropology 324L (Topic 35) and Latin American Studies 324L (Topic: *Indigenous Rights and Autonomy in Mexico*) may not both be counted.
- Topic 36: Nationalism and Gender in South Asia.** Same as Asian Studies 361 (Topic 26: *Nationalism and Gender in South Asia*) and Women's and Gender Studies 340 (Topic 24: *Nationalism and Gender in South Asia*). Explores why nationalist movements often make the reform of women's roles central to their political projects.
- Topic 37: The Politics of Race and Violence in Brazil.** Same as African and African American Studies 374E (Topic 2: *The Politics of Race and Violence in Brazil*) and Latin American Studies 324L (Topic 14: *The Politics of Race and Violence in Brazil*). Prerequisite: Upper-division standing.
- Topic 38: Race and the Criminal Justice System.** Same as African and African American Studies 320 (Topic 3: *Race and the Criminal Justice System*). Social classes, ethnic and racial groups, and their distribution in the urban landscape.
- Topic 39: Theories of Archaeology.** The history of archaeological thought, including the major theoretical trends that have shaped the discipline over time.
- Topic 40: Gender, Sexuality, and the Family in Indian Religions and Cultures.** Same as Asian Studies 372 (Topic 25: *Gender, Sexuality, and the Family in Indian Religions and Cultures*), Religious Studies 341 (Topic 3: *Gender, Sexuality, and the Family in Indian Religions and Cultures*), and Women's and Gender Studies 340 (Topic 25: *Gender, Sexuality, and the Family in Indian Religions and Cultures*). A comprehensive historical overview of gender issues as they are represented in the textual traditions of South Asia.
- 325L. Cultural Studies, Public Culture, and Folklore: Selected Topics.** Consideration of folklore in different culture areas of the Western Hemisphere. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Three hours in either Anthropology 325K or 325L may be counted toward a major in English. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 10: Middle Eastern Magic, Religion, and Folklore.** Same as Middle Eastern Studies 322K (Topic 19: *Middle Eastern Magic, Religion, and Folklore*). Anthropology 325L (Topic 10) and English 325L (Topic 10: *Middle Eastern Magic, Religion, and Folklore*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 11: Cultural Heritage on Display.** Explores the public construction and display of traditional American folk culture by studying popular folklife-oriented tourist sites. American Studies 321 (Topic: *Cultural Heritage on Display*) and Anthropology 325L (Topic 11) may not both be counted.
- 325M. Language in Culture and Society.** Same as Linguistics 373 (Topic 3: *Language in Culture and Society*) and Sociology 352M (Topic 4: *Language in Culture and Society*). Language as a cultural resource; functions of language in society; survey of language communities. Three lecture hours a week for one semester. Prerequisite: Anthropology 302, 305, 307, or Linguistics 306; or consent of instructor.
- 325N. Language and Speech in American Society.** Same as American Studies 321 (Topic 2: *Language and Speech in American Society*), Linguistics 373 (Topic 2: *Language and Speech in American Society*), and Sociology 352M (Topic 3: *Language and Speech in American Society*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Anthropology 302, 305, 307, or Linguistics 306.
- 326C. Native Americans in Texas.** Same as American Studies 321G. Studies the history of Native Americans in Texas using concepts and evidence from anthropology, history, archaeology, historical geography, and Native American studies. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 321 (Topic: *Native Americans in Texas*), Anthropology 324L (Topic: *Native Americans in Texas*), 326C. Prerequisite: Upper-division standing.
- 326D. Native Americans in the Plains.** The ethnohistory of some of the most influential Native American groups on the plains, from the arrival of the Spanish through the reservation period. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 321 (Topic: *Native Americans in the Plains*), Anthropology 324L (Topic: *Native Americans in the Plains*), 326D, History 365G (Topic: *Native Americans in the Plains*). Prerequisite: Upper-division standing.
- 326E. Plains Archaeology: Prehistory and History.** Explores the evidence of human activities on the central and southern plains from prehistoric to historical times (ca. 11,000 BC to ca. AD 1850). Three lecture hours a week for one semester. Anthropology 324L (Topic: *Plains Archaeology: Prehistory and History*) and 326E may not both be counted. Prerequisite: Upper-division standing.
- 326F. Great Discoveries in Archaeology.** Same as European Studies 346 (Topic 2: *Great Discoveries in Archaeology*). The stories, myths, and people behind some of the great archaeological discoveries. Three lecture hours a week for one semester. Anthropology 324L (Topic: *Great Discoveries in Archaeology*) and Anthropology 326F may not both be counted. Prerequisite: Upper-division standing.

- 326L. Cultures in Contact.** History of the interactions of the indigenous peoples of the Americas with Africans, Asians, and Europeans over the past five hundred years. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 327C. Topics in American Cultures.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
Topic 1: Race and Ethnicity in the United States.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Anthropology.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Anthropology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330C. Theories of Culture and Society.** Examination of the theoretical approaches that have established the intellectual foundations of contemporary sociocultural anthropology. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 432L. Primate Anatomy.** Comparative and functional anatomy of primates, including humans; emphasis on adaptations and evolution of the various taxa. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Anthropology 301.
- 334L. North American Archaeology.** Regional cultural development of Native American societies from the earliest human occupations to the historic period. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 336L. Native American Cultures North of Mexico.** Same as American Studies 321 (Topic 3: *Native American Cultures North of Mexico*). Three lecture hours a week for one semester. American Studies 322 (Topic: *American Indian Cultures North of Mexico*) and Anthropology 336L may not both be counted. Prerequisite: Upper-division standing and Anthropology 302.
- 340C. Ethnographic Research Methods.** Restricted to anthropology majors. Introduction to methods used in conducting ethnographic research; emphasis on research design, analysis, writing, and ethical considerations. Three lecture hours a week for one semester. Prerequisite: Anthropology 302, 305, or 307.
- 344K. Films: An Anthropological Perspective.** Films viewed and discussed. How is cultural meaning communicated? What systems of signification are involved? What are possibilities and limitations of ethnographic films? Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 345C. Urban Cultures.** The culture of cities, including the distinctive forms of expressive culture, ethnic and racial conflict, and political or economic activity that cities generate. Three lecture hours a week or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.
- 346L. Primate Social Behavior.** Studies primate behavior and why primates do what they do, including basic theoretical principles and the models used to explain primate behavior. Three lecture hours a week for one semester. Anthropology 346L and 348K (Topic 6: *Primate Social Behavior*) may not both be counted. Prerequisite: Upper-division standing and Anthropology 301.
- 346M. Comparative Primate Ecology.** The basics of how organisms interact with their environment, focusing on a wide range of primates from a comparative perspective. Discusses how various aspects of ecology are used to conserve primate populations. Three lecture hours a week for one semester. Anthropology 346M and 348K (Topic 7: *Comparative Primate Ecology*) may not both be counted. Prerequisite: Upper-division standing and Anthropology 301.
- 347C. Methods in Primate Biology.** The study of primate behavior and the methods by which animal behavior is observed and documented. Students conduct a research project and write a report. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Upper-division standing, and Anthropology 346L, 346M, or Biology 359K.
- 348. Human Origins and Evolution.** Detailed examination and analysis of morphological trends evident in the hominid fossil record. Two lecture hours and two laboratory hours a week for one semester. Prerequisite: Anthropology 301.
- 348K. Current Topics in Physical Anthropology.** An in-depth study of current topics, controversies, and literature on the evolution, morphology, genetics, and behavioral ecology of primates, including humans. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Anthropology 301.
Topic 1: Human Evolution.
Topic 8: Evolutionary Anatomy of the Head and Neck. The comparative and functional anatomy of the head and neck in primates and other mammals.
Topic 9: Introduction to Primate Anatomy. Explores the relationship between primate anatomical form and function.
Topic 10: Primate Conservation. The theory and practices of conservation biology as applied to primates. Explores species and community characteristics influencing extinction risk, current threats to primates, and potential conservation strategies.
- 349C. Human Variation.** The patterns of biological variation within and between human populations. Examines physical, genetic, and behavioral traits, and considers both the microevolutionary and cultural processes that influence those traits. Three lecture hours a week for one semester. Anthropology 348K (Topic: *Human Variation*) and 349C may not both be counted. Prerequisite: Upper-division standing and Anthropology 301.
- 349D. Anthropological Genetics.** Basic principles of molecular genetics and population genetics as they relate to the study of humans and other primates. Three lecture hours a week for one semester. Anthropology 348K (Topic: *Anthropological Genetics*) and 349D may not both be counted. Prerequisite: Upper-division standing and Anthropology 301.

- 350C. Primate Sensory Ecology.** An integrated perspective on the comparative anatomy, physiology, and ecological significance of sensory adaptations in primates. Three lecture hours a week for one semester. Anthropology 348K (Topic 5: *Primate Sensory Ecology*) and 350C may not both be counted. Prerequisite: Anthropology 301.
- 350M. Evolution of Primate Behavior.** Mechanisms underlying the evolution of human and nonhuman primate behavior. The reasons and ways primates live in social groups; comparisons between human and nonhuman primates using living primates, fossil remains, and archaeological evidence. Three lecture hours a week for one semester. Prerequisite: Anthropology 301.
- 351C. Quechua Language and Society in the Andes I.** Same as Latin American Studies 351C. Beginning spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 324L (Topic: *Quechua Language and Society in the Andes*), 351C, 381C, 389 (Topic: *Quechua Language and Society in the Andes*), Latin American Studies 324L (Topic: *Quechua Language and Society in the Andes*), 381C, 391 (Topic: *Quechua Language and Society in the Andes*). Prerequisite: Upper-division standing.
- 351D. Quechua Language and Society in the Andes II.** Same as Latin American Studies 351D. Intermediate spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 324L (Topic: *Advanced Quechua Language and Society in the Andes*), 351D, 381D, 389 (Topic: *Advanced Quechua Language and Society in the Andes*), Latin American Studies 324L (Topic: *Advanced Quechua Language and Society in the Andes*), 381D, 391 (Topic: *Advanced Quechua Language and Society in the Andes*). Prerequisite: Upper-division standing.
- 351E. Primate Evolution.** Examination of the fossil record for nonhuman primate evolution, including basic concepts of the anatomy, ecology, and systematics of living primates. Three lecture hours a week for one semester. Anthropology 348K (Topic 4: *Primate Evolution*) and 351E may not both be counted. Prerequisite: Anthropology 301.
- 453. Archaeological Analysis.** Derivation of chronology and cultural information from archaeological data; the role of archaeology in modern life. Four lecture hours a week for one semester. Prerequisite: Anthropology 304 or Archaeology 301.
- 353E. Archaeological Laboratory Analysis.** The analysis of artifacts, features, architecture, and other remains recovered in the field. Four and one-half laboratory hours a week for one semester. Anthropology 324L (Topic: *Archaeological Laboratory Analysis*) and 353E may not both be counted. Prerequisite: Anthropology 662.
- 358Q. Supervised Research.** Individual instruction. Prerequisite: Upper-division standing.
- 360K. The Civilization of the Maya.** Same as Latin American Studies 324L (Topic 10: *The Civilization of the Maya*). Maya prehistory and history: the archaeological record, codices and inscriptions, and Spanish conquest writings. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 361K. The Civilizations of Ancient Mexico.** Same as Latin American Studies 324L (Topic 11: *The Civilizations of Ancient Mexico*). Mexican cultures from earliest prehistory to the European conquest. Three lecture hours a week for one semester. Prerequisite: Anthropology 302 and six semester hours of upper-division coursework in social science.
- 662. Field Archaeology.** Two hundred and forty hours of fieldwork. May be repeated for credit, but may be taken only once on the letter-grade basis. Prerequisite: Anthropology 462M.
- 362K. Archaeology of Texas and Vicinity.** Cultural history of Texas and neighboring areas, from early prehistoric times to Anglo-American settlements. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 462M. Archaeological Techniques.** Problems in planning, organizing, and carrying out archaeological surveys and excavations. Four lecture hours a week for one semester. Prerequisite: Anthropology 453.
- 366. Anatomy and Biology of the Human Skeleton.** Comprehensive study of the human skeleton, with special attention to methods of identification. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Upper-division standing and Anthropology 301.
- 374M. Sociolinguistics.** Same as Linguistics 374M. An in-depth treatment of current interests in sociolinguistic research literature. Subjects include language and gender; social, regional, and ethnic dialects of American English; language use in African American communities; language and identity in a pluralistic society; and language, literacy, and education. Three lecture hours a week for one semester. Prerequisite: Anthropology 302 or Linguistics 306.
- 376P, 676P. Research Internship.** Restricted to anthropology majors. Supervised fieldwork in a business or community setting related to the student's career and research interests. Students conduct research and apply anthropological skills to real-world problems. Approximately 150 or 300 hours of fieldwork. May be repeated for credit, but no more than six semester hours may be counted toward the major requirement. Prerequisite: Upper-division standing and consent of instructor.
- 379. Problems in Anthropology.** Supervised individual research on selected problems in anthropology. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in anthropology and consent of instructor.
- 679H. Honors Tutorial Course.** For honors candidates in anthropology. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Prerequisite: For 679HA, admission to the Anthropology Honors Program; for 679HB, Anthropology 679HA.

SCIENCE, TECHNOLOGY, AND SOCIETY: STS

LOWER-DIVISION COURSES

- 101. Key Ideas and Issues in Science, Technology, and Society.** Designed to introduce students to the main areas of interest in science, technology, and society. Lectures, readings, and discussions include speakers from various academic disciplines. One lecture hour a week for one semester. Offered on the pass/fail basis only.
- 311. Topics in Science, Technology, and Society.** Some topics may include an academic service-learning component; these are identified in the *Course Schedule*. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Science, Technology, and Society 311 and Technology, Literacy, and Culture 311 may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 318. How We Shape Discoveries and How They Shape Us.** Technical, historical, and cultural approaches to the multiple dimensions and complexities of scientific and technological innovation, and how they shape and are shaped by society. Cases for discussion are drawn from energy discoveries, nanoscience, biomedicine, and materials science advances. Three lecture hours a week for one semester.
- 319. Information Technology and Social Life.** The impact of technologies on social life, and the necessity for applying skills developed in the liberal arts to managing new ways of life mediated through technologies, including work and home environments. Includes an academic service-learning component. Three lecture hours a week for one semester.

UPPER-DIVISION COURSES

- 321. Introduction to Science, Technology, and Society.** Introduction to the history of communication technology, including how past innovations shaped societies and how current changes are transforming human cultures, universities, and the liberal arts. Three lecture hours a week for one semester. Science, Technology, and Society 321 and Technology, Literacy, and Culture 321 may not both be counted. Prerequisite: Completion of at least thirty semester hours of coursework.
- 331. Topics in Science, Technology, and Society.** Some topics may include an academic service-learning component; these are identified in the *Course Schedule*. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Science, Technology, and Society 331 and Technology, Literacy, and Culture 331 may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 332. The Nanotechnology and Science Revolution.** The societal impacts of nanotechnology and how this emerging technology might transform the future of technologies, manufacturing, and innovation. Three lecture hours a week for one semester. Science, Technology, and Society 331 (Topic: *Impacts of Science: Nanotechnology, Technology, and Life*) and 332 may not both be counted.
- 360. Senior Seminar in Science, Technology, and Society.** Senior capstone seminar. Allows the student to integrate the knowledge he or she has gained in the major field of study with that provided by the concentration in science, technology, and society. Three lecture hours a week for one semester. Science, Technology, and Society 360 and Technology, Literacy, and Culture 360 may not both be counted. Prerequisite: Completion of at least ninety semester hours of coursework, including Science, Technology, and Society 321.
- 367. Conference Course in Science, Technology, and Society.** Supervised work on specific projects in science, technology, and society. Three conference hours a week for one semester. May be repeated for credit. Prerequisite: Completion of at least thirty-six semester hours of coursework and approval of written application by the supervising instructor.
- 370. Research Internship.** Supervised fieldwork in a business or community setting related to the student's career and research interests. Approximately six to ten hours of work a week for one semester, to be arranged with faculty member and internship sponsor. May be repeated for credit, but no more than six semester hours of Science, Technology, and Society 370 (or Technology, Literacy, and Culture 370) may be counted toward the concentration requirement. Prerequisite: Science, Technology, and Society 321, upper-division standing, and consent of instructor.

ARCHAEOLOGY: ARY

LOWER-DIVISION COURSES

- 301. Introduction to Archaeological Studies I: Prehistoric Archaeology.** Same as Anthropology 304. Anthropological study of prehistory, from human beginnings to the appearance of written records. Three lecture hours a week or two lecture hours and one discussion hour a week for one semester.
- 302. Introduction to Archaeological Studies II: Classical Archaeology.** Introduction to the archaeological study of the Mediterranean world from the beginnings of writing and complex urban civilizations to the fall of Rome. Three class hours a week for one semester. Archaeology 302 and Classical Civilization 302K may not both be counted.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Archaeology.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Anthropology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Archaeology.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Anthropology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 679H. Honors Tutorial Course.** For honors candidates in archaeological studies. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Prerequisite: For 679HA, admission to the Archaeological Studies Honors Program; for 679HB, Archaeology 679HA.

DEPARTMENT OF ASIAN STUDIES

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ASIAN STUDIES: ANS

LOWER-DIVISION COURSES

- 301M. Introduction to Asia.** Discussion of various problems involving language, history, and culture in Asia. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*.
- Topic 3: History of East Asia to 1800.** Same as History 305K. A survey of the traditional history and culture of China, Japan, Korea, and Vietnam.
- Topic 4: History of East Asia since 1800.** Same as History 305L. A survey of the modern history of China, Japan, Korea, and Vietnam.
- Topic 5: Introduction to the Study of Religion.** Introduction to scholarly methods in the study of religion. Only one of the following may be counted: Asian Studies 301M (Topic 5), Religious Studies 310, Sociology 313K.
- Topic 6: Asia's Futures.** Same as Government 314 (Topic 5: *Asia's Futures*). Current issues, visible trends, and projections for Asia's future.
- Topic 7: World Philosophy.** Basic issues of philosophy in Western and non-Western traditions, such as the nature of philosophy, its relation to religion and science, the self, knowledge, and virtue. Asian Studies 301M (Topic 7) and Philosophy 302 may not both be counted.
- Topic 10: Introduction to Korean Culture and History.** Introduction to Korea's history, culture, and civilization from antiquity to the present.
- Topic 11: Introduction to Buddhism.** Same as Religious Studies 312C. A structural and historical overview of Buddhism through the examination of various schools, doctrines, biographical narratives, and contemporary ethical issues. Asian Studies 301M (Topic 11) and Religious Studies 312 (Topic: *Introduction to Buddhism*) may not both be counted.
- Topic 12: Introduction to Hinduism.** Same as Religious Studies 312D. Asian Studies 301M (Topic 12) and Religious Studies 312 (Topic: *Introduction to Hinduism*) may not both be counted.
- 301R. History of the Religions of Asia.** Same as Religious Studies 302. Eastern religions: an introduction to the basic forms and the historical development of the religious traditions of India, China, and Japan. Three lecture hours a week for one semester.
- 302C. Introduction to China.** Introduction to Chinese civilization, past and present, including religion, literature, arts, philosophy, and history. Three lecture hours a week for one semester.
- 302J. Introduction to Japan.** Introduction to Japanese civilization, past and present, including religion, literature, arts, philosophy, and history. Three lecture hours a week for one semester.
- 302K. Introduction to India.** Same as Anthropology 310L (Topic 5: *Introduction to India*). Introduction to Indian civilization, past and present, including religion, literature, arts, philosophy, and history. Three lecture hours a week for one semester. Asian Studies 302K and History 306N (Topic: *Introduction to India*) may not both be counted.
- 303M. Introduction to Traditional Musics in World Cultures.** Same as Music 303M. Art, sacred, and folk traditions of music in the cultures of Asia, Africa, the Pacific, Europe, and the Americas. Three lecture hours a week for one semester, with one laboratory hour a week as required.
- 303N. Introduction to Popular Musics in World Cultures.** Same as Music 303N. Popular traditions of music in the cultures of Asia, Africa, the Pacific, Europe, and the Americas. Three lecture hours a week for one semester, with one laboratory hour a week as required.
- 304. Ethics: Asian Perspectives.** Introduction to the varieties of moral values that have guided behavior and thought in traditional and contemporary East and South Asian societies. Focus on a comparison of values among Asian societies and between particular Asian societies and the West. Three lecture hours a week for one semester.
- 307C. Introduction to the History of India.** Same as History 307C. Survey of the history of the Indian subcontinent from pre-historic times to the present. Three lecture hours a week for one semester.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Asian Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. Topics in Great Literatures of Asia.** Conducted in English. Introduction to various Asian literatures, emphasizing philosophical, religious, and social concepts. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Asian Studies 320 and 361 may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 321M. Politics in Japan.** Same as Government 321M. Survey of postwar Japanese politics; the occupation, governmental institutions, interest groups, protest movements, industrial policy, the government-business relationship, and political and economic reform. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 322M. Politics in China.** Same as Government 322M. Survey of twentieth-century China: historical trends; 1911 revolution; Warlord-Nationalist period; Communist revolution; post-1949 issues; new social and political institutions. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Asian Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 331. Geography of Asia.** Same as Geography 331. Natural regions and cultural landscapes of Asia, excluding the former Soviet Union. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 338L. East Asian International Relations.** Same as Government 338L. Survey of Russian/Soviet, Japanese, Chinese, and American foreign policies of the twentieth century, emphasizing Pacific-region interests; historical policies; intermittent conflicts, such as China versus Japan, Korean War, Indochina Wars; China's emergence as a nuclear power. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- 340. Studies in Asian Religions.** Topics in the religions and mythologies of the peoples of Asia. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 4: History of Hindu Religious Traditions.** Same as Anthropology 324L (Topic 23: *History of Hindu Religious Traditions*), History 364G (Topic 1: *History of Hindu Religious Traditions*), and Religious Studies 321. History of major doctrines, practices, and institutions that shaped the development of Hinduism; how religions adapt to social and cultural change and often provide the catalyst for change. Asian Studies 340 (Topic 4) and History 366N (Topic 5: *History of Hindu Religious Traditions*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 5: History of Indian Buddhism.** Same as Religious Studies 322. The institutional, social, economic, and doctrinal history of Buddhism in India. Prerequisite: Upper-division standing or consent of instructor.
- Topic 6: Religion and Rebellion in Modern East Asia.** Nineteenth- and twentieth-century religious movements in East Asia, including both specific movements, such as the Taiping Rebellion, The Boxers, Japanese new religions, Tibetan Buddhism under Communist China, and Aun Shinrikyo, and general trends, such as modern Millenarianism, Shamanism, and ascetic practice. Only one of the following may be counted: Asian Studies 340 (Topic 6), 361 (Topic: *Religion/Rebellion in Modern East Asia*), History 364G (Topic: *Religion/Rebellion in Modern East Asia*), Religious Studies 352 (Topic: *Religion/Rebellion in Modern East Asia*).
- Topic 7: Goddesses in World Religions and Cultures.** Historical and cross-cultural overview of the relationship between feminine and religious cultural expressions through comparative examinations and analyses of various goddess figures in world religions. Only one of the following may be counted: Anthropology 324L (Topic: *Goddesses in World Religions and Cultures*), Asian Studies 340 (Topic 7), Religious Studies 373 (Topic: *Goddesses in World Religions and Cultures*), Women's and Gender Studies 340 (Topic: *Goddesses in World Religions and Cultures*). Prerequisite: Upper-division standing.
- Topic 8: Sufism and Islamic Mysticism.** Explores the importance of the mystical traditions related to Islam in South Asia, the Middle East, Europe, and North America. Only one of the following may be counted: Asian Studies 340 (Topic 8), History 364G (Topic: *Sufism and Islamic Mysticism*), Islamic Studies 340 (Topic: *Sufism and Islamic Mysticism*), Middle Eastern Studies 321K (Topic: *Sufism and Islamic Mysticism*), Religious Studies 341 (Topic: *Sufism and Islamic Mysticism*). Prerequisite: Upper-division standing.
- Topic 9: Religion in Japanese History.** Same as Religious Studies 352 (Topic 7: *Religion in Japanese History*). Examines religious concepts and practices in wider contexts of modern Japanese culture and society. Focuses on the critical understanding of the individual and collective aspects of Japanese spiritual life.
- 340K. Traditional China.** Same as History 340K. History of China from its beginnings to 1800. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 340M. Modern China.** Same as History 340M. History of China from the intrusion of the West circa 1500 to the Communist revolution. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 340N. Communist China.** Same as History 340N. The history of China from the Communist takeover in 1949 to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 340P. European Expansion in Asia.** Same as History 340P. European exploration, the commerce of the East India Companies, and the beginnings of empire in South and Southeast Asia from the fifteenth to the early nineteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 340R. European Empires in Asia.** Same as History 340R. The British in India and Malaya, the Dutch in Indonesia, and the French in Indochina since 1800. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 340S. The Chinese in the United States.** A lecture and discussion course on the history of the Chinese in the United States from their first arrival in significant numbers during the California Gold Rush of the mid-nineteenth century to the present. Three lecture hours a week for one semester. Asian Studies 340S and History 340S may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 341K. Origins of Modern Japan.** Same as History 341K. Japan to the beginnings of the Industrial Revolution, with a focus on the culminating age of samurai rule, the Tokugawa period (1600–1867). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 341M. Imperial Japan.** Same as History 341M. Japan from the Meiji transformation through war, defeat, and occupation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 341N. Postwar Japan.** Same as History 342C. Japan since the war and occupation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 342C. Sustainable Development.** Prospects for expanding goods and services available to the rural poor in developing countries. Three lecture hours a week for one semester. Asian Studies 342C and Geography 342C may not both be counted. Prerequisite: Upper-division standing.
- 342D. Political Economy of Japan.** Same as History 342D. Historical development of the Japanese economy since early modern times. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 342D, 361 (Topic: *Political Economy of Japan*), History 350L (Topic: *Political Economy of Japan*). Prerequisite: Upper-division standing.
- 346C. Ancient India.** Same as History 346C. History and culture of South Asia from its protohistoric beginnings in the Indus Valley through the period of the early empires of the Mauryas and Guptas. Three lecture hours a week for one semester. Asian Studies 346C and History 366N (Topic: *Ancient India*) may not both be counted. Prerequisite: Upper-division standing or consent of instructor.
- 346D. Medieval India.** Same as History 346D. History and culture of South Asia from approximately 500 to 1500, with emphasis on religious and political institutions and the emergence of regional cultures. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 346M. Muslim India before 1750.** Same as History 346M and Religious Studies 341 (Topic 6: *Muslim India before 1750*). History, art and architecture, and religions of India during the period of Muslim rule from the tenth to the eighteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 346N. History and Culture of India since 1750.** Same as History 346N. The period of British rule, the nationalist movement, and independence, with emphasis on the impact of the West on Indian society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 347K. Governments and Politics of South Asia.** Same as Government 347K. A survey of political developments, governmental organization, and economic and social problems in South Asia. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 348C. Geography of South Asia.** Same as Geography 348C. Natural regions and cultural landscapes of South Asia. Agriculture, urban structure, issues of environment and development. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 361, 461. Topics in Asian Studies.** Selected topics in south and east Asian anthropology, economics, history, geography, government, art, music, and philosophy. Three or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Asian Studies 320 and 361 may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 3: Contemporary India.** Asian Studies 361 (Topic 3) is same as Anthropology 324L (Topic 16: *Contemporary India*).
- Topic 5: Cultures of Southeast Asia.** Asian Studies 361 (Topic 5) is same as Anthropology 324L (Topic 8: *Cultures of Southeast Asia*). Comparative study of the peoples of Indonesia, Burma, Thailand, Malaysia, and other countries. Prerequisite: Upper-division standing.
- Topic 6: Gandhi and Gandhism.** Asian Studies 361 (Topic 6) is same as History 350L (Topic 5: *Gandhi and Gandhism*) and Religious Studies 341 (Topic 5: *Gandhi and Gandhism*). Prerequisite: Upper-division standing.
- Topic 9: Modern Japanese Literature in Translation.** Only one of the following may be counted: Asian Studies 361 (Topic 9), 386 (Topic 2: *Modern Japanese Literature*), Japanese 384 (Topic 3: *Modern Japanese Literature*). Prerequisite: Upper-division standing or consent of instructor.
- Topic 10: Colonialism and Nationalism.** Asian Studies 361 (Topic 10) is same as Anthropology 324L (Topic 10: *Colonialism and Nationalism*). Prerequisite: Upper-division standing.
- Topic 11: Musics of India.** Asian Studies 361 (Topic 11) is same as Anthropology 324L (Topic 13: *Musics of India*) and Music 342 (Topic 3: *Musics of India*). Prerequisite: Upper-division standing.
- Topic 12: Politics of Economic Development in East Asia.** Asian Studies 361 (Topic 12) is same as Government 365L (Topic 1: *Politics of Economic Development in East Asia*). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 14: Women in Asian Societies. Asian Studies 361 (Topic 14) is same as History 350L (Topic 25: *Women in Asian Societies*) and Women's and Gender Studies 340 (Topic 8: *Women in Asian Societies*). Prerequisite: Upper-division standing.

Topic 15: Musics of East and Southeast Asia. Asian Studies 361 (Topic 15) is same as Music 342 (Topic 6: *Musics of East and Southeast Asia*). Prerequisite: Upper-division standing.

Topic 18: Popular Iranian Rituals and Traditions. Asian Studies 361 (Topic 18) is same as Islamic Studies 372 (Topic 3: *Popular Iranian Rituals and Traditions*), Middle Eastern Studies 322K (Topic 18: *Popular Iranian Rituals and Traditions*), and Religious Studies 358 (Topic 7: *Popular Iranian Rituals and Traditions*). Adoption of old Persian cultural heritage into Islamic practices, past and present. Prerequisite: Upper-division standing.

Topic 19: Sociology of South Asia. Asian Studies 361 (Topic 19) is same as Sociology 352M (Topic 10: *Sociology of South Asia*). A broad overview of South Asian society and culture from a sociological perspective. Prerequisite: Upper-division standing.

Topic 20: International Environmental Policy. Asian Studies 361 (Topic 20) is same as Government 365N (Topic 9: *International Environmental Policy*). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 21: Development Economics. Introduction to theories of economic development; discussion of leading issues. Asian Studies 361 (Topic 21) and Economics 333K may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C in each, and six additional semester hours of coursework in social science.

Topic 22: Japanese Foreign Policy. Asian Studies 361 (Topic 22) is same as Government 365L (Topic 2: *Japanese Foreign Policy*). An introduction to the foreign and domestic determinants of Japanese foreign policy. Only one of the following may be counted: Asian Studies 361 (Topic 22), 361 (Topic: *Japanese Politics and Foreign Policy*), Government 365L (Topic: *Japanese Politics and Foreign Policy*). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 23: International Relations of East and Southeast Asia. Asian Studies 361 (Topic 23) is same as Government 365L (Topic 3: *International Relations of East and Southeast Asia*). An introduction to the international relations of East and Southeast Asia, with particular attention to postwar economic and security issues, the changing political landscape of the post-Cold War period, and the development and functions of regional institutions. Prerequisite: Six semester hours of lower-division coursework in government.

Topic 24: The Two Koreas and the United States. The political, social, and cultural relationship between North and South Korea, and between the Koreas and the United States, since 1945. Only one of the following may be counted: Anthropology 324L (Topic: *The Two Koreas and the US*), Asian American Studies 325 (Topic: *The Two Koreas and the US*), Asian Studies 361 (Topic 24), Government 360N (Topic: *The Two Koreas and the US*), History 364G (Topic: *The Two Koreas and the US*).

Topic 25: Capitalism, Consumption, and Civil Society in Korea. Contemporary social and political life in urban South Korea, including such topics as corporations, factory work, consumption, activism, popular culture, and changing gender systems and roles. Anthropology 324L (Topic: *Capitalism, Consumption, and Civil Society in Korea*) and Asian Studies 361 (Topic 25) may not both be counted.

Topic 26: Nationalism and Gender in South Asia. Asian Studies 361 (Topic 26) is same as Anthropology 324L (Topic 36: *Nationalism and Gender in South Asia*) and Women's and Gender Studies 340 (Topic 24: *Nationalism and Gender in South Asia*). Explores why nationalist movements often make the reform of women's roles central to their political projects.

362. Research in Asian Studies. Individual instruction for Asian studies majors and nonmajors. Discussion, research, and the writing of papers about various general and specialized Asian subjects. May be repeated for credit. Prerequisite: Six semester hours of coursework in Asian studies and written consent of instructor on form obtained from the undergraduate adviser.

372. Topics in Asian Cultures. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 2: Indian Philosophies. Same as Philosophy 348 (Topic 2: *Indian Philosophies*) and Religious Studies 341 (Topic 1: *Indian Philosophies*).

Topic 5: Women and Family in Asia. Same as Women's and Gender Studies 340 (Topic 2: *Women and Family in Asia*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

Topic 6: Chinese Film and Literature. Three lecture hours a week for one semester. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing or consent of instructor.

Topic 7: Chinese Thought and Culture. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

Topic 12: Perspectives on Japanese Culture. Same as Anthropology 322M (Topic 1: *Perspectives on Japanese Culture*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

Topic 13: Gypsy Language and Culture. Linguistic introduction to Romani; relationship to languages of India; history from 280 BC; modern dialects and international standard language; history and culture as reflected in the language. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 372 (Topic 13); Linguistics 322; Russian, East European, and Eurasian Studies 325 (Topic 1: *Gypsy Language and Culture*).

Topic 14: Veiling in the Muslim World. Same as Islamic Studies 372 (Topic 2: *Veiling in the Muslim World*), Middle Eastern Studies 322K (Topic 17: *Veiling in the Muslim World*), Religious Studies 358 (Topic 5: *Veiling in the Muslim World*), and Women's and Gender Studies 340 (Topic 11: *Veiling in the Muslim World*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

Topic 15: Early Art of India. Same as Religious Studies 341 (Topic 10: *Early Art of India*). Artistic achievements of South Asia up to 1000 CE, with a focus on the function and meaning of works of art within the context of Indian culture. Three lecture hours a week for one semester. Art History 372 (Topic: *Early Art of India*) and Asian Studies 372 (Topic 15) may not both be counted. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

Topic 17: Women in Modern Japanese Fiction. Same as Women's and Gender Studies 340 (Topic 12: *Women in Modern Japanese Fiction*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

Topic 18: Formation of Indian Art. Same as Religious Studies 341 (Topic 7: *Formation of Indian Art*). The major artistic achievements of South Asia up to 500 CE within the context of Indian culture. Three lecture hours a week for one semester. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

Topic 19: Diversity of Indian Traditions. Same as Religious Studies 341 (Topic 2: *Diversity of Indian Traditions*). Art and architecture in South Asia from 1200 to 1900 CE within the context of Indian culture. Three lecture hours a week for one semester. Art History 372 (Topic: *Diversity of Indian Traditions*) and Asian Studies 372 (Topic 19) may not both be counted. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

Topic 20: Oriental Carpets: Art as Culture. Same as Middle Eastern Studies 322K (Topic 12: *Oriental Carpets: Art as Culture*). Three lecture hours a week for one semester. Asian Studies 372 (Topic 20) and Middle Eastern Studies 324K (Topic: *Oriental Carpets: Art as Culture*) may not both be counted.

Topic 21: Women and Gender in China. Same as History 350L (Topic 46: *Women and Gender in China*) and Women's and Gender Studies 340 (Topic 18: *Women and Gender in China*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

Topic 24: Buddhist Art. Same as Religious Studies 341 (Topic 8: *Buddhist Art*). Three lecture hours a week for one semester. Art History 372 (Topic: *Buddhist Art*) and Asian Studies 372 (Topic 24) may not both be counted. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures. Same as Anthropology 324L (Topic 40: *Gender, Sexuality, and the Family in Indian Religions and Cultures*), Religious Studies 341 (Topic 3: *Gender, Sexuality, and the Family in Indian Religions and Cultures*), and Women's and Gender Studies 340 (Topic 25: *Gender, Sexuality, and the Family in Indian Religions and Cultures*). A comprehensive historical overview of gender issues as they are represented in the textual traditions of South Asia.

378. Senior Seminar in Asian Studies. Restricted to Asian studies and Asian cultures and languages majors. Discussion and research-based course with Pan-Asian content. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Completion of at least ninety semester hours of coursework, including at least twelve semester hours of upper-division coursework in Asian studies and an Asian language.

678H. Honors Tutorial Course. Three lecture hours a week for two semesters. Prerequisite: For 678HA, credit or registration for Asian Studies 378 and admission to the Asian Studies Honors Program; for 678HB, Asian Studies 678HA.

379H. Honors Tutorial Course. Supervised research, readings, and writing of a substantial paper on a particular Asian topic. Prerequisite: Upper-division standing, Asian Studies 378 with a grade of at least B, admission to the Asian Studies Honors Program no later than two semesters before expected graduation, a University grade point average of at least 3.00, and a grade point average in Asian studies of at least 3.50.

BENGALI: BEN

LOWER-DIVISION COURSES

506. First-Year Bengali I. Not open to native speakers of Bengali. Five class hours a week for one semester.

507. First-Year Bengali II. Not open to native speakers of Bengali. Continuation of Bengali 506. Five class hours a week for one semester. Prerequisite: Bengali 506 with a grade of at least C.

312K. Second-Year Bengali I. Not open to native speakers of Bengali. Three class hours a week for one semester. Prerequisite: Bengali 507 with a grade of at least C.

- 312L. Second-Year Bengali II.** Not open to native speakers of Bengali. Continuation of Bengali 312K. Three class hours a week for one semester. Prerequisite: Bengali 312K with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Bengali.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320K. Advanced Bengali I.** Not open to native speakers of Bengali. Three class hours a week for one semester. Prerequisite: Bengali 312L with a grade of at least C.
- 320L. Advanced Bengali II.** Not open to native speakers of Bengali. Continuation of Bengali 320K. Three class hours a week for one semester. Prerequisite: Bengali 320K with a grade of at least C.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Bengali.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 360. Conference Course in Bengali Language and Literature.** Supervised individual study of selected problems in Bengali language and literature. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

CHINESE: CHI

LOWER-DIVISION COURSES

- 604. Accelerated First-Year Chinese.** Designed for students who understand or speak but do not read or write Mandarin Chinese. Six class hours a week for one semester. Chinese 604 and 506 may not both be counted; Chinese 604 and 507 may not both be counted. Prerequisite: Results on the placement examination in Chinese that indicate that the student is ineligible to receive credit for Chinese 507. If the student is eligible to receive credit by examination for Chinese 506, this credit must not appear on the student's record.
- 506 (TCCN: CHIN 1511). First-Year Chinese I.** Not open to students who understand or speak Mandarin Chinese. Modern Standard Chinese (Mandarin). Six class hours a week for one semester. Chinese 604 and 506 may not both be counted.

- 507 (TCCN: CHIN 1512). First-Year Chinese II.** Not open to native speakers of Chinese. Continuation of Chinese 506. Six class hours a week for one semester. Chinese 604 and 507 may not both be counted. Prerequisite: Chinese 506 with a grade of at least C.

- 612. Accelerated Second-Year Chinese.** Continuation of Chinese 604. Six class hours a week for one semester. Chinese 612 and 412K may not both be counted; Chinese 612 and 412L may not both be counted. Prerequisite: Chinese 604 with a grade of at least C.

- 412K. Second-Year Chinese I.** Not open to native speakers of Chinese. Modern Standard Chinese (Mandarin). Four class hours a week for one semester. Chinese 612 and 412K may not both be counted. Prerequisite: Chinese 507 with a grade of at least C.

- 412L. Second-Year Chinese II.** Not open to native speakers of Chinese. Continuation of Chinese 412K. Four class hours a week for one semester. Chinese 612 and 412L may not both be counted. Prerequisite: Chinese 412K with a grade of at least C.

- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Chinese.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320K. Readings in Modern Chinese I.** Readings in expository prose: selections from journals, newspapers, and other sources. Three lecture hours a week for one semester. Prerequisite: Chinese 612 or 412L with a grade of at least C.

- 320L. Readings in Modern Chinese II.** Readings in modern fiction, poetry, and drama. Three lecture hours a week for one semester. Prerequisite: Chinese 320K with a grade of at least C.

- 322. Introduction to Classical Chinese.** Beginning study of *wen yen*, the particles, and syntax of the Chinese classics. Three lecture hours a week for one semester. Prerequisite: Chinese 612 or 412L with a grade of at least C.

- 325K. Advanced Conversation I.** Not open to native speakers of Chinese. Drill in conversation on general topics. Three lecture hours a week for one semester. Prerequisite: Chinese 412L with a grade of at least C.

- 325L. Advanced Conversation II.** Not open to native speakers of Chinese. Practice in speaking Modern Standard Chinese. Three lecture hours a week for one semester. Prerequisite: Chinese 325K with a grade of at least C.

- 326. Business Chinese.** Advanced Chinese conversation, with emphasis on business vocabulary. Three lecture hours a week for one semester. Chinese 326 and 330 (Topic: *Business Chinese*) may not both be counted. Prerequisite: Chinese 612, 320K, or 325K with a grade of at least C.

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Chinese.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330. Topics in Advanced Chinese.** Fourth-year Chinese readings on special topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Chinese 320K and 320L with a grade of at least C in each.
- 340. Topics in Chinese Literature.** Study of Chinese literary texts in the original. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Chinese 320L with a grade of at least C.
- 360. Conference Course in Chinese Language and Literature.** Supervised individual study of selected problems in Chinese language or literature. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

HINDI: HIN

LOWER-DIVISION COURSES

- 604. Accelerated First-Year Hindi.** Not open to native speakers of Hindi. Modern Hindi of India. Eight class hours a week for one semester. Hindi 604 and 506 may not both be counted; Hindi 604 and 507 may not both be counted; Hindi 604 and Urdu 604 may not both be counted; Hindi 604 and Urdu 506 may not both be counted; Hindi 604 and Urdu 507 may not both be counted.
- 506. First-Year Hindi I.** Not open to native speakers of Hindi. Modern Hindi of India. Five class hours a week for one semester. Hindi 604 and 506 may not both be counted; Hindi 506 and Urdu 604 may not both be counted.
- 507. First-Year Hindi II.** Not open to native speakers of Hindi. Continuation of Hindi 506. Five class hours a week for one semester. Hindi 604 and 507 may not both be counted; Hindi 507 and Urdu 604 may not both be counted. Prerequisite: Hindi 506 with a grade of at least C.
- 612. Accelerated Second-Year Hindi.** Continuation of Hindi 604. Eight class hours a week for one semester. Hindi 612 and 312K may not both be counted; Hindi 612 and 312L may not both be counted. Prerequisite: Hindi 604 with a grade of at least C.
- 312K. Second-Year Hindi I.** Not open to native speakers of Hindi. Modern Hindi of India. Three lecture hours a week for one semester. Hindi 612 and 312K may not both be counted. Prerequisite: Hindi 507 with a grade of at least C.
- 312L. Second-Year Hindi II.** Not open to native speakers of Hindi. Continuation of Hindi 312K. Three lecture hours a week for one semester. Hindi 612 and 312L may not both be counted. Prerequisite: Hindi 312K with a grade of at least C.
- 118. Practice in Spoken Hindi.** Not open to native speakers of Hindi. Instruction and practice in conversation for intermediate-level students. Two lecture hours a week for one semester. Prerequisite: Hindi 507 with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Hindi.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser of the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 125. Advanced Practice in Spoken Hindi.** Instruction and practice in conversation for advanced students. Two lecture hours a week for one semester. Prerequisite: Hindi 118 with a grade of at least C.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Hindi.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in affiliated studies program. May be repeated for credit when the topics vary.
- 330. Topics in Hindi Language and Literature.** Study of specific subjects related to Hindi culture as reflected in its literary productions and other modes of expression. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Hindi 312L with a grade of at least C.
- Topic 1: Contemporary Hindi Narratives.** Designed to enhance all four language skills: reading, writing, speaking, and listening. Hindi 330 (Topic 1) and 384 (Topic 4: *Contemporary Hindi Narratives*) may not both be counted.
- Topic 2: Hindi Drama and Film.** Contemporary Hindi plays and film scripts in Devanagari script. Hindi 330 (Topic 2) and 384 (Topic 5: *Hindi Drama and Film*) may not both be counted.
- Topic 3: Hindi Literature in the Nationalist Era.** Examines the poetry and prose of a diverse group of writers who shaped Hindi literature during the nationalist era. Also includes critical studies in English. Hindi 330 (Topic 3) and 384 (Topic 6: *Hindi Literature in the Nationalist Era*) may not both be counted.
- Topic 4: Language and Identity at the Margins of Hindi Fiction.** Focuses on the stories and novels of a diverse group of writers, including Muslims, women, Biharis, and Marwaris, who have broadened the landscape of Hindi writing. Hindi 330 (Topic 4) and 384 (Topic 7: *Language and Identity at the Margins of Hindi Fiction*) may not both be counted.

- 431K, 531K, 631K. Flagship Hindi I.** For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.
- 431L, 531L, 631L. Flagship Hindi II.** For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.
- 432K, 532K, 632K. Flagship Hindi III.** For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.
- 432L, 532L, 632L. Flagship Hindi IV.** For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.
- 433K, 533K, 633K. Flagship Hindi V.** Students attend a variety of language and area studies courses at one or more universities in India. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Consent of instructor.
- 433L, 533L, 633L. Flagship Hindi VI.** Students attend a variety of language and area studies courses at one or more universities in India. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Consent of instructor.
- 434K, 534K, 634K. Flagship Hindi VII.** For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.
- 434L, 534L, 634L. Flagship Hindi VIII.** For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.
- 360. Conference Course in Hindi Language and Literature.** Supervised individual study of selected problems in Hindi language and literature. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

JAPANESE: JPN

LOWER-DIVISION COURSES

- 506 (TCCN: JAPN 1511). First-Year Japanese I.** Not open to native speakers of Japanese. Six class hours a week for one semester.
- 507 (TCCN: JAPN 1512). First-Year Japanese II.** Not open to native speakers of Japanese. Six class hours a week for one semester. Prerequisite: Japanese 506 with a grade of at least C.
- 412K. Second-Year Japanese I.** Not open to native speakers of Japanese. Five class hours a week for one semester. Prerequisite: Japanese 507 or the equivalent with a grade of at least C.
- 412L. Second-Year Japanese II.** Not open to native speakers of Japanese. Five class hours a week for one semester. Prerequisite: Japanese 412K or the equivalent with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Japanese.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320K. Readings in Modern Japanese I.** Not open to native speakers of Japanese. Readings in expository prose at the intermediate level. Three lecture hours a week for one semester. Prerequisite: Japanese 412L with a grade of at least C.
- 320L. Readings in Modern Japanese II.** Not open to native speakers of Japanese. Three lecture hours a week for one semester. Prerequisite: Japanese 320K with a grade of at least C.
- 322. Classical Japanese.** An introduction to the principal elements of premodern literary or "classical" Japanese (*bungo*), the standard form of the written language. A survey of the principal linguistic features, close reading, and translation of a variety of prose and poetry texts. Three lecture hours a week for one semester. Japanese 322 and 384 (Topic 1: *Classical Japanese*) may not both be counted. Prerequisite: Japanese 320L with a grade of at least C.
- 325K. Advanced Conversation I.** Not open to native speakers of Japanese. Conversations on more complex situations and topics; designed to continue students' development of conversation skills taught in Japanese 412L. Three lecture hours a week for one semester. Prerequisite: Japanese 412L with a grade of at least C.
- 325L. Advanced Conversation II.** Not open to native speakers of Japanese. Three lecture hours a week for one semester. Prerequisite: Japanese 325K with a grade of at least C.
- 326. Business Japanese.** Not open to native speakers of Japanese. Advanced Japanese conversation, with emphasis on business vocabulary. Three lecture hours a week for one semester. Prerequisite: Japanese 412L with a grade of at least C.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Japanese.** Not open to native speakers of Japanese. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330. Topics in Advanced Japanese.** Not open to native speakers of Japanese. Fourth-year Japanese readings on special topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Japanese 320L with a grade of at least C.
- Topic 1: Intensive Advanced Japanese Language: Japan.** Taught in Japan in Japanese. Emphasizes reading skills and conversation.
- Topic 2: Advanced Readings in Newspaper Articles.** Advanced Japanese readings, with emphasis on vocabulary.
- Topic 3: Practical Readings in Advanced Japanese.** Practical readings in advanced Japanese, including essays, short stories, comic strips, and newspaper and magazine articles.

360. Conference Course in Japanese Language and Literature. Not open to native speakers of Japanese. Supervised individual study of selected problems in Japanese language or literature. May be repeated for credit. Prerequisite: Upper-division standing, six semester hours of upper-division coursework in Japanese, and written consent of instructor on form obtained from the undergraduate adviser.

KOREAN: KOR

LOWER-DIVISION COURSES

604. Accelerated First-Year Korean. Designed for students who understand or speak but do not read or write Korean. Not open to native speakers of Korean. Six class hours a week for one semester. Korean 604 and 506 may not both be counted; Korean 604 and 507 may not both be counted. Prerequisite: Results on the placement examination in Korean that indicate that the student is ineligible to receive credit for Korean 507. If the student is eligible to receive credit by examination for Korean 506, this credit must not appear on the student's record.

506 (TCCN: KORE 1511). First-Year Korean I. Not open to native speakers of Korean. Five class hours a week for one semester. Korean 604 and 506 may not both be counted.

507 (TCCN: KORE 1512). First-Year Korean II. Not open to native speakers of Korean. Continuation of Korean 506. Five class hours a week for one semester. Korean 604 and 507 may not both be counted. Prerequisite: Korean 506 with a grade of at least C.

612. Accelerated Second-Year Korean. Not open to native speakers of Korean. Continuation of Korean 604. Six class hours a week for one semester. Korean 612 and 412K may not both be counted; Korean 612 and 412L may not both be counted. Prerequisite: Korean 604 with a grade of at least C.

412K. Second-Year Korean I. Not open to native speakers of Korean. Four lecture hours a week for one semester. Korean 612 and 412K may not both be counted. Prerequisite: Korean 507 with a grade of at least C.

412L. Second-Year Korean II. Not open to native speakers of Korean. Four lecture hours a week for one semester. Korean 612 and 412L may not both be counted. Prerequisite: Korean 412K with a grade of at least C.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Korean. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

320K. Third-Year Korean I. Three lecture hours a week for one semester. Prerequisite: Korean 412L with a grade of at least C.

320L. Third-Year Korean II. Three lecture hours a week for one semester. Prerequisite: Korean 320K with a grade of at least C.

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Korean. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

330. Topics in Advanced Korean. Fourth-year Korean readings on special topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Korean 320L with a grade of at least C.

360. Conference Course in Korean Language and Literature. Supervised individual study of selected problems in Korean language or literature. May be repeated for credit. Prerequisite: Korean 412K and written consent of instructor on form obtained from the undergraduate adviser.

MALAYALAM: MAL

LOWER-DIVISION COURSES

506. First-Year Malayalam I. Standard Malayalam of Kerala. Five class hours a week for one semester.

507. First-Year Malayalam II. Five class hours a week for one semester. Prerequisite: Malayalam 506 with a grade of at least C.

312K. Second-Year Malayalam I. Three lecture hours a week for one semester. Prerequisite: Malayalam 507 with a grade of at least C.

312L. Second-Year Malayalam II. Three lecture hours a week for one semester. Prerequisite: Malayalam 312K with a grade of at least C.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Malayalam. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Malayalam. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

- 330. Topics in Malayalam Language and Literature.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Malayalam 312L with a grade of at least C.
- 360. Conference Course in Malayalam Language and Literature.** Supervised individual study of selected problems in Malayalam language or literature. May be repeated for credit. Prerequisite: Malayalam 312L and written consent of instructor on form obtained from the undergraduate adviser.

SANSKRIT: SAN

LOWER-DIVISION COURSES

- 506. First-Year Sanskrit I.** Introduction to basic grammatical principles, with reading of *Ramayana* episodes as illustrations. Five class hours a week for one semester.
- 507. First-Year Sanskrit II.** Detailed study of problems of grammar and syntax; reading of extracts from Hitopadesha and the *Bhagavad Gita*. Five class hours a week for one semester. Prerequisite: Sanskrit 506 with a grade of at least C.
- 312K. Second-Year Sanskrit I.** Introduction to classical Sanskrit prose literature; readings from the Epics and *Kathasaritsagara*. Three lecture hours a week for one semester. Prerequisite: Sanskrit 507 with a grade of at least C.
- 312L. Second-Year Sanskrit II.** Introduction to classical Sanskrit poetry and philosophical literature; readings from the Upanishads and Kalidasa's *Meghaduta*. Three lecture hours a week for one semester. Prerequisite: Sanskrit 312K with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Sanskrit.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 325K. Advanced Sanskrit Readings and Composition I.** Three lecture hours a week for one semester. Prerequisite: Sanskrit 312L with a grade of at least C.
- 325L. Advanced Sanskrit Readings and Composition II.** Three lecture hours a week for one semester. Prerequisite: Sanskrit 325K with a grade of at least C.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Sanskrit.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

- 330. Topics in Sanskrit Language and Literature.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Sanskrit 312L with a grade of at least C.
- 360. Conference Course in Sanskrit Language and Literature.** Supervised individual study of selected problems in Sanskrit language or literature. May be repeated for credit. Prerequisite: Upper-division standing, Sanskrit 312L, and written consent of instructor on form obtained from the undergraduate adviser.

TAMIL: TAM

LOWER-DIVISION COURSES

- 604. Accelerated First-Year Tamil.** Not open to native speakers of Tamil. Designed for students who understand or speak but do not read or write Tamil. Six class hours a week for one semester. Tamil 604 and 506 may not both be counted; Tamil 604 and 507 may not both be counted.
- 506. First-Year Tamil I.** Not open to native speakers of Tamil. Five lecture hours a week for one semester. Tamil 506 and 604 may not both be counted.
- 507. First-Year Tamil II.** Not open to native speakers of Tamil. Five lecture hours a week for one semester. Tamil 604 and 507 may not both be counted. Prerequisite: Tamil 506 with a grade of at least C.
- 612. Accelerated Second-Year Tamil.** Not open to native speakers of Tamil. Continuation of Tamil 604. Designed for students who understand or speak but do not read or write Tamil. Six class hours a week for one semester. Tamil 612 and 312K may not both be counted; Tamil 612 and 312L may not both be counted. Prerequisite: Tamil 604 with a grade of at least C.
- 312K. Second-Year Tamil I.** Not open to native speakers of Tamil. Three lecture hours a week for one semester. Tamil 612 and 312K may not both be counted. Prerequisite: Tamil 507 with a grade of at least C.
- 312L. Second-Year Tamil II.** Not open to native speakers of Tamil. Three lecture hours a week for one semester. Tamil 612 and 312L may not both be counted. Prerequisite: Tamil 312K with a grade of at least C.

UPPER-DIVISION COURSES

- 320K. Advanced Tamil I.** Not open to native speakers of Tamil. Three lecture hours a week for one semester. Prerequisite: Tamil 312L with a grade of at least C.
- 320L. Advanced Tamil II.** Not open to native speakers of Tamil. Three lecture hours a week for one semester. Prerequisite: Tamil 320K with a grade of at least C.

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Tamil. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

330. Topics in Tamil Language and Literature. Not open to native speakers of Tamil. Study of specific subjects related to South Asian culture as reflected in Tamil literary productions and other modes of expression. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Tamil 312L with a grade of at least C.

360. Conference Course in Tamil Language and Literature. Supervised individual study of selected problems in Tamil language and literature. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

TELUGU: TEL

LOWER-DIVISION COURSES

604. Accelerated First-Year Telugu. Six lecture hours a week for one semester. Telugu 604 and 506 may not both be counted; Telugu 604 and 507 may not both be counted.

506. First-Year Telugu I. Not open to native speakers of Telugu. Five class hours a week for one semester. Telugu 604 and 506 may not both be counted.

507. First-Year Telugu II. Not open to native speakers of Telugu. Five class hours a week for one semester. Telugu 604 and 507 may not both be counted. Prerequisite: Telugu 506 with a grade of at least C.

612. Accelerated Second-Year Telugu. Continuation of Telugu 604. Six lecture hours a week for one semester. Telugu 612 and 312K may not both be counted; Telugu 612 and 312L may not both be counted. Prerequisite: Telugu 604.

312K. Second-Year Telugu I. Not open to native speakers of Telugu. Three lecture hours a week for one semester. Telugu 612 and 312K may not both be counted. Prerequisite: Telugu 507 with a grade of at least C.

312L. Second-Year Telugu II. Not open to native speakers of Telugu. Three lecture hours a week for one semester. Telugu 612 and 312L may not both be counted. Prerequisite: Telugu 312K with a grade of at least C.

118K. Practice in Spoken Telugu. Not open to native speakers of Telugu. Instruction and practice in conversation for intermediate-level students. Two lecture hours a week for one semester. Prerequisite: Telugu 507 with a grade of at least C.

118L. Practice in Spoken Telugu II. Not open to native speakers of Telugu. Instruction and practice in conversation for intermediate-level students. Two lecture hours a week for one semester. Prerequisite: Telugu 312K or 118K with a grade of at least C.

UPPER-DIVISION COURSES

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Telugu. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

330. Telugu Language and Literature. Three lecture hours a week for one semester. Prerequisite: Telugu 312L with a grade of at least C.

360. Conference Course in Telugu Language and Literature. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

URDU: URD

LOWER-DIVISION COURSES

604. Accelerated First-Year Urdu. Not open to native speakers of Urdu. Eight class hours a week for one semester. Hindi 604 and Urdu 604 may not both be counted; Hindi 506 and Urdu 604 may not both be counted; Hindi 507 and Urdu 604 may not both be counted; Urdu 604 and 506 may not both be counted; Urdu 604 and 507 may not both be counted.

506. First-Year Urdu I. Not open to native speakers of Urdu. Five class hours a week for one semester. Urdu 604 and 506 may not both be counted.

507. First-Year Urdu II. Not open to native speakers of Urdu. Five class hours a week for one semester. Urdu 604 and 507 may not both be counted. Prerequisite: Urdu 506 with a grade of at least C.

612. Accelerated Second-Year Urdu. Continuation of Urdu 604. Eight lecture hours a week for one semester. Urdu 612 and 312K may not both be counted; Urdu 612 and 312L may not both be counted. Prerequisite: Urdu 604 with a grade of at least C.

312K. Second-Year Urdu I. Not open to native speakers of Urdu. Introduction to the Urdu script, followed by Urdu reading, composition, and conversation. Three lecture hours a week for one semester. Urdu 612 and 312K may not both be counted. Prerequisite: Urdu 507 with a grade of at least C.

312L. Second-Year Urdu II. Not open to native speakers of Urdu. Continuation of Urdu 312K. Three lecture hours a week for one semester. Urdu 612 and 312L may not both be counted. Prerequisite: Urdu 312K with a grade of at least C.

118K. Practice in Spoken Urdu I. Not open to native speakers of Urdu. Instruction and practice in conversation for intermediate-level students. Two lecture hours a week for one semester. Prerequisite: Urdu 507 with a grade of at least C.

118L. Practice in Spoken Urdu II. Not open to native speakers of Urdu. Two lecture hours a week for one semester. Prerequisite: Urdu 118K with a grade of at least C.

UPPER-DIVISION COURSES

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Urdu. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

330. Topics in Urdu Language and Literature. Study of specific subjects related to Urdu culture as reflected in literary productions and other modes of expression. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Urdu 312L with a grade of at least C.

Topic 1: Female Voices in Urdu Literature. Survey of prose and poetry written in Urdu by women during the last three centuries. Only one of the following may be counted: Religious Studies 341 (Topic: *Female Voices in Urdu Literature*), Urdu 330 (Topic 1), 384 (Topic 4: *Female Voices in Urdu Literature*).

Topic 2: Love and Devotion in Urdu Literature. Examination of various literary genres that are shaped by discourses on the love of God and devotion to the prophet Muhammad. Urdu 330 (Topic 2) and 384 (Topic 5: *Love and Devotion in Urdu Literature*) may not both be counted.

Topic 3: Philosophy and Poetry of Iqbal. Explores the prose and poetry written by the most influential twentieth-century Muslim reformer in South Asia, Muhammad Iqbal. Urdu 330 (Topic 3) and 384 (Topic 6: *Philosophy and Poetry of Iqbal*) may not both be counted.

Topic 4: Urdu Aesthetics. Intensive overview of the most popular lyrical genre of Urdu poetry, the *ghazal*, and the standards used to judge a good *ghazal*. Urdu 330 (Topic 4) and 384 (Topic 7: *Urdu Aesthetics*) may not both be counted.

431K, 531K, 631K. Flagship Urdu I. For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

431L, 531L, 631L. Flagship Urdu II. For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

432K, 532K, 632K. Flagship Urdu III. For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

432L, 532L, 632L. Flagship Urdu IV. For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

433K, 533K, 633K. Flagship Urdu V. Students attend a variety of language and area studies courses at one or more universities in India. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Consent of instructor.

433L, 533L, 633L. Flagship Urdu VI. Students attend a variety of language and area studies courses at one or more universities in India. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Consent of instructor.

434K, 534K, 634K. Flagship Urdu VII. For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

434L, 534L, 634L. Flagship Urdu VIII. For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

360. Conference Course in Urdu Language and Literature. Supervised individual study of selected problems in Urdu language or literature. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

VIETNAMESE: VTN

LOWER-DIVISION COURSES

604. Accelerated First-Year Vietnamese. Designed for students who understand or speak but do not read or write Vietnamese. Six class hours a week for one semester. Vietnamese 604 and 506 may not both be counted; Vietnamese 604 and 507 may not both be counted. Prerequisite: Results on the placement examination in Vietnamese that indicate the student is ineligible to receive credit for Vietnamese 507. If the student is eligible to receive credit by examination for Vietnamese 506, credit must not appear on the student's record.

506 (TCCN: VIET 1511). First-Year Vietnamese I. Not open to native speakers of Vietnamese. Five class hours a week for one semester. Vietnamese 604 and 506 may not both be counted. Prerequisite: Results on the placement examination in Vietnamese that indicate the student is ineligible to receive credit by examination for Vietnamese 506 and 604.

507 (TCCN: VIET 1512). First-Year Vietnamese II. Not open to native speakers of Vietnamese. Five class hours a week for one semester. Vietnamese 604 and 507 may not both be counted. Prerequisite: Vietnamese 506 with a grade of at least C.

612. Accelerated Second-Year Vietnamese. Continuation of Vietnamese 604. Six class hours a week for one semester. Vietnamese 612 and 412K may not both be counted; Vietnamese 612 and 412L may not both be counted. Prerequisite: Vietnamese 604 with a grade of at least C.

412K. Second-Year Vietnamese I. Not open to native speakers of Vietnamese. Four class hours a week for one semester. Vietnamese 612 and 412K may not both be counted. Prerequisite: Vietnamese 507 with a grade of at least C.

412L. Second-Year Vietnamese II. Not open to native speakers of Vietnamese. Four class hours a week for one semester. Vietnamese 612 and 412L may not both be counted. Prerequisite: Vietnamese 412K with a grade of at least C.

320K. Readings in Modern Vietnamese I. Readings in expository prose: selections from journals, newspapers, and other sources. Three lecture hours a week for one semester. Prerequisite: Vietnamese 604 or 412L with a grade of at least C.

UPPER-DIVISION COURSES

320L. Readings in Modern Vietnamese II. Readings in modern fiction, poetry, and drama. Three lecture hours a week for one semester. Prerequisite: Vietnamese 320K with a grade of at least C.

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Vietnamese. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

360. Conference Course in Vietnamese Language and Literature. Supervised individual study in Vietnamese language and literature. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

DEPARTMENT OF CLASSICS

No knowledge of Greek or Latin is required for courses in classical civilization or in ancient history and classical civilization. These courses may not be counted toward fulfillment of any foreign language requirement.

Unless otherwise indicated, all Greek courses are ancient Greek (including New Testament Greek). Students beginning ancient Greek normally follow the regular sequence: Greek 506, 507, 311, and 312K. An intensive sequence is also available: Greek 804 and 412, normally followed by Greek 311.

Students beginning Latin normally follow the regular sequence: Latin 506, 507, 311, and 312K or 316. Students may instead follow an accelerated sequence; information about this sequence is available from the undergraduate departmental adviser. Students with high school or transfer credit in Latin usually begin University coursework at a higher level. To ensure proper placement, students should consult the undergraduate adviser for the Department of Classics before registering.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN)

designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ANCIENT HISTORY AND CLASSICAL CIVILIZATION: AHC

LOWER-DIVISION COURSES

310. Introductory Surveys in Premodern History. Introductory survey of premodern history with emphasis on regions outside of the ancient Mediterranean world. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

319. Introductory Surveys in Roman and Greek History. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary.

Topic 1: The Ancient Mediterranean World. Same as Classical Civilization 319D and History 319D. Survey of the ancient Mediterranean from ca. 3000 BC to AD 476. Focus on the development of ideas and institutions in the Greek and Roman worlds and on the active cultural exchange among the diverse civilizations of the broader region that shaped Greek and Roman history and cultural identity.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Ancient History. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the ancient history and classical civilization program. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

325. Topics in Ancient History. Topics in the history of the Greek and Roman empires and the surrounding area. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: The History of Rome: The Republic. Same as History 321M. A survey of Roman history from the founding of Rome to the death of Julius Caesar. Prerequisite: Upper-division standing.

Topic 2: The History of Rome: The Empire. Same as History 321. A survey of the Roman world from Augustus to Constantine the Great. Prerequisite: Upper-division standing.

Topic 3: Rome and Jerusalem. Same as History 321G, Jewish Studies 365 (Topic 7: *Rome and Jerusalem*), Middle Eastern Studies 320 (Topic 2: *Rome and Jerusalem*), and Religious Studies 365 (Topic 1: *Rome and Jerusalem*). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Only one of the following may be counted: Ancient History and Classical Civilization 325 (Topic 3), Jewish Studies 361 (Topic 2: *Rome and Jerusalem*), Middle Eastern Languages and Cultures 341 (Topic 7: *Rome and Jerusalem*), Religious Studies 361 (Topic 24: *Rome and Jerusalem*). Prerequisite: Upper-division standing.

Topic 4: History of Greece to the End of the Peloponnesian War. Same as Classical Civilization 354C and History 354C. Survey of Greek history from the emergence of the city-states through the end of the Peloponnesian War (ca. 700 to 404 BC). Prerequisite: Upper-division standing.

Topic 5: History of Greece to 146 BC. Same as Classical Civilization 354D and History 354D. Survey of Greek history from the end of the Peloponnesian War to the defeat of Greece by Rome (404 to 146 BC). Prerequisite: Upper-division standing.

Topic 6: The Hellenistic Age: Alexander to Actium. Same as Classical Civilization 351D and History 351D. History of Asia, Egypt, and the Mediterranean world from Alexander's expedition to Asia to Rome's defeat of the last of the Hellenistic monarchs at Actium (ca. 334 to 31 BC). Prerequisite: Upper-division standing.

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Ancient History. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the ancient history and classical civilization program. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

330. Topics in Premodern History. Topics in premodern history with emphasis on regions outside of the ancient Mediterranean world. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

378. Undergraduate Seminar in Ancient History. Lectures, discussion, reading, and research on selected topics in Greek and Roman history. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and a major in ancient history and classical civilization, classical civilization, Greek, or Latin. Additional prerequisites vary with the topic and are given in the *Course Schedule*.

679H. Honors Tutorial Course. Supervised conference course for honors candidates in ancient history and classical civilization. Three conference hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Ancient History and Classical Civilization Honors Program; for 679HB, Ancient History and Classical Civilization 679HA.

CLASSICAL CIVILIZATION: C C

LOWER-DIVISION COURSES

301. Introduction to Ancient Greece. Greatness of Greece as reflected in Greek history, literature, philosophy, art, religion, and politics. No knowledge of Greek is required. Three class hours a week for one semester. Classical Civilization 301 and 342 may not both be counted.

302. Introduction to Ancient Rome. Survey of the highlights and the influence of Roman civilization. No knowledge of Latin is required. Three class hours a week for one semester. Classical Civilization 302 and 347 may not both be counted.

303. Introduction to Classical Mythology. Survey of major Greek and Roman myths and their influence on literature, art, and music. Three class hours a week for one semester. Classical Civilization 303 and 352 may not both be counted.

304C. Topics in the Ancient World. An introductory survey of the highlights of Greek and Roman civilization and early Christianity. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Classical Civilization 304C and 348 may not both be counted unless the topics vary.

Topic 1: Introduction to Greek Private Life.

Topic 2: Paganism to Christianity: An Introduction.

Topic 3: Introduction to Ancient Egypt. A survey of the language, culture, and history of Egypt from the prehistorical period (13,000 BC) to the New Kingdom (1069 BC). Classical Civilization 304C (Topic 3) and 348 (Topic 11: *Ancient Egypt*) may not both be counted.

305. Topics in Roman Civilization. A survey of the social life and customs of ancient Rome and Pompeii. No knowledge of Latin is required. Three class hours a week for one semester. May be repeated for credit when the topics vary. Classical Civilization 305 and 335 may not both be counted unless the topics vary.

Topic 1: Introduction to Caesar and Augustus.

Topic 2: Introduction to Roman Private Life.

306. Introduction to the Latin and Greek Element in English. The systematic study of the Latin and Greek elements in the English vocabulary with a view to increasing the student's facility and authority in English. No knowledge of Greek or Latin is required. Three class hours a week for one semester. Classical Civilization 306 and 336 may not both be counted.

306M. Introduction to Medical and Scientific Terminology. A systematic study of medical and scientific terminology based on Greek and Latin roots. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Classical Civilization 306M and 336M may not both be counted.

307C. Introduction to Greek Archaeology. A survey of the artifacts, monuments, and sites of ancient Greece, and their value for documenting Greek religious, social, and cultural history. No knowledge of Greek is required. Three lecture hours a week for one semester. Classical Civilization 307C and 307K (Topic 1: *Greek Archaeology Survey*) may not both be counted.

- 307D. Introduction to Roman Archaeology.** A survey of the artifacts, monuments, and sites of ancient Rome, and their value for documenting Roman religious, social, and cultural history. No knowledge of Latin is required. Three lecture hours a week for one semester.
- 307K. Topics in Archaeology.** Survey of archaeological discoveries about ancient Greece or Rome in their historical and cultural context; emphasis on the major sites and monuments of architecture and art. No knowledge of Greek or Latin is required. Three class hours a week for one semester. May be repeated for credit when the topics vary. Classical Civilization 307K and 340 may not both be counted unless the topics vary.
- 317. Classical Archaeology: Methods and Approaches.** An overview of the history of classical archaeology and its methods and approaches. Focuses on case studies of major sites and their excavation and interpretation. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Classical Civilization 302K and 317 may not both be counted. Prerequisite: One of the following courses: Ancient History and Classical Civilization 319 (Topic 1: *The Ancient Mediterranean World*), Anthropology 304, Archaeology 301, Art History 302, Classical Civilization 301, 302, 307C, 307D, 319D, History 319D.
- 318. The Rise of Christianity.** Same as Religious Studies 318. Introduction to the origins and development of Christianity. Three lecture hours a week for one semester. Classical Civilization 318 and Religious Studies 311 (Topic: *The Rise of Christianity*) may not both be counted.
- 319D. The Ancient Mediterranean World.** Same as Ancient History and Classical Civilization 319 (Topic 1: *The Ancient Mediterranean World*) and History 319D. Survey of the ancient Mediterranean from ca. 3000 BC to AD 476. Focus on the development of ideas and institutions in the Greek and Roman worlds and on the active cultural exchange among the diverse civilizations of the broader region that shaped Greek and Roman history and cultural identity. Three lecture hours or two lecture hours and one discussion hour a week for one semester.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Classical Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 322. Classical Literature in Translation.** Survey of Greek and Latin philosophical, literary, and historical classics, in translation. No knowledge of Greek or Latin is required. Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- Topic 3: Wit and Humor in Antiquity.**
- Topic 4: Ancient Epic.** Classical Civilization 322 (Topic 4) and 322 (Topic: *Epic Tradition: From Homer to Tennyson*) may not both be counted.
- 327. Parageography.** Survey of the classical and medieval roots of speculative literature, especially those fantasies that involve the creation and presentation of imaginary places, lands, and worlds. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Classical Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330K. Ancient Philosophy after Aristotle.** Same as Philosophy 330K. Epicureans, Stoics, Skeptics, Plotinus and the Neoplatonist tradition. No knowledge of Greek is required. Three class hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- 336M. Medical and Scientific Terminology.** A systematic study of medical and scientific terminology based on Greek and Latin roots. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Classical Civilization 306M and 336M may not both be counted. Prerequisite: Upper-division standing.
- 340. Advanced Topics in Classical Archaeology.** Detailed study of a single topic such as architecture, sculpture, or topography of sites. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Classical Civilization 307K and 340 may not both be counted unless the topics vary. Classical Civilization 340 and 375 may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Greek Archaeology.** Study of the artifacts, monuments, and sites of classical Greece; and their value for documenting ancient Greek religious, social, and cultural history. Prerequisite: Upper-division standing.
- Topic 2: Roman Imperial Art.** Same as Art History 327N. Public art of the Roman Empire from Augustus to late antiquity, ca. 31 BC to AD 350. Prerequisite: For art history majors, Art History 302; for visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

- Topic 3: Greek Architecture.** The architecture of mainland Greece, Asia Minor, and Sicily from the Dark Ages to the end of the Hellenistic period (ca. 1000 to 30 BC), with emphasis on public buildings, both religious and secular. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.
- Topic 4: Roman Architecture.** Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.
- Topic 5: Hellenistic Art and Architecture.** Art of the Hellenistic period from the reign of Alexander the Great to the beginning of the Roman Empire, ca. 336 to 31 BC. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.
- 348. Topics in Ancient Civilization.** The development and progress of ancient civilization, including history, philosophy, literature, and culture. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Classical Civilization 304C and 348 may not both be counted unless the topics vary. Classical Civilization 348 and 375 may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 4: History of Ancient Philosophy.** Same as Philosophy 329K. Development of Western philosophy from the pre-Socratics to the early Christian era; emphasis on Plato and Aristotle. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- Topic 5: Homosexuality in Antiquity.** Prerequisite: Upper-division standing.
- Topic 7: Women in Classical Antiquity.** Same as Women's and Gender Studies 345 (Topic 9: *Women in Classical Antiquity*).
- Topic 8: German and English: Historical Perspectives.** Same as Anthropology 320L (Topic 8: *German and English: Historical Perspectives*), Germanic Civilization 327E (Topic 9: *German and English: Historical Perspectives*), and Linguistics 373 (Topic 8: *German and English: Historical Perspectives*). Only one of the following may be counted: Anthropology 320L (Topic 9: *The German Language: Historical Perspectives*), Classical Civilization 348 (Topic 8), 348 (Topic 9: *The German Language: Historical Perspectives*), German 369 (Topic 4: *The German Language: Historical Perspectives*), Linguistics 373 (Topic 9: *The German Language: Historical Perspectives*). Prerequisite: For English majors, completion of at least thirty semester hours of coursework, including English 316K or the equivalent; for others, upper-division standing.
- Topic 9: The German Language: Historical Perspectives.** Same as Anthropology 320L (Topic 9: *The German Language: Historical Perspectives*), German 369 (Topic 4: *The German Language: Historical Perspectives*), and Linguistics 373 (Topic 9: *The German Language: Historical Perspectives*). Only one of the following may be counted: Anthropology 320L (Topic 8: *German and English: Historical Perspectives*), Classical Civilization 348 (Topic 8: *German and English: Historical Perspectives*), 348 (Topic 9), Germanic Civilization 327E (Topic 9: *German and English: Historical Perspectives*), Linguistics 373 (Topic 8: *German and English: Historical Perspectives*). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics.
- Topic 10: Jesus in History and Tradition.** Same as Religious Studies 335. Critical issues, scholarly debates, and historical methods in studying the development of the Christian tradition regarding the figure of Jesus. Classical Civilization 348 (Topic 10) and Religious Studies 361 (Topic: *Jesus in History and Tradition*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 11: Ancient Egypt.** Discussion of Egypt's culture, language, and history from the prehistorical period (13,000 BC) to the New Kingdom (1069 BC). Classical Civilization 304C (Topic 3: *Introduction to Ancient Egypt*) and 348 (Topic 11) may not both be counted. Prerequisite: Upper-division standing.
- 351D. The Hellenistic Age: Alexander to Actium.** Same as Ancient History and Classical Civilization 325 (Topic 6: *The Hellenistic Age: Alexander to Actium*) and History 351D. History of Asia, Egypt, and the Mediterranean world from Alexander's expedition to Asia to Rome's defeat of the last of the Hellenistic monarchs at Actium (ca. 334 to 31 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.
- 352. Classical Mythology.** Survey of major Greek and Roman myths and their influence on literature, art, and music. Three class hours a week for one semester. Classical Civilization 303 and 352 may not both be counted. May be counted as an upper-division elective in English. Prerequisite: Upper-division standing.
- 354C. History of Greece to the End of the Peloponnesian War.** Same as Ancient History and Classical Civilization 325 (Topic 4: *History of Greece to the End of the Peloponnesian War*) and History 354C. Survey of Greek history from the emergence of the city-states through the end of the Peloponnesian War (ca. 700 to 404 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

- 354D. History of Greece to 146 BC.** Same as Ancient History and Classical Civilization 325 (Topic 5: *History of Greece to 146 BC*) and History 354D. Survey of Greek history from the end of the Peloponnesian War to the defeat of Greece by Rome (404 to 146 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.
- 362. Conference Course in Classical Archaeology.** Advanced archaeological instruction and research in classical archaeology. No knowledge of Greek is required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 363. Conference Course in Classical Civilization.** Supervised work in various specialized aspects of classical civilization. No knowledge of Greek or Latin is required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 375. Seminar in Classical Studies.** Restricted to students in the Department of Classics. Study of selected topics in classical studies. Some knowledge of Greek or Latin is expected. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Classical Civilization 340 and 375 may not both be counted unless the topics vary. Classical Civilization 348 and 375 may not both be counted unless the topics vary. Prerequisite: Upper-division standing; additional prerequisites may vary with the topic.
- 679H. Honors Tutorial Course.** Supervised conference course for honors candidates in classics. Three conference hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Classics Honors Program; for 679HB, Classical Civilization 679HA.

GREEK: GK

LOWER-DIVISION COURSES

- 601C. Beginning Greek.** Studies the fundamentals of grammar and reading in ancient Greek. Six lecture hours a week for one semester. Only one of the following may be counted: Greek 601C; 804; 506 and 507; 606Q.
- 502. First-Year Modern Greek I.** Introduction to grammar and reading. Five lecture hours a week for one semester. Greek 502 and 602C may not both be counted.
- 602C. Beginning Modern Greek.** Six lecture hours a week for one semester. Greek 502 and 602C may not both be counted. Greek 602C and 503 may not both be counted.
- 503. First-Year Modern Greek II.** Continuation of Greek 502. Five lecture hours a week for one semester. Greek 602C and 503 may not both be counted. Prerequisite: Greek 502 with a grade of at least C.
- 804. Intensive Beginning Greek.** An accelerated course for highly motivated students that combines the material covered in Greek 506 with that covered in the first part of Greek 507. Offered in the summer session as part of the Intensive Greek Program. The Intensive Greek Program meets for five hours each weekday during the summer session. Only one of the following may be counted: Greek 601C; 804; 506 and 507; 606Q. The student must complete both Greek 804 and 412 in order to earn credit for either; the same grade will be awarded for both courses. Prerequisite: Concurrent enrollment in Greek 412. Students who enroll in 804 must take Greek 412 in the same summer session.
- 506 (TCCN: GREE 1511). First-Year Greek I.** Studies the fundamentals of grammar and reading in ancient Greek. Five lecture hours a week for one semester. Only one of the following may be counted: Greek 601C; 804; 506 and 507; 606Q.
- 507 (TCCN: GREE 1512). First-Year Greek II.** Continuation of Greek 506. Five lecture hours a week for one semester. Only one of the following may be counted: Greek 601C; 804; 506 and 507; 606Q. Greek 507 and 412 may not both be counted. Prerequisite: Greek 506 with a grade of at least C.
- 309K. Conference Course.** Supervised individual instruction in second-year ancient or modern Greek reading. May be repeated for credit. Prerequisite: Consent of instructor.
- 310. Second-Year Modern Greek I.** Culture, language, and literature of present-day Greece. Three lecture hours a week for one semester. Greek 310 and 610C may not both be counted. Prerequisite: Greek 602C or 503 with a grade of at least C.
- 610C. Intermediate Modern Greek.** Continuation of Greek 602C. Six lecture hours a week for one semester. Greek 310 and 610C may not both be counted. Greek 610C and 310K may not both be counted. Prerequisite: Greek 602C or 503 with a grade of at least C.
- 310K. Second-Year Modern Greek II.** Continuation of Greek 310. Three lecture hours a week for one semester. Greek 610C and 310K may not both be counted. Prerequisite: Greek 310 with a grade of at least C.
- 311 (TCCN: GREE 2311). Intermediate Greek I.** Continuation of Greek 601C or 507. Introductory readings from classical authors such as Lysias, Plato, and Xenophon. Includes grammar review. Three lecture hours a week for one semester. Prerequisite: Greek 601C or 507 with a grade of at least C, or Greek 804 and 412 with a grade of at least C in each.
- 412. Intensive Greek.** An accelerated course for highly motivated students. Completion of this course is equivalent to completion of Greek 506 and 507. Students who enroll in 412 must take Greek 804 in the same summer session. A grade of A may allow the student to advance to Greek 324 with consent of the Greek 324 instructor. The Intensive Greek Program meets for five hours each weekday during the summer session. Greek 507 and 412 may not both be counted. Prerequisite: Concurrent enrollment in Greek 804.
- 312K. Intermediate Greek II.** Continuation of Greek 311. Selected readings from classical and biblical authors. Three lecture hours a week for one semester. Greek 312K and 312L may not both be counted. Prerequisite: Greek 311 with a grade of at least C.

- 312L. Intermediate Greek II: Biblical Greek.** Continuation of Greek 311. A parallel to Greek 312K with a focus on biblical Greek. Three class hours a week for one semester. Greek 312K and 312L may not both be counted. Prerequisite: Greek 311 with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Greek.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 362. Seminar in Biblical Greek.** Critical study of biblical texts and related writings. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Greek 328 and 362 may not both be counted unless the topics vary. Prerequisite: Greek 324 or 328.
- 365. Seminar in Greek.** Critical study of authors such as Thucydides, Demosthenes, and Aeschylus. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Greek 324 or 328.
- Topic 1: Aeschylus.**
Topic 2: Sophocles.
Topic 3: Thucydides.
Topic 4: Aristophanes.
- 370. Advanced Conference Course.** Supervised reading. May be repeated for credit. Prerequisite: Greek 310K or 324, and consent of instructor.
- 679H. Honors Tutorial Course.** Supervised conference course for honors candidates in Greek. Three conference hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the honors program in Greek; for 679HB, Greek 679HA.

UPPER-DIVISION COURSES

- 322. Advanced Greek I.** Reading and analysis of selected classical authors. Three lecture hours a week for one semester. Prerequisite: Greek 312K or 312L with a grade of at least C; or Greek 412 with a grade of A, and consent of the undergraduate adviser.
- 322C. Biblical Greek.** Selected readings from biblical authors. Three lecture hours a week for one semester. Prerequisite: Greek 312K or 312L with a grade of at least C; or Greek 412 with a grade of A, and consent of the undergraduate adviser.
- 324. Greek Literature: Junior Reading.** Readings from major writers such as Homer, Euripides, and Lysias. Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Greek 312K (or 319) with a grade of at least C, or Greek 804 and 412 with a grade of A in each; and consent of instructor or the undergraduate adviser.
- Topic 1: Euripides.**
Topic 2: Herodotus.
Topic 3: Homer's *Iliad*.
Topic 4: Plato.
- 326. Advanced Greek Grammar and Composition.** Study of syntax, style, and principles of written composition. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Greek 324.
- 328. Advanced Biblical Greek.** Reading and analysis of selections from the New Testament, the Septuagint, and related writings. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Greek 328 and 362 may not both be counted unless the topics vary. Prerequisite: Greek 322 or 322C with a grade of at least C.
- Topic 1: Pauline Epistles.**
Topic 2: The Gospel of John.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Greek.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

LATIN: LAT

LOWER-DIVISION COURSES

- 601C. Beginning Latin.** Fundamentals of grammar and reading. Six lecture hours a week for one semester. Only one of the following may be counted: Latin 601C; 506 and 507; 506Q; 508.
- 506 (TCCN: LATI 1511). First-Year Latin I.** Fundamentals of grammar and reading. Five lecture hours a week for one semester. Only one of the following may be counted: Latin 601C; 506 and 507; 506Q; 508.
- 507 (TCCN: LATI 1512). First-Year Latin II.** Continuation of Latin 506. Five lecture hours a week for one semester. Only one of the following may be counted: Latin 601C; 506 and 507; 506Q; 508. Prerequisite: Latin 506 with a grade of at least C.
- 309K. Conference Course.** Supervised individual instruction in second-year Latin reading. May be repeated for credit. Prerequisite: Consent of instructor.
- 311 (TCCN: LATI 2311). Intermediate Latin I.** Continuation of Latin 601C and 507. Introduction to reading classical authors in their cultural context. Includes grammar review. Three lecture hours a week for one semester. Latin 311 and 511K may not both be counted. Prerequisite: Latin 601C or 507 (or 506Q or 508) with a grade of at least C.
- 511K. Accelerated Intermediate Latin.** Designed primarily for students of high academic ability and motivation. Comparable to Latin 311 and 312K together. Five lecture hours a week for one semester. Only one of the following may be counted: Latin 511K, 312K, 312M, 316. Latin 311 and 511K may not both be counted. Prerequisite: Latin 601C or 507 (or 506Q or 508) with a grade of at least A-.
- 312K. Intermediate Latin II.** Continuation of Latin 311. Selected readings from classical authors. Three lecture hours a week for one semester. Only one of the following may be counted: Latin 511K, 312K, 312M, 316. Prerequisite: Latin 311 with a grade of at least C.

- 316. Intermediate Latin II: Poetry.** Continuation of Latin 311. Selected readings from classical and medieval poets. Three lecture hours a week for one semester. Only one of the following may be counted: Latin 511K, 312K, 312M, 316. Prerequisite: Latin 311 with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Latin.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 322. Advanced Latin I.** Reading and analysis of selected classical authors. Three lecture hours a week for one semester. Prerequisite: Latin 511K, 312K, or 316 (or 312M) with a grade of at least C.
- 323. Advanced Latin II.** Reading and interpretation of authors such as Caesar, Catullus, Cicero, and Ovid. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Latin 322 with a grade of at least C.
- 324. Advanced Latin Grammar and Composition.** Study of syntax, style, and principles of written composition. Three lecture hours a week for one semester. Required of all Latin majors and students seeking a secondary school teaching certificate with Latin as a teaching field. Prerequisite: Latin 322 with a grade of at least C, or consent of the undergraduate adviser.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Latin.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 365. Seminar in Latin.** Critical study of authors such as Horace, Livy, Lucretius, and Tacitus. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Latin 323 with a grade of at least C.
Topic 1: Horace.
Topic 2: Lucretius.
Topic 4: Tacitus.
- 370. Advanced Conference Course.** Supervised reading. May be repeated for credit. Prerequisite: Consent of instructor.
- 679H. Honors Tutorial Course.** Supervised conference course for honors candidates in Latin. Three conference hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Latin Honors Program; for 679HB, Latin 679HA.

COGNITIVE SCIENCE

COGNITIVE SCIENCE: CGS

UPPER-DIVISION COURSE

- 360. Cognitive Science: The Study of Mind.** An introduction to the study of mind known as cognitive science, focusing on key areas such as vision and language, cognition and problem solving, artificial intelligence. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
Topic 1: Introduction to Cognitive Science. Same as Linguistics 373 (Topic 7: *Introduction to Cognitive Science*) and Philosophy 365 (Topic 2: *Introduction to Cognitive Science*).

COMPARATIVE LITERATURE

COMPARATIVE LITERATURE: C L

LOWER-DIVISION COURSES

- 301. Introduction to Comparative Literature.** Reading and interpretation of literary texts in translation drawn from cultures around the world, focusing on methods of criticism and analysis. Three lecture hours a week for one semester.
- 305. Topics in Comparative Literature.** Study of masterpieces of world literature; of different literary genres; and the relationship between literature and other disciplines such as psychology, philosophy, and film. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 315. Masterworks of World Literature.** Introduction to masterpieces of the world's literary traditions, emphasizing historical, generic, and thematic connections. Three lecture hours a week for one semester. Some sections require an additional discussion hour a week. Only one of the following may be counted: Comparative Literature 315, English 603B, 316K, Tutorial Course 603B. Prerequisite: Completion of at least thirty semester hours of coursework, including English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A; and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test.
- 318Q. Supervised Research.** Individual instruction.

UPPER-DIVISION COURSES

320. Conference Course in Comparative Literature. Independent study of literary projects under supervision of professors in comparative literature. Prerequisite: Six semester hours of upper-division coursework in literature, of which three hours must be in a classical or foreign language.

323. Topics in Comparative Literature. Study of masterpieces of world literature; of different literary genres; of the relationship between literature and other disciplines, such as psychology, philosophy, and film; and of special topics of a comparative nature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 2: Literature and Music. Comparative Literature 323 (Topic 2) and English 320M (Topic 1: *Literature and Music*) may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 3: Autobiography: A Modern Literary Species. Same as African and African American Studies 374 (Topic 25: *Autobiography: A Modern Literary Species*) and Middle Eastern Studies 322K (Topic 25: *Autobiography: A Modern Literary Species*). Only one of the following may be counted: Comparative Literature 323 (Topic 3), English 379N (Topic 5: *Autobiography: A Modern Literary Species*), Middle Eastern Languages and Cultures 374 (Topic 2: *Autobiography: A Modern Literary Species*). Prerequisite: Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing.

Topic 4: Self-Revelation in Women's Writing. Same as African and African American Studies 374 (Topic 26: *Self-Revelation in Women's Writing*), Middle Eastern Studies 322K (Topic 26: *Self-Revelation in Women's Writing*), and Women's and Gender Studies 340 (Topic 14: *Self-Revelation in Women's Writing*). Only one of the following may be counted: Comparative Literature 323 (Topic 4), English 376L (Topic 9: *Self-Revelation in Women's Writing*), Middle Eastern Languages and Cultures 374 (Topic 3: *Self-Revelation in Women's Writing*). Prerequisite: Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing.

Topic 5: The Enlightenment. Only one of the following may be counted: Comparative Literature 323 (Topic 5), English 379N (Topic 6: *The Enlightenment*), French Civilization 349 (Topic: *The Enlightenment*), Philosophy 354 (Topic: *The Enlightenment*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 6: Caribbean Literature. Same as English 360L (Topic 2: *Caribbean Literature*) and African and African American Studies 374F (Topic 7: *Caribbean Literature*). Comparative Literature 323 (Topic 6) and English 379N (Topic: *Caribbean Literature*) may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

324. The History of Fantastic Literature. Open to all University students. The history of fantastic and fantasy literature.

358Q. Supervised Research. Individual instruction. Prerequisite: Upper-division standing.

THOMAS JEFFERSON CENTER FOR THE STUDY OF CORE TEXTS AND IDEAS

CORE TEXTS AND IDEAS: CTI

LOWER-DIVISION COURSES

301. Ancient Philosophy and Literature. Studies classical philosophy and literature, primarily from ancient Greece, to explore fundamental questions about human nature, justice, ethics, and humanity's place in the cosmos. Readings include one or more masterpieces of epic or tragedy and one or more dialogues of Plato. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 301 and Western Civilization 301 may not both be counted.

302. Classics of Social and Political Thought. Explores the origins of social scientific thought in the history of political philosophy and traces the development of one or more of the social sciences in modern times. Focuses on fundamental ideas about human nature, civil society, and politics, explored through reading such authors as Aristotle, Aquinas, Locke, Rousseau, Marx, Weber, Durkheim, and Freud. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

303. Competing Visions of the Good Life. Same as Government 314 (Topic 6: *Competing Visions of the Good Life*). Introduces the great rival conceptions of the moral basis and goals of political life as elaborated by revolutionary thinkers throughout the history of political philosophy, including Aristotle, Aquinas, Locke, late modern critics of the Enlightenment, and others. Three lecture hours a week for one semester. Core Texts and Ideas 303 and Western Civilization 303 (Topic: *Competing Visions of the Good Life*) may not both be counted.

304. World Religions: Traditions and Texts. A study of basic religious texts, including both the Hebrew Bible and New Testament, examined from various perspectives (including comparative, historical, philosophical, and literary), with emphasis on the fundamental questions and ideas raised in those texts. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Core Texts and Ideas 304 and Western Civilization 303 may not both be counted unless the topics vary.

310. Topics in Core Texts and Ideas. Introduction to fundamental texts and questions that have helped shape the world. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Core Texts and Ideas 310 and Western Civilization 303 may not both be counted unless the topics vary.

111. Core Texts Seminar. Close reading and discussion of primary sources, normally pursued in conjunction with another three-hour course in a field of study such as history or government. One discussion hour a week for one semester. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

322. Critics of Modern Liberalism. Selected critics of the philosophy of the Enlightenment from both the Left and the Right, and from the time of Rousseau to the present. Three lecture hours a week for one semester. Core Texts and Ideas 322 and Government 335M (Topic: *Liberalism and its Critics*) may not both be counted. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

324. Politics and Literature. Explores the “old battle between the poets and philosophers,” in which the two sides battle for recognition as the deepest source of wisdom about politics and ethics. Includes readings from great works of political philosophy and literature. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

325. Politics, Morality, and Leadership. Interdisciplinary readings from major works that explore issues of ethics and leadership. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

326. Core Texts on American Democracy. A close study of major texts and documents that shed light on fundamental issues in American democracy such as rights, equality, individual liberty, and the proper ends and limits of government. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Core Texts and Ideas 326 and Western Civilization 320 may not both be counted unless the topics vary. Prerequisite: Varies with the topic.

335. Core Texts in Philosophy. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Core Texts and Ideas 335 and Western Civilization 320 may not both be counted unless the topics vary. Prerequisite: Varies with the topic.

345. Core Texts in Literature. Major works of literature from one or more cultures, studied with special attention to questions of universal human concern. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Core Texts and Ideas 345 and Western Civilization 320 may not both be counted unless the topics vary. Prerequisite: Varies with the topic.

350. Masterworks of World Drama. Studies major tragedies, comedies, and historical plays from various epochs, including at least one of Shakespeare’s plays. Explores themes related to ethics, politics, and human nature, as well as the craft of the playwright. Students attend and discuss at least one play performance. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

351. The Idea of the Beautiful. Classical philosophical discussions of the idea of the beautiful (or noble or sublime), illustrated through selected works of art, drama, and literature. Explores the human perception of and response to beauty and its relation to such ideas as happiness and the promise of happiness, moral nobility or selflessness, and the divine. Philosophical works are studied in connection with examples drawn from the arts and are considered in their historical contexts. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

365. Classics of Social Scientific Thought. Studies a selection of foundational modern classics in economics, psychology, sociology, political science, and anthropology, drawn mainly from the nineteenth and twentieth centuries. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

366. Topics in Economic and Social Thought. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

370. Core Texts of Science and Mathematics. Studies works of major scientists, mathematicians, and philosophers, and explores the fundamental ideas from one discipline or time period and the nature and grounds of human knowledge. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Core Texts and Ideas 370 and Western Civilization 320 may not both be counted unless the topics vary. Prerequisite: Varies with the topic.

375. Topics in Core Texts and Ideas. Study of classic texts, connected historically or thematically. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Core Texts and Ideas 375 and Western Civilization 320 may not both be counted unless the topics vary. Prerequisite: Varies with the topic.

379. Conference Course. Intensive tutorial study of selected major texts. May be repeated for credit. Prerequisite: Upper-division standing and consent of the director of the Jefferson Center and instructor.

AMÉRICO PAREDES CENTER FOR CULTURAL STUDIES

CULTURAL STUDIES: CLS

LOWER-DIVISION COURSE

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Folklore and Cultural Studies. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University’s Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in cultural studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Folklore and Cultural Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in cultural studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 340. Conference Course in Folklore and Cultural Studies.** Supervised reading and research on a folklore or cultural studies subject, including the writing of an original paper. Prerequisite: Upper-division standing and a concentration in cultural studies.

DEPARTMENT OF ECONOMICS

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ECONOMICS: ECO

LOWER-DIVISION COURSES

- 301. Introduction to Economics.** Explores how economists describe and measure the economy in the aggregate and in specific markets, such as the labor market, the housing market, financial markets, and international trade. Studies concepts for measurement and data, as well as methods, approaches, and technologies used in social and behavioral science. Three lecture hours a week for one semester. May not be counted toward a major in economics.
- 304K (TCCN: ECON 2302). Introduction to Microeconomics.** Analysis of the economic behavior of individual consumers, firms, and workers; special attention to the role of markets. Three lecture hours a week for one semester. Some sections require an additional discussion hour a week.
- 304L (TCCN: ECON 2301). Introduction to Macroeconomics.** Analysis of the economy as a whole (its organization and the basic forces influencing its growth and development); money and banking, national income, public finance, and international linkages. Three lecture hours a week for one semester. Some sections require an additional discussion hour a week. Prerequisite: Economics 304K with a grade of at least C-.
- 305. Introductory Topics in Economics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 318Q. Supervised Research.** Individual instruction. May be repeated once for credit when the research topics vary. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Economics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Economics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 420K. Microeconomic Theory.** A survey of neoclassical and contemporary theories of the principal determinants of prices and of the role of prices in economic organization. Four lecture hours a week for one semester. Required of students majoring in economics. Students may not attempt Economics 420K more than twice. Prerequisite: Economics 304K and 304L with a grade of at least C- in each, and Mathematics 408C and 408D, or Mathematics 408K and 408L, with a grade of at least C- in each.
- 320L. Macroeconomic Theory.** Theory of the determination of national income, employment, and the price level, with policy implications. Three lecture hours a week for one semester. Required of students majoring in economics. Prerequisite: Economics 420K with a grade of at least C-.
- 321. Public Economics.** Study of appropriate allocations of economic activity between government (federal, state, and local) and the private sector. The workings of social security, welfare, education, pollution control, deregulation, taxation; and proposals for reform. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.
- 322. Money and Banking.** The role of money and depository institutions in the economy; introduction to financial and monetary theory and policy. Three lecture hours a week for one semester. Only one of the following may be counted: Economics 322, Finance 354, 354H. Prerequisite: Economics 420K and 320L with a grade of at least C- in each.
- 323T. Studies in Economic History.** Study of economic development, emphasizing more recent periods; causal factors, emerging problems, and major policy issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.
- Topic 1: Economic History of the United States.** Economic history of the United States from colonial times to the present. Includes some aspects of labor history, industrial organization, financial history, and socioeconomic perspectives.
- Topic 2: World Economic History.** Economic history of the world from the Industrial Revolution to the present, with emphasis on technology as the engine of change. Economics 323T (Topic 2) and History 366N (Topic 13: *World Economic History*) may not both be counted.

- 324. Introduction to Labor Economics.** Study of labor in industrial societies, with emphasis on principles, institutions, and policies for understanding labor and personnel problems. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.
- 327. Comparative Economic Systems.** Theories of and practices in the principal types of economic systems. Three lecture hours a week for one semester. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.
- 328. Industrial Organization.** The organization of industries and markets: competition, monopoly, and oligopoly; antitrust policy and its alternatives. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.
- 329. Economic Statistics.** Methods of statistical analysis and interpretation of quantitative data in the field of economics. Three lecture hours a week for one semester. Required of economics majors. Prerequisite: Economics 304K and 304L with a grade of at least C- in each, and Mathematics 408C and 408D, or Mathematics 408K and 408L, with a grade of at least C- in each.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Economics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Economics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330T. Topics in Economics.** Open to nonmajors. Topics may include economic theory, applications, and policy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Economics 330T and 350K may not both be counted unless the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and Economics 304K with a grade of at least C-.
- 333K. Development Economics.** Introduction to theories of economic development; discussion of leading issues. Three lecture hours a week for one semester. Asian Studies 361 (Topic 21: *Development Economics*) and Economics 333K may not both be counted. Prerequisite: Economics 420K with a grade of at least C-.
- 334K. Urban Economics.** Same as Urban Studies 351 (Topic 2: *Urban Economics*). Economic analysis of urban areas; emphasis on the nature of current urban problems—slums, transportation, finance—and an evaluation of current policy. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.
- 334L. Regional Economics.** Same as Urban Studies 351 (Topic 3: *Regional Economics*). Spatial aspects of economics, including concepts, theories, and policy applications. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.
- 339K. International Trade and Investment.** International trade theory, balance of payments, commodity trade, international finance and foreign exchange rates, foreign investments. Three lecture hours a week for one semester. Economics 339K and International Business 350 may not both be counted. Prerequisite: Economics 420K with a grade of at least C-.
- 339L. International Finance.** How foreign exchange rates are determined, why national interest rates differ, why risk is inherent when trading in international finance markets, and the role of international organizations such as the International Monetary Fund in crisis management. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 320L with a grade of at least C- in each.
- 341K. Introduction to Econometrics.** Introduces the student to standard regression procedures of parameter estimation and hypothesis testing in economics. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 329 with a grade of at least C- in each.
- 346K. Russian Economic Development since 1917.** The growth of the planned economy in industry, agriculture, and labor. Three lecture hours a week for one semester. Economics 346K and Russian, East European, and Eurasian Studies 335 (Topic 13: *Russian Economic Development since 1917*) may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.
- 350K. Advanced Topics in Economics.** Designed primarily for economics majors. Topics may include in-depth analysis of problems in economic theory, applications, and economic policy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Economics 330T and 350K may not both be counted unless the topics vary. Prerequisite: Economics 420K with a grade of at least C-. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- Topic 4: Advanced Econometrics.** Theory of the linear regression model used widely in economic applications, including model specification, least squares and maximum likelihood estimation, hypothesis testing, multicollinearity, dummy variables, heteroskedasticity, and discrete choice models. Additional prerequisite: Economics 341K with a grade of at least C-.
- Topic 6: Advanced Microeconomic Theory.** Modern theory of the consumer and the firm. Topics include an analysis of consumer choice and demand functions, the theory of supply, cost and profit functions, duality theory, consumer surplus, choice under uncertainty, and partial equilibrium analysis. Emphasis on both economic principles and quantitative methods, especially static and dynamic optimization models. Additional prerequisite: Economics 329 with a grade of at least C-.
- Topic 7: Applied Economic Analysis.** Major issues in applied economics, including relevant theoretical and empirical models. Additional prerequisite: Economics 341K with a grade of at least a C-; Mathematics 408D or 408M; and Mathematics 340L or 341.

- 351K. Current Issues in Business Economics.** Newly emerging problems in business and the approaches used for structuring, analyzing, and treating them. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.
- 351L. Business Trends and the Operational Environment in the United States Economy.** The technological basis of the United States economy; conditions, such as regulations, that define the macroenvironment. Three lecture hours a week for one semester. Prerequisite: Economics 420K, 320L, and 329 with a grade of at least C- in each.
- 351M. Managerial Economics.** The use of economic analysis optimizing techniques as tools for improving managerial decision making in business. Three lecture hours a week for one semester. Prerequisite: Economics 420K, and Economics 329 or Mathematics 362K, with a grade of at least C- in each.
- 354K. Introductory Game Theory.** Introduction to the formal study of interdependent decision making. Applications of game theory include pricing and advertising strategies, labor-management bargaining, and tariff negotiations. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 329 with a grade of at least C- in each.
- 355. Development Problems and Policies in Latin America.** Same as Latin American Studies 355 (Topic 1: *Development Problems and Policies in Latin America*) and Urban Studies 351 (Topic 1: *Development Problems and Policies in Latin America*). Description of the Latin American economy; business and market organization; problem of growth (involving credit, public finance, trade, investment aspects). Three lecture hours a week for one semester. Prerequisite: Economics 304K and 304L with a grade of at least C in each.
- 357K. Marxist Economics.** An introduction to the Marxian economic theory of capitalism through the study of Karl Marx's *Capital*, volume I, and of its contemporary relevance. Three lecture hours a week for one semester. Economics 357K and Russian, East European, and Eurasian Studies 335 (Topic 1: *Marxist Economics*) may not both be counted. Prerequisite: Upper-division standing.
- 357L. Political Economy of International Crises.** Examines several dimensions of the ongoing crises in the world economic order and the interrelationships among them. Problem areas covered are neoliberalism, international money, debt, famine, immigration, and energy shocks. Three lecture hours a week for one semester. Economics 357L and Russian, East European, and Eurasian Studies 335 (Topic 14: *Political Economy of International Crises*) may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.
- 358Q. Supervised Research.** Individual instruction. May be repeated once for credit when the research topics vary. May not be counted toward the twenty-five semester hours in economics required for the major in economics. Prerequisite: Economics 420K and 329 with a grade of at least C- in each.
- 359M. Environmental and Natural Resource Economics.** Optimal use of exhaustible and renewable resources, including fuels, minerals, fisheries, forests, and water; resource scarcity and economic growth; valuation of nonmarketed environmental amenities; the economics of pollution control instruments, including taxes, permits, direct regulation, and negotiation; environmental quality and international trade; the economics of global climate change; pollution control policy in practice. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 329 with a grade of at least C- in each.
- 361. Studies in Public Economics.** Studies in the principal problem areas of governmental revenues and expenditures. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Economics 420K with a grade of at least C-.
- 361N. Informational Society.** The social impact of the current technological changes in electronics, communications, and automation; focus on efficient institutions given the technological possibilities. Three lecture hours a week for one semester. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.
- 362M. Mathematics for Economists.** Application of mathematics in economic analysis. Three lecture hours a week for one semester. Prerequisite: Economics 420K, and Mathematics 408D or 408M, with a grade of at least C- in each.
- 363C. Computational Economics.** Three lecture hours a week for one semester. Prerequisite: Economics 420K or 320L with a grade of at least C-.
- 367R. Monetary Economics.** Major issues in the monetary field. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 320L with a grade of at least C- in each; Economics 322 is recommended.
- 368. Survey of the History of Economic Thought.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 369F. Financial Economics.** Economic analysis of the operation of financial markets, including arbitrage theory, asset pricing, and corporate finance. Three lecture hours a week for one semester. Prerequisite: Economics 420K, 320L, and 329 with a grade of at least C- in each; Economics 322 is recommended.
- 372M. Studies in Developing Economies.** An introductory analysis of the structure, functioning, and problems of developing economies. Specific geographical areas to be studied will vary each semester. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Economics 420K with a grade of at least C-.
- 376M. Studies in Labor Economics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Economics 420K with a grade of at least C-.

- 377R. Selected Topics in Economics Research.** Designed to teach undergraduate students how to conduct research. Focus on four fundamentals of economic research: the economic theory that underlies the research question, the research methods used, conducting research, and writing the research report. Three lecture hours a week for one semester; some topics may require field trips. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and Economics 420K, 320L, and 329 with a grade of at least C- in each.
- 378H. Honors Tutorial Course I.** Supervised individual reading, research, and writing of a substantial paper on a special topic in the field of economics. Prerequisite: Upper-division standing, admission to the Economics Honors Program, and consent of the honors adviser.
- 379C. Individual Conference Course.** Supervised individual study of selected problems in economics. May be repeated for credit. May not be counted toward the twenty-four semester hours in economics required for the major in economics. Prerequisite: Upper-division standing and consent of instructor. Students should ordinarily have completed six semester hours of upper-division coursework in economics and coursework with supervising instructor.
- 379D. Internship in Economics.** Students conduct research while working in an appropriate government agency or private business. Ten hours of fieldwork a week for one semester. Offered on the pass/fail basis only. May be repeated once for credit when the internships vary. Prerequisite: Economics 420K with a grade of at least C-.
- 379H. Honors Tutorial Course II.** Supervised individual reading, research, and writing of a substantial paper on a special topic in the field of economics. Prerequisite: Economics 378H.

DEPARTMENT OF ENGLISH

Students are discouraged from taking more than six semester hours of coursework in English in a semester or summer term. No student may take more than nine semester hours of coursework in English in a semester.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ENGLISH: E

LOWER-DIVISION COURSES

- 603. Composition and Reading in World Literature.** Reading of masterpieces of world literature and intensive training in writing and in critical analysis of literature. Three lecture hours a week for two semesters. Only one of the following may be counted: English 603A, Rhetoric and Writing 306, 306Q, Tutorial Course 603A; only one of the following may be counted: Comparative Literature 315, English 603B, 316K, Tutorial Course 603B. Prerequisite: For 603A, admission to the Plan II Honors Program; for 603B, English 603A.
- 314J. Literature across the Curriculum.** Readings selected to highlight the connections between literary study and other fields of inquiry. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be substituted for English 316K. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- 314L. Introduction to Literary Studies.** Emphasis on skills and methods used in upper-division English courses; intensive practice in writing; and an introduction to field-specific research. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be substituted for English 316K. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- Topic 3: Banned Books and Novel Ideas.**
Topic 4: Literary Contests and Contexts.
Topic 5: Reading Poetry.
Topic 6: Reading Women Writers.
Topic 7: Women's Popular Genres.
- 314V. Introduction to Literature and Culture.** Readings in minority and ethnic American literatures in their cultural contexts. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be substituted for English 316K. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- Topic 1: African American Literature and Culture.** Same as African and African American Studies 317F (Topic 1: *African American Literature and Culture*). Introduces key tools of literary analysis through the study of African American literature. Drawn from a variety of genres and periods, the texts indicate the range of African American experiences and how those experiences are influenced by issues such as class, ethnicity, gender, sexuality, and race. English 314V (Topic 1) and African and African American Studies 317 (Topic 1: *African American Literature and Culture*) may not both be counted.
- Topic 2: Asian American Literature and Culture.** Same as Asian American Studies 314. Explores how authors and artists over the course of the past century have imagined what it means to be Asian American. Covers a diverse range of Asian immigrant histories and the formation of Asian American identities according to ethnicity, gender, sexuality, class, and citizenship. English 314L (Topic: *Asian American Literature and Culture*) and 314V (Topic 2) may not both be counted.

- Topic 3: Mexican American Literature and Culture.** Same as Mexican American Studies 314. Introductory course concerned with representative contemporary Chicano writers and genres, such as poetry, prose fiction, and theatre.
- Topic 4: Gay and Lesbian Literature and Culture.** Same as Women's and Gender Studies 301 (Topic 12: *Gay and Lesbian Literature and Culture*).
- Topic 5: Native American Literature and Culture.** Same as American Studies 315F. Studies Native American literature from different regions and cultures and considers this literary tradition in tribal national and United States national contexts. American Studies 315 (Topic: *Native American Literature and Culture*) and English 314V (Topic 5) may not both be counted.
- 315F. Introduction to Writing Fiction.** Three lecture hours a week for one semester. Large sections require an additional discussion hour a week. English 315F and 318L (Topic 1: *Fiction*) may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- 315P. Introduction to Writing Poetry.** Three lecture hours a week for one semester. Large sections require an additional discussion hour a week. English 315P and 318L (Topic 2: *Poetry*) may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- 316K. Masterworks of Literature.** Three versions: World, British, American. Introduction to masterpieces of the literary tradition, emphasizing historical, generic, thematic connections. Three lecture hours a week for one semester. Large sections require an additional discussion hour a week. Only one of the following may be counted: Comparative Literature 315, English 603B, 316K, Tutorial Course 603B. Only one version of 316K may be taken for credit. Prerequisite: Completion of at least thirty semester hours of coursework, including English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A, and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test.
- 318M. Introduction to the English Language.** Basic linguistic concepts; phonology, syntax, and vocabulary of English; historical, regional, and social variation; applications of linguistics in educational and social action. Three lecture hours a week for one semester. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- 318Q. Supervised Research.** Student-initiated research conducted with instructor supervision. Three conference hours a week for one semester. May be repeated once for credit. Prerequisite: Approval of written application by supervising instructor and the undergraduate faculty adviser.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in English.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of English. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- UPPER-DIVISION COURSES
- 320L. Major Writers of the Restoration and Eighteenth Century.** A study of the principal writers: Dryden, Pope, Swift, Johnson, Boswell, Burns, and others. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 321. Shakespeare: Selected Plays.** A representative selection of Shakespeare's best comedies, tragedies, and histories. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 321K. Introduction to Criticism.** Introduction to major terms, issues, and approaches in literary criticism, and their application to the reasoned discussion of poetry, fiction, and drama. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 321L. American English.** Same as Linguistics 321L. An overview of the historical development of English in the Americas. Attention to regional, social, and ethnic differences, and their implications for public education. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 321P. Shakespeare through Performance.** An intensive study of the plays of William Shakespeare, with emphasis on performance as a means of interpretation and an aid to comprehension. Three lecture hours a week for one semester, with additional laboratory hours as required. English 321P and 379M (Topic 4: *Shakespeare through Performance*) may not both be counted. Prerequisites: Nine semester hours of coursework in English or rhetoric and writing, and consent of instructor.
- 322. Literature in Translation.** World literatures in English translation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. English 322 and 324 may not both be counted unless the topics vary. May be counted only once for a major in English. Prerequisite: Upper-division standing.
- Topic 17: Social Dramas of Henrik Ibsen.** Same as Scandinavian 323 (Topic 2: *Social Dramas of Henrik Ibsen*) and Women's and Gender Studies 345 (Topic 14: *Social Dramas of Henrik Ibsen*). Men and women in their public and private lives.
- Topic 23: Dante.** Same as Italian Civilization 349 (Topic 2: *Dante*).
- Topic 37: The Russian Novel.** Same as Russian 356 (Topic 1: *The Russian Novel*) and Russian, East European, and Eurasian Studies 325 (Topic 9: *The Russian Novel*). English 322 (Topic 37) and European Studies 361 (Topic: *The Russian Novel*) may not both be counted.
- Topic 38: Italian Women Writers.** Same as Italian Civilization 349 (Topic 5: *Italian Women Writers*) and Women's and Gender Studies 340 (Topic 17: *Italian Women Writers*).

- 323L. English as a World Language.** Same as Linguistics 323L. An account of the spread of English around the world; national, social, and regional varieties. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 324. Topics in Language and Literature.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. English 322 and 324 may not both be counted unless the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 324, 376L, 379M, 379N. Prerequisite: Completion of at least thirty semester hours of coursework, including Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.
Topic 5: Authors' Lives in Literature. Examines how the personal lives of authors may be expressed in their works. Uses biographies, memoirs, letters, and the words of the authors, both in their creative and private lives, to explicate some of the major texts of the twentieth century. English 324 (Topic 5) and 324 (Topic: *Literary Marriages from Hell*) may not both be counted.
- 325. Creative Writing.** Detailed study and practice of the techniques of creative writing; includes reading and analysis of contemporary models. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 325F. Fiction Writing.** Detailed study and practice of the techniques of fiction writing; includes reading and analysis of contemporary models. Three lecture hours a week for one semester. English 325 (Topic 1: *Creative Writing: Fiction*) and 325F may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 325P. Poetry Writing.** Detailed study and practice of the techniques of poetry writing; includes reading and analysis of contemporary models. Three lecture hours a week for one semester. English 325 (Topic 2: *Creative Writing: Poetry*) and 325P may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 326K. The Literature of the Middle Ages in Translation.** Romances, chronicles, legends, tales, and plays by English, Celtic, and Continental writers. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 326L. Survey of Middle English Language and Literature.** Language and literature from 1100 to 1500. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 327. The English Novel in the Eighteenth Century.** Representative novels and novelists from 1700 to 1832, including typical works of Defoe, Richardson, Fielding, Sterne, Austen, and Scott. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 328. The English Novel in the Nineteenth Century.** Representative works by such writers as Dickens, Thackeray, the Brontës, George Eliot, Meredith, and Hardy. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 329R. The Romantic Period.** The prose and poetry of writers such as Blake, Wordsworth, Coleridge, Byron, Keats, Shelley, and others. Three lecture hours a week for one semester. English 329K and 329R may not both be counted. English 329L and 329R may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in English.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of English. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 336E. British Literature: Beginnings through the Renaissance.** A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. English 336E and 379N (Topic: *British Literature: Beginnings to the Renaissance*) may not both be counted.
- 337. American Literature: From the Beginnings to 1865.** A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 337E. British Literature: The Restoration through the Romantic Era.** A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 338. American Literature: From 1865 to the Present.** A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 338E. British Literature: The Victorian Era through World War II.** A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 340. The American Novel before 1920.** Representative novels by such writers as Brown, Melville, Fern, Hawthorne, Twain, Crane, James, Wharton, and Dreiser. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 341. Short Story Workshop.** Practice in writing the short story, with study of contemporary models. Three lecture hours a week for one semester. Prerequisite: English 325F.
- 341L. Poetry Workshop.** Practice in writing poetry, with study of contemporary models. Three lecture hours a week for one semester. Prerequisite: English 325P.
- 342. Life and Literature of the Southwest.** Verse, fiction, travels, and memoirs, to acquaint students with the literature reflecting the social inheritance of Texas and the neighboring territory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
Topic 1: Life and Literature of the Southwest—Mexican American. Same as Mexican American Studies 374 (Topic 2: *Life and Literature of the Southwest—Mexican American*).

- 343L. Modernism and Literature.** Strands of thought and literature that form the network of modernist writing. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 344L. Twentieth-Century Literature and Other Media.** A study of the relationship between literary forms and other media (film, television, music, the visual arts). Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
Topic 1: Film and Short Story.
Topic 4: Australian Literature and Film.
- 348. The Twentieth-Century Short Story.** Extensive readings and analyses of stories by major modern writers such as Faulkner, Hemingway, Joyce, Chekhov, and Kafka, as well as contemporary writers. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 349S. Topics on Major Authors.** Intensive study of the works of a single major author or two major authors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 349S, 376L, 379M, 379N. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 350E. Topics in Language and Literature: Beginnings to 1630.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 350E, 376L, 379M, 379N. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 350M. Topics in Language and Literature: 1630 to 1830.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 350M, 376L, 379M, 379N. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 350R. Topics in Language and Literature: 1830 to 1940.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 350R, 376L, 379M, 379N. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 355K. Advanced Creative Writing.** A third-semester seminar-style workshop in poetry and/or fiction for experienced creative writers. Three lecture hours a week for one semester. Prerequisite: English 341 or 341L.
- 356. The European Novel.** Same as European Studies 347 (Topic 7: *The European Novel*). Selected masterpieces of Continental fiction in English translation: representative novelists of the nineteenth and twentieth centuries. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 358J. The Bible as Literature.** Same as Religious Studies 355. In-depth literary study of the Bible, with emphasis on the formal features of narrative, hymn, prophecy, apocalypse, gospel, and epistle. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 358K. The Bible in British and American Literature.** Same as Religious Studies 355K. The reading of biblical masterpieces as literature; consideration of different versions of the Bible and their influence on English and American literature. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 358Q. Supervised Research.** Student-initiated research conducted with instructor supervision. Three conference hours a week for one semester. May be repeated once for credit. Prerequisite: Completion of at least sixty semester hours of coursework, including at least six semester hours of upper-division coursework in English or rhetoric and writing; a University grade point average of at least 3.00; and approval of written application by supervising instructor and the undergraduate faculty adviser.
- 359. English Drama from 1660 to 1900.** Representative drama texts from the Restoration to the beginnings of modern theatre, including Behn, Sheridan, Wilde, and Shaw. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 360K. English Grammar.** The study of traditional and transformational grammar. Attention to social differences in language relevant to the teaching of English. Three lecture hours a week for one semester. English 360K and Linguistics 360K may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 360L. English as a World Literature.** English literature from around the world, including Canada, Australasia, Africa, and India. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 360L, 376L, 379M, 379N. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
Topic 2: Caribbean Literature. Same as Comparative Literature 323 (Topic 6: *Caribbean Literature*) and African and African American Studies 374F (Topic 7: *Caribbean Literature*).
- 360R. Literary Studies for High School Teachers of English.** Intended for students seeking a secondary school teaching certificate. The principles and practices of teaching literature in secondary schools. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 360S. Literature and Global Society.** Contexts for the study of literature, and for the study of pressing issues through literature, in an age of globalization. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 360S, 376L, 379M, 379N. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 361K. English Drama to 1642.** A survey of early English drama, usually including works by Marlowe, Kyd, Shakespeare, Jonson, Webster, and Middleton. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

- 362L. The British Novel in the Twentieth Century.** Representative novels, including those of Joyce, Lawrence, and Woolf. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 363. The Poetry of Milton.** All the poetry of Milton, with particular attention to *Comus*, *Samson Agonistes*, and *Paradise Lost*. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 363K. Classic to Romantic.** The theory and practice of Classicism in literature and other arts; the rise of the Romantics in the eighteenth century. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 364M. History of the English Language.** Same as Linguistics 364M. Development of sounds, forms, and vocabulary of the English language from its origins to the present. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 364P. Old English.** An introduction to Old English with sufficient grammar for a reading knowledge of Old English texts. A course in language, not in linguistics. Three lecture hours a week for one semester. English 364P and 395N (Topic 1: *Old English*) may not both be counted. May be counted as the equivalent to English 364M in fulfilling the requirements for a Bachelor of Arts degree with a major in linguistics. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 364S. Language and Gender.** Same as Women's and Gender Studies 345 (Topic 17: *Language and Gender*). Linguistic, social, and political dimensions of gender-related speech differences. Three lecture hours a week for one semester. Only one of the following may be counted: English 364S, 370W (Topic 4: *Language and Gender*), Linguistics 373 (Topic: *Language and the Sexes*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 364T. The English Language and Its Social Context.** English language history, theory, and research for students of literature and rhetoric. May include such topics as language diversity and variation, linguistic attitudes, language variety and education, and language and public policy. Three lecture hours a week for one semester. Only one of the following may be counted: English 364T, 376L (Topic: *The English Language and Its Social Context*), 376L (Topic: *The English Language in Its Social Context*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 366K. Shakespeare: Selected Tragedies.** A representative selection of Shakespeare's tragedies. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 367C. Conference Course in Literature and Language.** For students who wish to work under supervision on specific projects in literature or language. Three conference hours a week for one semester. May be repeated once for credit. Prerequisite: Completion of at least sixty semester hours of coursework, including at least six semester hours of upper-division coursework in English or rhetoric and writing; a University grade point average of at least 3.00; and approval of written application by supervising instructor and the undergraduate faculty adviser.
- 367E. English Internship.** Research and staff experience working in an appropriate agency or private business. At least twelve hours of fieldwork a week for one semester. Offered on the pass/fail basis only. May not be counted toward the thirty-three hours of English and rhetoric and writing required for the English major. May not be repeated for credit. Prerequisite: Completion of at least sixty semester hours of coursework, including at least six semester hours of upper-division coursework in English or rhetoric and writing; a University grade point average of at least 3.00; and approval of written application by the undergraduate faculty adviser.
- 367K. Conference Course in Creative Writing.** For advanced students already proficient in writing who wish to work under supervision on specific and fairly extensive projects. Three conference hours a week for one semester. May be repeated once for credit. Prerequisite: English 325 with a grade of A; completion of at least sixty semester hours of coursework, including at least six semester hours of upper-division coursework in English or rhetoric and writing; a University grade point average of at least 3.00; and approval of written application by supervising instructor and the undergraduate faculty adviser.
- 369. Twentieth-Century Drama.** Ibsen and other major dramatists; tradition and innovation in the substance and form of selected modern plays. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 370. Victorian Prose: Essays and Ideas.** The prose writer as artist and sage in the cultural, political, religious, and scientific controversies that influence the modern tradition. Representative writers: Carlyle, Mill, Newman, Arnold, Darwin. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 370W. Literature, Culture, and Gender.** Gender as a category of literary and cultural analysis. Texts may include literature, film, popular culture, and other forms. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 370W, 376L, 379M. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- Topic 2: Contemporary Women Authors.** Same as African and African American Studies 374F (Topic 4: *Contemporary Women Authors*) and Women's and Gender Studies 345 (Topic 15: *Contemporary Women Authors*). English 370W (Topic 2) and African and African American Studies 374 (Topic 13: *Contemporary Women Authors*) may not both be counted.

- Topic 8: Gay and Lesbian Literature and Culture.** Same as Women's and Gender Studies 345 (Topic 30: *Gay and Lesbian Literature and Culture*).
- Topic 9: Gender, Sexuality, and Migration.** Same as Women's and Gender Studies 345 (Topic 39: *Gender, Sexuality, and Migration*). Only one of the following may be counted: Asian American Studies 320 (Topic: *Gender, Sexuality, and Migration*), English 370W (Topic 9), 370W (Topic: *Cultures of Immigration and Dislocation*).
- 371K. Twentieth-Century Poetry.** Poets studied include Eliot, Auden, Stevens, Thomas, Bishop, Rich, and Merwin. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 372L. The American Renaissance.** Selected writers of the pre–Civil War Romantic movement, including Emerson, Douglass, Fuller, Hawthorne, Melville, Thoreau, Whitman, and others. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 372M. American Realism.** Selected writers of the post–Civil War realistic movement: Howells, Twain, James, Jewett, Freeman, Crane, and others. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 374G. *Beowulf*.** A word-by-word, line-by-line translation, with special attention to language and context. Three lecture hours a week for one semester. English 374G and 379N (Topic: *Beowulf*) may not both be counted. Prerequisite: English 364P.
- 374K. Elizabethan Poetry and Prose.** Renaissance thought and culture as revealed in the lyric and narrative poetry and in the prose masterpieces. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 374L. The Earlier Seventeenth Century: Donne, Jonson, and Their Contemporaries.** Poetry and prose, 1600 to 1660: the metaphysical and other leading traditions in poetry; the early poems of Milton; the essay, the character, and other prose forms. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 375K. English and American Satire.** Theory of satire, with readings in the works of such representative figures as Chaucer, Dryden, Pope, Byron, Twain, and Thurber. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 375L. Victorian Literature.** Poetry and prose, 1832 to 1901; parallel reading in the novel and drama, and attention to the social and intellectual background of the period. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 376. Chaucer.** Introduction to Chaucer's narrative and poetic art, as shown in a selection from the dream poems, *Troilus and Criseyde*, and the *Canterbury Tales*. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 376M. Studies in Ethnic American Literature.** Approaches to the literatures of the ethnic American cultural experience, including topics related to African American, Asian American, Mexican American, and Native American literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 376L, 376M, 379M, 379N. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- Topic 3: Writing Slavery.** Same as African and African American Studies 374F (Topic 6: *Writing Slavery*).
- Topic 4: Mexican American Modernism.**
- Topic 5: Contemporary Asian American Novels.** Same as Asian American Studies 320 (Topic 3: *Contemporary Asian American Novels*).
- Topic 6: Contemporary Native American Literature.** English 376M (Topic 6) and 379N (Topic: *20th-Century Native American Literature*) may not both be counted.
- 376R. African American Literature through the Harlem Renaissance.** Same as African and African American Studies 374F (Topic 1: *African American Literature through the Harlem Renaissance*). A survey of African American writing, including autobiography, poetry, fiction, and drama. Authors may include Douglass, Jacobs, Frances E. W. Harper, Chestnutt, Du Bois, Hurston, and Hughes. Three lecture hours a week for one semester. Only one of the following may be counted: African and African American Studies 374 (Topic 2: *African American Literature through the Harlem Renaissance*), English 376R, 376M (Topic 1: *African American Literature through the Harlem Renaissance*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 376S. African American Literature since the Harlem Renaissance.** Same as African and African American Studies 374F (Topic 2: *African American Literature since the Harlem Renaissance*). The development of African American poetry, drama, fiction, and nonfiction since the Harlem Renaissance. Authors may include Wright, Ellison, Baldwin, Malcolm X, Baraka, Morrison, Shange, and Charles Johnson. Three lecture hours a week for one semester. Only one of the following may be counted: African and African American Studies 374 (Topic 3: *African American Literature since the Harlem Renaissance*), English 376S, 376M (Topic 2: *African American Literature, 1940 to Present*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 377K. The American Novel after 1920.** Representative works by such writers as Faulkner, Hemingway, Fitzgerald, Larsen, Hurston, Morrison, Bellow, Erdrich, and Tan. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

- 678S. Shakespeare at Winedale.** Study and readings of selected works and criticism, culminating in public performance of the plays. For English 678SB, students are required to be in residence at Winedale near Round Top, Texas. For 678SA, the equivalent of five lecture hours a week for one semester; for 678SB, fifteen to eighteen hours of work a day, including weekends. Offered in the summer session only. English 678S and 379M (Topic 2: *Shakespeare at Winedale*) may not both be counted. Prerequisite: For 678SA, consent of instructor; for 678SB, English 678SA and consent of instructor.
- 379. American Literature and Thought: 1600–1840.** Early American literature as an embodiment of American thought and experience. Such topics as European ideas in the New World; the political ideas of Hamilton, Jefferson, and Jackson; nationalism; industrialism. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 679H. Honors Tutorial Course.** Research into and development of a thesis topic and proposal followed by the writing and defense of a thesis. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 679HA, enrollment in or completion of at least one honors section of an English course, admission to the English Honors Program, and consent of the honors adviser; for 679HB, English 679HA.
- 379K. American Literature and Thought: 1840–1920.** Such topics as transcendentalism, manifest destiny, Utopian thought, and the impact of the theory of organic evolution. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 379L. Contemporary Drama.** Major playwrights since 1950, such as Williams, Shepard, Beckett, Stoppard, Churchill, Fugard, and Pinter. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 379R. Research Seminar.** Intensive study of selected topics in English. Three lecture hours a week for one semester. Some sections require additional time for film screenings. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 376L, 379M, 379N, 379R. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 379S. Senior Seminar.** Intensive study of selected topics in English. Three lecture hours a week for one semester. May not be repeated for credit. Prerequisite: Completion of at least ninety semester hours of coursework, including twelve semester hours of upper-division coursework in English or rhetoric and writing.

ETHNIC STUDIES PROGRAM

CENTER FOR ASIAN AMERICAN STUDIES

ASIAN AMERICAN STUDIES: AAS

LOWER-DIVISION COURSES

- 301. Introduction to Asian American Studies.** Introduces the interdisciplinary study of Asian immigrants and Asian Americans in the United States. Explores key concepts, including immigration history, identity and community formation, cultural representation, and the intersections of race, class, gender, and sexuality. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 315 (Topic: *Introduction to Asian American Studies*), Asian American Studies 301, Sociology 308 (Topic: *Introduction to Asian American Studies*).
- 310. Introductory Topics in Asian American Studies.** An introduction to Asian American studies through a variety of disciplines. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 311. Introduction to Asian American Communities.** An introduction to contemporary Asian American communities through a variety of disciplines. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 312. Introduction to Asian American History.** Same as History 317L (Topic 4: *Introduction to Asian American History*). Introduces students to the national and transnational histories of Asian Americans in the United States. Explores a wide range of themes related to the Asian American experience. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history.
- 314. Asian American Literature and Culture.** Same as English 314V (Topic 2: *Asian American Literature and Culture*). Explores how authors and artists over the course of the past century have imagined what it means to be Asian American. Covers a diverse range of Asian immigrant histories and the formation of Asian American identities according to ethnicity, gender, sexuality, class, and citizenship. Three lecture hours a week for one semester. English 314L (Topic: *Asian American Literature and Culture*) and Asian American Studies 314 may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- 318Q. Supervised Research.** For Asian American studies majors only. Supervised, student-derived research in Asian American studies. Individual instruction. May be repeated for credit when the research projects vary. Prerequisite: Rhetoric and Writing 306 and consent of the director of the Center for Asian American Studies.

UPPER-DIVISION COURSES

- 320. Topics in Asian American Culture, Literature, and Media Studies.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Immigrants, Amusements, and Consumer Culture.** Same as American Studies 370 (Topic 25: *Immigrants, Amusements, and Consumer Culture*). Studies the growth of consumer capitalism as it coincides with the migration and integration of immigrants into American society. Examines the emergence of consumer culture as a force that defines modern American society and traces its developments and current manifestations throughout the world. Prerequisite: Upper-division standing.
- Topic 2: Comparative Cultures of Beauty.** Same as American Studies 370 (Topic 24: *Comparative Cultures of Beauty*) and Women's and Gender Studies 345 (Topic 45: *Comparative Cultures of Beauty*). Examines the intersections of race, class, and culture in contemporary and historical constructions of beauty in American society; and how class, gender, and race may shape definitions of beauty. Prerequisite: Upper-division standing.
- Topic 3: Contemporary Asian American Novels.** Same as English 376M (Topic 5: *Contemporary Asian American Novels*). Asian American Studies 320 (Topic 3) and English 379N (Topic: *Contemporary Asian American Novels*) may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 325. Topics in Asian American Economics, History, and Government.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Filipinos in the United States.** Same as History 357F. Only one of the following may be counted: Asian American Studies 325 (Topic 1), History 365G (Topic: *Filipinos in the United States*), 366N (Topic: *Filipinos in the United States*). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 330. Topics in Asian American Anthropology, Geography, and Sociology.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 335. General Topics in Asian American Studies.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 358Q. Supervised Research.** For Asian American studies majors only. Supervised, student-derived research in Asian American studies. Individual instruction. May be repeated for credit when the research projects vary. Prerequisite: Upper-division standing, Rhetoric and Writing 306, and consent of the director of the Center for Asian American Studies.

- 379. Conference Course in Asian American Studies.** Supervised individual study of selected problems in Asian American studies. May be repeated for credit. Prerequisite: Upper-division standing and consent of the director of the Center for Asian American Studies.
- 679H. Honors Tutorial Course.** Supervised individual reading for one semester, followed by a semester of research and writing to produce a substantial paper on a specific topic in Asian American studies. Prerequisite: For 679HA, upper-division standing and admission to the Asian American Studies Honors Program; for 679HB, Asian American Studies 679HA.

CENTER FOR MEXICAN AMERICAN STUDIES

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

MEXICAN AMERICAN STUDIES: MAS

LOWER-DIVISION COURSES

- 307. Introduction to Mexican American Cultural Studies.** An introduction to the theoretical and substantive issues covered under the interdisciplinary rubric of cultural studies. Explores the Mexican American cultural experience through the methodological approaches of historical analysis, cultural critique, and literary production. Three lecture hours a week for one semester.
- 308. Introduction to Mexican American Policy Studies.** An introduction to the basics of policy analysis, employing demographic and empirical information on the Mexican American and Latino populations in the United States. Current policy issues such as bilingual education, affirmative action, the English-only movement, immigration, Latino consumers, Latino entrepreneurship, and NAFTA. Three lecture hours a week for one semester.
- 310 (TCCN: HUMA 1305). Chicanos in American Society.** Same as Sociology 309. Introduction to the study of the American character and its bearing on the Chicano experience. Three lecture hours a week for one semester.
- 312 (TCCN: GOVT 2311). Mexican American Politics.** Mexican American political life from 1848 to the present; focuses on Mexican American institutions, values, and political groups. Three lecture hours a week for one semester. Mexican American Studies 312 and 313 may not both be counted. Prerequisite: Three semester hours of lower-division coursework in government.
- 313. Latino Politics.** Analysis of issues involving political institutions and policies, with emphasis on Latino politics. Three lecture hours a week for one semester. Mexican American Studies 312 and 313 may not both be counted. Prerequisite: Three semester hours of lower-division coursework in government.

- 314. Mexican American Literature and Culture.** Same as English 314V (Topic 3: *Mexican American Literature and Culture*). Introductory course concerned with representative contemporary Chicano writers and genres, such as poetry, prose fiction, and theatre. Three lecture hours a week for one semester. May not be substituted for English 316K. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- 316. History of Mexican Americans in the United States.** Same as History 314K. Examines the origin and growth of the Mexican American community in the United States. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history.
- 318. Mexican American Culture.** Same as Anthropology 318L. Mexican American cultural distinctiveness in the areas of social organization, child rearing, food culture, folklore, language, and religion. Three lecture hours a week for one semester.
- 319. Special Topics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*.
Topic 1: Ethnicity and Gender: La Chicana. Same as Sociology 308D and Women's and Gender Studies 301 (Topic 6: *Ethnicity and Gender: La Chicana*).
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Mexican American Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Mexican American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 350. Advanced Grammar and Composition for Bilingual/Bicultural Speakers.** Designed for Hispanic bilingual students whose home language is Spanish, but whose dominant language is English. The principal objective is to learn to write correctly and proficiently and to gain a strong cultural perspective on Latin America. The main focus of the course is on writing discourse, but oral language development is also addressed. Three lecture hours a week for one semester. Only one of the following may be counted: International Business 372 (Topic 8: *Business Spanish*), Mexican American Studies 350, Spanish 327. Prerequisite: Spanish 612 or 312L.
- 361. Mexican American Cultural Studies Seminar.** Explores cultural studies literature as read through the experience of the Mexican-origin community in the United States. Discussions include race, class, and feminism. Students write a research paper and deliver a scholarly presentation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Mexican American Studies 307.
- 362. Mexican American Policy Studies Seminar.** Profiles the current economic status of Mexican Americans in the United States. Examines two dimensions of public policy: historical trends and comparisons with other ethnic groups. Students write a policy report and deliver a professional presentation. Three lecture hours a week for one semester. Mexican American Studies 362 and 374 (Topic: *Mexican American Public Policy Issues*) may not both be counted. Prerequisite: Upper-division standing and Mexican American Studies 308.
- 371. Readings in Mexican American Studies.** Supervised readings with parallel work in relevant non-Chicano materials; preparation for Mexican American Studies 372. Individual instruction. Prerequisite: Mexican American Studies 310, 318, and 374; or consent of the director.
- 372. Research Seminar in Mexican American Studies.** Supervised research on a Mexican American topic chosen in consultation with adviser and leading to a full-length essay. Individual instruction. Prerequisite: Mexican American Studies 310, 318, and 374; or consent of the director.
- 373. Independent Research.** May be repeated for credit. Prerequisite: Mexican American Studies 310, 318, and 374; or consent of the director.
- 374. Special Topics.** Three lecture hours a week for one semester. Additional hours are required for some topics; these topics are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
Topic 2: Life and Literature of the Southwest—Mexican American. Same as English 342 (Topic 1: *Life and Literature of the Southwest—Mexican American*). Verse, fiction, travels, and memoirs, to acquaint students with the literature reflecting the social inheritance of Texas and the neighboring territory. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

UPPER-DIVISION COURSES

- 320L. Texas until 1845.** Same as History 320L. A study of Texas from before the European discovery through the exploration and mission periods to status as a Mexican colony and an independent republic. Three lecture hours a week for one semester. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Mexican American Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Mexican American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

Topic 3: Chicanos: Sociological Perspectives. Anglo-American and Mexican American contacts and relations in the southwestern United States from colonial times to the present; emphasis on social and cultural differences and problems of assimilation. Mexican American Studies 374 (Topic 3) and Sociology 348K may not both be counted. Prerequisite: Upper-division standing.

Topic 4: Narrative Journalism. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 335, Latin American Studies 322 (Topic 11: *Latino Community Journalism*), 322 (Topic 11: *Narrative Journalism*), Mexican American Studies 374 (Topic 4: *Latino Community Journalism*), 374 (Topic 4: *Narrative Journalism*). Prerequisite: Upper-division standing and consent of instructor.

Topic 6: Feature Writing. Same as Latin American Studies 322 (Topic 4: *Feature Writing*). Procedures in gathering material for feature stories, with stress on newspaper articles; analysis of reader appeal; study of feature story structure; development of style by practice in writing feature stories. Journalism 327 and Mexican American Studies 374 (Topic 6) may not both be counted. Prerequisite: Consent of instructor and a passing score on the College of Communication Grammar, Spelling and Punctuation Test.

Topic 8: Mexican Americans in the Schooling Process. Same as Educational Psychology 362 (Topic 4: *Mexican Americans in the Schooling Process*). Prerequisite: Upper-division standing.

Topic 9: Hispanic Images and Counterimages. Same as Latin American Studies 322 (Topic 1: *Hispanic Images and Counterimages*) and Radio-Television-Film 359S (Topic 1: *Hispanic Images and Counterimages*). The critical analysis of Hispanic images in media. Three lecture hours and one two-hour film screening a week for one semester. Mexican American Studies 374 (Topic 9) and Radio-Television-Film 359 (Topic 1: *Hispanic Images and Counterimages*) may not both be counted. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 10: Latino Audiences. Same as Latin American Studies 322 (Topic 2: *Latino Audiences*) and Radio-Television-Film 365 (Topic 2: *Latino Audiences*). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 11: Mass Media and Ethnic Groups. Same as Latin American Studies 322 (Topic 3: *Mass Media and Ethnic Groups*) and Radio-Television-Film 365 (Topic 3: *Mass Media and Ethnic Groups*). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 13: Spanish-Language Literature of the Southwest. Same as Latin American Studies 370S (Topic 6: *Spanish-Language Literature of the Southwest*) and Spanish 341K. The study of culturally valuable Chicano literary texts; related readings in Mexican and other Hispanic works. Taught in Spanish. Prerequisite: Spanish 612 or 312L.

Topic 14: United States–Mexican Border Relations. Same as Government 337M (Topic 4: *United States–Mexican Border Relations*) and Latin American Studies 337M (Topic 4: *United States–Mexican Border Relations*). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 15: Latino Politics. Same as Latin American Studies 337M (Topic 8: *Latino Politics*) and Government 370K (Topic 2: *Latino Politics*). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 16: Texas, 1914 to the Present. Same as History 320R and Urban Studies 353 (Topic 2: *Texas, 1914 to the Present*). The steady dissociation of Texas from its Old South status to a transitional state and a power in national politics. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.

Topic 17: International Communication: Third World Issues. Same as Latin American Studies 322 (Topic 7: *International Communication: Third World Issues*) and Radio-Television-Film 342 (Topic 3: *Third World Issues*). Prerequisite: For radio-television-film majors, upper-division standing; consent of instructor; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 21: Essay in Mexican Thought and Culture. Same as Latin American Studies 370S (Topic 13: *Essay in Mexican Thought and Culture*) and Spanish 350 (Topic 2: *Essay in Mexican Thought and Culture*). Prerequisite: Spanish 322K or 328.

Topic 22: Mass Media and Minorities. Same as Latin American Studies 322 (Topic 10: *Mass Media and Minorities*). Survey of minority communication problems: alienation, fragmentation, media access; criticism and feedback for minority groups based on racial/ethnic background, age, sex, disability, social or economic class, and sexual orientation. Journalism 340C (Topic 1: *Mass Media and Minorities*) and Mexican American Studies 374 (Topic 22) may not both be counted. Prerequisite: Upper-division standing.

Topic 23: Mexican American Indigenous Heritage. Same as Anthropology 322M (Topic 10: *Mexican American Indigenous Heritage*). The prehistory, history, and contemporary racial understanding of Mexican Americans. Prerequisite: Upper-division standing.

Topic 24: Latinos and Media. Same as Latin American Studies 322 (Topic 12: *Latinos and Media*) and Radio-Television-Film 365 (Topic 6: *Latinos and Media*). Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 25: Chicano Educational Struggles. Same as Educational Psychology 362 (Topic 5: *Chicano Educational Struggles*). Prerequisite: Upper-division standing.

Topic 28: Politics and Culture of Contemporary Mexico. Same as Government 337M (Topic 5: *Politics and Culture of Contemporary Mexico*), Latin American Studies 325 (Topic 3: *Politics and Culture of Contemporary Mexico*), and Sociology 338M. Introduction to the contemporary Mexican political system and the ways in which political change and democratization are recasting the political and civic culture of contemporary Mexico. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

Topic 29: Mexican and Mexican American Ballads. Same as Latin American Studies 370S (Topic 20: *Mexican and Mexican American Ballads*) and Spanish 350 (Topic 11: *Mexican and Mexican American Ballads*). Examines the *corrido* genre in the nineteenth and twentieth centuries, with special focus on its pivotal role in the Mexican Revolution and in the collision between cultures in the border zone. Prerequisite: Spanish 322K or 328.

Topic 30: Spanish for Health Care Professionals. Same as Spanish 367K (Topic 7: *Spanish for Health Care Professionals*). Designed to build fluency in both spoken and written Spanish that will enable the health care professional to communicate effectively with monolingual patients, to attend conferences or classes in Spanish, and to explain medical literature to patients. Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.

Topic 31: Rhetoric and Composition for Native Speakers. Same as Spanish 367K (Topic 8: *Rhetoric and Composition for Native Speakers*). Writing and oral expression for use in academic and professional settings. Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.

375. Internship. Restricted to Mexican American studies majors. Students participate in a nonpartisan, direct-service capacity in a community, civic, or government organization or program that facilitates the economic, political, and social development of the Mexican American community. Under the supervision of a faculty member, students write a report based on the internship project. The equivalent of three lecture hours a week for one semester. Additional weekly meeting times are sometimes required. With consent of the director or academic adviser, may be repeated for credit. Prerequisite: Mexican American Studies 310, 318, and 374; or consent of the director.

679H. Honors Tutorial Course. Restricted to Mexican American studies majors. Supervised research, readings, and writing of a substantial paper on a Mexican American studies topic. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 679HA, Mexican American Studies 361, 362, or 372 with a grade of A; admission to the Mexican American Studies Honors Program no later than two semesters before expected graduation; a University grade point average of at least 3.00; and a grade point average in Mexican American studies of at least 3.50; for 679HB, Mexican American Studies 679HA.

CENTER FOR EUROPEAN STUDIES

EUROPEAN STUDIES: EUS

LOWER-DIVISION COURSES

302. Introductory Interdisciplinary Topics in European Studies. Analysis of various aspects of European culture, science, and technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: European Studies 301, 302, 306, 307, 308. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

305. Introduction to European Studies. The myths, ideas, and sociopolitical realities that underpin the intellectual and cultural construction of Europe. Core course. Three lecture hours a week for one semester. European Studies 301 (Topic: *Introduction to European Studies*) and 305 may not both be counted.

306. Introductory Topics in European Anthropology, Geography, History, and Sociology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: European Studies 301, 302, 306, 307, 308. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

307. Introductory Topics in European Culture, Literature, Art, Music, and Media. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: European Studies 301, 302, 306, 307, 308. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

- 308. Introductory Topics in European Economics, Government, Business, and Policy.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: European Studies 301, 302, 306, 307, 308. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 113. Preparation for Study Abroad in Europe.** One lecture hour a week for one semester. Offered on the pass/fail basis only. May not be counted by students who have previously taken an international learning seminar.
- 318Q. Supervised Research.** Individual instruction.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in European Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for European Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in European Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for European Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 340M. Continuity and Change in Modern France.** Same as French Civilization 340M. Focuses on various social, political, and cultural crises in France from the revolution of 1789 to the present time. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 340M, 361 (Topic: *Continuity and Change in Modern France*), French 340T. Prerequisite: Upper-division standing.
- 346. Topics in European Anthropology, Geography, History, and Sociology.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: European Studies 346, 347, 348, 361, 363. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: History of Britain from 1783 through World War I.** Same as History 358M. Surveys the political, social, economic, and intellectual history of Great Britain from the years preceding the outbreak of the French Revolution to the conclusion of World War I. European Studies 346 (Topic 1) and 361 (Topic 4: *England in the Nineteenth Century*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 2: Great Discoveries in Archaeology.** Same as Anthropology 326F. The stories, myths, and people behind some of the great archaeological discoveries. Anthropology 324L (Topic: *Great Discoveries in Archaeology*) and European Studies 346 (Topic 2) may not both be counted. Prerequisite: Upper-division standing.
- 347. Topics in European Culture, Literature, Art, Music, and Media.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: European Studies 346, 347, 348, 361, 363. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Italian Civilization.** Same as Italian Civilization 360. Survey of the social, political, and cultural history of Italy. European Studies 347 (Topic 1) and 361 (Topic 7: *Italian Civilization*) may not both be counted. With consent of the undergraduate adviser in the Department of French and Italian, may be counted toward a major in Italian. Prerequisite: Upper-division standing.
- Topic 2: German Cinema since 1933.** Same as Germanic Civilization 361E (Topic 2: *German Cinema since 1933*). Only one of the following may be counted: English 322 (Topic 12: *German Cinema since 1933*), European Studies 347 (Topic 2), 361 (Topic 17: *German Cinema since 1933*). Prerequisite: Upper-division standing.
- Topic 3: Introduction to Germanic Religion and Myth.** Same as Germanic Civilization 340E (Topic 1: *Introduction to Germanic Religion and Myth*) and Religious Studies 365 (Topic 2: *Introduction to Germanic Religion and Myth*). Only one of the following may be counted: English 322 (Topic 2: *Introduction to Germanic Religion and Myth*), European Studies 347 (Topic 3), 361 (Topic 6: *Introduction to Germanic Religion and Myth*), Religious Studies 361 (Topic 8: *Introduction to Germanic Religion and Myth*). Prerequisite: Upper-division standing.
- Topic 4: Literature in the New German Cinema.** Same as Germanic Civilization 361E (Topic 4: *Literature in the New German Cinema*). Only one of the following may be counted: English 322 (Topic 3: *Literature in the New German Cinema*), European Studies 347 (Topic 4), 361 (Topic 1: *Literature in the New German Cinema*). Prerequisite: Upper-division standing.
- Topic 5: Genres, Structure, and Trends in German Cinema.** Same as Germanic Civilization 361E (Topic 3: *Genres, Structure, and Trends in German Cinema*). Only one of the following may be counted: English 322 (Topic 13: *Genres, Structure, and Trends in German Cinema*), European Studies 347 (Topic 5), 361 (Topic 2: *Genres, Structure, and Trends in German Cinema*). Prerequisite: Upper-division standing.
- Topic 6: The German Folktale and Fantasy Tale.** Same as Germanic Civilization 362E (Topic 3: *The German Folktale and Fantasy Tale*). Only one of the following may be counted: English 322 (Topic 30: *The German Folktale and Fantasy Tale*), European Studies 347 (Topic 6), 361 (Topic 16: *The German Folktale and Fantasy Tale*). Prerequisite: Upper-division standing.

- Topic 7: The European Novel.** Same as English 356. Selected masterpieces of Continental fiction in English translation: representative novelists of the nineteenth and twentieth centuries. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 348. Topics in European Economics, Government, Business, and Policy.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: European Studies 346, 347, 348, 361, 363. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Governments and Politics of Eastern Europe.** Same as Government 324J and Russian, East European, and Eurasian Studies 335 (Topic 2: *Governments and Politics of Eastern Europe*). European Studies 348 (Topic 1) and 361 (Topic 14: *Governments and Politics of Eastern Europe*) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 350. Governments and Politics of Western Europe.** Same as Government 324L. Comparative study of peoples, institutions, parties, interest groups, and bureaucracy in the countries of Western Europe, concentrating on the major political systems of Britain, France, Germany, and Italy. Three lecture hours a week for one semester. European Studies 350 and 361 (Topic 11: *Governments and Politics of Western Europe*) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 356. Germany and Europe since 1945.** Restricted to students participating in the summer program in Würzburg, Germany. The equivalent of three lecture hours a week for one semester. European Studies 356 and 361 (Topic: *Germany and Europe since 1945*) may not both be counted. Prerequisite: Upper-division standing and consent of instructor.
- 358Q. Supervised Research.** Individual instruction. Prerequisite: Upper-division standing.
- 362. Independent Research in European Studies.** Tutorially directed research on a modern European topic. Conference course. May be repeated for credit. Required for the concentration in European studies. Prerequisite: Upper-division standing, admission to the European studies program, and consent of instructor.
- 363. Interdisciplinary Topics in European Studies.** An analysis of various aspects of European culture, science, and technology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: European Studies 346, 347, 348, 361, 363. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 375. Capstone Research in European Studies.** Supervised research on a modern European topic chosen in consultation with the student's adviser and culminating in a full-length thesis. Individual instruction. Prerequisite: Upper-division standing, admission to the European studies major, and consent of instructor.

DEPARTMENT OF FRENCH AND ITALIAN

In all French civilization and Italian civilization courses, both lectures and readings are in English. In French 301, lectures are in English and readings are in French. All other courses are conducted primarily in the foreign language.

COURSE LEVELS AND PLACEMENT

The lower-division sequences in French and Italian involve four levels of coursework, with options available as indicated.

FRENCH

Level 1: French 506.

Level 2: French 507, for students who took 506 at the University recently; or 508K, for students with high school, transfer, or placement credit for 506 and those who took French 506 at the University more than a year ago.

Levels 1 and 2, combined: French 604.

Level 3: French 312K.

Level 4: French 312L or 312N.

Levels 3 and 4, combined: French 612.

ITALIAN

Level 1: Italian 506.

Level 2: Italian 507.

Levels 1 and 2, combined: Italian 604.

Level 3: Italian 312K.

Level 4: Italian 312L.

Levels 3 and 4, combined: Italian 612.

Students with knowledge of either language must take appropriate steps to determine at which level they may begin work at the University. Students with transfer credit for college work done at another institution may start at the next higher level here. All other students are required to take the placement test administered by the Division of Instructional Innovation and Assessment for placement in French or the departmentally administered classification test for placement in Italian.

Students are urged to consult departmental advisers about any problem either with placement or with credit by examination.

Students with credit for the fourth level of lower-division coursework who wish to continue their study of French or Italian may consult departmental advisers about appropriate upper-division courses.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

FRENCH: FR

LOWER-DIVISION COURSES

- 301. French for Graduate Students in Other Departments.** No auditors permitted. Intensive reading course for graduate students, emphasizing basic grammar and vocabulary with translation practice. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. The symbol CR fulfills the foreign language requirement for the Doctor of Philosophy degree in some departments. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Graduate standing.
- 601C. Beginning French.** Designed for non-French majors. An intensive beginning course with an emphasis on basic skills: listening, speaking, reading, and writing. Six lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 506. Only one of the following may be counted: French 601C, 604, 507, 508K.
- 604. Accelerated First-Year French.** Designed for students of high motivation. A six-hour course comparable to French 506 and 507. Six lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 506. Only one of the following may be counted: French 601C, 604, 507, 508K.
- 506 (TCCN: FREN 1511). First-Year French I.** Emphasis on basic skills: listening, speaking, reading, and writing. Designed for students with no previous coursework in French. Five lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 506.
- 507 (TCCN: FREN 1512). First-Year French II.** Five lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 507, 508K. Prerequisite: French 506 completed at the University with a grade of at least C.
- 508K. Alternate First-Year French II.** An accelerated review of material covered in French 506, followed by study of new material covered in French 507. Five lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 507, 508K. Prerequisite: Transfer credit or credit by examination for French 506; or credit for French 506 earned at the University more than one calendar year prior to registering, with a grade of at least C.
- 611C. Intermediate French.** Designed for non-French majors. A six-hour intensive intermediate course with emphasis on basic skills: listening, speaking, reading, and writing. Does not meet the prerequisite requirements for French 320E or 324L. Six lecture hours a week for one semester. Only one of the following may be counted: French 310K, 611C, 612, 312K. French 310L and 611C may not both be counted. French 611C and 612 may not both be counted. French 611C and 312L may not both be counted. Prerequisite: French 601C, 604, 507, or 508K with a grade of at least C.
- 612. Accelerated Second-Year French: Four Skills.** Designed for students of high motivation. A six-hour course comparable to French 312K and 312L combined. Six lecture hours a week for one semester. Only one of the following may be counted: French 310L, 612, 312L, 312N. Only one of the following may be counted: French 310K, 611C, 612, 312K. French 611C and 612 may not both be counted. Prerequisite: French 604, 507, or 508K with a grade of at least C.
- 312K (TCCN: FREN 2311). Second-Year French I: Four Skills.** Listening, speaking, reading, and writing at the second-year level. Three lecture hours a week for one semester. Only one of the following may be counted: French 310K, 611C, 612, 312K. Prerequisite: French 604, 507, or 508K with a grade of at least C.
- 312L (TCCN: FREN 2312). Second-Year French II: Four Skills.** Listening, speaking, reading, and writing at the advanced, second-year level. Three lecture hours a week for one semester. Only one of the following may be counted: French 310L, 612, 312L, 312N. French 611C and 312L may not both be counted. Prerequisite: French 312K with a grade of at least C.
- 312N. Second-Year French II: Oral Expression.** Intensive practice in oral expression; some reading and writing, as relevant to development of oral skills. Three lecture hours a week for one semester. Only one of the following may be counted: French 610, 310L, 612, 312L, 312M, 312N. Prerequisite: French 312K with a grade of at least C.
- 317C. Enhancing French Skills.** Listening, speaking, reading, and writing course designed to provide students who have credit for French 611C with additional preparation for upper-division French courses. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: French 611C with a grade of at least C.
- 118K. Practice in Spoken French I.** Recommended for all French majors. Designed to be taken concurrently with French 312K. Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: French 604, 507, or 508K with a grade of at least C.
- 118L. Practice in Spoken French II.** Recommended for all French majors. Designed to be taken concurrently with French 312L. Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: French 611C or 312K with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in French.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320E. Advanced French I.** Designed to develop the listening, speaking, reading, and writing skills needed for the analysis of literary and cultural readings in the French-speaking world. Three lecture hours a week for one semester. Prerequisite: French 612, 312L, 312N, or 317C with a grade of at least C.
- 120M. Advanced Practice in Spoken French I.** Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: French 612, 312L, or 312N with a grade of at least C.
- 120N. Advanced Practice in Spoken French II.** Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Completion of at least one upper-division French course, or equivalent proficiency.
- 322E. Advanced French II.** Continuation of French 320E. Designed to develop the listening, speaking, reading, and writing skills needed to analyze literary and cultural readings in the French-speaking world. Three lecture hours a week for one semester. Prerequisite: French 320E.
- 324L. Practical Phonetics.** A thorough review of French phonetics, with emphasis on improving production and understanding of spoken French. Three lecture hours a week for one semester. Prerequisite: French 612, 312L, 312N, or 317C with a grade of at least C.
- 326K. Introduction to French Literature I: From the Middle Ages through the Eighteenth Century.** Introduction to the reading and analysis of representative texts, with some attention to cultural and historical background. Three lecture hours a week for one semester. Prerequisite: French 320E.
- 326L. Introduction to French Literature II: From the French Revolution to the Present.** Introduction to the reading and analysis of representative texts, with some attention to cultural and historical background. Three lecture hours a week for one semester. Prerequisite: French 320E.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in French.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 130D. French across Disciplines.** Students read and discuss French language materials related to the subject matter of another designated course. One lecture hour a week for one semester. Prerequisite: Upper-division standing and three semester hours of upper-division coursework in French.
- 330K. Studies in French Language and Cultures.** Topics with a focus on language or culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: French 320E.
- Topic 1: Scientific French.**
- 340C. The Arts in France.** A survey of the major artistic styles, modes, and currents in painting, architecture, sculpture, the decorative arts, and costume, from the medieval through the contemporary periods. Three lecture hours a week for one semester. Prerequisite: French 320E.
- 340P. The Making and Identity of France.** The general political history of France, from the nation's inception to its current existence as part of the European Community. Three lecture hours a week for one semester. Prerequisite: French 320E.
- 340T. France and the Francophone World Today.** An introduction to life in France and francophone regions through the study of contemporary society and culture. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 340M, 361 (Topic: *Continuity and Change in Modern France*), French 340T, French Civilization 340M. Prerequisite: French 320E.
- 342C. French for Business.** Development of the ability to function in French in business-related situations, both orally and in writing. Three lecture hours a week for one semester. Prerequisite: French 320E.
- 348. French Drama Workshop.** Intensive analysis of one or several plays or short literary texts, with emphasis on diction, delivery of lines, acting and staging; public performance of one play. The equivalent of three lecture hours a week for one semester. Prerequisite: French 320E.
- 355. Topics in Medieval and Renaissance French Literature.** Study of literary texts from the Middle Ages and the Renaissance. Topics may focus on a specific writer or period, a genre, or a theme. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.
- 356. Topics in French Literature of the Baroque, Classicism, and the Enlightenment.** Study of literary texts of the seventeenth-century baroque and classical periods and the eighteenth-century Enlightenment. Topics may focus on a specific writer or period, a literary mode or movement, a genre, or a theme. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.
- 357. Topics in French Literature of the Nineteenth and Twentieth Centuries.** Study of literary texts since the French revolution. Topics may focus on a specific writer or period, a literary mode or movement, a genre, or a theme. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.
- 358. Seminar in French and Francophone Studies.** Topics in literature or culture, with a focus on study in depth or on synthesis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.

- 359. Topics in French Linguistics.** Advanced introduction to linguistic analysis of French. Topics may include analysis of contemporary French, introduction to French linguistics, contrastive analysis of French and English, and advanced French grammar. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.
- 364L. Introduction to French Linguistics.** Introduction to the syntactic, phonological, morphological, lexical, historical, and applied aspects of French linguistics. Three lecture hours a week for one semester. Prerequisite: Six semester hours of upper-division coursework in French.
- 165K, 265K, 365K. Conference Course.** Supervised individual study of selected problems in French language and literature. Prerequisite: French 612, 312L, 312N, or the equivalent, or consent of instructor.
- 371L. Advanced Written and Oral Composition.** Designed to guide students toward smooth and effective written and oral expression; weekly compositions on assigned topics; periodic oral presentations. Three lecture hours a week for one semester. Prerequisite: French 320E and 322E.
- 372. Comparative Stylistics.** Comparison of contemporary French and English syntax and style; study and practice in the technical difficulties of English-to-French and French-to-English translation. Three lecture hours a week for one semester. Prerequisite: French 320E and 322E.
- 379H. Honors Tutorial Course.** Supervised individual research on a literary, linguistic, or cultural topic, and writing and defense of a thesis under the direction of a committee of two faculty members. Prerequisite: Admission to the French Honors Program.

FRENCH CIVILIZATION: F C

LOWER-DIVISION COURSE

- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in French Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated study program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. The French Heritage.** Introduction to French civilization: architecture, painting, music, and social and political history. Given in English; requires no knowledge of French. Three lecture hours a week for one semester. May not be counted toward a major or minor in French. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in French Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 339. The Development of the French Film.** Films in French, with subtitles in English; lectures in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. English 322 (Topic 20: *The Development of the French Film*) and French Civilization 339 may not both be counted. Prerequisite: Upper-division standing.
- 340M. Continuity and Change in Modern France.** Same as European Studies 340M. Focuses on various social, political, and cultural crises in France from the revolution of 1789 to the present time. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 361 (Topic: *Continuity and Change in Modern France*), French 340T, French Civilization 340M. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.
- 345. Studies in the Cultures of French-Speaking Peoples.** Lectures and readings in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.
- Topic 1: The Cultural and Intellectual History of France and Germany, 1870 to 1945.**
- 349. French Literature in Translation.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

ITALIAN: ITL

LOWER-DIVISION COURSES

- 601C. Beginning Italian.** An intensive beginning course with an emphasis on basic skills: listening, speaking, reading, and writing. Six lecture hours a week for one semester. Only one of the following may be counted: Italian 601C, 604, 506. Only one of the following may be counted: Italian 601C, 604, 507.
- 604. Accelerated First-Year Italian.** Designed for students of high motivation. A six-hour course comparable to Italian 506 and 507. Six lecture hours a week for one semester. Only one of the following may be counted: Italian 601C, 604, 506. Only one of the following may be counted: Italian 601C, 604, 507.

- 305. Introduction to Italian Language and Culture.** An introductory course in Italian language and culture taught in Castiglione-Fiorentino, Italy. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Designed for students studying abroad who wish to receive University credit.
- 506 (TCCN: ITAL 1511). First-Year Italian I: Language and Culture.** Grounding in the basic skills: listening, speaking, reading, and writing; one class hour a week devoted to Italian cultural topics. Five lecture hours a week for one semester. Only one of the following may be counted: Italian 601C, 604, 506.
- 507 (TCCN: ITAL 1512). First-Year Italian II: Language and Culture.** Emphasis on basic skills: listening, speaking, reading, and writing; one class hour a week devoted to Italian cultural topics. Five lecture hours a week for one semester. Only one of the following may be counted: Italian 601C, 604, 507. Prerequisite: Italian 506 with a grade of at least C.
- 611C. Intermediate Italian.** An intensive intermediate course with an emphasis on basic skills: listening, speaking, reading, and writing. Does not meet the prerequisite requirements for Italian 328, 326K, or 326L. Six lecture hours a week for one semester. Only one of the following may be counted: Italian 611C, 612, 312K. Only one of the following may be counted: Italian 611C, 612, 312L. Prerequisite: Italian 601C, 604, or 507 with a grade of at least C.
- 612. Accelerated Second-Year Italian.** Comparable to Italian 312K and 312L combined. Intensive work in writing, reading, and speaking at the second-year level. Six lecture hours a week for one semester. Only one of the following may be counted: Italian 611C, 612, 312K. Only one of the following may be counted: Italian 611C, 612, 312L. Prerequisite: Italian 604 or 507 with a grade of at least C.
- 312K (TCCN: ITAL 2311). Second-Year Italian I.** Listening, speaking, reading, and writing at the second-year level. Three lecture hours a week for one semester. Only one of the following may be counted: Italian 611C, 612, 312K. Prerequisite: Italian 604 or 507 with a grade of at least C.
- 312L (TCCN: ITAL 2312). Second-Year Italian II.** Listening, speaking, reading, and writing at the advanced second-year level. Three lecture hours a week for one semester. Only one of the following may be counted: Italian 611C, 612, 312L. Prerequisite: Italian 312K with a grade of at least C.
- 317C. Enhancing Italian Skills.** Listening, speaking, reading, and writing course designed to provide students who have credit for Italian 611C with additional preparation for upper-division Italian courses. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Italian 611C with a grade of at least C.
- 118K. Practice in Spoken Italian I.** Designed to be taken concurrently with Italian 312K. Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Italian 604 or 507 with a grade of at least C.
- 118L. Practice in Spoken Italian II.** Designed to be taken concurrently with Italian 312L. Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Italian 611C or 312K with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Italian.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 322L. Tradition and Change in Contemporary Italy.** An analysis of Italy's trends and of conflicting values in its political, economic, and social development. Three lecture hours a week for one semester. Prerequisite: Three semester hours of upper-division coursework in Italian.
- 326K. Introduction to Italian Literature I: From the Middle Ages to the Eighteenth Century.** Introduction to the reading and analysis of representative texts, with some attention to cultural and historical background. Three lecture hours a week for one semester. Italian 321 and 326K may not both be counted. Prerequisite: Credit or registration for Italian 328.
- 326L. Introduction to Italian Literature II: From the Eighteenth Century to the Present.** Introduction to the reading and analysis of representative texts, with some attention to cultural and historical background. Three lecture hours a week for one semester. Italian 321 and 326L may not both be counted. Prerequisite: Credit or registration for Italian 328.
- 328. Composition and Conversation.** Focuses on idioms, grammar, syntax, and style. Three lecture hours a week for one semester. Prerequisite: Italian 612, 312L, or 317C with a grade of at least C.
- 329. Advanced Composition and Conversation.** Advanced work in writing and speech, based on current events and contemporary readings. Three lecture hours a week for one semester. Prerequisite: Italian 328.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Italian.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

- 130D. Italian across Disciplines.** Students read and discuss Italian language materials related to the subject matter of another designated course. One lecture hour a week for one semester. Prerequisite: Upper-division standing, three semester hours of upper-division coursework in Italian, and consent of instructor.
- 330K. Studies in Italian Language.** Study in specific areas of Italian language. Topics may include history of the Italian language, applied Italian linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Italian 328.
- 348. Italian Drama Workshop.** Intensive analysis of one or several plays or short literary texts, with emphasis on diction, delivery of lines, and acting and staging. Three lecture hours a week for one semester, with additional rehearsal hours to be arranged. Prerequisite: Italian 326K, 326L, and 328 with a grade of at least C in each.
- 365. Conference Course in Italian Language and Literature.** Course content varies according to needs of students; designed to fill in gaps and give students a good overall picture of the development of Italian literature. Prerequisite: Upper-division standing and consent of the undergraduate adviser or the chair. Italian majors may take conference courses only in exceptional cases.
- 375. Studies in Italian Literature.** Intensive examination of a period or a major writer. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Italian 326K, 326L, and 328 with a grade of at least C in each.
- 379H. Honors Tutorial Course.** Supervised individual research on a literary, linguistic, or cultural topic, and writing and defense of a thesis under the direction of a committee of two faculty members. Prerequisite: Admission to the Italian Honors Program.

ITALIAN CIVILIZATION: ITC

LOWER-DIVISION COURSE

- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Italian Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Italian Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 349. Italian Literature in Translation.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward a major or minor in Italian. Prerequisite: Upper-division standing.
- Topic 1: Italian Cinema.** English 322 (Topic 22: *Italian Cinema*) and Italian Civilization 349 (Topic 1) may not both be counted.
- Topic 2: Dante.** Same as English 322 (Topic 23: *Dante*).
- Topic 3: Great Italian Novels and Plays.** English 322 (Topic 24: *Great Italian Novels and Plays*) and Italian Civilization 349 (Topic 3) may not both be counted.
- Topic 5: Italian Women Writers.** Same as English 322 (Topic 38: *Italian Women Writers*) and Women's and Gender Studies 340 (Topic 17: *Italian Women Writers*).
- 360. Italian Civilization.** Same as European Studies 347 (Topic 1: *Italian Civilization*). Survey of the social, political, and cultural history of Italy. Taught in English. Three lecture hours a week for one semester. European Studies 361 (Topic 7: *Italian Civilization*) and Italian Civilization 360 may not both be counted. May be counted toward a major in Italian. Prerequisite: Upper-division standing.

DEPARTMENT OF GEOGRAPHY AND THE ENVIRONMENT

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

GEOGRAPHY: GRG

LOWER-DIVISION COURSES

- 301C (TCCN: GEOG 1301). The Natural Environment.** Geomorphic processes that shape the earth's surface; origin and evolution of landforms. Groundwater and water resources. Pedogenesis and soil properties. Three lecture hours and one and one-half laboratory hours a week for one semester, and a one-day field trip.
- 301K (TCCN: GEOL 1347). Weather and Climate.** A survey of meteorological phenomena and climatological processes of the earth. Three lecture hours a week for one semester.

- 303P. Topics in Physical Geography.** Three lecture hours or two lecture hours and one discussion hour a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Geography 303P, 304P, 309.
- 304E. Environmental Science: A Changing World.** Surveys the major global environmental concerns affecting the Earth and its residents from the perspectives of the environmental sciences. Three lecture hours and one laboratory hour a week for one semester.
- 304P. Topics in Geographical Methods.** Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Geography 303P, 304P, 309.
- 305 (TCN: GEOG 1303). This Human World: An Introduction to Geography.** Introductory survey of human geography, including human-environment relations, cultural patterns and processes, and geography's relation to other fields of study. Three lecture hours and one laboratory hour a week for one semester.
- 306C. Conservation.** Introduction to environmental management, with emphasis on the major causes and consequences of environmental degradation. The course is organized around the premise that people cannot solve environmental problems unless they know how and why they occur; a major objective is to identify and understand the sociocultural forces that drive environmental degradation. Three lecture hours a week for one semester.
- 307C. Introduction to Urban Studies.** Same as Urban Studies 301. A multidisciplinary study of cities and complex urban environments; historical and contemporary issues from both national and international perspectives. Three lecture hours a week for one semester.
- 308. Computer Cartography.** An introduction to the computer languages, equipment, and techniques employed in modern automated cartography. Three lecture hours a week for one semester.
- 309. Topics in Human Geography.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Geography 303P, 304P, 309.
- 310C. Spatial Data and Analysis.** Fundamental concepts in spatial data acquisition, analysis, and presentation, with emphasis on the needs of professionals in cartography, geographic information systems (GIS), and remote sensing. Three lecture hours a week for one semester.
- 312. Maps and Map Interpretation.** History of maps and mapping; types and uses; chief sources; reading and interpretation. Three lecture hours a week for one semester.
- 319. Geography of Latin America.** Same as Latin American Studies 319. Adaptations to population growth and spatial integration in cultural landscapes of great natural and ethnic diversity; problems of frontiers and cities. Three lecture hours a week for one semester.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Geography.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Geography and the Environment. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320K. Land and Life: The American Southwest.** Historical geography of the southwestern United States, emphasizing the ways of life of American Indian, Spanish, mestizo, and Anglo cultures. Three lecture hours a week for one semester, with one field trip to be arranged. Prerequisite: Upper-division standing.
- 323K. Geography of South America.** Same as Latin American Studies 330 (Topic 3: *Geography of South America*). Ecological, cultural, and political challenges of the densely populated margins and sparsely populated interior frontier of South America; appropriate development and conservation pathways. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 325. Geography of Texas.** Texas as an environmental and cultural borderland: as a transition zone between plains and mountains, humid and arid, South and West, Anglo-America and Latin America. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 326. Regions and Cultures of Europe.** Spatial patterns in Europe, with emphasis on cultural, historical, and political geography. Three lecture hours a week for one semester. Only one of the following may be counted: Geography 326; 385 (Topic: *Regions and Cultures of Europe*); Russian, East European, and Eurasian Studies 345 (Topic 2: *Regions and Cultures of Europe*). Prerequisite: Upper-division standing.
- 327. Geography of the Former Soviet Union.** The land and peoples of the former Soviet Union, with an examination of such problems as ethnic tension, economic restructuring, and the quality of life. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 328. Geography of the Middle East.** Same as Middle Eastern Studies 322K (Topic 3: *Geography of the Middle East*). Major elements of physical and social environment in the region extending from Egypt to Afghanistan. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Geography.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Geography and the Environment. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

- 331. Geography of Asia.** Same as Asian Studies 331. Natural regions and cultural landscapes of Asia, excluding the former Soviet Union. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Geography of Asia*) and Geography 331 may not both be counted. Prerequisite: Upper-division standing.
- 331K. Cultural Ecology.** Same as Anthropology 324L (Topic 17: *Cultural Ecology*). Long-term patterns and processes of conversion of planet Earth to the human home, including the emergence of humans, the achievement of control over the food supply, the emergence of civilizations, and globalization. Three lecture hours a week for one semester. Geography 331K and Urban Studies 354 (Topic 1: *Cultural Geography*) may not both be counted. Prerequisite: Upper-division standing.
- 333C. Severe and Unusual Weather.** In-depth discussion of inclement weather phenomena (tornadoes, tropical cyclones, floods, drought) and their effects on human beings, as well as the climatology of those types of weather events. Three lecture hours a week for one semester, with additional field hours to be arranged. Prerequisite: Geography 301K.
- 333K. Climate Change.** Examines changes in climatic systems over both short and long time periods in relation to impacts on physical and ecological systems. Discusses past, present, and future changes in climatic conditions and the methods used to make those evaluations. Three lecture hours a week for one semester. Geography 333K and 356T (Topic: *Climate Change*) may not both be counted. Prerequisite: Upper-division standing and Geography 301C or 301K.
- 334. Conservation, Resources, and Technology.** Analysis of the relationship between the human population and its resource base, with particular emphasis on current problems in environmental resource management. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 334C. Environmental Hazards.** Earth science processes that affect human activities: soil, erosion, flooding, slope stability, earthquakes, volcanism, and water resources and quality. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 334K. Soils.** Morphology, genesis, properties, and distribution of world soils. Factors of soil formation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and six semester hours of coursework in physical geography or one or more of the geological or natural sciences, or the equivalent.
- 335C. Quaternary Landscapes.** Changing physical and biotic landscapes on the Ice Age earth during the last two million years. Reconstruction of Quaternary geomorphic landscapes based on principles and applications of geochronology and paleoclimatology. Three lecture hours a week for one semester. Geography 335C and 385C may not both be counted. Prerequisite: Upper-division standing and Geography 301C.
- 335K. Mountain Geocology.** Geological evolution of mountains. Physical geography of mountains: climates, soils, vegetation, landforms and geomorphic processes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and six semester hours of coursework in physical geography or one or more of the geological or natural sciences.
- 335N. Landscape Ecology.** The study of spatial patterns in the earth's biosphere found within landscapes, typically areas measured in square kilometers. Examines the processes that create those patterns, drawing from ecology, biogeography, and many other disciplines. Also explores the practical applications of landscape ecology to the study of natural environments and those managed or altered by human activities. Three lecture hours a week for one semester. Geography 335N and 356T (Topic: *Landscape Ecology*) may not both be counted. Prerequisite: Upper-division standing and three semester hours of coursework in physical geography or one of the geological or natural sciences.
- 336. Contemporary Cultural Geography.** Recent theoretical developments in cultural geography—landscape, culture area, ecosystem, and environmental perception. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 336C. National Parks and Protected Areas.** The history, purpose, and meaning of national parks (and preserves, refuges, and other publicly protected natural areas), from their inception at Yellowstone in 1872 to their present global distribution. Emphasis is on key management issues and dilemmas in the parks today; and the adoption and modification of Western notions of nature preservation within non-Western cultural settings. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 337. The Modern American City.** Same as Architecture 350R (Topic 1: *The Modern American City*) and Urban Studies 352 (Topic 1: *The Modern American City*). Issues facing residents of U.S. cities, such as transportation and housing, poverty and crime, metropolitan finance, environmental and architectural design; historical/comparative urban evolution. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 338C. Rivers and Landscapes: Fluvial Geomorphology.** Drainage basin evolution and channel adjustment, variability of river systems in differing geomorphic regimes, relationships between fluvial systems and other components of physical geography, and the role of humans as geomorphic agents. Three lecture hours a week for one semester, with additional field hours to be arranged. Prerequisite: Upper-division standing; and Geography 301C or Geological Sciences 401, or the equivalent.
- 339. Process Geomorphology.** Analysis of geomorphic processes and their effects on landform development. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and credit or registration for Geography 301C or Geological Sciences 401.
- 339C. Principles of Environmental Conservation.** Environmental conservation issues, focusing on the factors that control the production and consumption of environment-based resources. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 339K. Environment, Development, and Food Production.** Assessment of various types of agriculture with regard to environmental factors and management techniques. Three lecture hours a week for one semester. Geography 339K and 390S may not both be counted. Prerequisite: Upper-division standing.

- 340D. Political Ecology of Globalization and Environmental Degradation.** Study of current environmental problems from the perspective of political ecology, which critically examines political, economic, and social relations between humans and the natural world. Uses case studies from Africa, Latin America, Asia, and the Middle East to address climate change, deforestation, desertification, biodiversity, and environmental justice. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 341K. Landscapes of Mexico and Caribbean America.** Same as Latin American Studies 330 (Topic 2: *Landscapes of Mexico and Caribbean America*). The natural regions and cultural landscapes of Mexico, Central America, and the West Indies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 342C. Sustainable Development.** Historical and contemporary analysis of international development with a focus on the prospects for environmental sustainability. Three lecture hours a week for one semester. Asian Studies 342C and Geography 342C may not both be counted. Prerequisite: Upper-division standing.
- 346. The Human Use of the Earth.** The state of the world from an ecological perspective. Case studies are drawn from a wide range of ecological settings and involve both traditional and modern societies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 348C. Geography of South Asia.** Same as Asian Studies 348C. Natural regions and cultural landscapes of South Asia. Agriculture, urban structure, issues of environment and development. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Geography of South Asia*) and Geography 348C may not both be counted. Prerequisite: Upper-division standing.
- 350K. Geographies of Globalization.** Examines the process of globalization by theoretically and empirically analyzing the rise of capitalism and industrial modernity, its evolution into a global system through methods such as colonization and free-trade imperialism, and its metamorphosis into the postmodern cultural, economic and political process known as globalization. Three lecture hours a week for one semester. Geography 350K and 356T (Topic: *Introduction to Globalization*) may not both be counted.
- 356. Topics in Environmental Geography.** Topics include environmental assessment methods and techniques, the conservation movement, and climate and people. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- 356C. Geo-Archaeology and Environmental History.** Long-term ecology as reconstructed from settlement and land-use histories. Empirical case studies in environmental history from the Mediterranean region, the Near East, and Mesoamerica. Applications to degradation, desertification, sustainability, and global change. Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 382N, Geography 356C, 382K. Prerequisite: Upper-division standing.
- 356T, 456T. Topics in Geography.** Three or four lecture hours a week for one semester. Some topics may require additional field trips; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: The Culture of Cities.** Geography 356T (Topic 1) is same as American Studies 370 (Topic 13: *The Culture of Cities*) and Urban Studies 354 (Topic 4: *The Culture of Cities*). Examines the social, geographical, and cultural evolution of the United States from a rural and small-town society to an urban and suburban nation. Subjects may include the segregation of public and private space; the formation of urban subcultures organized by gender, work, race, religion, and sexuality; social and spatial divisions between rich and poor and native-born and immigrant; and the increasing importance of "cultural capital" in reshaping urban politics and in conflicts over revitalization and gentrification. Prerequisite: Upper-division standing.
- Topic 2: Memory and Place.** Geography 356T (Topic 2) is same as American Studies 370 (Topic 23: *Memory and Place*). Explores how cultural memory is produced in its various forms, from memorials, public art, and commodities to popular culture, rituals, and museums, and how public remembering is inevitably anchored in specific geographic places. Prerequisite: Upper-division standing.
- Topic 3: Geographical Information Systems and Remote Sensing for Archaeology and Paleontology.** Geography 356T (Topic 3) is same as Anthropology 324L (Topic 33: *Geographical Information Systems and Remote Sensing for Archaeology and Paleontology*). Designed to give students interested in the fields of archaeology, physical anthropology, and paleontology a foundation in the use of geographical information systems (GIS) and the analysis of remotely sensed data from satellites and aerial photographs. Prerequisite: Upper-division standing.
- 357. Medical Geography.** The geographic distribution, expansion, and contraction of the infectious diseases that have the greatest influence in shaping human societies today: malaria, AIDS, and others. Three lecture hours a week for one semester. American Studies 357 and Geography 357 may not both be counted. Prerequisite: Upper-division standing.
- 358. Cities in Developing Countries.** Comparative analysis of demographic, social, economic, and political features of cities in Latin America, the Middle East, Asia, and Africa; emphasis on regional imbalance, migration, occupational and social stratification, housing the poor, and suburbanization. Possibilities for individual research. Three lecture hours a week for one semester. Asian Studies 358 and Geography 358 may not both be counted. Prerequisite: Upper-division standing.
- 358E. Geography and Religion.** Same as Humanities 350 (Topic 3: *Geography and Religion*) and Middle Eastern Studies 322K (Topic 15: *Geography and Religion*). Ideas about the relationships among the natural world, myth, and ritual; principal focus on Christianity, Islam, and Judaism and their offshoots and antagonists in the Western world. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 460C. The Geographer's Craft.** A comprehensive introductory survey of research techniques used in contemporary geography. The course uses the problem-solving approach to teach technical skills and concepts drawn from cartography, remote sensing, geographical information systems, spatial statistics, and maps and map interpretation. Three lecture hours and one and one-half laboratory hours a week for one semester.
- 360G. Environmental Geographic Information Systems.** An introduction to the creation and use of geographic information systems. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Geography 310C.
- 360L. Spatial Analysis.** Application of statistical techniques to spatial problems: research and experimental design, hypothesis testing and sampling, with reference to spatial patterns and areal associations. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 462K. Introduction to Remote Sensing of the Environment.** The use of electromagnetic energy to sense objects in the natural environment; interpretation and recognition of patterns detected by sensors. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Upper-division standing.
- 464K. Advanced Remote Sensing and Pattern Analysis.** Advanced classification techniques for satellite image processing and landscape pattern analysis. Three lecture hours and one and one-half discussion hours a week for one semester. Geography 356 (Topic: *Advanced Remote Sensing and Pattern Analysis*) and 464K may not both be counted. Prerequisite: Upper-division standing, and Geography 462K or the equivalent or consent of instructor.
- 366C. Comparative Ecosystems.** The important ecosystem processes that affect the distributions, characteristics, and management of natural environments at landscape, regional, and continental scales. Ecosystem functions, including nutrient cycling, water balance, and the role of natural disturbances in a wide range of ecosystems, from the tundra to the rain forests and grasslands of the tropics. Three lecture hours a week for one semester. Geography 356T (Topic: *Comparative Ecosystems*) and 366C may not both be counted. Prerequisite: Upper-division standing and three semester hours of coursework in physical geography or one of the geological or natural sciences.
- 366K. Biogeography.** Contemporary patterns of plant and animal distribution, and the environmental and historical processes affecting them. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and three semester hours of coursework in physical geography or one of the geological or natural sciences.
- 367K. Vegetation Ecology.** Plant autecology and synecology. Ecological factors and processes of plant communities. Vegetation geocology, succession, and dynamics. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and six semester hours of coursework in physical geography or one or more of the geological or natural sciences.
- 470C. Advanced Geographic Information Systems.** Study of methods of spatial analysis, design and implementation of a geographic information system, vector and raster modeling, and advanced applications of geographic information systems. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Geography 360G and consent of instructor.
- 373F. Field Techniques.** Introduction to the collection and mapping of environmental and cultural data, involving both classroom lectures and outdoor exercises. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a major in geography, consent of instructor, and ability to use the World Wide Web; students must have an e-mail address.
- 373K. Field Methods for Landscape Characterization.** The design of research questions and the acquisition of data for the characterization of landscapes. Utilizes geographical and ecological field-based methods. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Geography 301C or the equivalent.
- 374. Frontiers in Geography.** Restricted to geography majors and students seeking a secondary school teaching certificate with geography as the second teaching field. Current concerns and methodology in the field of geography; an introduction to theory and research in geography. The equivalent of three lecture hours a week for one semester, with one field trip to be arranged. Prerequisite: Upper-division standing and consent of the undergraduate adviser.
- 476T. Topics in Geography.** Three lecture hours and one and one-half laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- 679H. Honors Tutorial Course.** For honors candidates in geography. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Regular conferences with the faculty supervisor are also required. Prerequisite: For 679HA, admission to the Geography Honors Program no later than two semesters before expected graduation; for 679HB, Geography 679HA. A University grade point average of at least 3.00 and a grade point average in geography of at least 3.50 are required for admission to the Geography Honors Program.
- 379K. Conference Course.** Supervised individual study of selected problems in geography. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in one or more of the social, geological, or natural sciences; and consent of instructor.
- 379L. Practicum: Internships in Applied Geography.** Research and staff experience working in an appropriate government agency or private business. At least six but no more than nine hours of work a week for one semester. Prerequisite: Completion of at least seventy semester hours of coursework, including twelve semester hours of geography, and consent of the undergraduate adviser.

URBAN STUDIES: URB

LOWER-DIVISION COURSES

- 301. Introduction to Urban Studies.** Same as Geography 307C. A multidisciplinary study of cities and complex urban environments; historical and contemporary issues from both national and international perspectives. Three lecture hours a week for one semester.
- 305. Introductory Topics in Urban Studies.** An introduction to urban studies within the framework of different disciplines. Topics include urban history, urban education, politics and governance, economics, design and planning, and society and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 315. Urban Studies Research Methods.** An introduction to urban studies research methodologies. Includes sources of urban data, the use of the library in urban research, formulating research questions, research design, methods commonly used in urban research, the use of computers to store and manipulate quantitative urban data, and an introduction to data analysis and theoretical and practical applications of urban research. Three lecture hours a week for one semester. Prerequisite: Mathematics 408C or 408K with a grade of at least C; Mathematics 316 or the equivalent with a grade of at least C; and Urban Studies 301 or consent of instructor.

UPPER-DIVISION COURSES

- 325. Special Topics in Urban Studies.** Three lecture hours a week for one semester. Additional hours may be required for some topics; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 350. Topics in Urban Politics and Governance.** The basic political and administrative structures of cities and metropolitan regions, including problems associated with local and regional government. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Urban Politics.** Same as Government 370L (Topic 11: *Urban Politics*). Prerequisite: Six semester hours of lower-division coursework in government.
- 351. Topics in Urban Economics.** Urban economics and the application of economic analysis to urban concerns, including economic development, urbanization, urban form, public finance, and competition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Development Problems and Policies in Latin America.** Same as Economics 355 and Latin American Studies 355 (Topic 1: *Development Problems and Policies in Latin America*). Description of the Latin American economy; business and market organization; problem of growth (involving credit, public finance, trade, investment aspects). Prerequisite: Economics 304K with a grade of at least C.
- Topic 2: Urban Economics.** Same as Economics 334K. Economic analysis of urban areas; emphasis on the nature of current urban problems—slums, transportation, finance—and an evaluation of current policy. Prerequisite: Economics 420K with a grade of at least C.
- Topic 3: Regional Economics.** Same as Economics 334L. Spatial aspects of economics, including concepts, theories, and policy applications. Prerequisite: Economics 420K with a grade of at least C.
- 352. Topics in Urban Design and Planning.** Issues concerning the built environment and urban infrastructure, environmental sustainability, and the public policy framework designed to manage the challenges presented by these issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: The Modern American City.** Same as Architecture 350R (Topic 1: *The Modern American City*) and Geography 337. Issues facing residents of U.S. cities, such as transportation and housing, poverty and crime, metropolitan finance, environmental and architectural design; historical/comparative urban evolution. Prerequisite: Upper-division standing.
- Topic 2: Housing America.** Same as Architecture 350R (Topic 2: *Housing America*).
- Topic 3: Urban Design Practice.** Same as Architecture 350R (Topic 3: *Urban Design Practice*).
- Topic 4: Economy/Value/Quality of Life.** Same as Architecture 350R (Topic 4: *Economy/Value/Quality of Life*).
- 353. Topics in Urban History.** The historical evolution of cities, contemporary urban development trends, and the links between social development and physical form. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: African American History since 1860.** Same as American Studies 321F, African and African American Studies 357D, and History 357D. Survey of the history of African Americans in the United States from 1860 to the present: Emancipation, Reconstruction politics, migration and urbanization, and the evolution of African American culture; kinds of sources and methods valuable for analyzing African American life and culture. American Studies 321 (Topic: *African American History since 1860*) and Urban Studies 353 (Topic 1) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

- Topic 2: Texas, 1914 to the Present.** Same as History 320R and Mexican American Studies 374 (Topic 16: *Texas, 1914 to the Present*). The steady dissociation of Texas from its Old South status to a transitional state and a power in national politics. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.
- Topic 5: Environmental History of North America.** Same as American Studies 329 and History 350R (Topic 7: *Environmental History of North America*). The history of humanity's influence on the plants, animals, microlife, soils, water, and air of North America, and vice versa, from the arrival of the proto-Indians to the contemporary environmental crisis. History 350L (Topic 4: *Environmental History of North America*) and Urban Studies 353 (Topic 5) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.
- 354. Topics in Urban Society and Culture.** Topics on the social and cultural diversity within cities; social policies; and the sociocultural impact of the media and other institutions on urban development. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Society of Modern Mexico.** Same as Latin American Studies 325 (Topic 1: *Society of Modern Mexico*) and Sociology 335. Family, community, industrialization, and urbanization in modern Mexico.
- Topic 4: The Culture of Cities.** Same as American Studies 370 (Topic 13: *The Culture of Cities*) and Geography 356T (Topic 1: *The Culture of Cities*). Examines the social, geographical, and cultural evolution of the United States from a rural and small-town society to an urban and suburban nation. Subjects may include the segregation of public and private space; the formation of urban subcultures organized by gender, work, race, religion, and sexuality; social and spatial divisions between rich and poor and native-born and immigrant; and the increasing importance of "cultural capital" in reshaping urban politics and in conflicts over revitalization and gentrification. Prerequisite: Upper-division standing.
- Topic 6: The City and Urbanization.** Same as Sociology 346. Examination of urbanization from a cross-national perspective: discrimination and racial inequality in urban labor markets. Prerequisite: Upper-division standing.
- 360. Internship and Service Learning.** Internship experience in an urban studies–related public or nonprofit agency. Students have the opportunity to apply the knowledge, theory, and understanding gained from courses in their areas of specialization to urban issues in a professional setting. Includes an academic service-learning component. Approximately five to ten hours a week for one semester. Prerequisite: Urban Studies 301 and 315, and upper-division standing or consent of instructor.
- 370. Senior Project.** Students identify an urban issue, develop a position paper, and work closely with a faculty adviser on a project. Students may use text or other media (such as video or portfolio) to present their arguments. The equivalent of three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Urban Studies 301, 315, and 360 with a grade of at least C in each.
- 379. Conference Course.** Supervised individual study of selected problems in urban studies. Prerequisite: Upper-division standing and consent of instructor and the undergraduate adviser.
- 679H. Honors Tutorial Course.** Directed reading and research or creation of an honors project, followed by the writing of a thesis. Prerequisite: For 679HA, admission to the Urban Studies Honors Program and consent of the urban studies adviser; for 679HB, Urban Studies 679HA.

DEPARTMENT OF GERMANIC STUDIES

Students with knowledge of German must take a placement test before registering for a German course. Students with transfer credit are strongly encouraged to take a placement test. The lower-division placement test consists of the SAT Subject Test in German with a listening component, with additional questions from the Department of Germanic Studies. The student may earn credit through this examination for any German language course currently offered; the examination also helps the student and the adviser determine with which course the student should begin the study of German at the University. Credit for German 328, and 330C or 331L, may also be earned by special examination. Information about these tests is available from the departmental undergraduate adviser and from the Division of Instructional Innovation and Assessment, 2616 Wichita.

A student with no knowledge of German may take any beginning German language course. Graduate students preparing for the doctoral reading examination may take German 301.

Before enrolling for the first time in any other language offered in the Department of Germanic Studies, all students with knowledge of that language, however acquired, must be tested to determine the course for which they should register. Information about placement tests is available from the departmental undergraduate adviser.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

DANISH: DAN

LOWER-DIVISION COURSES

- 604. Accelerated First-Year Danish.** Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.
- 612. Accelerated Second-Year Danish.** Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Danish 604 or an appropriate score on the placement test.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Danish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSE

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Danish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

DUTCH: DCH

LOWER-DIVISION COURSES

- 604. Accelerated First-Year Dutch.** Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.
- 612. Accelerated Second-Year Dutch.** Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Dutch 604 or an appropriate score on the placement test.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Dutch.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Dutch.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 375. Studies in Dutch Literature.** Selected topics in Dutch and Flemish literature. Conducted in Dutch. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Dutch 612 or the equivalent, and consent of instructor.
- 379. Conference Course in Dutch Language or Literature.** Supervised individual study of selected problems in Dutch language or literature. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

GERMAN: GER

LOWER-DIVISION COURSES

- 301. German for Graduate Students in Other Departments.** No auditors. Beginning reading course for students preparing to fulfill language requirement for advanced degrees. Emphasis on grammar, vocabulary, and translation. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. May not be used to fulfill the undergraduate foreign language requirement. Prerequisite: Graduate standing.
- 601C. Beginning German.** Not open to native speakers of German. An introduction to the German language and the cultures of the German-speaking countries. Focuses on development of vocabulary, grammatical knowledge, reading, writing, listening, and speaking abilities in a contemporary cultural context. Six lecture hours a week for one semester. Only one of the following may be counted: German 601C, 604, 506. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K.
- 604. Accelerated First-Year German.** Covers the same material as German 506 and 507. Six lecture hours a week for one semester, with optional laboratory available. Only one of the following may be counted: German 601C, 604, 506. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.
- 305. German for Graduate Students in Other Departments.** No auditors. Advanced reading. Emphasis on grammar, vocabulary, and translation. Three lecture hours a week for one semester. Offered on the credit/no credit basis only. Fulfills the foreign language requirement for the Doctor of Philosophy degree in some departments. May not be used to fulfill the undergraduate foreign language requirement. Prerequisite: Graduate standing, and German 301 or equivalent knowledge.

- 506 (TCCN: GERM 1511). First-Year German I.** Basic training in grammatical patterns and usage of modern German. Five lecture hours a week for one semester. Only one of the following may be counted: German 601C, 604, 506.
- 507 (TCCN: GERM 1512). First-Year German II.** Advanced training in grammatical patterns and usage of modern German. Five lecture hours a week for one semester. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K. Prerequisite: German 506 with a grade of at least C.
- 507R. Intensive First-Year German II.** German 507R covers the same material as 507 but is offered only in the spring as part of the Intensive German Program. Students in this program must take German 507R, 312R, and 312S during the same spring semester; they must register for all three courses at or before the beginning of the semester and must earn a grade of at least C in each course to take the next course in the sequence. Credit is given for each course in the sequence only if the student completes the entire sequence. The Intensive German Program meets for eleven hours a week for one semester. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K. Prerequisite: Completion in residence of German 506 and consent of the undergraduate adviser.
- 508K. Alternate First-Year German II.** Reviews grammar, pronunciation, and reading skills; for students with beginning preparation below the average provided by German 506. Five lecture hours a week for one semester. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K. Prerequisite: Two high school units of German or transfer credit for German 506, and appropriate score on the placement test.
- 310. Conversation and Composition.** Conducted in German. Intended to develop the ability to use German correctly and idiomatically in conversation and in compositions of gradually increasing difficulty. Three class hours a week for one semester. Fulfills fourth-semester language proficiency requirement. Prerequisite: German 312K or 312V with a grade of at least C. With consent of the German undergraduate adviser, may be taken concurrently with German 312K or 312V.
- 611C. Intermediate German.** Not open to native speakers of German. Continuation of German 601C. Development of vocabulary, grammatical knowledge, and reading, writing, listening, and speaking abilities in a contemporary cultural context. Six lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: German 601C, 604, 507, or 508K with a grade of at least C.
- 612. Accelerated Second-Year German: Readings in Modern German.** Grammar review, composition, readings and recitation, discussion of literary works, and German culture. Six lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: German 604, 507, or 508K.
- 312K (TCCN: GERM 2311). Second-Year German I: Readings in Humanities and Social Sciences.** Three lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Prerequisite: German 604, 507, or 508K with a grade of at least C.
- 312L (TCCN: GERM 2312). Second-Year German II: Readings in Humanities and Social Sciences.** Three lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: German 312K or 312V with a grade of at least C.
- 312R. Intensive Second-Year German: Oral and Written Expression and Reading Skill.** German 312R covers the same material as 312K but is offered only in the spring as part of the Intensive German Program. Students in this program must take German 507R, 312R, and 312S during the same spring semester; they must register for all three courses at or before the beginning of the semester and must earn a grade of at least C in each course to take the next course in the sequence. Credit is given for each course in the sequence only if the student completes the entire sequence. The Intensive German Program meets for eleven hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Prerequisite: Completion in residence of German 506 and consent of the undergraduate adviser.
- 312S. Intensive Second-Year German II: Readings in Humanities and Social Sciences.** German 312S covers the same material as 312L but is offered only in the spring as part of the Intensive German Program. Students in this program must take German 507R, 312R, and 312S during the same spring semester; they must register for all three courses at or before the beginning of the semester and must earn a grade of at least C in each course to take the next course in the sequence. Credit is given for each course in the sequence only if the student completes the entire sequence. The Intensive German Program meets for eleven hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: Completion in residence of German 506 and consent of the undergraduate adviser.
- 312V. Second-Year German I: Business German.** German 312V covers the same material as 312K, but with readings, discussions, and exercises that focus on the business world. Emphasis on practical, career-oriented competence. Three lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Prerequisite: German 604, 507, or 508K with a grade of at least C.
- 312W. Second-Year German II: Business German.** German 312W covers the same material as 312L, but with readings, discussions, and exercises that focus on the business world. Emphasis on practical, career-oriented competence. Three lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: German 312K or 312V with a grade of at least C.

- 317C. Advanced Intermediate German.** Not open to native speakers of German. Designed to prepare students with credit for German 611C for upper-division German language courses. Special focus on text and media literacy, advanced oral language practice, debate and writing, and accuracy. Three lecture hours a week for one semester. Prerequisite: German 611C with a grade of at least C.
- 118C, 218C. Practice in Spoken German.** Conducted in German. Recommended for all German majors. For each semester hour of credit earned, one class hour a week for one semester. May be repeated for credit. May not be counted toward a German major or minor. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: German 310, 312L, 612, or the equivalent with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in German.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 331L. Advanced Conversation and Composition: Literature.** German literary material from print and visual media provides the basis for advanced conversation and composition, with considerable practice in the writing of short essays in German. Three lecture hours a week for one semester. Only one of the following may be counted: German 330C, 331L, 356. Prerequisite: German 310, 612, 312L, 312S, 312W, or 317C with a grade of at least C.
- 336W. Advanced Business German I.** Development of proficiency through readings, discussions, and assignments based on materials dealing with the German economic system and Germany's role in international trade. Emphasis on practical, job-related competence in business German. Taught in German. Three lecture hours a week for one semester. Normally meets with International Business 372 (Topic 7: *Advanced Business German*). Only one of the following may be counted: German 336W, 356V, International Business 372 (Topic 7: *Advanced Business German*). Prerequisite: German 310, 612, 312L, 312S, 312W, or 317C with a grade of at least C.
- 340C. Historical Backgrounds of German Civilization.** Cultural, social, and literary history of German-speaking Europe of the Middle Ages. Studies humanism, the Reformation, absolutism, and the early Enlightenment (between 1200 and 1750). Taught in German. Three lecture hours a week for one semester. German 324 and 340C may not both be counted. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.
- 343C. Contemporary German Civilization.** Cultural, social, and literary history of Germany between 1900 and reunification. Taught in German. Three lecture hours a week for one semester. German 325 and 343C may not both be counted. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.
- 345L. German Literature between the Beginnings and the Baroque.** Three lecture hours a week for one semester. German 345L and 361K may not both be counted. Prerequisite: Six semester hours of upper-division coursework in German.
- 346L. German Literature between the Enlightenment and the Present.** Cultural, social, and literary history of German-speaking Europe between 1750 and 1900. Taught in German. Three lecture hours a week for one semester. German 346L and 361L may not both be counted. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.
- 347L. Language and Society in the German-speaking Countries.** Uses language and linguistics to study the culture and society of the German-speaking countries. Taught in German. Three lecture hours a week for one semester. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.
- 348D. German Play: Student Production.** Discussion, staging, and production of a German play. Three hours of lecture or laboratory a week for one semester. Prerequisite: German 310, 612, 312L, or the equivalent with a grade of at least C.

UPPER-DIVISION COURSES

- 328. Advanced German Grammar.** Description of German sounds, grammatical structures, pronunciation, word formation. Three lecture hours a week for one semester. Prerequisite: German 310, 612, 312L, 312S, 312W, or 317C with a grade of at least C.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in German.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded to work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330C. Advanced Conversation and Composition: Culture.** German cultural material from print and visual media provides the basis for advanced conversation and composition, with considerable practice in the writing of short essays in German. Three lecture hours a week for one semester. Only one of the following may be counted: German 330C, 331L, 356. Prerequisite: German 310, 612, 312L, 312S, 312W, or 317C with a grade of at least C.
- 130D. German across Disciplines.** Students read and discuss German language materials related to the subject matter of another designated course. One lecture hour a week for one semester. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.

- 149T, 249T, 349T. Introduction to Teaching German.** Supervised individual instruction designed to offer students an introduction to principles of foreign language education and the opportunity to teach German in local elementary schools. Weekly class meetings for four weeks, followed by one, two, or three student teaching hours a week for eight weeks. Additional class meetings may also be required. May be repeated for credit, but no more than three semester hours may be counted toward a degree in the College of Liberal Arts. May not be counted toward a major in German. Prerequisite: Credit or registration for German 312L or the equivalent.
- 356W. Advanced Business German II.** Readings, discussions, and assignments based on material dealing with key areas of German business such as management and corporate hierarchies. Preparation for the German Certificate for Professional Purposes. Recommended for students planning a career in international business. Taught in German. Three lecture hours a week for one semester. German 356W and International Business 372 (Topic 6: *Business German*) may not both be counted. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.
- 363K. Topics in German Culture.** Study of selected aspects of Germanic civilization, such as science and philosophy, fine arts, film, history, social institutions. Conducted in German. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in German.
- 366K. Practicum in German Stylistics.** Three lecture hours a week for one semester. Prerequisite: German 328 (or 356), and three additional semester hours of upper-division coursework in German.
- 369. Topics in Germanic Languages.** Introduction to the phonology, morphology, syntax, dialectology, or lexicography of individual Germanic languages. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics
- Topic 1: The Structure of the German Language.** Same as Linguistics 373 (Topic 6: *The Structure of the German Language*). Only one of the following may be counted: German 369 (Topic 1), 369 (Topic: *German Dialectology*), Linguistics 373 (Topic: *German Dialectology*).
- Topic 4: The German Language: Historical Perspectives.** Same as Anthropology 320L (Topic 9: *The German Language: Historical Perspectives*), Classical Civilization 348 (Topic 9: *The German Language: Historical Perspectives*), and Linguistics 373 (Topic 9: *The German Language: Historical Perspectives*). Only one of the following may be counted: Anthropology 320L (Topic 8: *German and English: Historical Perspectives*), Classical Civilization 348 (Topic 8: *German and English: Historical Perspectives*), German 369 (Topic 4), Germanic Civilization 327E (Topic 9: *German and English: Historical Perspectives*), Linguistics 373 (Topic 8: *German and English: Historical Perspectives*). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics.
- Topic 7: Translation I.**
- Topic 8: Translation II.**
- 373. Topics in Germanic Literature.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in German.
- Topic 1: German Short Prose.** The linguistic, stylistic, and thematic varieties of short prose (anecdotes, meditations, fables, parables, reports, impressions, and sketches) seen through translation, critical discussion, and literary-historical contextualization.
- Topic 2: German Folktale and Fantasy Tale.**
- 179, 279, 379. Conference Course in Germanic Language or Literature.** Supervised individual instruction course in which students engage in special studies necessary to expand their acquaintance with any subject in Germanic languages or literature. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in German.
- 679H. Honors Tutorial Course.** Supervised individual research on a literary or linguistic problem, culminating in an honors paper of some length. Prerequisite: For 679HA, upper-division standing, six semester hours of upper-division German, a University grade point average of at least 3.00, a grade point average in German of at least 3.50, and admission to the Germanic Studies Honors Program; for 679HB, German 679HA.

GERMANIC CIVILIZATION: GRC

LOWER-DIVISION COURSES

- 301. Introductory Topics in Germanic Civilization.** Introduction to Germanic literary and cultural history. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 311. Topics in Germanic Literature and Culture.** Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Movies Go To War, from World War I to Vietnam.** Same as American Studies 315C. Only one of the following may be counted: American Studies 315 (Topic: *Movies Go To War, World War I to Vietnam*); Germanic Civilization 311 (Topic 2); Science, Technology, and Society 311 (Topic: *Movies Go To War, World War I to Vietnam*).
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Germanic Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies course. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

323E. Germanic Literature in Translation. Outstanding works of Germanic literature in cultural-historical perspective. Topics include medieval literature, the Renaissance, classicism, realism, modernism, exemplary writers, and genres. Taught in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. Prerequisite: Upper-division standing.

Topic 1: Isak Dinesen/Karen Blixen. Same as Scandinavian 373 (Topic 6: *Isak Dinesen/Karen Blixen*) and Women's and Gender Studies 345 (Topic 13: *Isak Dinesen/Karen Blixen*). English 322 (Topic 7: *Isak Dinesen/Karen Blixen*) and Germanic Civilization 323E (Topic 1) may not both be counted.

Topic 2: Medieval German Chivalric Romance. English 322 (Topic 8: *Medieval German Chivalric Romance*) and Germanic Civilization 323E (Topic 2) may not both be counted.

Topic 3: Twentieth-Century German Shorter Prose. English 322 (Topic 9: *Twentieth-Century German Shorter Prose*) and Germanic Civilization 323E (Topic 3) may not both be counted.

Topic 4: Hans Christian Andersen. Same as Scandinavian 373 (Topic 4: *Hans Christian Andersen*). English 322 (Topic 19: *Hans Christian Andersen*) and Germanic Civilization 323E (Topic 4) may not both be counted.

Topic 5: The Detective/Crime Story in German, English, and American Tradition. English 322 (Topic 35: *The Detective/Crime Story in German, English, and American Tradition*) and Germanic Civilization 323E (Topic 5) may not both be counted.

327E. Topics in Germanic Civilization. Examination of the broad spectrum of social and political life in sociohistorical perspective; and an introduction to the lifestyle of the cultures investigated. Taught in English. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 2: Freud's Vienna. Only one of the following may be counted: English 322 (Topic 1: *Freud's Vienna*), European Studies 361 (Topic 5: *Freud's Vienna*), Germanic Civilization 327E (Topic 2). Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing or consent of instructor.

Topic 3: Sociolinguistics of German-Speaking Society. Same as Linguistics 373 (Topic 5: *Sociolinguistics of German-Speaking Society*). Prerequisite: Upper-division standing or consent of instructor.

Topic 4: Medieval Life and Thought. European Studies 361 (Topic 18: *Medieval Life and Thought*) and Germanic Civilization 327E (Topic 4) may not both be counted. Prerequisite: Upper-division standing or consent of instructor.

Topic 5: Johann Sebastian Bach and His Work. The life and work of Johann Sebastian Bach (1685–1750), examined from a number of perspectives. Prerequisite: For music majors, Music 302L or consent of instructor; for others, upper-division standing.

Topic 6: Renaissance Literature and Art. Introduction to Renaissance culture and exploration of links between art and literature during the sixteenth-century Renaissance and Reformation in Germany. English 322 (Topic 33: *Renaissance Literature and Art*) and Germanic Civilization 327E (Topic 6) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

Topic 7: German Cultural History. Restricted to students enrolled in the University of Würzburg Summer Program. Excursions, library research, and exposure to a German viewpoint on contemporary European affairs. The equivalent of four lecture hours a week for one semester. Taught in Würzburg, Germany.

Topic 8: Yiddish Drama and Film in Translation. Same as Jewish Studies 361 (Topic 5: *Yiddish Drama and Film in Translation*); Russian, East European, and Eurasian Studies 325 (Topic 8: *Yiddish Drama and Film in Translation*); and Slavic 324 (Topic 2: *Yiddish Drama and Film in Translation*). Jewish life in Poland and Russia before the Holocaust, and the transition to American Jewish life, as revealed in plays and films produced in Eastern Europe and in the United States. No knowledge of Yiddish is required. English 322 (Topic 34: *Yiddish Drama and Film in Translation*) and Germanic Civilization 327E (Topic 8) may not both be counted. Prerequisite: Upper-division standing.

Topic 9: German and English: Historical Perspectives. Same as Anthropology 320L (Topic 8: *German and English: Historical Perspectives*), Classical Civilization 348 (Topic 8: *German and English: Historical Perspectives*), and Linguistics 373 (Topic 8: *German and English: Historical Perspectives*). Only one of the following may be counted: Anthropology 320L (Topic 9: *The German Language: Historical Perspectives*), Classical Civilization 348 (Topic 9: *The German Language: Historical Perspectives*), German 369 (Topic 4: *The German Language: Historical Perspectives*), Germanic Civilization 327E (Topic 9), Linguistics 373 (Topic 9: *The German Language: Historical Perspectives*). Prerequisite: For English majors, completion of at least thirty semester hours of coursework, including English 316K or the equivalent; for others, upper-division standing.

Topic 10: Birgitta, Hildegard, and Margery. Same as Scandinavian 373 (Topic 8: *Birgitta, Hildegard, and Margery*). Only one of the following may be counted: English 322 (Topic: *Birgitta, Hildegard, and Margery*), European Studies 361 (Topic: *Birgitta, Hildegard, and Margery*), Germanic Civilization 327E (Topic 10), Religious Studies 355E (Topic: *Birgitta, Hildegard, and Margery*), 357 (Topic: *Birgitta, Hildegard, and Margery*), Women's and Gender Studies 340 (Topic: *Birgitta, Hildegard, and Margery*).

Topic 11: Language, Culture, and the Texas German Experience. Only one of the following may be counted: American Studies 370 (Topic: *Language, Culture, and the Texas German Experience*), Anthropology 324L (Topic: *Language, Culture, and the Texas German Experience*), Germanic Civilization 327E (Topic 11), Linguistics 350 (Topic: *Language, Culture, and the Texas German Experience*). Prerequisite: Upper-division standing.

Topic 12: Midnight Sun People: The Sami. Same as Religious Studies 357 (Topic 4: *Midnight Sun People: The Sami*) and Scandinavian 327 (Topic 10: *Midnight Sun People: The Sami*). Only one of the following may be counted: Anthropology 324L (Topic: *Midnight Sun People*), English 322 (Topic: *Midnight Sun People*), Germanic Civilization 327E (Topic 12), Religious Studies 361 (Topic: *Midnight Sun People*).

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Germanic Civilization. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

332. Preparation for Work and Study Abroad. Open to students of all languages who are interested in working or studying abroad. Preparation for the cross-cultural experience of international exchange and the problems that may occur in adjusting to a new culture, host family, or work or study abroad situation. Taught in English. Three lecture hours a week for one semester. May not be counted toward a German major or minor. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Consent of instructor.

340E. Introduction to Germanic Civilization. Examination of the early Germanic peoples, their myths, religions, migrations, from a cultural and historical perspective. Taught in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Introduction to Germanic Religion and Myth. Same as European Studies 347 (Topic 3: *Introduction to Germanic Religion and Myth*) and Religious Studies 365 (Topic 2: *Introduction to Germanic Religion and Myth*). Only one of the following may be counted: English 322 (Topic 2: *Introduction to Germanic Religion and Myth*), European Studies 361 (Topic 6: *Introduction to Germanic Religion and Myth*), Germanic Civilization 340E (Topic 1), Religious Studies 361 (Topic 8: *Introduction to Germanic Religion and Myth*). Prerequisite: Upper-division standing.

360E. Seminar in Politics and Culture. Analysis of specific aspects of German, Swiss, Austrian, Netherlandic, and/or Scandinavian historical, political, sociological, and intellectual development. Taught in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Reformation Theology. Same as History 362G (Topic 1: *Reformation Theology*) and Religious Studies 355D. Only one of the following may be counted: English 322 (Topic 10: *Reformation Theology*), Germanic Civilization 360E (Topic 1), History 366N (Topic 3: *Reformation Theology*). Prerequisite: Upper-division standing.

Topic 2: Cultural Politics of Kant and Hegel. Same as Philosophy 365 (Topic 3: *Cultural Politics of Kant and Hegel*), English 322 (Topic 5: *Cultural Politics of Kant and Hegel*) and Germanic Civilization 360E (Topic 2) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

Topic 3: German Nationalisms. Same as Government 365N (Topic 6: *German Nationalisms*). German national movements within their historical context, and the present-day implications of nationalism. Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

Topic 4: German Unification: Problems and Prospects. Same as Government 365N (Topic 7: *German Unification: Problems and Prospects*) and Russian, East European, and Eurasian Studies 335 (Topic 9: *German Unification: Problems and Prospects*). A brief history of Germany since 1815, the contemporary German state and its institutions, and perspectives for the current decade. Only one of the following may be counted: Germanic Civilization 360E (Topic 4), 360E (Topic: *German Reunification: Problems and Prospects*), Government 365N (Topic: *German Reunification: Problems and Prospects*). Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

Topic 5: Switzerland and Europe: Integration or Isolation. Same as Government 365N (Topic 8: *Switzerland and Europe: Integration or Isolation*). Culture, society, history, economics, and politics in historical and contemporary Switzerland. Only one of the following may be counted: Germanic Civilization 360E (Topic 5), 360E (Topic: *Switzerland: Seven Hundred Years*), Government 365N (Topic: *Switzerland: Seven Hundred Years*). Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

361E. Cinema and Society. History and aesthetics of Germanic-language films related to Germanic and world cultural movements. Selected films shown and discussed. Taught in English. Three lecture hours a week for one semester. May be repeated once for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: German Cinema through 1932. English 322 (Topic 11: *German Cinema through 1932*) and Germanic Civilization 361E (Topic 1) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

Topic 2: German Cinema since 1933. Same as European Studies 347 (Topic 2: *German Cinema since 1933*). Only one of the following may be counted: English 322 (Topic 12: *German Cinema since 1933*), European Studies 361 (Topic 17: *German Cinema since 1933*), Germanic Civilization 361E (Topic 2). Prerequisite: Upper-division standing.

Topic 3: Genres, Structure, and Trends in German Cinema. Same as European Studies 347 (Topic 5: *Genres, Structure, and Trends in German Cinema*). Only one of the following may be counted: English 322 (Topic 13: *Genres, Structure, and Trends in German Cinema*), European Studies 361 (Topic 2: *Genres, Structure, and Trends in German Cinema*), Germanic Civilization 361E (Topic 3). Prerequisite: Upper-division standing.

Topic 4: Literature in the New German Cinema. Same as European Studies 347 (Topic 4: *Literature in the New German Cinema*). Only one of the following may be counted: English 322 (Topic 3: *Literature in the New German Cinema*), European Studies 361 (Topic 1: *Literature in the New German Cinema*), Germanic Civilization 361E (Topic 4). Prerequisite: Upper-division standing.

Topic 5: German Women Filmmakers. Same as Women's and Gender Studies 340 (Topic 5: *German Women Filmmakers*). Only one of the following may be counted: English 322 (Topic 14: *German Women Filmmakers*), European Studies 361 (Topic 15: *German Women Filmmakers*), Germanic Civilization 361E (Topic 5). Prerequisite: Upper-division standing.

362E. Topics in Germanic Studies. Introduction to methodologies and area concentrations, such as feminist criticism and literary criticism, in the field of Germanic studies. Taught in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Freudians and Feminisms. Same as Philosophy 365 (Topic 1: *Freudians and Feminisms*) and Women's and Gender Studies 345 (Topic 10: *Freudians and Feminisms*). English 322 (Topic 4: *Freudians and Feminisms*) and Germanic Civilization 362E (Topic 1) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

Topic 2: Wagner's Ring of the Nibelung. English 322 (Topic 15: *Wagner's Ring of the Nibelung*) and Germanic Civilization 362E (Topic 2) may not both be counted. Prerequisite: Upper-division standing.

Topic 3: The German Folktale and Fantasy Tale. Same as European Studies 347 (Topic 6: *The German Folktale and Fantasy Tale*). Only one of the following may be counted: English 322 (Topic 30: *The German Folktale and Fantasy Tale*), European Studies 361 (Topic 16: *The German Folktale and Fantasy Tale*), Germanic Civilization 362E (Topic 3). Prerequisite: Upper-division standing.

Topic 4: Freud and Lacan, with Kristeva. English 322 (Topic 31: *Freud and Lacan, with Kristeva*) and Germanic Civilization 362E (Topic 4) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

179, 279, 379. Conference Course in Germanic Civilization. Supervised individual instruction course in which students engage in special studies necessary to expand their acquaintance with any subject in Germanic civilization. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

NORWEGIAN: NOR

LOWER-DIVISION COURSES

604. Accelerated First-Year Norwegian. Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.

612. Accelerated Second-Year Norwegian. Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Norwegian 604 or an appropriate score on the placement test.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Norwegian. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser for the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSE

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Norwegian. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

SCANDINAVIAN: SCA

LOWER-DIVISION COURSES

301. Scandinavian Culture and Civilization. Designed to introduce the student to various aspects of Scandinavian life; emphasis on the arts (literature, music, film); includes political and sociological aspects. Conducted in English. Three lecture hours a week for one semester.

302. Introductory Topics in Scandinavian Studies. Open only to lower-division students. Introduction to Scandinavian literary and cultural history. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted by students who took Scandinavian 301 when the subject was European Folktale. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Scandinavian. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

323. Scandinavian Literature in Translation. Topics include modern Scandinavian literature and medieval Scandinavian literature. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree or toward a German major or minor. Prerequisite: Upper-division standing.

Topic 1: Survey of Scandinavian Drama and Film. English 322 (Topic 16: *Survey of Scandinavian Drama and Film*) and Scandinavian 323 (Topic 1) may not both be counted.

Topic 2: Social Dramas of Henrik Ibsen. Same as English 322 (Topic 17: *Social Dramas of Henrik Ibsen*) and Women's and Gender Studies 345 (Topic 14: *Social Dramas of Henrik Ibsen*). Men and women in their public and private lives.

Topic 3: Women and Literature: European Tradition. Same as Women's and Gender Studies 321 (Topic 4: *Women and Literature: European Tradition*). English 322 (Topic 6: *Women and Literature: European Tradition*) and Scandinavian 323 (Topic 3) may not both be counted.

Topic 4: Saga, Novel, and Tale. English 322 (Topic 28: *Saga, Novel, and Tale*) and Scandinavian 323 (Topic 4) may not both be counted.

327. Topics in Scandinavian Culture. Various aspects of political and cultural development of Scandinavian countries. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree or toward a German major or minor. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 9: Films of Ingmar Bergman. English 322 (Topic 18: *Films of Ingmar Bergman*) and Scandinavian 327 (Topic 9) may not both be counted. Prerequisite: Upper-division standing.

Topic 10: Midnight Sun People: The Sami. Same as Germanic Civilization 327E (Topic 12: *Midnight Sun People: The Sami*) and Religious Studies 357 (Topic 4: *Midnight Sun People: The Sami*). Only one of the following may be counted: Anthropology 324L (Topic: *Midnight Sun People*), English 322 (Topic: *Midnight Sun People*), Scandinavian 327 (Topic 10), Religious Studies 361 (Topic: *Midnight Sun People*).

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Scandinavian. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

335. Topics in Scandinavian Society. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

358. Forms and Genres of Scandinavian Literature. Topics include Scandinavian prose, Scandinavian drama, and Scandinavian poetry. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

- 369. Topics in Scandinavian Languages.** Introduction to the phonology, morphology, syntax, dialectology, or lexicography of the Danish, Norwegian, and Swedish languages. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
- 373. Topics in Scandinavian Literature.** Study of selected writers and topics in Scandinavian literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree or toward a German major or minor. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 4: Hans Christian Andersen.** Same as Germanic Civilization 323E (Topic 4: *Hans Christian Andersen*). English 322 (Topic 19: *Hans Christian Andersen*) and Scandinavian 373 (Topic 4) may not both be counted. Prerequisite: Upper-division standing.
- Topic 6: Isak Dinesen/Karen Blixen.** Same as Germanic Civilization 323E (Topic 1: *Isak Dinesen/Karen Blixen*) and Women's and Gender Studies 345 (Topic 13: *Isak Dinesen/Karen Blixen*). English 322 (Topic 7: *Isak Dinesen/Karen Blixen*) and Scandinavian 373 (Topic 6) may not both be counted. Prerequisite: Upper-division standing.
- Topic 8: Birgitta, Hildegard, and Margery.** Same as Germanic Civilization 327E (Topic 10: *Birgitta, Hildegard, and Margery*). Only one of the following may be counted: English 322 (Topic: *Birgitta, Hildegard, and Margery*), European Studies 361 (Topic: *Birgitta, Hildegard, and Margery*), Scandinavian 373 (Topic 8), Religious Studies 355E (Topic: *Birgitta, Hildegard, and Margery*), 357 (Topic: *Birgitta, Hildegard, and Margery*), Women's and Gender Studies 340 (Topic: *Birgitta, Hildegard, and Margery*).
- 179, 279, 379. Conference Course in Scandinavian Languages or Literature.** Supervised individual instruction course in which students engage in special studies necessary to expand their acquaintance with any subject in Scandinavian language or literature. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 679H. Honors Tutorial Course.** Supervised individual research on a literary or linguistic problem, culminating in an honors paper of some length. Must be taken for special honors in addition to the major requirement. Prerequisite: For 679HA, upper-division standing, six semester hours of upper-division coursework in Scandinavian or consent of instructor, a University grade point average of at least 3.00, and a grade point average in Scandinavian of at least 3.50; for 679HB, Scandinavian 679HA.

SWEDISH: SWE

LOWER-DIVISION COURSES

- 604. Accelerated First-Year Swedish.** Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.

- 612. Accelerated Second-Year Swedish.** Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Swedish 604 or an appropriate score on the placement test.

- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Swedish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSE

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Swedish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

YIDDISH: YID

LOWER-DIVISION COURSES

- 604. Accelerated First-Year Yiddish.** Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.
- 612. Accelerated Second-Year Yiddish.** Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Yiddish 604 or an appropriate score on the placement test.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Yiddish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Yiddish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

179, 279, 379. Conference Course in Yiddish Language or Literature. Supervised individual instruction course in which students engage in special studies necessary to expand their acquaintance with any subject in Yiddish language or literature. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

DEPARTMENT OF GOVERNMENT

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

GOVERNMENT: GOV

LOWER-DIVISION COURSES

- 310L (TCCN: GOVT 2301). American Government.** A basic survey of American government, including fundamental political institutions, federal, state, and local; special attention to the United States and Texas Constitutions. Part of a six-semester-hour integrated sequence, the second half of which is Government 312L. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Fulfills first half of legislative requirement for government. Prerequisite: Twelve semester hours of college coursework and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).
- 312L (TCCN: GOVT 2302). Issues and Policies in American Government.** Analysis of varying topics concerned with American political institutions and policies, including the United States Constitution. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Offered on the letter-grade basis only. Fulfills second half of legislative requirement for government. May be taken for credit only once. Prerequisite: Twenty-four semester hours of college coursework, including Government 310L, and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).
- 312P. Constitutional Principles: Core Texts.** Close readings from primary texts that have shaped or that reflect deeply upon American democracy, including the Declaration of Independence, *The Federalist Papers*, and Tocqueville's *Democracy in America*. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Offered on the letter-grade basis only. Fulfills second half of legislative requirement for government. Government 312P and 312R may not both be counted. Prerequisite: Twenty-four semester hours of college coursework, including Government 310L, and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test.
- 312R. Constitutional Principles: Equality.** Close readings from primary texts that have shaped or that reflect deeply upon American democracy, including the Declaration of Independence, *The Federalist Papers*, and Tocqueville's *Democracy in America*. Special emphasis is given to the issue of equality and the experience or perspectives of one or more under-represented cultural groups in the United States. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Offered on the letter-grade basis only. Fulfills second half of legislative requirement for government. Government 312P and 312R may not both be counted. Prerequisite: Twenty-four semester hours of college coursework, including Government 310L, and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test.
- 314. Introductory Topics in Political Science.** Introduction to varying topics in government and politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Does not fulfill any part of the legislative requirement for government.
- Topic 2: American Policy toward Eastern Europe.**
- Topic 3: Introduction to the Middle East: Adjustment and Change in Modern Times.** Same as History 306N (Topic 5: *Introduction to the Middle East: Adjustment and Change in Modern Times*) and Middle Eastern Studies 301L. The responses of the societies of the Middle East and North Africa (Turkey, Iran, Afghanistan, Israel, and the Arab world) to Western cultural and political challenges, primarily since about 1800.
- Topic 4: Introduction to Russian, East European, and Eurasian Studies: Political Science.** Government 314 (Topic 4) and Russian, East European, and Eurasian Studies 301 may not both be counted.
- Topic 5: Asia's Futures.** Same as Asian Studies 301M (Topic 6: *Asia's Futures*). Current issues, visible trends, and projections for Asia's future.
- Topic 6: Competing Visions of the Good Life.** Same as Core Texts and Ideas 303. Introduces the great rival conceptions of the moral basis and goals of political life as elaborated by revolutionary thinkers throughout the history of political philosophy, including Aristotle, Aquinas, Locke, late modern critics of the Enlightenment, and others. Government 314 (Topic 6) and Western Civilization 303 (Topic: *Competing Visions of the Good Life*) may not both be counted.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Government.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Government. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320K. American Constitutional Development I.** Primarily for prelaw students and government majors. A survey of the origin and growth of the American constitutional system, with emphasis on the political and economic background. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 320L. Arab-Israeli Politics.** Same as Middle Eastern Studies 322K (Topic 30: *Arab-Israeli Politics*). In-depth study of domestic, regional, and international factors involved in politics in the Middle East, including simulation of diplomatic interaction in the Arab-Israeli conflict. Three lecture hours a week for one semester. Government 320L and Middle Eastern Studies 323K (Topic 1: *Arab-Israeli Politics*) may not both be counted. Prerequisite: Upper-division standing.
- 320N. American Constitutional Development II.** Primarily for prelaw students and government majors. Government 320N and 357M (Topic: *American Constitutional Development II*) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 321. American State Politics.** The states as subsystems of the American political system; state political cultures, social-economic environments, federalism, political participation, interest groups, parties, legislatures, executives, courts, and selected public policies. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 321M. Politics in Japan.** Same as Asian Studies 321M. Survey of postwar Japanese politics; the occupation, governmental institutions, interest groups, protest movements, industrial policy, the government-business relationship, and political and economic reform. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Politics in Japan*) and Government 321M may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 322M. Politics in China.** Same as Asian Studies 322M. Survey of twentieth-century China: historical trends; 1911 revolution; Warlord-Nationalist period; Communist revolution; post-1949 issues; new social and political institutions. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Politics in China*) and Government 322M may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 324J. Governments and Politics of Eastern Europe.** Same as European Studies 348 (Topic 1: *Governments and Politics of Eastern Europe*) and Russian, East European, and Eurasian Studies 335 (Topic 2: *Governments and Politics of Eastern Europe*). Three lecture hours a week for one semester. European Studies 361 (Topic 14: *Governments and Politics of Eastern Europe*) and Government 324J may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 324L. Governments and Politics of Western Europe.** Same as European Studies 350. Comparative study of peoples, institutions, parties, interest groups, and bureaucracy in the countries of Western Europe, concentrating on the major political systems of Britain, France, Germany, and Italy. Three lecture hours a week for one semester. European Studies 361 (Topic 11: *Governments and Politics of Western Europe*) and Government 324L may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 325. Political Parties.** Character of the American party system, organization and leadership; pressure politics; the nominating process, campaigns, suffrage, elections, and the expression of public opinion. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 327L. Public Opinion and American Politics.** The nature of and major influences on public attitudes, the measurement of public opinion, and the role of public opinion in government. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 328L. Introduction to Latin American Government and Politics.** Same as Latin American Studies 337M (Topic 5: *Introduction to Latin American Government and Politics*). An introductory survey of Latin American political systems: governmental organization, political processes, and current problems. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Government.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Government. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330K. The American President.** Development of the power and influence of the president; nomination, election, and responsibility; case studies of presidential problems; comparison of president and other executives. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 331L. Law and Society.** Designed primarily for prelaw students. The role of law in the context of major social issues; legal research and oral argument. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 335M. Topics in Political Thought.** Intensive examination of selected issues in political thought. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

Topic 3: Politics and Reality.

- Topic 5: Religion in American Political Thought.** Same as Religious Studies 346 (Topic 2: *Religion in American Political Thought*). Government 335M (Topic 5) and Religious Studies 361 (Topic 9: *Religion in American Political Thought*) may not both be counted.
- Topic 7: Feminist Theory.** Same as Women's and Gender Studies 322 (Topic 4: *Feminist Theory*). Government 335M (Topic 7) and 370L (Topic: *Introduction to Feminist Theory*) may not both be counted.
- Topic 8: Contemporary European Social Theory.** Same as Philosophy 365 (Topic 4: *Contemporary European Social Theory*) and Sociology 352M (Topic 7: *Contemporary European Social Theory*).
- Topic 9: Contemporary American Social Theory.** Same as Philosophy 365 (Topic 5: *Contemporary American Social Theory*) and Sociology 352M (Topic 8: *Contemporary American Social Theory*).
- 335N. Topics in American State Government and Politics.** Analysis of varying topics in the study of American state government and politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 1: American State Constitutions.**
- Topic 2: American State Legislatures.**
- Topic 3: Texas Political History.**
- Topic 4: Texas Political Parties and Elections.** An examination of the nature of Texas electoral politics.
- Topic 5: State Politics and Public Policy.** Survey of the revitalization of political institutions in the American states and the implications for the making of public policy.
- Topic 6: American State Politics.** Examination of the political power, policy responsibilities, and institutional capacities of state governments.
- 336M. Governments and Politics of Russia.** Issues of nationalism and state-building facing Russia and its neighbors. Evaluation of the post-Soviet experience from the perspectives of both domestic and foreign policy. Three lecture hours a week for one semester. Government 336M and Russian, East European, and Eurasian Studies 335 (Topic 3: *Governments and Politics of Russia*) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 337M. Topics in Latin American Government and Politics.** In-depth analysis of the governmental process in Latin American countries, and topical treatment of political and administrative patterns across the region. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 2: Parties, Elections, and Democracy in Latin America.** Same as Latin American Studies 337M (Topic 2: *Parties, Elections, and Democracy in Latin America*).
- Topic 3: Politics in South America.** Same as Latin American Studies 337M (Topic 3: *Politics in South America*).
- Topic 4: United States–Mexican Border Relations.** Same as Mexican American Studies 374 (Topic 14: *United States–Mexican Border Relations*) and Latin American Studies 337M (Topic 4: *United States–Mexican Border Relations*).
- Topic 5: Politics and Culture of Contemporary Mexico.** Same as Mexican American Studies 374 (Topic 28: *Politics and Culture of Contemporary Mexico*), Latin American Studies 325 (Topic 3: *Politics and Culture of Contemporary Mexico*), and Sociology 338M. Introduction to the contemporary Mexican political system and the ways in which political change and democratization are recasting the political and civic culture of contemporary Mexico. Additional prerequisite: Upper-division standing.
- 338L. East Asian International Relations.** Same as Asian Studies 338L. Survey of Russian/Soviet, Japanese, Chinese, and American foreign policies of the twentieth century, emphasizing Pacific-region interests; historical policies; intermittent conflicts, such as China versus Japan, Korean War, Indochina Wars; China's emergence as a nuclear power. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *East Asian International Relations*) and Government 338L may not both be counted. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- 339L. Research Methods in Government.** An introduction to research design, data collection and analysis, and the use of the computer and related equipment. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 340M. Readings in Government.** Individually guided and supervised readings and research in selected topics in government. Schedule and topic of study determined by student in consultation with instructor. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, and written consent of instructor and the undergraduate adviser.
- 341M. Decision Theory.** An introduction to the basic concepts and models using decision theory in political science, with particular emphasis on utility analysis, game theory, coalition formation, and voting behavior. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 342N. Public Choice.** The political-economic models that have developed in this area of social science. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 344. American Foreign Relations.** The aims, methods, and accomplishments of United States foreign policy since World War II, by geographic areas and by special problems. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

- 344L. Introduction to Comparative Politics.** Introductory survey of basic concepts, perspectives, approaches, and trends in comparative politics, with emphasis on the formal-legal, group, class, elite, political culture, structural-functional, and systems approaches. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 347K. Governments and Politics of South Asia.** Same as Asian Studies 347K. A survey of political developments, governmental organization, and economic and social problems in South Asia. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Governments and Politics of South Asia*) and Government 347K may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 347L. Introduction to Political Theory.** Study of political theory: what it is; its origins; tradition; political theory today. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 348. Government and the American Economy.** Relationship of government to the economic system; past trends and present problems in government policy in the United States. Three lecture hours a week for one semester. Prerequisite: Economics 304L and six semester hours of lower-division coursework in government.
- 350K. Statistical Analysis in Political Science.** Elementary statistical techniques and their applications to problems in political science. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 351C. The Classical Quest for Justice.** Introduces students to classical political thought through a study of seminal works of antiquity, focusing on those of Plato and Aristotle. Three lecture hours a week for one semester. Government 335M (Topic: *Classical Quest for Justice*) and 351C may not both be counted. Prerequisite: Completion of at least thirty semester hours of coursework.
- 351D. The Theoretical Foundations of Modern Politics.** Examines competing foundations of the ongoing development of political and social modernity. Examines a selection of major authors from Machiavelli to Nietzsche. Three lecture hours a week for one semester. Government 335M (Topic: *Theoretical Foundations of Modern Politics*) and 351D may not both be counted. Prerequisite: Completion of at least thirty semester hours of coursework.
- 351E. Contemporary Political Theory.** Introduces ongoing debates about identity, power, justice, rights, and democracy that are central to the theories of contemporary thinkers from Arendt to Habermas. Three lecture hours a week for one semester. Government 335M (Topic: *Contemporary Political Theory*) and 351E may not both be counted. Prerequisite: Completion of at least thirty semester hours of coursework.
- 355M. Topics in Political Science.** Emphasis on varying topics in government and politics of contemporary interest and concern. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 1: Human Behavior as Rational Action.**
- 357L. Judicial Process and Behavior.** Introduction to traditional and modern approaches to the study of the judicial process, with emphasis on the nature and origin of judicial decisions and the factors that affect judicial decision making. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 357M. Topics in Public Law.** Intensive study of various aspects of law and the legal system. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 1: Gender-Based Discrimination.** Same as American Studies 370 (Topic 6: *Gender-Based Discrimination*) and Women's and Gender Studies 345 (Topic 8: *Gender-Based Discrimination*). Studies the substance of laws that relate to gender-based roles, and the participation of women in the legal process. Three lecture hours a week for one semester. Additional prerequisite: Upper-division standing, a University grade point average of at least 3.50, and consent of department received prior to registering.
- Topic 3: Supreme Court and Public Policy.** Two lecture hours and one discussion hour a week for one semester.
- Topic 4: Civil Liberties.** Three lecture hours a week for one semester.
- Topic 5: Constitutional Interpretation.** Three lecture hours a week for one semester.
- Topic 6: Constitutional Politics, Law, and Citizenship.** Examination of the development of constitutional order and the debates over citizenship and civic membership. Three lecture hours a week for one semester. Asian American Studies 325 (Topic: *Constitutional Politics, Law, and Citizenship*) and Government 357M (Topic 6) may not both be counted.
- Topic 7: Constitutional Structure of Power.** Examination of the power of federal and state governments, the emergency power of the executive branch, and the authority of the Supreme Court. Three lecture hours a week for one semester.
- Topic 8: Structure of Individual Liberties.** Study of individual rights protected by the Constitution, with an emphasis on the United States Supreme Court. Three lecture hours a week for one semester.
- 358. Introduction to Public Policy.** A survey of American public policy, with emphasis on modern problems and trends. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 360N, 460N. Topics in International Relations.** Special studies stressing the theoretical aspects or the substantive policy problems of international politics. Three or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- Topic 1: America in Decline?**
- Topic 2: Causes of War.**

Topic 4: Understanding the Cold War. Government 360N (Topic 4) is same as Russian, East European, and Eurasian Studies 335 (Topic 15: *Understanding the Cold War*).

Topic 8: Democracy, War, and Peace.

Topic 9: Force and Politics.

Topic 10: Introduction to International Relations. Asian Studies 361 (Topic: *Introduction to International Relations Theory*) and Government 360N (Topic 10) may not both be counted.

Topic 11: International Political Economy. Study of the changing relationship between political and economic power in international relations.

Topic 12: International Security. Comprehensive survey of conventional security issues, including causes of war, ethnic conflict, and terrorism.

362L. Government Research Internship. Fieldwork in research and analysis on governmental and political problems. The equivalent of three lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Six semester hours of lower-division coursework in government and consent of instructor.

365L. Studies in Asian Politics. Special studies of political behavior and institutions, problems, or developments in individual countries or in the region. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.

Topic 1: Politics of Economic Development in East Asia. Same as Asian Studies 361 (Topic 12: *Politics of Economic Development in East Asia*).

Topic 2: Japanese Foreign Policy. Same as Asian Studies 361 (Topic 22: *Japanese Foreign Policy*). An introduction to the foreign and domestic determinants of Japanese foreign policy. Only one of the following may be counted: Asian Studies 361 (Topic: *Japanese Politics and Foreign Policy*), Government 365L (Topic 2), 365L (Topic: *Japanese Politics and Foreign Policy*).

Topic 3: International Relations of East and Southeast Asia. Same as Asian Studies 361 (Topic 23: *International Relations of East and Southeast Asia*). An introduction to the international relations of East and Southeast Asia, with particular attention to postwar economic and security issues, the changing political landscape of the post-Cold War period, and the development and functions of regional institutions.

365N, 465N. Topics in Comparative Politics. Analysis of varying topics in the comparative study of political processes. Three or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Politics in Contemporary Africa. Government 365N (Topic 1) is same as African and African American Studies 365. African and African American Studies 374 (Topic: *Politics in Contemporary Africa*) and Government 365N (Topic 1) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

Topic 2: Immigration and Comparative Politics. Prerequisite: Six semester hours of lower-division coursework in government.

Topic 3: The Military in Politics. Only one of the following may be counted: Government 365N (Topic 3); Latin American Studies 337M (Topic 9: *The Military in Politics*); Russian, East European, and Eurasian Studies 335 (Topic 10: *The Military in Politics*). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 4: Political Development in Eastern Europe and Latin America. Government 365N (Topic 4) is same as Latin American Studies 337M (Topic 6: *Political Development in Eastern Europe and Latin America*). Government 365N (Topic 4) and Russian, East European, and Eurasian Studies 335 (Topic 7: *Political Development in Eastern Europe and Latin America*) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

Topic 5: States and Peasants. Government 365N (Topic 5) is same as African and African American Studies 374 (Topic 5: *States and Peasants*). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 6: German Nationalisms. Government 365N (Topic 6) is same as Germanic Civilization 360E (Topic 3: *German Nationalisms*). German national movements within their historical context, and the present-day implications of nationalism. Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

Topic 7: German Unification: Problems and Prospects. Government 365N (Topic 7) is same as Germanic Civilization 360E (Topic 4: *German Unification: Problems and Prospects*) and Russian, East European and Eurasian Studies 335 (Topic 9: *German Unification: Problems and Prospects*). A brief history of Germany since 1815, the contemporary German state and its institutions, and perspectives for the current decade. Only one of the following may be counted: Germanic Civilization 360E (Topic: *German Reunification: Problems and Prospects*), Government 365N (Topic 7), 365N (Topic: *German Reunification: Problems and Prospects*). Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

Topic 8: Switzerland and Europe: Integration or Isolation. Government 365N (Topic 8) is same as Germanic Civilization 360E (Topic 5: *Switzerland and Europe: Integration or Isolation*). Culture, society, history, economics, and politics in historical and contemporary Switzerland. Only one of the following may be counted: Germanic Civilization 360E (Topic: *Switzerland: Seven Hundred Years*), Government 365N (Topic 8), 365N (Topic: *Switzerland: Seven Hundred Years*). Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

- Topic 9: International Environmental Policy.** Government 365N (Topic 9) is same as Asian Studies 361 (Topic 20: *International Environmental Policy*). Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 10: Australian Society and Politics.** Government 365N (Topic 10) is same as Sociology 352M (Topic 12: *Australian Society and Politics*). Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 11: Political Transition in Europe and Latin America.** Government 365N (Topic 11) is same as Latin American Studies 337M (Topic 10: *Political Transition in Europe and Latin America*). European Studies 361 (Topic 21: *Political Transition in Europe and Latin America*) and Government 365N (Topic 11) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 12: Globalization in the Middle East and North Africa.** A comparison of economic and political development strategies in the countries of the Middle East and North Africa. Only one of the following may be counted: Government 365N (Topic 12), Middle Eastern Studies 323K (Topic: *Globalization in the Middle East and North Africa*), Technology, Literacy, and Culture 331 (Topic: *Globalization in the Middle East and North Africa*). Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 13: Politics of New Democracies.** Examination of the process of democratization and factors related to its success. Government 365N (Topic 13) and Russian, East European, and Eurasian Studies 335 (Topic: *Politics of New Democracies*) may not both be counted.
- Topic 14: Politics of the Welfare State.** Introductory survey of trends in welfare state development in North America, Western Europe, and Australia.
- 365P. The Politics of Oil.** Same as Middle Eastern Studies 322K (Topic 7: *The Politics of Oil*). The national and international political complexities of petroleum; relationship of trends in petroleum economics to international political alignments. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.
- 370K. Racial and Ethnic Politics.** An examination of the role of racial and ethnic minorities in politics and of the impact of politics on these minorities. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 2: Latino Politics.** Same as Mexican American Studies 374 (Topic 15: *Latino Politics*) and Latin American Studies 337M (Topic 8: *Latino Politics*).
- Topic 3: African American Politics.** The evolution and role of African American politics within the American political system. African and African American Studies 374D (Topic: *African American Politics*) and Government 370K (Topic 3) may not both be counted.
- Topic 4: The Black Church in African American Politics.** Examination of the political role of the black church and its leaders in the development of African American political behavior. Only one of the following may be counted: African and African American Studies 374 (Topic: *Black Church in African American Politics*), 374D (Topic: *Black Church in African American Politics*), Government 370K (Topic 4), Religious Studies 346 (Topic: *Black Church in African American Politics*).
- Topic 5: Race and Democracy.** Examination of multicultural and multiracial influences on democratic societies. Only one of the following may be counted: African and African American Studies 374 (Topic: *Race and Democracy*), 374D (Topic: *Race and Democracy*), Government 370K (Topic 5).
- 370L. Topics in American Government and Politics.** Analysis of varying topics in the study of American government and politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 1: Election Campaigns.**
- Topic 2: Leadership in America.** Same as American Studies 370 (Topic 10: *Leadership in America*) and Women's and Gender Studies 345 (Topic 34: *Leadership in America*). Introduction to the concepts of leadership and the application of those concepts in public and political leadership. Additional prerequisite: Upper-division standing, a University grade point average of at least 3.50, and consent of department received prior to registering.
- Topic 3: Bureaucracy in America.**
- Topic 5: Parties and Electoral Politics in the United States.**
- Topic 6: Politics of Hollywood.**
- Topic 7: The United States Congress.**
- Topic 8: Congress and the Executive Branch.**
- Topic 9: Social Movements: Theory and Practice.**
- Topic 10: Congress and the Presidency.**
- Topic 11: Urban Politics.** Same as Urban Studies 350 (Topic 1: *Urban Politics*).
- Topic 12: Congressional Elections.** Examination of congressional campaigns and election outcomes from both historical and contemporary perspectives.
- Topic 13: Leaders and Followers in American Politics.** Examination of the relationship between elected officials and voters.
- Topic 14: The News Media as a Political Institution.** Analysis of the role of the news media in American politics and the operation of national government. Government 370L (Topic 14) and Urban Studies 350 (Topic: *News Media as a Political Institution*) may not both be counted.
- Topic 15: Political Communication.** Introduction to the impact of modern forms of communication on American governance.
- Topic 16: Political Psychology.** Study of the role of psychological theories in understanding politics and forming political views.

Topic 17: Money in United States Politics. Study of the nature and consequences of campaign finance on American politics. Government 370L (Topic 17) and 379S (Topic: *Money in Politics—Honors*) may not both be counted.

Topic 18: Politics and the Economy. Survey of the relationship between politics and market behavior in democracies.

Topic 19: The United States as a Territorial Nation. Examination of the history, public policy, law, and political philosophy behind United States territories and land acquisitions.

- 370M. Research on the United States Congress.** Independent research on lawmaking in the modern United States Congress. Individual instruction. Prerequisite: Six semester hours of lower-division coursework in government.
- 371N, 671N. Administrative Internship.** Students perform research and related activities in a national, state, or local administrative agency. Written reports required. The equivalent of three or six lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Twelve semester hours of coursework in government and consent of instructor.
- 372N, 672N. Campaigns and Elections Internship.** Students perform research and related activities in political campaigns and polling. Written reports required. The equivalent of three or six lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Twelve semester hours of coursework in government and consent of instructor.
- 373N, 673N. Legislative Internship.** Students perform research and related activities in a national, state, or local legislature. Written reports required. The equivalent of three or six lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Twelve semester hours of coursework in government and consent of instructor.
- 374N. Political Internship.** Students perform research and related activities for an entity directly related to government and politics. Written reports required. The equivalent of three lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Twelve semester hours of coursework in government.
- 679H. Honors Tutorial Course.** Lectures and supervised individual research and the writing of a substantial paper on a special topic in the field of government. No grade is awarded until the student has completed the two-semester sequence. Three lecture hours a week for two semesters. Prerequisite: For 679HA, upper-division standing, admission to the Government Honors Program, and written consent of the Government Honors Program adviser; for 679HB, Government 679HA.
- 379S. Honors Seminar.** Substantive focus varies each semester. Topics include but are not limited to constitutional interpretation, political thought, the evolution of American politics, and comparative politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of thirty semester hours of coursework, including at least six hours of government.

DEPARTMENT OF HISTORY

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

HISTORY: HIS

LOWER-DIVISION COURSES

- 301F. The Premodern World.** Survey of world history from human origins to the sixteenth century. Three lecture hours or two lecture hours and one discussion hour a week for one semester. History 301F and 306N (Topic: *Premodern World*) may not both be counted.
- 304K (TCCN: HIST 2313). English Civilization before 1603.** Survey of English civilization from Roman times to the death of Queen Elizabeth I. Three lecture hours a week for one semester.
- 304L (TCCN: HIST 2314). English Civilization since 1603.** Survey of English history from the seventeenth century to the present. Three lecture hours a week for one semester.
- 304R. Judaism, Christianity, and Islam: An Introduction.** Same as Islamic Studies 311 (Topic 2: *Judaism, Christianity, and Islam: An Introduction*), Jewish Studies 311 (Topic 2: *Judaism, Christianity, and Islam: An Introduction*), and Religious Studies 304. Examines the intertwined historical developments of the religions of Judaism, Christianity, and Islam, and explores the principal beliefs and practices of Jews, Christians, and Muslims. Three lecture hours a week for one semester.
- 305K. History of East Asia to 1800.** Same as Asian Studies 301M (Topic 3: *History of East Asia to 1800*). A survey of the traditional history and culture of China, Japan, Korea, and Vietnam. Three lecture hours a week for one semester.
- 305L. History of East Asia since 1800.** Same as Asian Studies 301M (Topic 4: *History of East Asia since 1800*). A survey of the modern history of China, Japan, Korea, and Vietnam. Three lecture hours a week for one semester.

- 306K. Introduction to the Middle East: Religious, Cultural, and Historical Foundations.** Same as Middle Eastern Studies 301K. A survey of the history and civilization of the Middle East from the sixth to the fourteenth century. Three lecture hours a week for one semester. History 306K and Middle Eastern Languages and Cultures 312K may not both be counted.
- 306N. Topics in History.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- Topic 3: Key Ideas and Issues in Latin America.** Same as Latin American Studies 301. Broad introductory course to acquaint students with the main areas of interest in Latin American studies.
- Topic 4: Introduction to Russian, East European, and Eurasian Studies: History.** History 306N (Topic 4) and Russian, East European, and Eurasian Studies 301 may not both be counted.
- Topic 5: Introduction to the Middle East: Adjustment and Change in Modern Times.** Same as Government 314 (Topic 3: *Introduction to the Middle East: Adjustment and Change in Modern Times*) and Middle Eastern Studies 301L. History 306N (Topic 5) and Middle Eastern Languages and Cultures 312L may not both be counted.
- Topic 7: Introduction to Islam.** Same as Islamic Studies 310 and Religious Studies 319. The beliefs, theology, history, and main social and legal institutions of Islam, including the concept of God and society, the role of women, and Islamic government and movements. History 306N (Topic 7) and Middle Eastern Studies 310 (Topic 1: *Introduction to Islam*) may not both be counted.
- Topic 8: Africa: A Visual Journey.** Same as African and African American Studies 317 (Topic 5: *Africa: A Visual Journey*). A broad introduction to key themes in African history and culture, from earliest times to the postindependence era. Designed around the video series *The Africans*.
- Topic 10: Jewish Civilization: Beginnings to 1492.** Same as Jewish Studies 304M and Religious Studies 313M. Introduction to the history, culture, and religion of the Jewish people from around 1000 BC to the end of the medieval period. Subjects may include ancient Israel, late Second Temple sectarianism, the rise of Christianity, rabbinic Judaism, medieval Jewish philosophy, Jewish mysticism, and Hebrew poetry. Only one of the following may be counted: History 306N (Topic 10), 306N (Topic: *Jewish Civilization I*), Jewish Studies 311 (Topic: *Jewish Civilization I*), Religious Studies 313 (Topic: *Jewish Civilization I*).
- Topic 11: Jewish Civilization: 1492 to the Present.** Same as Jewish Studies 304N and Religious Studies 313N. Subjects may include trends toward secularization, the emancipation of European Jewry, the emergence of American Jewry, the Holocaust, the establishment of the State of Israel, and the Arab-Israeli conflict. Only one of the following may be counted: History 306N (Topic 11), Jewish Studies 311 (Topic: *Jewish Civilization: 1492 to the Present*), Religious Studies 313 (Topic: *Jewish Civilization: 1492 to the Present*).
- 307C. Introduction to the History of India.** Same as Asian Studies 307C. Survey of the history of the Indian subcontinent from prehistoric times to the present. Three lecture hours a week for one semester.
- 309K (TCCN: HIST 2311). Western Civilization in Medieval Times.** Survey of medieval Europe from late antiquity to the fifteenth century. Three lecture hours a week for one semester.
- 309L (TCCN: HIST 2312). Western Civilization in Modern Times.** Survey of European civilization since the fifteenth century. Three lecture hours a week for one semester.
- 310. Introduction to Modern Africa.** Same as African and African American Studies 310K. Introduction to modern Africa, with focus on colonial and postcolonial development in political organization, economics, sociolinguistics, and literature. Three lecture hours a week for one semester.
- 310K. Latin American Civilization: The Colonial Experience.** Same as Latin American Studies 310 (Topic 1: *Latin American Civilization: The Colonial Experience*). A broad survey of the political, economic, social, and cultural aspects of the Latin American past, stressing both that area's achievements and its enduring problems. Three lecture hours a week for one semester. Only one of the following may be counted: History 310K, 346K, Latin American Studies 366 (Topic 2: *Latin America before 1810*).
- 310L. Latin American Civilization: The National Experience.** Same as Latin American Studies 310 (Topic 2: *Latin American Civilization: The National Experience*). A broad survey of the political, social, and cultural aspects of the Latin American past. Three lecture hours a week for one semester. Only one of the following may be counted: History 310L, 346L, Latin American Studies 366 (Topic 3: *Latin America since 1810*).
- 311K. Introduction to Traditional Africa.** Same as African and African American Studies 310L. Introductory, interdisciplinary course on the peoples and cultures of Africa. Three lecture hours a week for one semester.
- 314K (TCCN: HIST 2328). History of Mexican Americans in the United States.** Same as Mexican American Studies 316. Examines the origin and growth of the Mexican American community in the United States. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history.
- 315G. Introduction to American Studies.** Same as American Studies 310. An interdisciplinary introduction to the historical exploration of American culture. Three lecture hours a week for one semester. History 306N (Topic 2: *Introduction to American Studies*) and History 315G may not both be counted. Partially fulfills legislative requirement for American history.
- 315K (TCCN: HIST 1301). The United States, 1492–1865.** Survey of United States history from the colonial period through the Civil War. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Partially fulfills legislative requirement for American history.

- 315L (TCCN: HIST 1302). The United States since 1865.** Survey of *United States* history since the Civil War. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Partially fulfills legislative requirement for American history.
- 317L. Topics in United States History.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Partially fulfills legislative requirement for American history.
- Topic 1: Colonial America.**
- Topic 2: The Era of the American Revolution.**
- Topic 3: Introduction to African American History.** Same as African and African American Studies 317D (Topic 1: *Introduction to African American History*). African and African American Studies 317 (Topic: *Introduction to African American History*) and History 317L (Topic 3) may not both be counted.
- Topic 4: Introduction to Asian American History.** Same as Asian American Studies 312. Introduces students to the national and transnational histories of Asian Americans in the United States. Explores a wide range of themes related to the Asian American experience.
- Topic 5: United States Women, Sexuality, and Gender to 1865.** Same as Women's and Gender Studies 301 (Topic 11: *United States Women, Sexuality, and Gender to 1865*).
- Topic 6: The United States in the 17th-Century Atlantic World.** The United States during a period marked by the spread of knowledge and experience of the world through conflict, economic exchange, cultural creativity, exploration, New World colonization, technological innovation, and religious reformation and counter-reformation.
- Topic 7: The United States and Africa.** Same as African and African American Studies 317C (Topic 1: *The United States and Africa*). History of political, economic, and cultural relations between the United States and Africa from the early origins of the slave trade to the present. African and African American Studies 317 (Topic: *United States and Africa*) and History 317L (Topic 7) may not both be counted.
- 317N. Topics in History.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework.
- 318Q. Supervised Research.** Individual instruction.
- 319D. The Ancient Mediterranean World.** Same as Ancient History and Classical Civilization 319 (Topic 1: *The Ancient Mediterranean World*) and Classical Civilization 319D. Survey of the ancient Mediterranean from ca. 3000 BC to AD 476. Focus on the development of ideas and institutions in the Greek and Roman worlds and on the active cultural exchange among the diverse civilizations of the broader region that shaped Greek and Roman history and cultural identity. Three lecture hours or two lecture hours and one discussion hour a week for one semester.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in History.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320L. Texas until 1845.** Same as Mexican American Studies 320L. A study of Texas from before the European discovery through the exploration and mission periods to status as a Mexican colony and an independent republic. Three lecture hours a week for one semester. History 320L and Mexican American Studies 374 (Topic: *Texas until 1845*) may not both be counted. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.
- 320P. Texas, 1845–1914.** A study of Texas through early statehood, the Civil War and Reconstruction, and its expansion from a dependent state to a beginning industrial entity. Three lecture hours a week for one semester. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.
- 320R. Texas, 1914 to the Present.** Same as Mexican American Studies 374 (Topic 16: *Texas, 1914 to the Present*) and Urban Studies 353 (Topic 2: *Texas, 1914 to the Present*). The steady dissociation of Texas from its Old South status to a transitional state and a power in national politics. Three lecture hours a week for one semester. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.
- 321. The History of Rome: The Empire.** Same as Ancient History and Classical Civilization 325 (Topic 2: *The History of Rome: The Empire*). A survey of the Roman world from Augustus to Constantine the Great. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 321G. Rome and Jerusalem.** Same as Ancient History and Classical Civilization 325 (Topic 3: *Rome and Jerusalem*), Jewish Studies 365 (Topic 7: *Rome and Jerusalem*), Middle Eastern Studies 320 (Topic 2: *Rome and Jerusalem*), and Religious Studies 365 (Topic 1: *Rome and Jerusalem*). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Three lecture hours a week for one semester. Only one of the following may be counted: History 321G, Jewish Studies 361 (Topic 2: *Rome and Jerusalem*), Middle Eastern Languages and Cultures 341 (Topic 7: *Rome and Jerusalem*), Religious Studies 361 (Topic 24: *Rome and Jerusalem*). Prerequisite: Upper-division standing.

- 321M. The History of Rome: The Republic.** Same as Ancient History and Classical Civilization 325 (Topic 1: *The History of Rome: The Republic*). A survey of Roman history from the founding of Rome to the death of Julius Caesar. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 322C. Cultural History of World Science to 1650.** Cultural history of science from ancient times to the seventeenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 322D. The Scientific Revolution of the Seventeenth Century.** The history of science and its place in society from the mid–sixteenth century to the time of Isaac Newton. Three lecture hours a week for one semester. History 322D and 329N may not both be counted. Prerequisite: Upper-division standing.
- 322G. History of the Modern Life Sciences.** History of the life sciences from the eighteenth century to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 322M. History of Modern Science.** The history of science and its place in society from the time of Newton to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 323L. Europe since 1919.** Survey course emphasizing the impact of the two world wars on European social, political, and cultural life in the twentieth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 328M. Modern Brazil.** Same as Latin American Studies 366 (Topic 12: *Modern Brazil*). The social, economic, political, and cultural forces that have shaped modern Brazil. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 329K. United States Relations with Latin America.** A survey of the major conflicts in US–Latin American relations in the nineteenth and twentieth centuries, as well as the economic relations between North America and Latin America. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 329P. History of the Atomic Bomb.** The development, use, and influence of nuclear weapons from the 1930s to 1954. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in History.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329U. Perspectives on Science and Mathematics.** An examination of five notable episodes in the history of science: Galileo's conflict with the Catholic Church, Isaac Newton's formulation of the laws of motion, Charles Darwin's proposal of the theory of evolution by natural selection, the development of the atomic bomb, and the discovery of the double helix structure of DNA. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: History 329U, 366N (Topic: *Perspectives on Science and Mathematics*), Philosophy 329U. Prerequisite: Upper-division standing and consent of instructor.
- 331C. History of the Ottoman Empire.** Same as Middle Eastern Studies 331C. A survey of Ottoman society and culture and of the empire's place on the world scene. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 331G. History of Iran to 1800.** Same as Middle Eastern Studies 321K (Topic 3: *History of Iran to 1800*). A survey of the social, economic, and religious components unique to Iran from the pre-Islamic empire of the Achaemenids through the development of Iran as a medieval and premodern Islamic state. Three lecture hours a week for one semester. History 331G and Religious Studies 361 (Topic 23: *History of Iran to 1800*) may not both be counted. Prerequisite: Upper-division standing.
- 331J. History of the Arab World.** A general survey of the origins and development of Arabic civilization. Three lecture hours a week for one semester. History 331J and Middle Eastern Studies 321K (Topic 2: *History of the Arab World*) may not both be counted. Prerequisite: Upper-division standing.
- 331L. Modern Iran.** Same as Middle Eastern Studies 324K (Topic 5: *Modern Iran*). The development of modern Iran; special attention is given to the impact of the West, the constitutional movement, nationalism, the oil crisis, and the Islamic Revolution of 1979. Three lecture hours a week for one semester. History 331L and Middle Eastern Studies 323L may not both be counted. Prerequisite: Upper-division standing.
- 331M. Imperialism and Nationalism in the Middle East.** Same as Middle Eastern Studies 322K (Topic 10: *Imperialism and Nationalism in the Middle East*). An interpretative analysis of European imperialism in the Middle East; the origin and the rise of nationalism in the Arab world, Turkey, Iran, and Israel. Three lecture hours a week for one semester. History 331M and Middle Eastern Studies 321K (Topic: *Imperialism and Nationalism in the Middle East*) may not both be counted. Prerequisite: Upper-division standing and consent of instructor.
- 332G. European Intellectual History from the Enlightenment to Nietzsche.** Explores significant intellectual developments in Europe throughout the nineteenth century. Themes include romanticism, positivism, socialism, and nihilism. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 332J. Twentieth-Century European Intellectual History.** Explores significant intellectual developments in Europe in the twentieth century. Topics include psychoanalysis, sociology, existentialism, and poststructuralism. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 333L. United States Foreign Relations, 1776–1914.** The history of United States foreign policy and diplomacy from the founding of the United States to the outbreak of the First World War. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 333M. United States Foreign Relations, 1914 to the Present.** The history of United States foreign policy and diplomacy from the First World War to the present. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 334C. Music Cultures of the Middle East, Past and Present.** Same as Middle Eastern Studies 334C. A historical and ethnomusicological survey of the Arab, Turkish, and Persian music cultures. Three lecture hours a week for one semester. History 334C and Middle Eastern Languages and Cultures 372 (Topic 11: *Music Cultures of the Middle East, Past and Present*) may not both be counted. Prerequisite: Upper-division standing.
- 334J. History of Britain from the Restoration to 1783.** Surveys the political, social, economic, and intellectual history of England and Great Britain from the restoration of the Stuart monarchy in 1660 to the conclusion of the War for American Independence in 1783. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 334L. The American Revolution and the Founding of the United States, 1763–1800.** The Revolutionary transformation of America between 1763 and 1800. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 334M. The Jeffersonian Era, 1800–1829.** Analysis of the early American republic; emphasis on Jeffersonian republicanism as ideology and as public policy. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 336L. The Old South.** Southern institutions and the role of the South in American history. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 337N. Germany in the Twentieth Century.** Same as Russian, East European, and Eurasian Studies 335 (Topic 11: *Germany in the Twentieth Century*). Survey of German political and military institutions, economic development, culture, and society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 340K. Traditional China.** Same as Asian Studies 340K. History of China from its beginnings to 1800. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Traditional China*) and History 340K may not both be counted. Prerequisite: Upper-division standing.
- 340M. Modern China.** Same as Asian Studies 340M. History of China from the intrusion of the West circa 1500 to the Communist revolution. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Modern China*) and History 340M may not both be counted. Prerequisite: Upper-division standing.
- 340N. Communist China.** Same as Asian Studies 340N. The history of China from the Communist takeover in 1949 to the present. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Communist China*) and History 340N may not both be counted. Prerequisite: Upper-division standing.
- 340P. European Expansion in Asia.** Same as Asian Studies 340P. European exploration, the commerce of the East India Companies, and the beginnings of empire in South and Southeast Asia from the fifteenth to the early nineteenth century. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *European Expansion in Asia*) and History 340P may not both be counted. Prerequisite: Upper-division standing.
- 340R. European Empires in Asia.** Same as Asian Studies 340R. The British in India and Malaya, the Dutch in Indonesia, and the French in Indochina since 1800. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *European Empires in Asia*) and History 340R may not both be counted. Prerequisite: Upper-division standing.
- 340S. The Chinese in the United States.** A lecture and discussion course on the history of the Chinese in the United States from their first arrival in significant numbers during the California Gold Rush of the mid-nineteenth century to the present. Three lecture hours a week for one semester. Asian Studies 340S and History 340S may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 341K. Origins of Modern Japan.** Same as Asian Studies 341K. Japan to the beginnings of the Industrial Revolution, with a focus on the culminating age of samurai rule, the Tokugawa period (1600–1867). Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Japan to 1800*) and History 341K may not both be counted. Prerequisite: Upper-division standing.
- 341M. Imperial Japan.** Same as Asian Studies 341M. Japan from the Meiji transformation through war, defeat, and occupation. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Modern Japan*) and History 341M may not both be counted. Prerequisite: Upper-division standing.
- 341N. Women's Rights Movement in the United States.** Same as Women's and Gender Studies 345 (Topic 11: *Women's Rights Movement in the United States*). A survey of the women's movement in the United States from the seventeenth century to the present. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 342C. Postwar Japan.** Same as Asian Studies 341N. Japan since the war and occupation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 342D. Political Economy of Japan.** Same as Asian Studies 342D. Historical development of the Japanese economy since early modern times. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 361 (Topic: *Political Economy of Japan*), History 342D, 350L (Topic: *Political Economy of Japan*). Prerequisite: Upper-division standing.

- 343. The Age of Reformation.** Same as Religious Studies 344. Examines late medieval religion, the rise of Protestant movements, and the Catholic response in their cultural, political, and social contexts. Three lecture hours a week for one semester. History 343 and Religious Studies 361 (Topic 26: *The Age of Reformation*) may not both be counted. Prerequisite: Upper-division standing.
- 343G. Italian Renaissance, 1350–1550.** Survey of political, socioeconomic, religious, and intellectual trends during the Italian Renaissance. Three lecture hours a week for one semester. History 343G and 362K (Topic: *Italian Renaissance, 1350–1550*) may not both be counted. Prerequisite: History 309K or the equivalent is recommended.
- 343L. History of Russia to 1917.** Same as Russian, East European, and Eurasian Studies 335 (Topic 5: *History of Russia to 1917*). Survey of Russian history from seventeenth-century Muscovy to the fall of the Romanovs in 1917. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 343M. History of Russia since 1917.** Same as Russian, East European, and Eurasian Studies 335 (Topic 6: *History of Russia since 1917*). A survey of Russian history from the revolution of 1917 to the collapse of the Soviet Union. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 343P. History of Witchcraft.** A study of witch beliefs and witchcraft prosecutions in western Europe and colonial America, mainly between 1100 and 1700. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 343W. Witches, Workers, and Wives.** Explores the role of families and concepts of gender as expressed in key economic, social, political, and cultural patterns in early modern Europe. Three lecture hours a week for one semester. History 343W and 366N (Topic: *Witches, Workers, and Wives*) may not be counted.
- 344E. France in the Middle Ages.** Social, cultural, political, and economic history of France from the fall of the Roman Empire to the fifteenth century; emphasis on the development of feudalism and nationalism. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 344F. Anglo-Saxon England.** The political, social, cultural, and legal history of England from about 410 to 1154. Lectures and discussion of primary sources. Three lecture hours a week for one semester. History 344F and 362K (Topic: *Anglo-Saxon England*) may not both be counted. Prerequisite: Upper-division standing.
- 344G. Twelfth-Century Renaissance: 1050–1200.** An examination of social, cultural, and intellectual developments in eleventh- and twelfth-century Europe. Three lecture hours a week for one semester. History 344G and 362K (Topic: *Twelfth-Century Renaissance: 1050–1200*) may not both be counted. Prerequisite: Upper-division standing.
- 344J. Norman and Angevin England.** Political, social, and legal history of England from the Norman conquest in 1066 to the end of the reign of Richard III in 1485. Three lecture hours a week for one semester. History 344J and 362K (Topic: *Norman and Angevin England*) may not both be counted.
- 344M. Everyday Life in Early Modern Europe.** Social history of early modern Europe (1400–1700), with emphasis on material conditions of social existence. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 345J. The Coming of the Civil War, 1829–1861.** Lecture and discussion course dealing with the historical conditions that led to the American Civil War. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 345L. The American Civil War and Reconstruction, 1861–1877.** Lecture and discussion course on the Civil War and Reconstruction period. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 345M. The South since 1865.** The history of the South after the Civil War through the civil rights movement. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 346C. Ancient India.** Same as Asian Studies 346C. History and culture of South Asia from its protohistoric beginnings in the Indus Valley through the period of the early empires of the Mauryas and Guptas. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *Ancient India*) and History 346C may not both be counted. Prerequisite: Upper-division standing or consent of instructor.
- 346D. Medieval India.** Same as Asian Studies 346D. History and culture of South Asia from approximately 500 to 1500, with emphasis on religious and political institutions and the emergence of regional cultures. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 346K. Colonial Latin America.** Same as Latin American Studies 366 (Topic 2: *Colonial Latin America*). Basic survey course, designed as an introduction to Latin American history in the colonial period. Three lecture hours a week for one semester. Only one of the following may be counted: History 310K, 346K, Latin American Studies 310 (Topic 1: *Latin American Civilization: The Colonial Experience*). Prerequisite: Upper-division standing.
- 346L. Modern Latin America.** Same as Latin American Studies 366 (Topic 3: *Modern Latin America*). Continuation of History 346K. Three lecture hours a week for one semester. Only one of the following may be counted: History 310L, 346L, Latin American Studies 310 (Topic 2: *Latin American Civilization: The National Experience*). Prerequisite: Upper-division standing.
- 346M. Muslim India before 1750.** Same as Asian Studies 346M and Religious Studies 341 (Topic 6: *Muslim India before 1750*). The history, art and architecture, and religions of India during the period of Muslim rule, from the tenth to the eighteenth century. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *History and Culture of India before 1750*) and History 346M may not both be counted. Prerequisite: Upper-division standing.

- 346N. History and Culture of India since 1750.** Same as Asian Studies 346N. The period of British rule, the nationalist movement, and independence, with emphasis on the impact of the West on Indian society. Three lecture hours a week for one semester. Asian Studies 361 (Topic: *History and Culture of India since 1750*) and History 346N may not both be counted. Prerequisite: Upper-division standing.
- 346R. Revolution in Modern Latin America.** Same as Latin American Studies 366 (Topic 13: *Revolution in Modern Latin America*). Comparison of the Mexican and Cuban revolutions and of their challenges to inter-American relations. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 346S. Revolution in Twentieth-Century Latin America.** Same as Latin American Studies 366 (Topic 9: *Revolution in Twentieth-Century Latin America*). An introduction to recent Latin American history, with emphasis on phenomena that explain the apparent social unrest and political instability of the region. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 346T. The Cuban Revolution and the United States.** Same as Latin American Studies 366 (Topic 17: *The Cuban Revolution and the United States*). The special economic and political relationship between the United States and Cuba from 1898 to 1967; and how the 1959 revolution affected the Cold War relationships between East and West, North and South. Three lecture hours a week for one semester. Only one of the following may be counted: History 346T, 366N (Topic: *The Cuban Revolution and the US*), Latin American Studies 366 (Topic: *The Cuban Revolution and the US*). Prerequisite: Upper-division standing.
- 347L. Seminar in Historiography.** Restricted to students in the History Honors Program. Designed to familiarize students in the honors program with general problems of historiography, historical interpretation, and the philosophy of history. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.
- 349R. Military History to 1640.** A broad survey of world military systems from ancient times to about 1640. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 349S. Survey of Military History, 1640 to 1900.** An investigation of world military systems and of the evolution of military technology from about the time of the Thirty Years' War to the end of the nineteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 350L. Undergraduate Seminar in History.** Lectures, discussion, reading, and research on selected topics in the field of history. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. History 350L and 350R may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Islam: Its History and Political Dynamics.** Same as Middle Eastern Studies 322K (Topic 2: *Islam: Its History and Political Dynamics*). Prerequisite: Upper-division standing.
- Topic 5: Gandhi and Gandhism.** Same as Asian Studies 361 (Topic 6: *Gandhi and Gandhism*) and Religious Studies 341 (Topic 5: *Gandhi and Gandhism*). Prerequisite: Upper-division standing.
- Topic 6: Black Movements in the Caribbean.** Same as African and African American Studies 374 (Topic 7: *Black Movements in the Caribbean*) and Latin American Studies 366 (Topic 4: *Black Movements in the Caribbean*). Prerequisite: Upper-division standing.
- Topic 19: Resistance, Rebellion, and Revolution in Colonial Spanish America.** Same as Latin American Studies 366 (Topic 7: *Resistance, Rebellion, and Revolution in Colonial Spanish America*). History 350L (Topic 19) and Latin American Studies 366 (Topic: *Resistance, Rebellion, and Revolution in Colonial Spanish America*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 25: Women in Asian Societies.** Same as Asian Studies 361 (Topic 14: *Women in Asian Societies*) and Women's and Gender Studies 340 (Topic 8: *Women in Asian Societies*). Prerequisite: Upper-division standing.
- Topic 32: The Galileo Affair.** Prerequisite: Upper-division standing.
- Topic 33: Heresy and the Inquisition.** Same as Religious Studies 357 (Topic 1: *Heresy and the Inquisition*). Only one of the following may be counted: History 350L (Topic 33), Religious Studies 355E (Topic 1: *Heresy and the Inquisition*), 361 (Topic 27: *Heresy and the Inquisition*). Prerequisite: Upper-division standing and consent of instructor.
- Topic 34: Medieval Islam: Faith and History.** Same as Middle Eastern Studies 321K (Topic 7: *Medieval Islam: Faith and History*) and Religious Studies 358 (Topic 2: *Medieval Islam: Faith and History*). History 350L (Topic 34) and Religious Studies 361 (Topic 28: *Medieval Islam: Faith and History*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 35: Nigeria: A History of Nation-Building.** Same as African and African American Studies 374C (Topic 1: *Nigeria: A History of Nation-Building*). African and African American Studies 374 (Topic 1: *Nigeria: A History of Nation-Building*) and History 350L (Topic 35) may not both be counted. Prerequisite: Upper-division standing.
- Topic 41: Stalinist Russia.** Same as Russian, East European, and Eurasian Studies 335 (Topic 12: *Stalinist Russia*). Prerequisite: Upper-division standing and consent of instructor.
- Topic 42: History of Modern Central America.** Same as Latin American Studies 366 (Topic 15: *History of Modern Central America*). History 350L (Topic 42) and 363K (Topic: *History of Modern Central America*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 44: Culture and Identity in Colonial Mexico.** Same as Latin American Studies 366 (Topic 16: *Culture and Identity in Colonial Mexico*). Prerequisite: Upper-division standing.
- Topic 46: Women and Gender in China.** Same as Asian Studies 372 (Topic 21: *Women and Gender in China*) and Women's and Gender Studies 340 (Topic 18: *Women and Gender in China*). Prerequisite: Upper-division standing or consent of instructor.

- Topic 49: History of Imperialism.** Prerequisite: Upper-division standing.
- Topic 50: Imperialism: Empire to Globalization.** Prerequisite: Upper-division standing.
- Topic 54: Epics and Heroes of India.** Prerequisite: Upper-division standing.
- Topic 56: Germany since Hitler.** Prerequisite: Upper-division standing.
- Topic 57: Law and Society in Early Modern Europe.** Prerequisite: Upper-division standing.
- Topic 59: Stalin's Russia at War.** Only one of the following may be counted: History 350L (Topic 59), 362G (Topic: *Stalin's Russia at War*), 366N (Topic: *Stalin's Russia at War*). Prerequisite: Upper-division standing.
- 350R. Undergraduate Seminar in United States History.** Lectures, discussion, reading, and research on selected topics in the field of United States history. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. History 350L and 350R may not both be counted unless the topics vary. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.
- Topic 1: Coastal Communities in Early America.**
- Topic 2: Lyndon Johnson and His Times.**
- Topic 3: Myth and Construction of American Identity.**
- Topic 4: Constitutional Issues in the Twentieth-Century United States.**
- Topic 5: American Cultural History of Alcohol and Drugs.** Same as American Studies 370 (Topic 1: *American Cultural History of Alcohol and Drugs*). Study of the American use and perception of drugs, including alcohol, and how they have changed over time. Examines significant shifts in American attitudes toward individualism and social control.
- Topic 6: Deviance in America: An Alternative History.** Same as American Studies 370 (Topic 22: *Deviance in America: An Alternative History*). Examines movements and individuals outside the conventional mainstream and how they reflect American ideals and dilemmas.
- Topic 7: Environmental History of North America.** Same as American Studies 329 and Urban Studies 353 (Topic 5: *Environmental History of North America*). The history of humanity's influence on the plants, animals, microlife, soils, water, and air of North America, and vice versa, from the arrival of the proto-Indians to the contemporary environmental crisis.
- Topic 8: Women in Postwar America.** Same as American Studies 370 (Topic 30: *Women in Postwar America*) and Women's and Gender Studies 345 (Topic 37: *Women in Postwar America*).
- Topic 9: Animals and American Culture.** Same as American Studies 370 (Topic 28: *Animals and American Culture*) and Women's and Gender Studies 345 (Topic 43: *Animals and American Culture*). Explores the role of animals in American history, culture, and society.
- Topic 10: Slavery in the United States.** Same as African and African American Studies 374D (Topic 3: *Slavery in the United States*). African and African American Studies 374 (Topic 21: *Slavery in the United States*) and History 350R (Topic 10) may not both be counted.
- Topic 11: Race and Beauty in American Culture.** Same as African and African American Studies 374D (Topic 1: *Race and Beauty in American Culture*).
- Topic 12: History of Black Entrepreneurship in the United States.** Same as African and African American Studies 374D (Topic 2: *History of Black Entrepreneurship in the United States*).
- Topic 13: History of Sexuality in America.** Same as Women's and Gender Studies 345 (Topic 38: *History of Sexuality in America*).
- 351D. The Hellenistic Age: Alexander to Actium.** Same as Ancient History and Classical Civilization 325 (Topic 6: *The Hellenistic Age: Alexander to Actium*) and Classical Civilization 351D. History of Asia, Egypt, and the Mediterranean world from Alexander's expedition to Asia to Rome's defeat of the last of the Hellenistic monarchs at Actium (ca. 334 to 31 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.
- 351N. The History of Religion in America to 1800.** Same as Religious Studies 327. Survey of religious thought, practices, and institutions in the colonies and early republic. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 351P. History of Religion in America since 1800.** Same as Religious Studies 326. Survey of religious thought and institutions from the Second Great Awakening to the present; emphasis given to Protestantism challenged by science, industrialism, immigration, urbanism, religious heterogeneity, and indifference, and to revivalism, reform, and the social gospel. Three lecture hours a week for one semester. History 351P and Religious Studies 361 (Topic 12: *History of Religion in America since 1800*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 352L. The Mexican Revolution, 1910–1920.** Same as Latin American Studies 366 (Topic 8: *The Mexican Revolution, 1910–1920*). An analytical examination of the initial decade of the Mexican Revolution, the first of the twentieth-century nationalist social revolutions; examines through lectures and discussion the historical antecedents and the political, economic, social, and intellectual elements of the upheaval. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 353. The French Revolution and Napoleon.** Analysis of the social, political, and economic origins and outcomes of the French Revolution and Napoleon's empire. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 354C. History of Greece to the End of the Peloponnesian War.** Same as Ancient History and Classical Civilization 325 (Topic 4: *History of Greece to the End of the Peloponnesian War*) and Classical Civilization 354C. Survey of Greek history from the emergence of the city-states through the end of the Peloponnesian War (ca. 700 to 404 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.
- 354D. History of Greece to 146 BC.** Same as Ancient History and Classical Civilization 325 (Topic 5: *History of Greece to 146 BC*) and Classical Civilization 354D. Survey of Greek history from the end of the Peloponnesian War to the defeat of Greece by Rome (404 to 146 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.
- 354N. France in Modern Times.** The impact of revolution on French political, economic, and social development in the nineteenth and twentieth centuries. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 355F. The United States, 1877–1920.** Examines the Gilded Age and Progressive Era to depict the rise of modern America. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 355M. The United States, 1920–1941.** Same as American Studies 358. A history of political, economic, diplomatic, military, social, and cultural developments in the United States between the two world wars. Three lecture hours a week for one semester. American Studies 322 (Topic: *The United States, 1920–1941*) and History 355M may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 355N. Main Currents of American Culture to 1865.** Same as American Studies 355. Traces the development of American culture and society from the colonial era until the end of the Civil War. Major themes include racial conflict, religion, slavery, the development of democracy, and cultural reform. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 355P. The United States since 1941.** A history of political, economic, diplomatic, social, and cultural developments in the United States since the nation's entry into World War II. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 355S. United States Constitutional History.** A lecture and discussion course dealing with the history of the development of the American constitutional tradition from colonial times to the present. Three lecture hours a week for one semester. History 355S and 366N (Topic: *United States Constitutional History*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 356G. History of the United States West.** Examines the history of the trans-Mississippi West with a special focus on the concepts of conquest, resistance, and region from the nineteenth to the twentieth century. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. History 356G and 365G (Topic: *History of the United States West*) may not both be counted. Prerequisite: Upper-division standing.
- 356K. Main Currents of American Culture since 1865.** Same as American Studies 356. Traces the development of American culture and society from the end of the Civil War to the present. Major themes include racial conflict, pluralism, religion, urban development and reform, modernism, government centralization, cultural radicalism, and the rebirth of conservatism. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 356N. American Culture and Social Life since 1945.** Same as American Studies 328. Study of postwar American culture and society, using novels, plays, movies, music, television, journalism, political thought, and social criticism; special attention to the 1950s. Three lecture hours a week for one semester. American Studies 322 (Topic: *American Culture and Social Life since 1945*) and History 356N may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 356P. The United States in the Civil Rights Era.** Examines United States history in the post–World War II era, including how civil rights and other racial issues helped shape the politics, popular culture, and social life of this period. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. History 356P and 365G (Topic: *United States in the Civil Rights Era*) may not both be counted. Prerequisite: Upper-division standing.
- 356R. America and the Holocaust.** Same as American Studies 321 (Topic 4: *America and the Holocaust*) and Jewish Studies 365 (Topic 1: *America and the Holocaust*). Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 370 (Topic: *America and the Holocaust*), History 350L (Topic: *America and the Holocaust*), 356R, 365G (Topic: *America and the Holocaust*), Jewish Studies 361 (Topic: *America and the Holocaust*), Liberal Arts Honors 350 (Topic: *America and the Holocaust*). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 357C. African American History to 1860.** Same as African and African American Studies 357C and American Studies 321E. Review of West African origins; New World settlement patterns, social life, and culture; discussion of the Atlantic slave trade, the development of capitalism and plantation slavery, and the origins of racism. Three lecture hours a week for one semester. American Studies 321 (Topic: *African American History to 1860*) and History 357C may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

- 357D. African American History since 1860.** Same as American Studies 321F, African and African American Studies 357D, and Urban Studies 353 (Topic 1: *African American History since 1860*). Survey of the history of African Americans in the United States from 1860 to the present: Emancipation, Reconstruction politics, migration and urbanization, and the evolution of African American culture; kinds of sources and methods valuable for analyzing African American life and culture. Three lecture hours a week for one semester. American Studies 321 (Topic: *African American History since 1860*) and History 357D may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 357F. Filipinos in the United States.** Same as Asian American Studies 325 (Topic 1: *Filipinos in the United States*). Three lecture hours a week for one semester. Only one of the following may be counted: History 357F, 365G (Topic: *Filipinos in the United States*), 366N (Topic: *Filipinos in the United States*). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 357P. Twentieth-Century American Indian History.** Studies American Indian life and culture in the twentieth century through the use of historical and anthropological texts, autobiographies, films, and fiction. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 358M. History of Britain from 1783 through World War I.** Same as European Studies 346 (Topic 1: *History of Britain from 1783 through World War I*). Surveys the political, social, economic, and intellectual history of Great Britain from the years preceding the outbreak of the French Revolution to the conclusion of World War I. Three lecture hours a week for one semester. European Studies 361 (Topic 4: *England in the Nineteenth Century*) and History 358M may not both be counted. Prerequisite: Upper-division standing.
- 358Q. Supervised Research.** Individual instruction. Prerequisite: Upper-division standing.
- 359N. History of Africa since 1800.** Same as African and African American Studies 359N. Development of sub-Saharan African societies from the end of the slave trade to independence. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 359P. History of East Africa.** Same as African and African American Studies 345. A survey of the history of Kenya, Tanzania, and Uganda from prehistoric times to the postindependence era. Three lecture hours a week for one semester. African and African American Studies 374 (Topic: *History of East Africa*) and History 359P may not both be counted. Prerequisite: Upper-division standing.
- 359R. History of West Africa.** Same as African and African American Studies 345C. A history of the West Africa region: the rise and fall of kingdoms, relations with Europe and Asia, the great revolutions of the nineteenth century, colonial administration, decolonization, and the search for economic development and political stability since independence. Three lecture hours a week for one semester. African and African American Studies 374 (Topic: *History of West Africa*) and History 359R may not both be counted. Prerequisite: Upper-division standing.
- 362G. Topics in European History.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Reformation Theology.** Same as Germanic Civilization 360E (Topic 1: *Reformation Theology*) and Religious Studies 355D. Only one of the following may be counted: English 322 (Topic 10: *Reformation Theology*), History 362G (Topic 1), 366N (Topic 3: *Reformation Theology*). Prerequisite: Upper-division standing.
- 362K. Medieval Civilization.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- 363K. Topics in Latin American History.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Some topics also require consent of instructor; these are identified in the *Course Schedule*.
- 364G. Topics in African, Asian, and Middle Eastern History.** May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: History of Hindu Religious Traditions.** Same as Anthropology 324L (Topic 23: *History of Hindu Religious Traditions*), Asian Studies 340 (Topic 4: *History of Hindu Religious Traditions*), and Religious Studies 321. History of major doctrines, practices, and institutions that shaped the development of Hinduism; how religions adapt to social and cultural change and often provide the catalyst for change. History 364G (Topic 1) and 366N (Topic 5: *History of Hindu Religious Traditions*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 2: Prophet of Islam: His Life and Times.** Same as Islamic Studies 340 (Topic 1: *Prophet of Islam: His Life and Times*) and Religious Studies 325. A detailed study of the prophet Muhammad's life and message, and of the means by which his life was recorded and popularized. Only one of the following may be counted: History 364G (Topic 2), 366N (Topic 6: *Prophet of Islam: His Life and Times*), Middle Eastern Studies 321K (Topic 6: *Prophet of Islam: His Life and Times*). Prerequisite: Upper-division standing.
- Topic 3: The Dead Sea Scrolls.** Same as Jewish Studies 364 (Topic 4: *The Dead Sea Scrolls*), Middle Eastern Studies 320 (Topic 13: *The Dead Sea Scrolls*), and Religious Studies 353D. Only one of the following may be counted: History 364G (Topic 3), 366N (Topic 8: *The Dead Sea Scrolls*), Jewish Studies 361 (Topic 4: *The Dead Sea Scrolls*), Middle Eastern Languages and Cultures 341 (Topic 14: *The Dead Sea Scrolls*), Religious Studies 361 (Topic 31: *The Dead Sea Scrolls*). Prerequisite: Upper-division standing.
- 365G. Topics in United States History.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Partially fulfills legislative requirement for American history. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 366N. Topics in History.** Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

- 372L. Proseminar in Historical Source Readings.** Individual instruction in reading history and historiography. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor; consent forms are available in the departmental advising office.
- 372M. Proseminar in Historical Writing.** Individual instruction in historical research and writing. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor; consent forms are available in the departmental advising office.
- 372P. The Bible and History.** Same as Jewish Studies 364 (Topic 3: *The Bible and History*), Middle Eastern Studies 320 (Topic 3: *The Bible and History*), and Religious Studies 354D. The critical uses of biblical and extrabiblical data in the reconstruction of the history of the biblical period. Three lecture hours a week for one semester. Only one of the following may be counted: History 372P, Jewish Studies 361 (Topic 3: *The Bible and History*), Middle Eastern Languages and Cultures 341 (Topic 1: *The Bible and History*), Religious Studies 361 (Topic 14: *The Bible and History*). Prerequisite: Upper-division standing.
- 373C. History of the Hip-Hop Generation.** Same as African and African American Studies 374F (Topic 5: *History of the Hip-Hop Generation*). Explores the evolution of the hip-hop generation through the lens of music, culture, and politics of black America after the civil rights movement. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. History 365G (Topic: *History of the Hip-Hop Generation*) and History 373C may not both be counted. Prerequisite: Upper-division standing, and concurrent enrollment in Curriculum and Instruction 373.
- 375D. Islamic Spain and North Africa to 1492.** Same as Middle Eastern Studies 321K (Topic 4: *Islamic Spain and North Africa to 1492*) and Religious Studies 345. An introduction to the impact of Islam on Spain and North Africa, with emphasis on social, economic, and cultural development. Three lecture hours a week for one semester. History 375D and Religious Studies 361 (Topic 13: *Islamic Spain and North Africa to 1492*) may not both be counted. Prerequisite: Upper-division standing.
- 375K. Tudor England, 1485–1603.** Exploration of the most important political, religious, social, economic, and intellectual changes that occurred in England between the accession of Henry VII and the death of Elizabeth I. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 375L. Stuart England, 1603–1689.** Topical lecture course focusing on the most significant political, religious, social, economic, and cultural developments in seventeenth-century England. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 375M. Modern Spain, 1800 to the Present.** Political, social, and economic changes in the nineteenth century: the Second Republic; the Spanish Civil War; the Franco Era and the transition to democracy after 1975. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 376F. The United States and the Second World War.** Restricted to students in the Normandy Scholars Program. Three lecture hours a week for one semester, and approximately three weeks of study in France. Partially fulfills legislative requirement for American history.
- 376G. Hitler, Nazism, and World War II.** Restricted to students in the Normandy Scholars Program. Three lecture hours a week for one semester, and approximately three weeks of study in France.
- 679H. Honors Tutorial Course.** An individual instruction course to provide training in the methods and teaching of historical research and writing. The equivalent of three semester hours a week for two semesters. May not be included in the thirty semester hours of coursework required for the major. Prerequisite: For 679HA, upper-division standing and admission to the History Honors Program; for 679HB, History 679HA.

HUMANITIES PROGRAM

HUMANITIES: HMN

LOWER-DIVISION COURSES

- 101. Community Service.** Tutorial course, in which the student submits a report based on a community service project and appropriate supplementary reading. Conference course. Prerequisite: Consent of the humanities adviser.
- 305. Freshman Seminar.** Reading, discussion, writing, and oral reporting on various humanities topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Humanities 305 and Liberal Arts Honors 305 may not both be counted unless the topics vary. Prerequisite: Advanced placement credit for Rhetoric and Writing 306 or the equivalent.
- Topic 1: Epic Journeys.** Offered on the pass/fail basis only.
- 110, 210, 310. Internship.** Students work in a professional environment, applying analytical, communication, and other academic skills to practical work. For each semester hour of credit earned, one lecture hour and ten hours of fieldwork a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Consent of the humanities director.
- 116, 216, 316. Topics in the Humanities.** Intensive lecture or seminar course addressing topics in various disciplines in the humanities. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Consent of the humanities adviser.
- 318Q. Supervised Research.** Individual instruction. Prerequisite: Consent of the humanities adviser.

UPPER-DIVISION COURSES

- 321. Humanism and Western Civilization: The Ancient World.** A history of humanism in ancient Greece and Rome. The contributions of humanism to the values we place on the individual and human potential, democratic government, the arts, religion, and the family. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 322. Humanism and Western Civilization: The Renaissance.** A history of humanism during the European Renaissance, the thirteenth through the sixteenth century. The contributions of humanism to the values we place on the individual and human potential, democratic government, the arts, religion, and the family. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 323. Humanism and Western Civilization: The Enlightenment.** A history of humanism during the Enlightenment. The contributions of humanism to the values we place on the individual and human potential, democratic government, the arts, religion, and the family. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 125K. The Arts, Sciences, and Social Sciences.** Analysis of topics in the arts, sciences, and social sciences through reading, discussion, and lectures. One lecture hour a week for one semester. May be repeated for credit. Prerequisite: Consent of the humanities adviser.
- 350. Topics in the Humanities.** Study of the values underlying humanistic disciplines. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: A University grade point average of at least 3.50.
- Topic 2: Daily Life in Northern Europe.**
- Topic 3: Geography and Religion.** Same as Geography 358E and Middle Eastern Studies 322K (Topic 15: *Geography and Religion*). Ideas about the relationships among the natural world, myth, and ritual; principal focus on Christianity, Islam, and Judaism and their offshoots and antagonists in the Western world. Geography 356T (Topic: *Geography and Religion*) and Humanities 350 (Topic 3) may not both be counted. Prerequisite: Upper-division standing.

Topic 4: Reading Images: Icons and Beliefs. The content (not the aesthetics or the technical, compositional features) of selected Renaissance paintings, sculptures, and prints. Only one of the following may be counted: Humanities 350 (Topic 4), Religious Studies 355M, 361 (Topic 30: *Renaissance Art: Beliefs, Images, and Ideas*). Additional prerequisite: Upper-division standing.

Topic 5: Great Trials in Western History. The intellectual and historical importance of a variety of significant trials in Western history. Offered on the letter-grade basis only. Humanities 350 (Topic 5) and Liberal Arts Honors 350 (Topic: *Great Trials in Western History*) may not both be counted.

Topic 6: In Search of Meaning. Humanities 350 (Topic: *The Quest for Meaning*) and 350 (Topic 6) may not both be counted.

Topic 7: The Enlightenment. Offered on the letter-grade basis only.

Topic 8: Sites, Structures, and Images of Italy. Examination of the historical factors of religion, politics, economics, and local culture that define the significance of selected late medieval and Renaissance (twelfth through fifteenth century) buildings and the visual art they formerly housed and displayed. Taught in Italy. Additional prerequisite: Upper-division standing and consent of instructor.

358Q. Supervised Research. Individual instruction. Prerequisite: Consent of the humanities adviser.

370. Senior Tutorial Course. A tutorial program of supervised reading and writing, including an individual paper or papers in which the student draws together the central directions and discoveries of his or her studies in the humanities. Three lecture hours a week for one semester. Humanities 370 and 679HB may not both be counted. Prerequisite: Consent of the humanities adviser.

379. Conference Course. Individual instruction in a topic approved by the instructor and the humanities adviser. May be repeated for credit. Prerequisite: Upper-division standing and consent of the humanities adviser.

679H. Honors Tutorial Course. Directed reading and research, followed by the writing of a report or the creation of a project. Humanities 370 and 679HB may not both be counted. Prerequisite: For 679HA, admission to the Humanities Honors Program and consent of the humanities adviser; for 679HB, Humanities 679HA.

INTERNATIONAL RELATIONS AND GLOBAL STUDIES PROGRAM

INTERNATIONAL RELATIONS AND GLOBAL STUDIES: IRG

LOWER-DIVISION COURSE

- 301. Introduction to International Relations and Global Studies.** Introduction to the areas related to international relations. Three lecture hours a week for one semester.

UPPER-DIVISION COURSES

- 378. Capstone Research in International Relations and Global Studies.** Restricted to international relations and global studies majors. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 678H. Honors Tutorial Course.** Supervised individual research on an international relations and global studies topic. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 678HA, upper-division standing, International Relations and Global Studies 378 with a grade of at least *B*, and admission to the International Relations and Global Studies Honors Program; for 678HB, International Relations and Global Studies 678HA.

SCHUSTERMAN CENTER FOR JEWISH STUDIES

JEWISH STUDIES: J S

LOWER-DIVISION COURSES

- 301. Introduction to Jewish Studies.** Jewish literature and Jewish thought, comprising a general introduction to biblical, rabbinic, philosophic, and literary Jewish texts from the sixth century BC to the twenty-first century CE. Emphasis on hermeneutics (interpretation). Three lecture hours a week for one semester.
- 304M. Jewish Civilization: Beginnings to 1492.** Same as History 306N (Topic 10: *Jewish Civilization: Beginnings to 1492*) and Religious Studies 313M. Introduction to the history, culture, and religion of the Jewish people from around 1000 BC to the end of the medieval period. Subjects may include ancient Israel, late Second Temple sectarianism, the rise of Christianity, rabbinic Judaism, medieval Jewish philosophy, Jewish mysticism, and Hebrew poetry. Three lecture hours a week for one semester. Only one of the following may be counted: History 306N (Topic: *Jewish Civilization I*), Jewish Studies 304M, 311 (Topic: *Jewish Civilization I*), Religious Studies 313 (Topic: *Jewish Civilization I*).
- 304N. Jewish Civilization: 1492 to the Present.** Same as History 306N (Topic 11: *Jewish Civilization: 1492 to the Present*) and Religious Studies 313N. Subjects may include trends toward secularization, the emancipation of European Jewry, the emergence of American Jewry, the Holocaust, the establishment of the State of Israel, and the Arab-Israeli conflict. Three lecture hours a week for one semester. Only one of the following may be counted: Jewish Studies 304N, 311 (Topic: *Jewish Civilization: 1492 to the Present*), Religious Studies 313 (Topic: *Jewish Civilization: 1492 to the Present*).
- 311. Topics in Jewish Studies.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history.
- Topic 2: Judaism, Christianity, and Islam: An Introduction.** Same as History 304R, Islamic Studies 311 (Topic 2: *Judaism, Christianity, and Islam: An Introduction*), and Religious Studies 304. Examines the intertwined historical developments of the religions of Judaism, Christianity, and Islam, and explores the principal beliefs and practices of Jews, Christians, and Muslims.
- Topic 3: The Rise of Christianity.** Introduction to the origins and development of Christianity.

UPPER-DIVISION COURSES

- 361. Topics in Jewish Studies.** Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 5: Yiddish Drama and Film in Translation.** Same as Germanic Civilization 327E (Topic 8: *Yiddish Drama and Film in Translation*); Russian, East European, and Eurasian Studies 325 (Topic 8: *Yiddish Drama and Film in Translation*); and Slavic 324 (Topic 2: *Yiddish Drama and Film in Translation*). Jewish life in Poland and Russia before the Holocaust, and the transition to American Jewish life, as revealed in plays and films produced in Eastern Europe and in the United States. No knowledge of Yiddish is required. English 322 (Topic 34: *Yiddish Drama and Film in Translation*) and Jewish Studies 361 (Topic 5) may not both be counted. Prerequisite: Upper-division standing.
- 362. Independent Research in Jewish Studies.** Tutorially directed research in Jewish studies. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 363. Topics in the Humanities and Arts.** Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Jewish Studies 361 and 363 may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Anne Frank and Beyond.** Prerequisite: Upper-division standing.
- Topic 3: Film Adaptations of Israeli Literature.** Prerequisite: Upper-division standing.
- Topic 4: Israeli and American Jewish Fiction.** Prerequisite: Upper-division standing.
- Topic 5: Jerusalem in Israeli Literature and Cinema.** Same as Middle Eastern Studies 325 (Topic 5: *Jerusalem in Israeli Literature and Cinema*). Prerequisite: Upper-division standing.
- Topic 6: Key Yiddish Novels.** Prerequisite: Upper-division standing.

Topic 7: Love and the State in Contemporary Israeli Literature. Same as Hebrew 374 (Topic 9: *Love and the State in Contemporary Israeli Literature*) and Middle Eastern Studies 322K (Topic 27: *Love and the State in Contemporary Israeli Literature*). Prerequisite: Upper-division standing.

Topic 8: Mizrahi Writing in Israel. Same as Hebrew 346 (Topic 9: *Mizrahi Writing in Israel*) and Middle Eastern Studies 325 (Topic 6: *Mizrahi Writing in Israel*). Prerequisite: Upper-division standing and Hebrew 412L (or 312L).

Topic 10: The Sacred and the Secular in Contemporary Jewish Literature. Same as Hebrew 374 (Topic 11: *The Sacred and the Secular in Contemporary Jewish Literature*) and Middle Eastern Studies 322K (Topic 28: *The Sacred and the Secular in Contemporary Jewish Literature*). Prerequisite: Upper-division standing.

Topic 11: Women's Narratives of the Holocaust and World War II. Prerequisite: Upper-division standing.

Topic 12: Yiddish Literature. Prerequisite: Upper-division standing.

Topic 13: Jewish-American-European Fiction: The Case of Roth, Roth, and Roth. Prerequisite: Upper-division standing.

Topic 16: Israeli Cinema and Television. Same as Middle Eastern Studies 325 (Topic 2: *Israeli Cinema and Television*). Israeli culture and society as expressed in films and television programs. Three lecture hours and one two-hour film screening a week for one semester. Only one of the following may be counted: Jewish Studies 361 (Topic 6: *Israeli Cinema and Television*), 363 (Topic 16), Middle Eastern Languages and Cultures 372 (Topic 15: *Israeli Cinema and Television*), Radio-Television-Film 345 (Topic 2: *Israeli Cinema and Television*). Prerequisite: Upper-division standing.

Topic 17: Introduction to Israeli Literature. Same as Hebrew 374 (Topic 10: *Introduction to Israeli Literature*) and Middle Eastern Studies 325 (Topic 7: *Introduction to Israeli Literature*). Prerequisite: Upper-division standing.

Topic 18: Jerusalem in Israeli Literature. Same as Hebrew 346 (Topic 8: *Jerusalem in Israeli Literature*). Prerequisite: Upper-division standing and Hebrew 412L (or 312L).

Topic 19: Postmodernist Israeli Literature. Same as Hebrew 374 (Topic 8: *Postmodernist Israeli Literature*). Study of the first decades of Israeli literature. Themes include the establishment of a new state in the aftermath of the Holocaust, conflict between Israel and Arab nations, and conflict between Israelis and Palestinians. Only one of the following may be counted: Comparative Literature 323 (Topic: *Postmodernist Israeli Literature*), English 322 (Topic: *Postmodernist Israeli Literature*), Jewish Studies 363 (Topic 19), Middle Eastern Studies 325 (Topic: *Postmodernist Israeli Literature*). Prerequisite: Upper-division standing.

364. Topics in History. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Anti-Semitism in History and Literature. Jewish Studies 361 (Topic: *Anti-Semitism in History and Literature*) and 364 (Topic 1) may not both be counted. Prerequisite: Upper-division standing.

Topic 2: The Jewish Experience in the Greco-Roman World. Prerequisite: Upper-division standing.

Topic 3: The Bible and History. Same as History 372P, Middle Eastern Studies 320 (Topic 3: *The Bible and History*), and Religious Studies 354D. The critical uses of biblical and extrabiblical data in the reconstruction of the history of the biblical period. Only one of the following may be counted: Jewish Studies 361 (Topic 3: *The Bible and History*), 364 (Topic 3), Middle Eastern Languages and Cultures 341 (Topic 1: *The Bible and History*), Religious Studies 361 (Topic 14: *The Bible and History*). Prerequisite: Upper-division standing.

Topic 4: The Dead Sea Scrolls. Same as History 364G (Topic 3: *The Dead Sea Scrolls*), Middle Eastern Studies 320 (Topic 13: *The Dead Sea Scrolls*), and Religious Studies 353D. Only one of the following may be counted: History 366N (Topic 8: *The Dead Sea Scrolls*), Jewish Studies 361 (Topic 4: *The Dead Sea Scrolls*), 364 (Topic 4), Middle Eastern Languages and Cultures 341 (Topic 14: *The Dead Sea Scrolls*), Religious Studies 361 (Topic 31: *The Dead Sea Scrolls*). Prerequisite: Upper-division standing.

365. Topics in the Social Sciences. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: America and the Holocaust. Same as American Studies 321 (Topic 4: *America and the Holocaust*) and History 356R. Only one of the following may be counted: American Studies 370 (Topic: *America and the Holocaust*), History 350L (Topic: *America and the Holocaust*), 365G (Topic: *America and the Holocaust*), Jewish Studies 361 (Topic: *America and the Holocaust*), 365 (Topic 1), Liberal Arts Honors 350 (Topic: *America and the Holocaust*). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

Topic 2: Concepts in Judaic Culture. Prerequisite: Upper-division standing.

Topic 3: Jewish Communities in the Middle East and North Africa. Prerequisite: Upper-division standing.

Topic 4: Jewish Immigrant Culture in America. Prerequisite: Upper-division standing.

Topic 5: Jewish Ethics. Prerequisite: Upper-division standing.

Topic 6: Modern Israel. Same as Middle Eastern Studies 325 (Topic 1: *Modern Israel*). Only one of the following may be counted: Jewish Studies 361 (Topic 7: *Modern Israel*), 365 (Topic 6), Middle Eastern Languages and Cultures 341 (Topic 5: *Modern Israel*). Prerequisite: Upper-division standing.

Topic 7: Rome and Jerusalem. Same as Ancient History and Classical Civilization 325 (Topic 3: *Rome and Jerusalem*), History 321G, Middle Eastern Studies 320 (Topic 2: *Rome and Jerusalem*), and Religious Studies 365 (Topic 1: *Rome and Jerusalem*). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Only one of the following may be counted: Jewish Studies 361 (Topic 2: *Rome and Jerusalem*), 365 (Topic 7), Middle Eastern Languages and Cultures 341 (Topic 7: *Rome and Jerusalem*), Religious Studies 361 (Topic 24: *Rome and Jerusalem*).

Topic 8: Ethnic and Social Israeli Cinema. Same as Hebrew 374 (Topic 12: *Ethnic and Social Israeli Cinema*) and Middle Eastern Studies 325 (Topic 4: *Ethnic and Social Israeli Cinema*). Jewish Studies 365 (Topic 8) and Hebrew 346 (Topic: *Ethnic and Social Israeli Cinema*) may not both be counted. Prerequisite: Upper-division standing.

Topic 9: Jewish Mysticism. Same as Middle Eastern Studies 321K (Topic 15: *Jewish Mysticism*). Prerequisite: Upper-division standing.

375. Senior Seminar. Intensive study and research on selected topics in Jewish studies, with on-going, in-class presentations for critique by fellow students and the instructor. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and consent of the Jewish studies adviser.

679H. Honors Tutorial Course. Restricted to Jewish studies majors. Supervised individual reading and research for one semester, followed by writing a substantial honors thesis during the second semester. Prerequisite: For 679HA, admission to the Jewish Studies Honors Program; for 679HB, Jewish Studies 679HA.

TERESA LOZANO LONG INSTITUTE OF LATIN AMERICAN STUDIES

LATIN AMERICAN STUDIES: LAS

LOWER-DIVISION COURSES

301. Key Ideas and Issues in Latin America. Same as History 306N (Topic 3: *Key Ideas and Issues in Latin America*). Broad introductory course to acquaint students with the main areas of interest in Latin American studies. Three lecture hours a week for one semester.

310. General Topics in Latin American Studies. Topics that serve as an introduction to Latin America within the framework of different disciplines. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary.

Topic 1: Latin American Civilization: The Colonial Experience. Same as History 310K. A broad survey of the political, economic, social, and cultural aspects of the Latin American past, stressing both that area's achievements and its enduring problems. Only one of the following may be counted: History 346K, Latin American Studies 310 (Topic 1), 366 (Topic 2: *Latin America before 1810*).

Topic 2: Latin American Civilization: The National Experience. Same as History 310L. A broad survey of the political, social, and cultural aspects of the Latin American past. Only one of the following may be counted: History 346L, Latin American Studies 310 (Topic 2), 366 (Topic 3: *Latin America since 1810*).

Topic 3: Introduction to Mesoamerican Archaeology. Same as Anthropology 310L (Topic 1: *Introduction to Mesoamerican Archaeology*). Introduction to ancient Mesoamerica from the time of emerging social inequality in the formative period until the Spanish conquest of Mexico-Tenochtitlán in the sixteenth century.

Topic 4: Anthropology of Latin America. Same as Anthropology 310L (Topic 3: *Anthropology of Latin America*). Provides a framework for understanding contemporary concerns in Latin America.

319. Geography of Latin America. Same as Geography 319. Adaptations to population growth and spatial integration in cultural landscapes of great natural and ethnic diversity; problems of frontiers and cities. Three lecture hours a week for one semester.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Latin American Studies. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in Latin American studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

322. Topics in Latin American Studies. Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. Additional hours are required for some topics; these topics are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Latin American Studies 322 and 330 may not both be counted unless the topics vary; Latin American Studies 322 and 370P may not both be counted unless the topics vary; Latin American Studies 322 and 370S may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Hispanic Images and Counterimages. Same as Mexican American Studies 374 (Topic 9: *Hispanic Images and Counterimages*) and Radio-Television-Film 359S (Topic 1: *Hispanic Images and Counterimages*). The critical analysis of Hispanic images in media. Three lecture hours and one two-hour film screening a week for one semester. Latin American Studies 322 (Topic 1) and Radio-Television-Film 359 (Topic 1: *Hispanic Images and Counterimages*) may not both be counted. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 2: Latino Audiences. Same as Mexican American Studies 374 (Topic 10: *Latino Audiences*) and Radio-Television-Film 365 (Topic 2: *Latino Audiences*). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 3: Mass Media and Ethnic Groups. Same as Mexican American Studies 374 (Topic 11: *Mass Media and Ethnic Groups*) and Radio-Television-Film 365 (Topic 3: *Mass Media and Ethnic Groups*). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 4: Feature Writing. Same as Mexican American Studies 374 (Topic 6: *Feature Writing*). Procedures in gathering material for feature stories, with stress on newspaper articles; analysis of reader appeal; study of feature story structure; development of style by practice in writing feature stories. Journalism 327 and Latin American Studies 322 (Topic 4) may not both be counted. Prerequisite: Consent of instructor and a passing score on the College of Communication Grammar, Spelling and Punctuation Test.

Topic 7: International Communication: Third World Issues. Same as Mexican American Studies 374 (Topic 17: *International Communication: Third World Issues*) and Radio-Television-Film 342 (Topic 3: *Third World Issues*). Prerequisite: For radio-television-film majors, upper-division standing; consent of instructor; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 9: Business in Emerging Markets. Same as International Business 372 (Topic 2: *Business in Emerging Markets*) and Middle Eastern Studies 322K (Topic 4: *Business in Emerging Markets*). Only one of the following may be counted: International Business 372 (Topic: *Business in Developing Countries*), Latin American Studies 322 (Topic 9), 322 (Topic: *Business in Developing Countries*), Middle Eastern Studies 322K (Topic: *Business in Developing Countries*). Prerequisite: Upper-division standing.

Topic 10: Mass Media and Minorities. Same as Mexican American Studies 374 (Topic 22: *Mass Media and Minorities*). Survey of minority communication problems: alienation, fragmentation, media access; criticism and feedback for minority groups based on racial/ethnic background, age, sex, disability, social or economic class, and sexual orientation. Journalism 340C (Topic 1: *Mass Media and Minorities*) and Latin American Studies 322 (Topic 10) may not both be counted. Prerequisite: Upper-division standing.

Topic 11: Narrative Journalism. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 335, Latin American Studies 322 (Topic 11: *Latino Community Journalism*), 322 (Topic 11: *Narrative Journalism*), Mexican American Studies 374 (Topic 4: *Latino Community Journalism*), 374 (Topic 4: *Narrative Journalism*). Prerequisite: Upper-division standing and consent of instructor.

Topic 12: Latinos and Media. Same as Mexican American Studies 374 (Topic 24: *Latinos and Media*) and Radio-Television-Film 365 (Topic 6: *Latinos and Media*). Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 13: Latin American Theatre and Drama. Same as Theatre and Dance 357T (Topic 1: *Latin American Theatre and Drama*). Prerequisite: Upper-division standing and consent of instructor.

Topic 14: Journalism in Latin America. Same as Journalism 367E. Study of the practice of journalism in Latin America. Survey of the region, including historical, political, economic, cultural, ethnic, and geographical aspects. Prerequisite: Upper-division standing and a major in journalism, or consent of instructor.

324L. Topics in Latin American Anthropology. Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 2: Indians of Mexico and Guatemala. Same as Anthropology 322M (Topic 5: *Indians of Mexico and Guatemala*). Prerequisite: Upper-division standing.

Topic 10: The Civilization of the Maya. Same as Anthropology 360K. Maya prehistory and history: the archaeological record, codices and inscriptions, and Spanish conquest writings. Prerequisite: Upper-division standing.

- Topic 11: The Civilizations of Ancient Mexico.** Same as Anthropology 361K. Mexican cultures from earliest prehistory to the European conquest. Prerequisite: Anthropology 302 and six semester hours of any upper-division coursework in social science.
- Topic 13: Colonial Latin American Archaeology.** Same as Anthropology 324L (Topic 32: *Colonial Latin American Archaeology*). Focuses on the Spanish colonies in Latin America.
- Topic 14: The Politics of Race and Violence in Brazil.** Same as Anthropology 324L (Topic 37: *The Politics of Race and Violence in Brazil*) and African and African American Studies 374E (Topic 2: *The Politics of Race and Violence in Brazil*). Prerequisite: Upper-division standing.
- 325. Topics in Latin American Sociology.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Society of Modern Mexico.** Same as Sociology 335 and Urban Studies 354 (Topic 2: *Society of Modern Mexico*). Family, community, industrialization, and urbanization in modern Mexico.
- Topic 2: Social Change in Developing Nations.** Overview of changing social structure in the Third World. Latin American Studies 325 (Topic 2) and Sociology 324K may not both be counted. Prerequisite: Upper-division standing.
- Topic 3: Politics and Culture of Contemporary Mexico.** Same as Mexican American Studies 374 (Topic 28: *Politics and Culture of Contemporary Mexico*), Government 337M (Topic 5: *Politics and Culture of Contemporary Mexico*), and Sociology 338M. Introduction to the contemporary Mexican political system and the ways in which political change and democratization are recasting the political and civic culture of contemporary Mexico. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- 326. Topics in Latin American Music.** Three lecture hours a week for one semester, with one laboratory hour a week if required. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Music of Mexico and the Caribbean.** Same as Music 334 (Topic 1: *Music of Mexico and the Caribbean*). Prerequisite: Upper-division standing.
- Topic 2: Music of Latin America.** Same as Music 334 (Topic 2: *Music of Latin America*). Prerequisite: Upper-division standing.
- Topic 3: Music of Brazil and Argentina.** Same as Music 334 (Topic 3: *Music of Brazil and Argentina*). Prerequisite: Upper-division standing.
- Topic 4: Music of Andean Countries.** Same as Music 334 (Topic 4: *Music of Andean Countries*). Prerequisite: Upper-division standing.
- 327. Topics in Latin American Art History.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Modern Latin American Art.** Same as Art History 341L. Development and sources of twentieth-century art in the Caribbean and Central and South America. Latin American Studies 322 (Topic: *Modern Latin American Art*) and 327 (Topic 1) may not both be counted.
- Topic 2: Modern Art of Mexico.** Same as Art History 341K. Art of the nineteenth and twentieth centuries, particularly muralism and its sources, surrealism, and later movements.
- Topic 3: Mesoamerican Art.** Same as Art History 347L. Mesoamerican art and architectural styles, with emphasis on the function of art in culture.
- Topic 4: Contemporary Latin American Art, 1960 to the Present.** Same as Art History 366N (Topic 1: *Contemporary Latin American Art, 1960 to the Present*). Painting, sculpture, media art, and environments.
- Topic 5: Maya Art and Architecture.** Same as Art History 347M. The development and function of art and architectural form in the classic Maya culture.
- Topic 6: Art and Archaeology of Ancient Peru.** Same as Art History 347K. The growth of civilization in South America from the earliest decorated textiles, pottery, and ceremonial buildings to the imperial Inca style.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Latin American Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in Latin American studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330. Topics in Latin American Geography.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Latin American Studies 322 and 330 may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Landscapes of Mexico and Caribbean America.** Same as Geography 341K. The natural regions and cultural landscapes of Mexico, Central America, and the West Indies. Prerequisite: Upper-division standing.
- Topic 3: Geography of South America.** Same as Geography 323K. Ecological, cultural, and political challenges of the densely populated margins and sparsely populated interior frontier of South America; appropriate development and conservation pathways. Prerequisite: Upper-division standing.
- 337M. Topics in Latin American Politics.** Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Parties, Elections, and Democracy in Latin America.** Same as Government 337M (Topic 2: *Parties, Elections, and Democracy in Latin America*). Prerequisite: Six semester hours of lower-division coursework in government.

- Topic 3: Politics in South America.** Same as Government 337M (Topic 3: *Politics in South America*). Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 4: United States–Mexican Border Relations.** Same as Mexican American Studies 374 (Topic 14: *United States–Mexican Border Relations*) and Government 337M (Topic 4: *United States–Mexican Border Relations*). Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 5: Introduction to Latin American Government and Politics.** Same as Government 328L. An introductory survey of Latin American political systems: governmental organization, political processes, and current problems. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 6: Political Development in Eastern Europe and Latin America.** Same as Government 365N (Topic 4: *Political Development in Eastern Europe and Latin America*). Latin American Studies 337M (Topic 6) and Russian, East European, and Eurasian Studies 335 (Topic 7: *Political Development in Eastern Europe and Latin America*) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 8: Latino Politics.** Same as Mexican American Studies 374 (Topic 15: *Latino Politics*) and Government 370K (Topic 2: *Latino Politics*). Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 9: The Military in Politics.** Only one of the following may be counted: Government 365N (Topic 3: *The Military in Politics*); Latin American Studies 337M (Topic 9); Russian, East European, and Eurasian Studies 335 (Topic 10: *The Military in Politics*). Prerequisite: Six semester hours of lower-division coursework in government.
- Topic 10: Political Transition in Europe and Latin America.** Same as Government 365N (Topic 11: *Political Transition in Europe and Latin America*). European Studies 361 (Topic 21: *Political Transition in Europe and Latin America*) and Latin American Studies 337M (Topic 10) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.
- 350. Epic of Latin America.** Introduction to Latin American culture; main topics and debates in Latin American studies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 351C. Quechua Language and Society in the Andes I.** Same as Anthropology 351C. Beginning spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 324L (Topic: *Quechua Language and Society in the Andes*), 381C, 389 (Topic: *Quechua Language and Society in the Andes*), Latin American Studies 324L (Topic: *Quechua Language and Society in the Andes*), 351C, 381C, 391 (Topic: *Quechua Language and Society in the Andes*). Prerequisite: Upper-division standing.
- 351D. Quechua Language and Society in the Andes II.** Same as Anthropology 351D. Intermediate spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 324L (Topic: *Advanced Quechua Language and Society in the Andes*), 381D, 389 (Topic: *Advanced Quechua Language and Society in the Andes*), Latin American Studies 324L (Topic: *Advanced Quechua Language and Society in the Andes*), 351D, 381D, 391 (Topic: *Advanced Quechua Language and Society in the Andes*). Prerequisite: Upper-division standing.
- 355. Topics in Latin American Economics.** Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Development Problems and Policies in Latin America.** Same as Economics 355 and Urban Studies 351 (Topic 1: *Development Problems and Policies in Latin America*). Description of the Latin American economy; business and market organization; problem of growth (involving credit, public finance, trade, investment aspects). Prerequisite: Economics 304K with a grade of at least C.
- 359H. Honors Seminar.** An interdisciplinary discussion and writing seminar. Lectures and supervised individual research and writing of a substantial paper on a special topic. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, and consent of instructor and the Latin American studies honors adviser.
- 366. Topics in Latin American History.** Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Colonial Latin America.** Same as History 346K. Basic survey course, designed as an introduction to Latin American history in the colonial period. Only one of the following may be counted: History 310K, Latin American Studies 310 (Topic 1: *Latin American Civilization: The Colonial Experience*), 366 (Topic 2). Prerequisite: Upper-division standing.
- Topic 3: Modern Latin America.** Same as History 346L. Continuation of Latin American Studies 366 (Topic 2). Only one of the following may be counted: History 310L, Latin American Studies 310 (Topic 2: *Latin American Civilization: The National Experience*), 366 (Topic 3). Prerequisite: Upper-division standing.
- Topic 4: Black Movements in the Caribbean.** Same as African and African American Studies 374 (Topic 7: *Black Movements in the Caribbean*) and History 350L (Topic 6: *Black Movements in the Caribbean*). Prerequisite: Upper-division standing.

- Topic 7: Resistance, Rebellion, and Revolution in Colonial Spanish America.** Same as History 350L (Topic 19: *Resistance, Rebellion, and Revolution in Colonial Spanish America*). History 350L (Topic: *Resistance, Rebellion, and Revolution in Colonial Spanish America*) and Latin American Studies 366 (Topic 7) may not both be counted. Prerequisite: Upper-division standing.
- Topic 8: The Mexican Revolution, 1910–1920.** Same as History 352L. An analytical examination of the initial decade of the Mexican Revolution, the first of the twentieth-century nationalist social revolutions; examines through lectures and discussion the historical antecedents and the political, economic, social, and intellectual elements of the upheaval. Prerequisite: Upper-division standing or consent of instructor.
- Topic 9: Revolution in Twentieth-Century Latin America.** Same as History 346S. An introduction to recent Latin American history, with emphasis on phenomena that explain the apparent social unrest and political instability of the region. History 366N (Topic: *Revolution in Twentieth-Century Latin America*) and Latin American Studies 366 (Topic 9) may not both be counted. Prerequisite: Upper-division standing.
- Topic 12: Modern Brazil.** Same as History 328M. The social, economic, political, and cultural forces that have shaped modern Brazil. Prerequisite: Upper-division standing.
- Topic 13: Revolution in Modern Latin America.** Same as History 346R. Comparison of the Mexican and Cuban revolutions and of their challenges to inter-American relations. Prerequisite: Upper-division standing.
- Topic 15: History of Modern Central America.** Same as History 350L (Topic 42: *History of Modern Central America*). History 363K (Topic: *History of Modern Central America*) and Latin American Studies 366 (Topic 15) may not both be counted. Prerequisite: Upper-division standing.
- Topic 16: Culture and Identity in Colonial Mexico.** Same as History 350L (Topic 44: *Culture and Identity in Colonial Mexico*). Prerequisite: Upper-division standing.
- Topic 17: The Cuban Revolution and the United States.** Same as History 346T. The special economic and political relationship between the United States and Cuba from 1898 to 1967; and how the 1959 revolution affected the Cold War relationships between East and West, North and South. History 366N (Topic: *The Cuban Revolution and the US*) and Latin American Studies 366 (Topic 17) may not both be counted. Prerequisite: Upper-division standing.
- 370P. Topics in Luso-Brazilian Literature, Culture, Civilization, and Linguistics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Latin American Studies 322 and 370P may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Brazil: An Introduction.** Same as Portuguese 375 (Topic 5: *Brazil: An Introduction*). Prerequisite: Six semester hours of upper-division coursework in Portuguese.
- 370S. Topics in Hispanic Literature, Culture, Civilization, and Linguistics.** Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Latin American Studies 322 and 370S may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 3: Civilization of Spanish America.** Same as Spanish 322K. Survey of the social and cultural evolution of the Spanish American countries. Taught in Spanish. Three lecture hours and one laboratory/discussion hour a week for one semester. Prerequisite: Spanish 612 or 312L.
- Topic 4: Introduction to Spanish American Literature through Modernism.** Same as Spanish 325K. Main literary trends and principal writers in Spanish America from the sixteenth century through Modernism. Taught in Spanish. Prerequisite: Spanish 612 or 312L.
- Topic 5: Introduction to Spanish American Literature since Modernism.** Same as Spanish 325L. Main literary trends and principal writers in Spanish America since Modernism. Taught in Spanish. Prerequisite: Spanish 612 or 312L.
- Topic 6: Spanish-Language Literature of the Southwest.** Same as Mexican American Studies 374 (Topic 13: *Spanish-Language Literature of the Southwest*) and Spanish 341K. The study of culturally valuable Chicano literary texts; related readings in Mexican and other Hispanic works. Taught in Spanish. Prerequisite: Spanish 612 or 312L.
- Topic 7: The Mexican Revolution.** Same as Spanish 350 (Topic 1: *The Mexican Revolution*). Taught in Spanish. Prerequisite: Spanish 322K or 328.
- Topic 9: Contemporary Spanish American Poetry.** Same as Spanish 364K (Topic 2: *Contemporary Spanish American Poetry*). Taught in Spanish. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- Topic 10: Contemporary Spanish American Prose.** Same as Spanish 365K. Novels, short stories, and essays from different regions of Hispanic America. Taught in Spanish. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- Topic 11: Comparative Structure of English and Spanish.** Same as Spanish 367K (Topic 2: *Comparative Structure of English and Spanish*). Taught in Spanish. Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.
- Topic 12: Translation Principles and Practice.** Same as Spanish 367K (Topic 4: *Translation Principles and Practice*). Taught in Spanish. Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.
- Topic 13: Essay in Mexican Thought and Culture.** Same as Mexican American Studies 374 (Topic 21: *Essay in Mexican Thought and Culture*) and Spanish 350 (Topic 2: *Essay in Mexican Thought and Culture*). Prerequisite: Spanish 322K or 328.
- Topic 14: Interpretation Principles and Practice.** Same as Spanish 367K (Topic 5: *Interpretation Principles and Practice*). Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.

Topic 15: Literary Translation: Analysis and Criticism. Same as Spanish 367K (Topic 6: *Literary Translation: Analysis and Criticism*). Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.

Topic 16: Writing the Conquest. Same as Spanish 374K (Topic 1: *Writing the Conquest*). The forging of Spanish-American civilization and many of its persistent dilemmas seen through the examination of an exuberant and original body of narrative texts. Latin American Studies 370S (Topic 16) and Spanish 350 (Topic: *Writing the Conquest*) may not both be counted. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

Topic 17: The Indian in Spanish American Literature. Same as Spanish 350 (Topic 4: *The Indian in Spanish American Literature*). Prerequisite: Spanish 322K or 328.

Topic 18: Latin American Civilization: The New World. Same as Spanish 350 (Topic 5: *Latin American Civilization: The New World*). Prerequisite: Spanish 322K or 328.

Topic 19: Business in Hispanic Life and Culture. Same as Spanish 350 (Topic 10: *Business in Hispanic Life and Culture*). Prerequisite: Spanish 322K or 328.

Topic 20: Mexican and Mexican American Ballads. Same as Mexican American Studies 374 (Topic 29: *Mexican and Mexican American Ballads*) and Spanish 350 (Topic 11: *Mexican and Mexican American Ballads*). Examines the *corrido* genre in the nineteenth and twentieth centuries, with special focus on its pivotal role in the Mexican Revolution and in the collision between cultures in the border zone. Prerequisite: Spanish 322K or 328.

379. Conference Course in Latin American Studies. Supervised individual study of selected problems in Latin American studies. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the undergraduate adviser in Latin American studies.

679H. Honors Tutorial Course. For honors candidates in Latin American studies. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Prerequisite: For Latin American Studies 679HA, Latin American Studies 359H, admission to the Latin American Studies Honors Program, and written consent of the Latin American Studies Honors Program adviser; for 679HB, Latin American Studies 679HA.

DEPARTMENT OF LINGUISTICS

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

AMERICAN SIGN LANGUAGE: ASL

LOWER-DIVISION COURSES

601C. Accelerated First-Year American Sign Language. Introduction to American Sign Language and its vocabulary and sentence structure. A six-hour course comparable to American Sign Language 506 and 507. Six lecture hours a week for one semester. Offered on the letter-grade basis only. American Sign Language 601C and 506 may not both be counted. American Sign Language 601C and 507 may not both be counted.

506 (TCCN: SGNL 1501). First-Year American Sign Language I. Introduction to American Sign Language. Five lecture hours a week for one semester. Offered on the letter-grade basis only. American Sign Language 601C and 506 may not both be counted.

507 (TCCN: SGNL 1502). First-Year American Sign Language II. American Sign Language vocabulary and basic sentence structure. Five lecture hours a week for one semester. Offered on the letter-grade basis only. American Sign Language 601C and 507 may not both be counted. Prerequisite: American Sign Language 506 with a grade of at least C-.

611C. Accelerated Second-Year American Sign Language. Focuses on developing conversational skills in American Sign Language and introduces American Sign Language literature and folklore. A six-hour course comparable to American Sign Language 312K and 312L. Six lecture hours a week for one semester. Offered on the letter-grade basis only. American Sign Language 611C and 312K may not both be counted. American Sign Language 611C and 312L may not both be counted. Prerequisite: American Sign Language 601C or 507 with a grade of at least C-.

312K (TCCN: SGNL 2301). Second-Year American Sign Language I. Development of conversational skills in American Sign Language. Three lecture hours a week for one semester. Offered on the letter-grade basis only. American Sign Language 611C and 312K may not both be counted. Prerequisite: American Sign Language 601C or 507 with a grade of at least C-.

312L (TCCN: SGNL 2302). Second-Year American Sign Language II. Further development of conversational skills in American Sign Language; introduction to American Sign Language literature and folklore. Three lecture hours a week for one semester. Offered on the letter-grade basis only. American Sign Language 611C and 312L may not both be counted. Prerequisite: American Sign Language 312K with a grade of at least C-.

UPPER-DIVISION COURSES

320. Advanced American Sign Language Conversation. Advanced development of conversational skills in American Sign Language, with a focus on sophisticated linguistic structures and important issues in deaf studies. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: American Sign Language 611C or 312L with a grade of at least C-.

- 326. Sign Languages and Signing Communities.** Same as Linguistics 350 (Topic 3: *Sign Languages and Signing Communities*). Examines the grammar of signed languages, their use in signing communities, and the acquisition of signed languages as first languages. No knowledge of American Sign Language is required. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.
- 336. Introduction to Sign Interpreting.** Introduction to sign interpreting from American Sign Language into English and from English into American Sign Language. Topics include the ethics of interpreting and the problems that arise in interpreting in different social and professional situations. Three lecture hours a week for one semester. Prerequisite: American Sign Language 611C, or credit or registration for American Sign Language 312L.
- 350. Topics in American Sign Language, Deaf Studies, and Interpreting.** Three lecture hours a week for one semester. Additional hours may be required for some topics; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 357. Undergraduate Research.** Supervised research experience. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and American Sign Language 506 with a grade of at least C.

LINGUISTICS: LIN

LOWER-DIVISION COURSES

- 306. Introduction to the Study of Language.** Survey of major areas of linguistics: sound systems, grammatical structures, historical development of languages, language families and linguistic universals, dialect differences and their social significance. Three lecture hours a week for one semester.
- 312. Interdisciplinary Approaches to Language.** An interdisciplinary and multidisciplinary introduction to the manifold aspects of language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 313. Language and Computers.** Natural language processing, including spam filtering, dialogue systems, spelling and grammar correction, forensic linguistics, cryptography, and machine translation. Studies how these systems function, the difficulties in implementing them, and implications of such technologies for society. Three lecture hours a week for one semester. Linguistics 312 (Topic: *Language and Computers*) and 313 may not both be counted.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Linguistics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Linguistics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321L. American English.** Same as English 321L. An overview of the historical development of English in the Americas. Attention to regional, social, and ethnic differences, and their implications for public education. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 322. Gypsy Language and Culture.** Linguistic introduction to Romani; relationship to languages of India; history from 280 BC; modern dialects and international standard language; history and culture as reflected in the language. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 372 (Topic 13: *Gypsy Language and Culture*); Linguistics 322; Russian, East European, and Eurasian Studies 325 (Topic 1: *Gypsy Language and Culture*).
- 323L. English as a World Language.** Same as English 323L. An account of the spread of English around the world; national, social, and regional varieties. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 325. Introduction to the Study of African American English.** Same as African and African American Studies 320 (Topic 1: *Introduction to the Study of African American English*). African American English: evolution, contemporary styles, comparison with other ethnic dialects; attitudes toward African American English, effects in education, controversy about dialect differences and intellectual abilities. Three lecture hours a week for one semester.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Linguistics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Linguistics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 340. Automata Theory.** Introduction to the formal study of automata and of related formal languages. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 341, 341H, Linguistics 340. Prerequisite: Computer Science 336 or consent of instructor.
- 344K. Phonetics: The Production and Perception of Speech Sounds.** Articulation and transcription of speech sounds; distinctive feature systems; physiological and acoustical aspects of phonetics; common phonological processes. Three lecture hours a week for one semester. Prerequisite: Linguistics 306.
- 345. Language Change and Language Variation.** Three lecture hours a week for one semester. Prerequisite: Linguistics 344K.

- 350. Special Topics in the Study of Language.** Nontechnical examination of social, educational, and political problems to which current linguistic knowledge is relevant. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Language and the Brain.** Same as Communication Sciences and Disorders 350. Prerequisite: Upper-division standing.
- Topic 2: Language and Thought.** Study of the relation between language and thought, using a cognitive science approach. Examines the words people use and how people think; whether language structure affects thought; and some cognitive aspects of language. Prerequisite: Upper-division standing.
- Topic 3: Sign Languages and Signing Communities.** Same as American Sign Language 326. Examines the grammar of signed languages, their use in signing communities, and the acquisition of signed languages as first languages. No knowledge of American Sign Language is required. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.
- Topic 4: Language and People.** Areas in language and linguistics that most directly impact people, such as language and ethnicity, language and nation-building, and language politics. Prerequisite: Upper-division standing.
- 357. Undergraduate Research.** Supervised research experience. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and Linguistics 306 with a grade of at least C-.
- 358Q. Supervised Research.** Supervised student-initiated research. Individual instruction. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and Linguistics 306 with a grade of at least C-.
- 358S. Fundamentals of Speech Science.** Same as Communication Sciences and Disorders 358S. Neurophysiological mechanisms underlying the encoding and decoding of speech. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Sciences and Disorders 315S, 396N, Linguistics 315, 358S. Prerequisite: Upper-division standing and a University grade point average of at least 2.25.
- 360K. Introduction to English Grammar.** Introduction to the study of the syntactic structure of modern English from the viewpoint of generative grammar. Three lecture hours a week for one semester. English 360K and Linguistics 360K may not both be counted. Prerequisite: Upper-division standing.
- 364M. History of the English Language.** Same as English 364M. Development of sounds, forms, and vocabulary of the English language from its origins to the present. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 372K. Sound Patterns: From Sound to Word.** Methods and principles of analyzing the sound systems of languages. Three lecture hours a week for one semester. Prerequisite: Linguistics 344K.
- 372L. Syntax and Semantics: The Structure and Meaning of Utterances.** Methods and principles of describing the syntactic systems of languages. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Linguistics 306.
- 373. Topics in Linguistics and Related Disciplines.** Introduction to the study of the areas of linguistics that involve other disciplines, such as sociolinguistics, psycholinguistics, mathematical methods in linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Child Language.** Examination of theory and research concerning the development of language in the child. Linguistics 373 (Topic 1) and Psychology 333P may not both be counted. Prerequisite: Upper-division standing.
- Topic 2: Language and Speech in American Society.** Same as American Studies 321 (Topic 2: *Language and Speech in American Society*), Anthropology 325N, and Sociology 352M (Topic 3: *Language and Speech in American Society*). Prerequisite: Upper-division standing, and Anthropology 302, 305, 307, or Linguistics 306.
- Topic 3: Language in Culture and Society.** Same as Anthropology 325M and Sociology 352M (Topic 4: *Language in Culture and Society*). Language as a cultural resource; functions of language in society; survey of language communities. Prerequisite: Anthropology 302, 305, 307, or Linguistics 306; or consent of instructor.
- Topic 5: Sociolinguistics of German-Speaking Society.** Same as Germanic Civilization 327E (Topic 3: *Sociolinguistics of German-Speaking Society*). Prerequisite: Upper-division standing or consent of instructor.
- Topic 6: The Structure of the German Language.** Same as German 369 (Topic 1: *The Structure of the German Language*). Only one of the following may be counted: German 369 (Topic: *German Dialectology*), Linguistics 373 (Topic 6), 373 (Topic: *German Dialectology*). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen semester hours of lower-division coursework in German and six semester hours of coursework in linguistics.
- Topic 7: Introduction to Cognitive Science.** Same as Cognitive Science 360 (Topic 1: *Introduction to Cognitive Science*) and Philosophy 365 (Topic 2: *Introduction to Cognitive Science*). Prerequisite: Upper-division standing.

Topic 8: German and English: Historical Perspectives. Same as Anthropology 320L (Topic 8: *German and English: Historical Perspectives*), Classical Civilization 348 (Topic 8: *German and English: Historical Perspectives*), and Germanic Civilization 327E (Topic 9: *German and English: Historical Perspectives*). Only one of the following may be counted: Anthropology 320L (Topic 9: *The German Language: Historical Perspectives*), Classical Civilization 348 (Topic 9: *The German Language: Historical Perspectives*), German 369 (Topic 4: *The German Language: Historical Perspectives*), Linguistics 373 (Topic 8), 373 (Topic 9: *The German Language: Historical Perspectives*). Prerequisite: For English majors, completion of at least thirty semester hours of coursework, including English 316K or the equivalent; for others, upper-division standing.

Topic 9: The German Language: Historical Perspectives. Same as Anthropology 320L (Topic 9: *The German Language: Historical Perspectives*), Classical Civilization 348 (Topic 9: *The German Language: Historical Perspectives*), and German 369 (Topic 4: *The German Language: Historical Perspectives*). Only one of the following may be counted: Anthropology 320L (Topic 8: *German and English: Historical Perspectives*), Classical Civilization 348 (Topic 8: *German and English: Historical Perspectives*), Germanic Civilization 327E (Topic 9: *German and English: Historical Perspectives*), Linguistics 373 (Topic 8: *German and English: Historical Perspectives*), 373 (Topic 9). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics.

374M. Sociolinguistics. Same as Anthropology 374M. An in-depth treatment of current interests in sociolinguistic research literature. Subjects include language and gender; social, regional, and ethnic dialects of American English; language use in African American communities; language and identity in a pluralistic society; and language, literacy, and education. Three lecture hours a week for one semester. Prerequisite: Anthropology 302 or Linguistics 306.

379. Conference Course in Linguistics. Supervised individual study of selected problems in linguistics. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in linguistics.

679H. Honors Tutorial Course. Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. May be repeated for credit. Prerequisite: For 679HA, admission to the Linguistics Honors Program; for 679HB, Linguistics 679HA.

DEPARTMENT OF MIDDLE EASTERN STUDIES

Before enrolling for the first time in any language offered by the Department of Middle Eastern Studies, all students with knowledge of the language, however acquired, must be tested to determine the course for which they should register. Information about the tests is available from the departmental undergraduate adviser. The Department of Middle Eastern Studies considers

students educated in a Middle Eastern language beyond the elementary school level to be native speakers of that language.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ARABIC: ARA

LOWER-DIVISION COURSES

601C. Intensive Arabic I. Not open to native speakers of Arabic. First semester of intensive Arabic language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Arabic 601C, 506, 508. Arabic 601C and 106C may not both be counted.

305. Arabic Tutorial. The basics of the Arabic language. Individual instruction. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Consent of the faculty coordinator.

506 (TCCN: ARAB 1511). First-Year Arabic I. Not open to native speakers of Arabic. First semester of Arabic language instruction. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 601C, 506, 508. Prerequisite: Credit or registration for Arabic 106C.

106C. Conversation for First-Year Arabic I. Not open to native speakers of Arabic. One lecture hour a week for one semester. Arabic 601C and 106C may not both be counted. Prerequisite: Credit or registration for Arabic 506.

507 (TCCN: ARAB 1512). First-Year Arabic II. Not open to native speakers of Arabic. Continuation of Arabic 506. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 507, 509, 611C. Prerequisite: Arabic 506 and 106C with a grade of at least C in each, and credit or registration for Arabic 107C.

107C. Conversation for First-Year Arabic II. Not open to native speakers of Arabic. One lecture hour a week for one semester. Arabic 107C and 611C may not both be counted. Prerequisite: Arabic 506 and 106C with a grade of at least C in each, and credit or registration for Arabic 507.

508. Modern Standard Arabic I. Designed to provide students with basic competence in Modern Standard Arabic, targeting the skills of speaking, reading, writing, and listening. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 601C, 506, 508.

509. Modern Standard Arabic II. Continuation of Arabic 508. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 507, 509, 611C. Prerequisite: Arabic 508 with a grade of at least C.

611C. Intensive Arabic II. Not open to native speakers of Arabic. Second semester of intensive Arabic language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Arabic 507, 509, 611C. Arabic 107C and 611C may not both be counted. Prerequisite: Arabic 506 and 106C with a grade of at least C in each, or Arabic 601C with a grade of at least C.

- 112C. Conversation for Second-Year Arabic I.** Not open to native speakers of Arabic. One lecture hour a week for one semester. Arabic 112C and 621K may not both be counted. Prerequisite: Arabic 507 and 107C with a grade of at least C in each, and credit or registration for Arabic 512K.
- 112D. Conversation for Second-Year Arabic II.** Not open to native speakers of Arabic. One lecture hour a week for one semester. Arabic 112D and 621L may not both be counted. Prerequisite: Arabic 112C and 512K (or 412K) with a grade of at least C in each, and credit or registration for Arabic 512L.
- 512K. Second-Year Arabic I.** Not open to native speakers of Arabic. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 412K, 512K, 413, 621K. Prerequisite: Arabic 507 and 107C with a grade of at least C in each, and credit or registration for Arabic 112C.
- 512L. Second-Year Arabic II.** Not open to native speakers of Arabic. Continuation of Arabic 512K. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 412L, 512L, 414, 621L. Prerequisite: Arabic 112C and 512K (or 412K) with a grade of at least C in each, and credit or registration for Arabic 112D.
- 413. Intermediate Modern Standard Arabic I.** Designed to build upon the skills covered in Arabic 509, with a focus on attaining an intermediate level of proficiency. Four lecture hours a week for one semester. Only one of the following may be counted: Arabic 412K, 512K, 413, 621K. Prerequisite: Arabic 509 with a grade of at least C.
- 414. Intermediate Modern Standard Arabic II.** Continuation of Arabic 413. Four lecture hours a week for one semester. Only one of the following may be counted: Arabic 412L, 512L, 414, 621L. Prerequisite: Arabic 413 with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Arabic.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework counted in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 120C. Third-Year Arabic I Conversation Practice.** Not open to native speakers of Arabic. Guided conversation practice, with a special focus on Egyptian and Levantine Arabic. One lecture hour a week for one semester. Arabic 120C and 531K may not both be counted. Prerequisite: Arabic 112D and 512L (or 412L) with a grade of at least C in each, and credit or registration for Arabic 420K.
- 120D. Third-Year Arabic II Conversation Practice.** Not open to native speakers of Arabic. Guided conversation practice, with a special focus on Egyptian and Levantine Arabic. One lecture hour a week for one semester. Arabic 120D and 531L may not both be counted. Prerequisite: Arabic 120C and 420K (or 320K) with a grade of at least C in each, and credit or registration for Arabic 420L.
- 420K. Third-Year Arabic I.** Not open to native speakers of Arabic. Four lecture hours a week for one semester. Arabic 320K, 420K and 531K may not both be counted. Prerequisite: Arabic 112D and 512L (or 412L) with a grade of at least C in each, and credit or registration for Arabic 120C.
- 420L. Third-Year Arabic II.** Not open to native speakers of Arabic. Continuation of Arabic 420K. Four lecture hours a week for one semester. Arabic 320L, 420L and 531L may not both be counted. Prerequisite: Arabic 120C and 420K (or 320K) with a grade of at least C in each, and credit or registration for Arabic 120D.
- 321. Introduction to Arabic Dialects.** Introduction to Arabic as spoken throughout the Arab world. Three lecture hours a week for one semester. Prerequisite: Arabic 420K (or 320K) with a grade of at least C.
- 621K. Intensive Arabic III.** Not open to native speakers of Arabic. Third semester of intensive Arabic language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Arabic 412K, 512K, 413, 621K. Arabic 112C and 621K may not both be counted. Prerequisite: Arabic 507 and 107C with a grade of at least C in each, or Arabic 611C with a grade of at least C.
- 621L. Intensive Arabic IV.** Not open to native speakers of Arabic. Fourth semester of intensive Arabic language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Arabic 412L, 512L, 414, 621L. Arabic 112D and 621L may not both be counted. Prerequisite: Arabic 112C and 512K (or 412K) with a grade of at least C in each, or 621K with a grade of at least C.
- 322. Introduction to Arabic Literature.** Same as Islamic Studies 372 (Topic 15: *Introduction to Arabic Literature*). General survey of major themes, genres, and artists in the Arabic literary tradition from the sixth century to the modern era. Three lecture hours a week for one semester. Only one of the following may be counted: Arabic 322, Comparative Literature 323 (Topic: *Introduction to Arabic Literature*), Middle Eastern Studies 323K (Topic 5: *Introduction to Arabic Literature*), Women's and Gender Studies 340 (Topic: *Introduction to Arabic Literature*). Prerequisite: Upper-division standing.
- 322K. Levantine Arabic.** Not open to native speakers of Arabic. Three lecture hours a week for one semester. Arabic 413K and 322K may not both be counted. Prerequisite: Arabic 512L (or 412L) or 621L with a grade of at least C.
- 325K. Egyptian Arabic.** Not open to native speakers of Arabic. Introduction to the Egyptian dialect of Arabic. Three lecture hours a week for one semester. Prerequisite: Arabic 512L (or 412L) or 621L with a grade of at least C.
- 327K. Advanced Spoken Media Arabic I.** Development of the specialized vocabulary and skills needed in the media or public policy sectors of the Arab-speaking world. Three lecture hours a week for one semester. Prerequisite: Arabic 420L or 531L with a grade of at least B-.

- 327L. Advanced Spoken Media Arabic II.** Development of the specialized vocabulary and skills needed in the media or public policy sectors of the Arab-speaking world. Three lecture hours a week for one semester. Prerequisite: Arabic 327K with a grade of at least B-.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Arabic.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 130D. Arabic across Disciplines.** Students read and discuss Arabic language materials related to the subject matter of another designated course. One lecture hour a week for one semester. Prerequisite: Upper-division standing, Arabic 420L (or 320L), and consent of instructor.
- 531K. Intensive Arabic V.** Not open to native speakers of Arabic. Five lecture hours a week for one semester. Arabic 320K, 420K and 531K may not both be counted. Arabic 120C and 531K may not both be counted. Prerequisite: Arabic 112D and 512L (or 412L) with a grade of at least C in each, or Arabic 621L with a grade of at least C.
- 531L. Intensive Arabic VI.** Not open to native speakers of Arabic. Sixth semester of intensive Arabic language instruction. Five lecture hours a week for one semester. Arabic 320L, 420L and 531L may not both be counted. Arabic 120D and 531L may not both be counted. Prerequisite: Arabic 120C and 420K (or 320K) with a grade of at least C in each, or Arabic 531K with a grade of at least C.
- 360K. Arabic Literature in Translation.** Study of selected Arabic works in translation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.
- Topic 4: Loyalty and Rebellion in Arabic Literature.** Same as Islamic Studies 372 (Topic 16: *Loyalty and Rebellion in Arabic Literature*) and Middle Eastern Studies 321K (Topic 12: *Loyalty and Rebellion in Arabic Literature*).
- Topic 5: Memory and Identity in Ancient Arabia.** Same as Islamic Studies 372 (Topic 17: *Memory and Identity in Ancient Arabia*) and Middle Eastern Studies 321K (Topic 13: *Memory and Identity in Ancient Arabia*).
- Topic 6: The Arabian Nights.** Same as Islamic Studies 372 (Topic 18: *The Arabian Nights*). Arabic 360K (Topic 6) and Middle Eastern Studies 323K (Topic 6: *The Arabian Nights*) may not both be counted.
- 360L. Topics in Arabic Language, Literature, and Culture.** Close textual study of prose or poetry in Arabic. Some topics may focus on the cultural impact of literature and language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Arabic 420L (or 320L), and Arabic 322 or 360K.
- Topic 2: Arab Women Poets.** Same as Islamic Studies 372 (Topic 14: *Arab Women Poets*) and Middle Eastern Studies 323K (Topic 4: *Arab Women Poets*).
- Topic 3: Politics of Court Literature.** Same as Islamic Studies 372 (Topic 19: *Politics of Court Literature*) and Middle Eastern Studies 321K (Topic 14: *Politics of Court Literature*).
- Topic 4: Translating Arabic Texts.** Only one of the following may be counted: Arabic 360L (Topic 4), 380C (Topic 8: *Translating Arabic Texts*), Middle Eastern Studies 381 (Topic 39: *Translating Arabic Texts*).
- 369. Conference Course in Arabic Language and Literature.** Supervised individual study of selected problems in Arabic language or literature. May be repeated for credit. Prerequisite: Nine semester hours of upper-division coursework in Arabic and consent of instructor.
- 372. Topics in Arab History and Society.** Study of selected aspects of Arabic culture, such as calligraphy, architecture, archaeology, textiles, folklife, music, and folklore. Taught in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the language requirement for any bachelor's degree. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Classical Islamic Studies.** Same as Islamic Studies 340 (Topic 3: *Classical Islamic Studies*) and Middle Eastern Studies 321K (Topic 11: *Classical Islamic Studies*). Prerequisite: Upper-division standing.
- Topic 2: The Qur'an.** Same as Islamic Studies 340 (Topic 2: *The Qur'an*), Middle Eastern Studies 320 (Topic 14: *The Qur'an*), and Religious Studies 325G. The history, language and style, and themes of the Qur'an. Arabic 372 (Topic 2) and Middle Eastern Languages and Cultures 340 (Topic 3: *The Qur'an*) may not both be counted. Prerequisite: Upper-division standing.
- 679H. Honors Tutorial Course.** Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Prerequisite: For 679HA, admission to the Arabic Language and Literature Honors Program; for 679HB, Arabic 679HA.

HEBREW: HEB

LOWER-DIVISION COURSES

- 601C. Intensive Hebrew I.** First semester of intensive Hebrew language instruction. Six lecture hours a week for one semester. Hebrew 601C and 506 may not both be counted. Hebrew 601C and 507 may not both be counted.
- 506. First-Year Hebrew I.** Not open to native speakers of Hebrew. Modern Israeli Hebrew, including the writing system, basic sentence structure, vocabulary, and simple conversation. Five lecture hours a week for one semester. Hebrew 601C and 506 may not both be counted.
- 507. First-Year Hebrew II.** Not open to native speakers of Hebrew. Continuation of Hebrew 506. Five lecture hours a week for one semester. Hebrew 601C and 507 may not both be counted. Prerequisite: Hebrew 506 with a grade of at least C.

- 508. First-Year Biblical Hebrew I.** Introduction to biblical Hebrew, including basic lexicon and grammar. Emphasis on reading the Hebrew Bible; selected texts may include the Creation, the Tower of Babel, the binding of Isaac, the Joseph story, and the David and Goliath story. Five lecture hours a week for one semester.
- 509. First-Year Biblical Hebrew II.** Builds on material covered in Hebrew 508. A thorough study of biblical Hebrew grammar, with emphasis on the verb system and the rules of sentence structure. Selected texts include biblical chapters of poetic, legal, and prophetic nature, such as the Ten Commandments, chapters from the Book of Leviticus, Psalms 23, 27, and 121, Proverbs 8 and 10, Isaiah 53, and Jeremiah 31. Five lecture hours a week for one semester. Prerequisite: Hebrew 508 with a grade of at least C.
- 611C. Intensive Hebrew II.** Second semester of intensive Hebrew language instruction. Six lecture hours a week for one semester. Hebrew 611C and 312K, 412K may not both be counted. Hebrew 611C and 312L, 412L may not both be counted. Prerequisite: Hebrew 601C or 507 with a grade of at least C.
- 412K. Second-Year Hebrew I.** Not open to native speakers of Hebrew. Modern Israeli Hebrew. Continuation of Hebrew 507 with expanded grammar and conversation. Four lecture hours a week for one semester. Hebrew 611C and 312K, 412K may not both be counted. Prerequisite: Hebrew 507 with a grade of at least C.
- 412L. Second-Year Hebrew II.** Not open to native speakers of Hebrew. Continuation of Hebrew 412K, with emphasis on conversation and composition. Four lecture hours a week for one semester. Hebrew 611C and 312L, 412L may not both be counted. Prerequisite: Hebrew 412K (or 312K) with a grade of at least C.
- 313K. Second-Year Biblical Hebrew I.** Builds on material covered in Hebrew 508 and 509. A thorough study of biblical Hebrew grammar, with emphasis on nominal structures and complex sentence structures. Students are introduced to the historical development of biblical Hebrew phonology and to the commonly used reference works. Selected texts include large sections from Genesis, the Book of Judges, the Book of Job, and the Scroll of Ruth. Three lecture hours a week for one semester. Prerequisite: Hebrew 509 with a grade of at least C.
- 313L. Second-Year Biblical Hebrew II.** Builds on material covered in Hebrew 313K. A study of biblical Hebrew, with an introduction to Mishnaic and Modern Hebrew. Focus on the historical development of the Hebrew language. The texts studied are taken from the Hebrew Bible and the Mishnah, and include poems from the Golden Age in Spain and Modern Hebrew poetry and prose. Three lecture hours a week for one semester. Prerequisite: Hebrew 313K with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Hebrew.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321. Hebrew Grammar.** Phonology, morphology, and syntax of Hebrew. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Hebrew 325 and 346 with a grade of at least C in each.
- 322. Introduction to Hebrew Literature.** Discussion of the forms, subjects, and ideals of Hebrew literature. All texts are in Hebrew. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Hebrew 325 and 346 with a grade of at least C in each.
- 325. Advanced Conversation and Composition.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Hebrew 611C or 412L (or 312L) with a grade of at least C.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Hebrew.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 346. Topics in Hebrew Language, Literature, and Culture.** The principal Hebrew prose and poetic works of the nineteenth and twentieth centuries; and contemporary literature from 1948 to the present. Conducted in Hebrew. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Hebrew 412L (or 312L).
- Topic 7: Hebrew via Popular Culture.**
- Topic 8: Jerusalem in Israeli Literature.** Same as Jewish Studies 363 (Topic 18: *Jerusalem in Israeli Literature*).
- Topic 9: Mizrahi Writing in Israel.** Same as Jewish Studies 363 (Topic 8: *Mizrahi Writing in Israel*) and Middle Eastern Studies 325 (Topic 6: *Mizrahi Writing in Israel*).
- 369. Conference Course in Hebrew Language and Literature.** Supervised individual study of selected problems in Hebrew language or literature. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in Hebrew and consent of instructor.

372. Topics in Hebrew Culture. Study of selected aspects of Hebrew culture, such as calligraphy, architecture, archaeology, textiles, folklife, music, and folklore. Taught in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. No more than six hours of Hebrew 372 and 374 may be counted toward the major for the Bachelor of Arts with a major in Hebrew language and literature. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

374. Hebrew Literature in Translation. Study of selected works of Hebrew literature in English translation and Israeli film and television programs with English subtitles. Taught in English. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. No more than six hours of Hebrew 372 and 374 may be counted toward the major for the Bachelor of Arts with a major in Hebrew language and literature. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

Topic 8: Postmodernist Israeli Literature. Same As Jewish Studies 363 (Topic 19: *Postmodernist Israeli Literature*). Study of the first decades of Israeli literature. Themes include the establishment of a new state in the aftermath of the Holocaust, conflict between Israel and Arab nations, and conflict between Israelis and Palestinians. Only one of the following may be counted: Comparative Literature 323 (Topic: *Postmodernist Israeli Literature*), English 322 (Topic: *Postmodernist Israeli Literature*), Hebrew 374 (Topic 8), Middle Eastern Studies 325 (Topic: *Postmodernist Israeli Literature*).

Topic 9: Love and the State in Contemporary Israeli Literature. Same as Jewish Studies 363 (Topic 7: *Love and the State in Contemporary Israeli Literature*) and Middle Eastern Studies 322K (Topic 27: *Love and the State in Contemporary Israeli Literature*).

Topic 10: Introduction to Israeli Literature. Same as Jewish Studies 363 (Topic 17: *Introduction to Israeli Literature*) and Middle Eastern Studies 325 (Topic 7: *Introduction to Israeli Literature*).

Topic 11: The Sacred and the Secular in Contemporary Jewish Literature. Same as Jewish Studies 363 (Topic 10: *The Sacred and the Secular in Contemporary Jewish Literature*) and Middle Eastern Studies 322K (Topic 28: *The Sacred and the Secular in Contemporary Jewish Literature*).

Topic 12: Ethnic and Social Israeli Cinema. Same as Jewish Studies 365 (Topic 8: *Ethnic and Social Israeli Cinema*) and Middle Eastern Studies 325 (Topic 4: *Ethnic and Social Israeli Cinema*). Hebrew 346 (Topic: *Ethnic and Social Israeli Cinema*) and 374 (Topic 12) may not both be counted.

679H. Honors Tutorial Course. Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Must be taken for special honors in addition to the major requirement. Prerequisite: For 679HA, upper-division standing and admission to the Hebrew Language and Literature Honors Program; for 679HB, Hebrew 679HA with a grade of A.

ISLAMIC STUDIES: ISL

LOWER-DIVISION COURSES

310. Introduction to Islam. Same as History 306N (Topic 7: *Introduction to Islam*) and Religious Studies 319. The beliefs, theology, history, and main social and legal institutions of Islam, including the concept of God and society, the role of women, and Islamic government and movements. Three lecture hours a week for one semester. Islamic Studies 310 and Middle Eastern Studies 310 (Topic 1: *Introduction to Islam*) may not both be counted.

311. Topics in Islamic Studies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Introduction to the Middle East: Religious, Cultural, and Historical Foundations. A survey of the history and civilization of the Middle East from the sixth to the fourteenth century.

Topic 2: Judaism, Christianity, and Islam: An Introduction. Same as History 304R, Jewish Studies 311 (Topic 2: *Judaism, Christianity, and Islam: An Introduction*), and Religious Studies 304. Examines the intertwined historical developments of the religions of Judaism, Christianity, and Islam, and explores the principal beliefs and practices of Jews, Christians, and Muslims.

UPPER-DIVISION COURSES

340. Topics in Islam. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Prophet of Islam: His Life and Times. Same as History 364G (Topic 2: *Prophet of Islam: His Life and Times*) and Religious Studies 325. A detailed study of the prophet Muhammad's life and message, and of the means by which his life was recorded and popularized. Only one of the following may be counted: History 366N (Topic 6: *Prophet of Islam: His Life and Times*), Islamic Studies 340 (Topic 1), Middle Eastern Studies 321K (Topic 6: *Prophet of Islam: His Life and Times*). Prerequisite: Upper-division standing.

Topic 2: The Qur'an. Same as Middle Eastern Studies 320 (Topic 14: *The Qur'an*), Arabic 372 (Topic 2: *The Qur'an*), and Religious Studies 325G. The history, language and style, and themes of the Qur'an. Islamic Studies 340 (Topic 2) and Middle Eastern Languages and Cultures 340 (Topic 3: *The Qur'an*) may not both be counted. Prerequisite: Upper-division standing.

Topic 3: Classical Islamic Studies. Same as Arabic 372 (Topic 1: *Classical Islamic Studies*) and Middle Eastern Studies 321K (Topic 11: *Classical Islamic Studies*). Prerequisite: Upper-division standing.

369. Conference Course in Islamic Studies. Supervised individual study of selected problems in Islamic studies. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

372. Topics in Islamic Cultures. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: The Islamic Middle East in the Visual Arts. Same as Middle Eastern Studies 322K (Topic 16: *The Islamic Middle East in the Visual Arts*) and Religious Studies 358 (Topic 6: *The Islamic Middle East in the Visual Arts*). Prerequisite: Upper-division standing.

Topic 2: Veiling in the Muslim World. Same as Asian Studies 372 (Topic 14: *Veiling in the Muslim World*), Middle Eastern Studies 322K (Topic 17: *Veiling in the Muslim World*), Religious Studies 358 (Topic 5: *Veiling in the Muslim World*), and Women's and Gender Studies 340 (Topic 11: *Veiling in the Muslim World*). Prerequisite: Upper-division standing.

Topic 3: Popular Iranian Rituals and Traditions. Same as Asian Studies 361 (Topic 18: *Popular Iranian Rituals and Traditions*), Middle Eastern Studies 322K (Topic 18: *Popular Iranian Rituals and Traditions*), and Religious Studies 358 (Topic 7: *Popular Iranian Rituals and Traditions*). Adoption of old Persian cultural heritage into Islamic practices, past and present. Prerequisite: Upper-division standing.

Topic 10: Sufism: Islamic Mysticism and Spirituality. Same as Middle Eastern Studies 320 (Topic 16: *Sufism: Islamic Mysticism and Spirituality*) and Religious Studies 358 (Topic 4: *Sufism: Islamic Mysticism and Spirituality*). Muslim debates on Sufism; the historical development of Sufi beliefs regarding theology, religious laws, expression, and popular social practices. Only one of the following may be counted: Islamic Studies 340 (Topic: *Sufism: Islamic Mysticism and Spirituality*), 372 (Topic 10), Middle Eastern Studies 320 (Topic: *Sufism: History and Doctrines*). Prerequisite: Upper-division standing.

Topic 11: Sacred and Ceremonial Textiles. Same as Anthropology 324L (Topic 29: *Sacred and Ceremonial Textiles*). Textiles and material objects indigenous to the Islamic world, and what they reveal about the culture of various Islamic societies. Islamic Studies 372 (Topic 11) and Middle Eastern Studies 322K (Topic 24: *Sacred and Ceremonial Textiles*) may not both be counted. Prerequisite: Upper-division standing.

Topic 12: Muslim Women: Past and Present I. Survey of the role of women in Islamic societies from the Middle Ages to the eighteenth century, with a glimpse into modern times. Islamic Studies 372 (Topic 12) and Middle Eastern Studies 321K (Topic 9: *Muslim Women: Past and Present I*) may not both be counted. Prerequisite: Upper-division standing.

Topic 13: Muslim Women: Past and Present II. Survey of the role of women in the modern Muslim world, with a glimpse into historical developments within Islamic societies. Islamic Studies 372 (Topic 13) and Middle Eastern Studies 321K (Topic 10: *Muslim Women: Past and Present II*) may not both be counted. Prerequisite: Upper-division standing.

Topic 14: Arab Women Poets. Same as Arabic 360L (Topic 2: *Arab Women Poets*) and Middle Eastern Studies 323K (Topic 4: *Arab Women Poets*). Prerequisite: Arabic 420L (or 320L), and Arabic 322 or 360K.

Topic 15: Introduction to Arabic Literature. Same as Arabic 322. General survey of major themes, genres, and artists in the Arabic literary tradition from the sixth century to the modern era. Only one of the following may be counted: Comparative Literature 323 (Topic: *Introduction to Arabic Literature*), Islamic Studies 372 (Topic 15), Middle Eastern Studies 323K (Topic 5: *Introduction to Arabic Literature*), Women's and Gender Studies 340 (Topic: *Introduction to Arabic Literature*). Prerequisite: Upper-division standing.

Topic 16: Loyalty and Rebellion in Arabic Literature. Same as Arabic 360K (Topic 4: *Loyalty and Rebellion in Arabic Literature*) and Middle Eastern Studies 321K (Topic 12: *Loyalty and Rebellion in Arabic Literature*). Prerequisite: Upper-division standing.

Topic 17: Memory and Identity in Ancient Arabia. Same as Arabic 360K (Topic 5: *Memory and Identity in Ancient Arabia*) and Middle Eastern Studies 321K (Topic 13: *Memory and Identity in Ancient Arabia*). Prerequisite: Upper-division standing.

Topic 18: The Arabian Nights. Same as Arabic 360K (Topic 6: *The Arabian Nights*). Islamic Studies 372 (Topic 18) and Middle Eastern Studies 323K (Topic 6: *The Arabian Nights*) may not both be counted. Prerequisite: Upper-division standing.

Topic 19: Politics of Court Literature. Same as Arabic 360L (Topic 3: *Politics of Court Literature*) and Middle Eastern Studies 321K (Topic 14: *Politics of Court Literature*). Prerequisite: Arabic 420L (or 320L), and Arabic 322 or 360K.

373. Topics in Middle Eastern Islamic Cultures. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

679H. Honors Tutorial Course. Supervised individual reading for one semester, following by research and writing to produce a substantial paper on a specific topic in Islamic studies to be completed during the second semester. Prerequisite: For 679HA, upper-division standing and admission to the Islamic Studies Honors Program; for 679HB, Islamic Studies 679HA.

MIDDLE EASTERN STUDIES: MES

LOWER-DIVISION COURSES

- 301K. Introduction to the Middle East: Religious, Cultural, and Historical Foundations.** Same as History 306K. A survey of the history and civilization of the Middle East from the sixth to the fourteenth century. Three lecture hours a week for one semester. Middle Eastern Languages and Cultures 312K and Middle Eastern Studies 301K may not both be counted.
- 301L. Introduction to the Middle East: Adjustment and Change in Modern Times.** Same as Government 314 (Topic 3: *Introduction to the Middle East: Adjustment and Change in Modern Times*) and History 306N (Topic 5: *Introduction to the Middle East: Adjustment and Change in Modern Times*). The responses of the societies of the Middle East and North Africa (Turkey, Iran, Afghanistan, Israel, and the Arab world) to Western cultural and political challenges, primarily since about 1800. Three lecture hours a week for one semester. Middle Eastern Languages and Cultures 312L and Middle Eastern Studies 301L may not both be counted.
- 106, 206, 306. Introduction to Middle Eastern Languages and Cultures.** One, two, or three lecture hours a week for one semester.
- 310. Topics in Middle Eastern Studies.** Studies of areas and issues in the Middle East and North Africa. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Middle Eastern Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded to work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. Topics in the Ancient Middle East.** Analysis of significant social and cultural events that shaped Western culture: domestication, cities, kinship, religion, writing, crafts (pottery, metallurgy), and the wheel. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 320, 321K, 322K, 323K, 328. Prerequisite: Varies with the topic.

Topic 2: Rome and Jerusalem. Same as Ancient History and Classical Civilization 325 (Topic 3: *Rome and Jerusalem*), History 321G, Jewish Studies 365 (Topic 7: *Rome and Jerusalem*), and Religious Studies 365 (Topic 1: *Rome and Jerusalem*). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Only one of the following may be counted: Jewish Studies 361 (Topic 2: *Rome and Jerusalem*), Middle Eastern Languages and Cultures 341 (Topic 7: *Rome and Jerusalem*), Middle Eastern Studies 320 (Topic 2), Religious Studies 361 (Topic 24: *Rome and Jerusalem*). Prerequisite: Upper-division standing.

Topic 3: The Bible and History. Same as History 372P, Jewish Studies 364 (Topic 3: *The Bible and History*), and Religious Studies 354D. The critical uses of biblical and extrabiblical data in the reconstruction of the history of the biblical period. Only one of the following may be counted: Jewish Studies 361 (Topic 3: *The Bible and History*), Middle Eastern Languages and Cultures 341 (Topic 1: *The Bible and History*), Middle Eastern Studies 320 (Topic 3), Religious Studies 361 (Topic 14: *The Bible and History*). Prerequisite: Upper-division standing.

Topic 4: Survey of Ancient Near Eastern Art. Same as Art History 325. The art of Mesopotamia, Anatolia, Syria, and Persia to the Islamic period. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

Topic 5: Biblical Archaeology. Middle Eastern Languages and Cultures 341 (Topic 3: *Biblical Archaeology*) and Middle Eastern Studies 320 (Topic 5) may not both be counted.

Topic 9: Material Culture of Ancient Israel. Middle Eastern Languages and Cultures 341 (Topic 9: *Material Culture of Ancient Israel*) and Middle Eastern Studies 320 (Topic 9) may not both be counted. Prerequisite: Upper-division standing.

Topic 13: The Dead Sea Scrolls. Same as History 364G (Topic 3: *The Dead Sea Scrolls*), Jewish Studies 364 (Topic 4: *The Dead Sea Scrolls*), and Religious Studies 353D. Only one of the following may be counted: History 366N (Topic 8: *The Dead Sea Scrolls*), Jewish Studies 361 (Topic 4: *The Dead Sea Scrolls*), Middle Eastern Languages and Cultures 341 (Topic 14: *The Dead Sea Scrolls*), Middle Eastern Studies 320 (Topic 13), Religious Studies 361 (Topic 31: *The Dead Sea Scrolls*). Prerequisite: Upper-division standing.

Topic 14: The Qur'an. Same as Arabic 372 (Topic 2: *The Qur'an*), Islamic Studies 340 (Topic 2: *The Qur'an*), and Religious Studies 325G. The history, language and style, and themes of the Qur'an. Middle Eastern Languages and Cultures 340 (Topic 3: *The Qur'an*) and Middle Eastern Studies 320 (Topic 14) may not both be counted. Prerequisite: Upper-division standing.

Topic 16: Sufism: Islamic Mysticism and Spirituality. Same as Islamic Studies 372 (Topic 10: *Sufism: Islamic Mysticism and Spirituality*) and Religious Studies 358 (Topic 4: *Sufism: Islamic Mysticism and Spirituality*). Muslim debates on Sufism; the historical development of Sufi beliefs regarding theology, religious laws, expression, and popular social practices. Only one of the following may be counted: Islamic Studies 340 (Topic: *Sufism: Islamic Mysticism and Spirituality*), Middle Eastern Studies 320 (Topic 16), 320 (Topic: *Sufism: History and Doctrines*). Prerequisite: Upper-division standing.

321K. Topics in the Middle East from 600 to 1800. Detailed studies in the civilizations and the cultures of Middle Eastern peoples from the rise of Islam to modern times. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 320, 321K, 322K, 323K, 328. Prerequisite: Varies with the topic.

Topic 1: Concepts in Judaic Culture. Only one of the following may be counted: English 379N (Topic 3: *Concepts in Judaic Culture*), Linguistics 373 (Topic 4: *Concepts in Judaic Culture*), Middle Eastern Languages and Cultures 341 (Topic 6: *Concepts in Judaic Culture*), Middle Eastern Studies 321K (Topic 1). Prerequisite: Upper-division standing.

Topic 3: History of Iran to 1800. Same as History 331G. A survey of the social, economic, and religious components unique to Iran from the pre-Islamic empire of the Achaemenids through the development of Iran as a medieval and premodern Islamic state. Middle Eastern Studies 321K (Topic 3) and Religious Studies 361 (Topic 23: *History of Iran to 1800*) may not both be counted. Prerequisite: Upper-division standing.

Topic 4: Islamic Spain and North Africa to 1492. Same as History 375D and Religious Studies 345. An introduction to the impact of Islam on Spain and North Africa, with emphasis on social, economic, and cultural development. Middle Eastern Studies 321K (Topic 4) and Religious Studies 361 (Topic 13: *Islamic Spain and North Africa to 1492*) may not both be counted. Prerequisite: Upper-division standing.

Topic 7: Medieval Islam: Faith and History. Same as History 350L (Topic 34: *Medieval Islam: Faith and History*) and Religious Studies 358 (Topic 2: *Medieval Islam: Faith and History*). Middle Eastern Studies 321K (Topic 7) and Religious Studies 361 (Topic 28: *Medieval Islam: Faith and History*) may not both be counted. Prerequisite: Upper-division standing.

Topic 11: Classical Islamic Studies. Same as Arabic 372 (Topic 1: *Classical Islamic Studies*) and Islamic Studies 340 (Topic 3: *Classical Islamic Studies*). Prerequisite: Upper-division standing.

Topic 12: Loyalty and Rebellion in Arabic Literature. Same as Arabic 360K (Topic 4: *Loyalty and Rebellion in Arabic Literature*) and Islamic Studies 372 (Topic 16: *Loyalty and Rebellion in Arabic Literature*). Prerequisite: Upper-division standing.

Topic 13: Memory and Identity in Ancient Arabia. Same as Arabic 360K (Topic 5: *Memory and Identity in Ancient Arabia*) and Islamic Studies 372 (Topic 17: *Memory and Identity in Ancient Arabia*). Prerequisite: Upper-division standing.

Topic 14: Politics of Court Literature. Same as Arabic 360L (Topic 3: *Politics of Court Literature*) and Islamic Studies 372 (Topic 19: *Politics of Court Literature*). Prerequisite: Arabic 420L (or 320L), and Arabic 322 or 360K.

Topic 15: Jewish Mysticism. Same as Jewish Studies 365 (Topic 9: *Jewish Mysticism*). Prerequisite: Upper-division standing.

Topic 16: Muslim Travelers. Prerequisite: Upper-division standing.

322K. Topics in the Contemporary Middle East. Detailed studies of particular areas or issues in societies and cultures of the modern Middle East and North Africa. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 320, 321K, 322K, 323K, 328. Some topics partially fulfill legislative requirement for American history. Prerequisite: Varies with the topic.

Topic 2: Islam: Its History and Political Dynamics. Same as History 350L (Topic 1: *Islam: Its History and Political Dynamics*). Prerequisite: Upper-division standing.

Topic 3: Geography of the Middle East. Same as Geography 328. Major elements of physical and social environment in the region extending from Egypt to Afghanistan. Prerequisite: Upper-division standing.

Topic 4: Business in Emerging Markets. Same as International Business 372 (Topic 2: *Business in Emerging Markets*) and Latin American Studies 322 (Topic 9: *Business in Emerging Markets*). Only one of the following may be counted: International Business 372 (Topic: *Business in Developing Countries*), Latin American Studies 322 (Topic: *Business in Developing Countries*), Middle Eastern Studies 322K (Topic 4), 322K (Topic: *Business in Developing Countries*). Prerequisite: Upper-division standing.

Topic 7: The Politics of Oil. Same as Government 365P. The national and international political complexities of petroleum; relationship of trends in petroleum economics to international political alignments. Prerequisite: Six semester hours of lower-division coursework in government.

Topic 10: Imperialism and Nationalism in the Middle East. Same as History 331M. An interpretative analysis of European imperialism in the Middle East; the origin and the rise of nationalism in the Arab world, Turkey, Iran, and Israel. Prerequisite: Upper-division standing.

Topic 12: Oriental Carpets: Art as Culture. Same as Asian Studies 372 (Topic 20: *Oriental Carpets: Art as Culture*). Middle Eastern Studies 322K (Topic 12) and 324K (Topic: *Oriental Carpets: Art as Culture*) may not both be counted.

Topic 13: Social Change in Developing Nations. Overview of changing social structure in the Third World.

Topic 14: Development Communication. Same as Radio-Television-Film 342 (Topic 6: *Development Communication*). Asian Studies 361 (Topic 17: *Development Communication*) and Middle Eastern Studies 322K (Topic 14) may not both be counted. Prerequisite: For radio-television-film majors, upper-division standing; consent of instructor; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

Topic 15: Geography and Religion. Same as Geography 358E and Humanities 350 (Topic 3: *Geography and Religion*). Ideas about the relationships among the natural world, myth, and ritual; principal focus on Christianity, Islam, and Judaism and their offshoots and antagonists in the Western world. Geography 356T (Topic: *Geography and Religion*) and Middle Eastern Studies 322K (Topic 15) may not both be counted. Prerequisite: Upper-division standing.

Topic 16: The Islamic Middle East in the Visual Arts. Same as Islamic Studies 372 (Topic 1: *The Islamic Middle East in the Visual Arts*) and Religious Studies 358 (Topic 6: *The Islamic Middle East in the Visual Arts*). Prerequisite: Upper-division standing.

Topic 17: Veiling in the Muslim World. Same as Asian Studies 372 (Topic 14: *Veiling in the Muslim World*), Islamic Studies 372 (Topic 2: *Veiling in the Muslim World*), Religious Studies 358 (Topic 5: *Veiling in the Muslim World*), and Women's and Gender Studies 340 (Topic 11: *Veiling in the Muslim World*). Prerequisite: Upper-division standing.

Topic 18: Popular Iranian Rituals and Traditions. Same as Asian Studies 361 (Topic 18: *Popular Iranian Rituals and Traditions*), Islamic Studies 372 (Topic 3: *Popular Iranian Rituals and Traditions*), and Religious Studies 358 (Topic 7: *Popular Iranian Rituals and Traditions*). Adoption of old Persian cultural heritage into Islamic practices, past and present. Prerequisite: Upper-division standing.

Topic 19: Middle Eastern Magic, Religion, and Folklore. Same as Anthropology 325L (Topic 10: *Middle Eastern Magic, Religion, and Folklore*). English 325L (Topic 10: *Middle Eastern Magic, Religion, and Folklore*) and Middle Eastern Studies 322K (Topic 19) may not both be counted. Prerequisite: Upper-division standing.

Topic 25: Autobiography: A Modern Literary Species. Same as African and African American Studies 374 (Topic 25: *Autobiography: A Modern Literary Species*) and Comparative Literature 323 (Topic 3: *Autobiography: A Modern Literary Species*). Only one of the following may be counted: English 379N (Topic 5: *Autobiography: A Modern Literary Species*), Middle Eastern Languages and Cultures 374 (Topic 2: *Autobiography: A Modern Literary Species*), Middle Eastern Studies 322K (Topic 25). Prerequisite: Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing.

Topic 26: Self-Revelation in Women's Writing. Same as African and African American Studies 374 (Topic 26: *Self-Revelation in Women's Writing*), Comparative Literature 323 (Topic 4: *Self-Revelation in Women's Writing*), and Women's and Gender Studies 340 (Topic 14: *Self-Revelation in Women's Writing*). Only one of the following may be counted: English 376L (Topic 9: *Self-Revelation in Women's Writing*), Middle Eastern Languages and Cultures 374 (Topic 3: *Self-Revelation in Women's Writing*), Middle Eastern Studies 322K (Topic 26). Prerequisite: Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing.

Topic 27: Love and the State in Contemporary Israeli Literature. Same as Hebrew 374 (Topic 9: *Love and the State in Contemporary Israeli Literature*) and Jewish Studies 363 (Topic 7: *Love and the State in Contemporary Israeli Literature*). Prerequisite: Upper-division standing.

Topic 28: The Sacred and the Secular in Contemporary Jewish Literature. Same as Hebrew 374 (Topic 11: *The Sacred and the Secular in Contemporary Jewish Literature*) and Jewish Studies 363 (Topic 10: *The Sacred and the Secular in Contemporary Jewish Literature*). Prerequisite: Upper-division standing.

Topic 30: Arab-Israeli Politics. Same as Government 320L. In-depth study of domestic, regional, and international factors involved in politics in the Middle East, including simulation of diplomatic interaction in the Arab-Israeli conflict. Prerequisite: Upper-division standing.

323K. Topics in the Modern Arab World. Aspects of contemporary Arab societies and their cultural heritage. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 320, 321K, 322K, 323K, 328. Prerequisite: Varies with the topic.

Topic 3: Arab Cinema. Three lecture hours and one two-hour film screening a week for one semester. Middle Eastern Languages and Cultures 372 (Topic 17: *Arab Cinema*) and Middle Eastern Studies 323K (Topic 3) may not both be counted. Prerequisite: Upper-division standing.

Topic 4: Arab Women Poets. Same as Arabic 360L (Topic 2: *Arab Women Poets*) and Islamic Studies 372 (Topic 14: *Arab Women Poets*). Prerequisite: Arabic 420L (or 320L), and Arabic 322 or 360K.

324K. Topics in Modern Iran. Aspects of contemporary Iranian society and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Iranian Women Writers. Same as Persian 361 (Topic 3: *Iranian Women Writers*) and Women's and Gender Studies 340 (Topic 10: *Iranian Women Writers*). Prerequisite: Upper-division standing.

Topic 2: Iranian Literature in Exile. Same as Persian 361 (Topic 4: *Iranian Literature in Exile*). Prerequisite: Upper-division standing.

- Topic 3: Images of the West and Westerners in Persian Fiction.** Same as Persian 361 (Topic 1: *Images of the West and Westerners in Persian Fiction*). Prerequisite: Upper-division standing.
- Topic 4: Iranian Film and Fiction.** Same as Persian 361 (Topic 5: *Iranian Film and Fiction*). Middle Eastern Studies 324K (Topic 4) and 381 (Topic 7: *Iranian Film and Fiction*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 5: Modern Iran.** Same as History 331L. The development of modern Iran; special attention is given to the impact of the West, the constitutional movement, nationalism, the oil crisis, and the Islamic Revolution of 1979. Middle Eastern Studies 323L and 324K (Topic 5) may not both be counted. Prerequisite: Upper-division standing.
- 325. Topics in Modern Israel.** Aspects of contemporary Israeli society and its cultural heritage. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Modern Israel.** Same as Jewish Studies 365 (Topic 6: *Modern Israel*). Only one of the following may be counted: Jewish Studies 361 (Topic 7: *Modern Israel*), Middle Eastern Languages and Cultures 341 (Topic 5: *Modern Israel*), Middle Eastern Studies 325 (Topic 1). Prerequisite: Upper-division standing.
- Topic 2: Israeli Cinema and Television.** Same as Jewish Studies 363 (Topic 16: *Israeli Cinema and Television*). Three lecture hours and one two-hour film screening a week for one semester. Only one of the following may be counted: Jewish Studies 361 (Topic 6: *Israeli Cinema and Television*), Middle Eastern Languages and Cultures 372 (Topic 15: *Israeli Cinema and Television*), Middle Eastern Studies 325 (Topic 2), Radio-Television-Film 345 (Topic 2: *Israeli Cinema and Television*). Prerequisite: Upper-division standing.
- Topic 4: Ethnic and Social Israeli Cinema.** Same as Hebrew 374 (Topic 12: *Ethnic and Social Israeli Cinema*) and Jewish Studies 365 (Topic 8: *Ethnic and Social Israeli Cinema*). Hebrew 346 (Topic: *Ethnic and Social Israeli Cinema*) and Middle Eastern Studies 325 (Topic 4) may not both be counted. Prerequisite: Upper-division standing.
- Topic 5: Jerusalem in Israeli Literature and Cinema.** Same as Jewish Studies 363 (Topic 5: *Jerusalem in Israeli Literature and Cinema*). Prerequisite: Upper-division standing.
- Topic 6: Mizrahi Writing in Israel.** Same as Hebrew 346 (Topic 9: *Mizrahi Writing in Israel*) and Jewish Studies 363 (Topic 8: *Mizrahi Writing in Israel*). Prerequisite: Upper-division standing and Hebrew 412L (or 312L).
- Topic 7: Introduction to Israeli Literature.** Same as Hebrew 374 (Topic 10: *Introduction to Israeli Literature*) and Jewish Studies 363 (Topic 17: *Introduction to Israeli Literature*). Prerequisite: Upper-division standing.
- 326. Topics in Modern Turkey.** Aspects of contemporary Turkish society and its cultural heritage. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 127. Middle Eastern Cultural Exchange.** Provides an opportunity for students to interact with peer groups in Middle Eastern countries in which Arabic, Hebrew, Persian, and Turkish are spoken. Students engage in a variety of cultural activities and correspond with peer groups via blogs and Internet discussion forums. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Upper-division standing.
- 328. Topics in the Middle East: Past and Present.** Study of the peoples, cultures, and themes of the Middle East. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 320, 321K, 322K, 323K, 328. Prerequisite: Varies with the topic.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Middle Eastern Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 331C. History of the Ottoman Empire.** Same as History 331C. A survey of Ottoman society and culture and of the empire's place on the world scene. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 334C. Music Cultures of the Middle East, Past and Present.** Same as History 334C. A historical and ethnomusicological survey of the Arab, Turkish, and Persian music cultures. Three lecture hours a week for one semester. Middle Eastern Languages and Cultures 372 (Topic 11: *Music Cultures of the Middle East, Past and Present*) and Middle Eastern Studies 334C may not both be counted. Prerequisite: Upper-division standing.
- 351. Mediterranean Crossroads Seminar.** Reading and discussion about the lands, cultures, and societies of the eastern Mediterranean from a variety of disciplinary perspectives. Students prepare to study in the Middle East (in Middle Eastern Studies 352) and begin work on their individual research projects. Three lecture hours a week for one semester. Offered in the spring semester only. Middle Eastern Studies 322K (Topic: *Mediterranean Crossroads Seminar*) and 351 may not both be counted. Prerequisite: Upper-division standing and consent of instructor.
- 352. Mediterranean Crossroads Study Abroad Seminar.** Students study and conduct research in the Middle East. The equivalent of three lecture hours a week for one semester. Offered in the summer session only. Middle Eastern Studies 322K (Topic: *Mediterranean Crossroads Study Abroad Seminar*) and 352 may not both be counted. Prerequisite: Middle Eastern Studies 351.

- 353. Mediterranean Crossroads Conference Course.** Under supervision of a faculty member, students complete their research projects following participation in Middle Eastern Studies 352. Offered in the fall semester only. Prerequisite: Middle Eastern Studies 352.
- 360. Conference Course.** Supervised individual research, discussion, and writing of papers about various general and specialized Middle Eastern subjects. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 370. Practicum: Internships in Applied Middle Eastern Studies.** Research and staff experience working in an appropriate agency or business. At least six but no more than nine hours of work a week for one semester. May not be repeated for credit. Prerequisite: Completion of at least seventy semester hours of coursework, including twelve hours of Middle Eastern studies, and consent of the undergraduate adviser.
- 679H. Honors Tutorial Course.** Supervised individual reading for one semester, followed by research and writing to produce a substantial paper on a special topic in middle eastern studies, to be completed during the second semester. Prerequisite: For 679HA, admission to the Middle Eastern Studies Honors Program; for 679HB, Middle Eastern Studies 679HA.

PERSIAN: PRS

LOWER-DIVISION COURSES

- 601C. Intensive Persian I.** First semester of intensive Persian language instruction. Six lecture hours a week for one semester. Persian 601C and 506 may not both be counted. Persian 601C and 507 may not both be counted.
- 506. First-Year Persian I.** Elementary colloquial Persian. Five lecture hours a week for one semester. Persian 601C and 506 may not both be counted.
- 507. First-Year Persian II.** Continuation of Persian 506. Elementary literary Persian. Five lecture hours a week for one semester. Persian 601C and 507 may not both be counted. Prerequisite: Persian 506 with a grade of at least C.
- 611C. Intensive Persian II.** Second semester of intensive Persian language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Persian 611C, 612C, 312K, 512K. Only one of the following may be counted: Persian 611C, 612C, 312L, 512L. Prerequisite: Persian 601C or 507 with a grade of at least C.
- 612C. Intensive Persian for Heritage Speakers.** Designed for heritage Persian language speakers who have had little or no formal instruction in the language. Six lecture hours a week for one semester. Only one of the following may be counted: Persian 611C, 612C, 312K, 512K. Only one of the following may be counted: Persian 611C, 612C, 312L, 512L.
- 512K. Second-Year Persian I.** Not open to native speakers of Persian. Five lecture hours a week for one semester. Only one of the following may be counted: Persian 611C, 612C, 312K, 512K. Prerequisite: Persian 507 with a grade of at least C.
- 512L. Second-Year Persian II.** Not open to native speakers of Persian. Continuation of Persian 512K. Five lecture hours a week for one semester. Only one of the following may be counted: Persian 611C, 612C, 312L, 512L. Prerequisite: Persian 512K (or 312K) with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Persian.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 322K. Intermediate Persian I.** Not open to native speakers of Persian. First semester of intermediate Persian language instruction. Three lecture hours a week for one semester. Prerequisite: Persian 611C, 612C, or 512L (or 312L) with a grade of at least C.
- 322L. Intermediate Persian II.** Not open to native speakers of Persian. Second semester of intermediate Persian language instruction. Three lecture hours a week for one semester. Prerequisite: Persian 322K with a grade of at least C.
- 329. Topics in Persian Language, Literature, and Culture.** Study of various aspects of Persian linguistics, literature, and culture. Conducted in Persian. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- Topic 1: Ferdowsi's *Shāhnāme*.**
- Topic 2: Sa'di's *Golestān*.** Additional prerequisite: Persian 512L (or 312L).
- Topic 3: Hāfez's *Ghazals*.**
- Topic 4: Sadeq Hedayat and Twentieth-Century Persian Fiction.**
- Topic 5: Forugh Farrokhzad and Modernist Persian Poetry.**
- Topic 6: Persian Prose Nonfiction.**
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Persian.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 361. Topics in Persian Literature in Translation.** Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Images of the West and Westerners in Persian Fiction. Same as Middle Eastern Studies 324K (Topic 3: *Images of the West and Westerners in Persian Fiction*). Prerequisite: Upper-division standing.

Topic 2: Persian Literature, Past and Present. Middle Eastern Studies 322K (Topic 9: *Persian Literature: Past and Present*) and Persian 361 (Topic 2) may not both be counted. Prerequisite: Upper-division standing.

Topic 3: Iranian Women Writers. Same as Middle Eastern Studies 324K (Topic 1: *Iranian Women Writers*) and Women's and Gender Studies 340 (Topic 10: *Iranian Woman Writers*). Prerequisite: Upper-division standing.

Topic 4: Iranian Literature in Exile. Same as Middle Eastern Studies 324K (Topic 2: *Iranian Literature in Exile*). Prerequisite: Upper-division standing.

Topic 5: Iranian Film and Fiction. Same as Middle Eastern Studies 324K (Topic 4: *Iranian Film and Fiction*). Persian 361 (Topic 5) and 384C (Topic 10: *Iranian Film and Fiction*) may not both be counted. Prerequisite: Upper-division standing.

- 369. Conference Course in Persian Language and Literature.** Supervised individual study of selected problems in Persian language or literature. May be repeated for credit. Prerequisite: Nine semester hours of upper-division coursework in Persian and consent of instructor.
- 372. Topics in Iranian Culture.** Study of selected aspects of Iranian history, culture, and politics. Taught in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- 679H. Honors Tutorial Course.** Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Prerequisite: For 679HA, upper-division standing and admission to the Persian Language and Literature Honors Program; for 679HB, Persian 679HA.

TURKISH: TUR

LOWER-DIVISION COURSES

- 601C. Intensive Turkish I.** First semester of intensive Turkish language instruction. Six lecture hours a week for one semester. Turkish 601C and 506 may not both be counted. Turkish 601C and 507 may not both be counted.
- 506. First-Year Turkish I.** Modern Standard Turkish. Five lecture hours a week for one semester. Turkish 601C and 506 may not both be counted.
- 507. First-Year Turkish II.** Modern Standard Turkish. Continuation of Turkish 506. Five lecture hours a week for one semester. Turkish 601C and 507 may not both be counted. Prerequisite: Turkish 506 with a grade of at least C.
- 611C. Intensive Turkish II.** Second semester of intensive Turkish language instruction. Six lecture hours a week for one semester. Turkish 611C and 412K may not both be counted. Turkish 611C and 412L may not both be counted. Prerequisite: Turkish 601C or 507 with a grade of at least C.
- 412K. Second-Year Turkish I.** Conversational Turkish and readings in contemporary Turkish literature and newspapers. Review of the grammar covered in Turkish 506 and 507, and introduction of more complex grammatical patterns. Four lecture hours a week for one semester. Turkish 611C and 412K may not both be counted. Prerequisite: Turkish 601C or 507 with a grade of at least C.
- 412L. Second-Year Turkish II.** Continuation of Turkish 412K. Four lecture hours a week for one semester. Turkish 611C and 412L may not both be counted. Prerequisite: Turkish 412K with a grade of at least C.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Turkish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320K. Intermediate Turkish I.** Not open to native speakers of Turkish. Intermediate to high-level Turkish in four basic language skills: speaking, listening, reading, and writing. Turkish culture. Three lecture hours a week for one semester. Prerequisite: Turkish 611C or 412L with a grade of at least C.
- 320L. Intermediate Turkish II.** Not open to native speakers of Turkish. Continuation of Turkish 320K. Three lecture hours a week for one semester. Prerequisite: Turkish 320K with a grade of at least C.
- 329. Topics in Turkish Language, Literature, and Culture.** Conducted in Turkish. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Turkish 611C or 412L with a grade of at least C.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Turkish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 361. Topics in Turkish Literature in Translation.** Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.
- 369. Conference Course in Turkish Language and Literature.** Supervised individual study of selected problems in Turkish language or literature. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

- 372. Topics in Turkish Culture.** Examines cultural issues in Turkey, among Turkic people of Central Asia, and among Turkish immigrants throughout the world. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. No more than six hours may be counted toward the major in Turkish language and literature. Prerequisite: Upper-division standing.
- 679H. Honors Tutorial Course.** Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Prerequisite: For 679HA, admission to the Turkish Language and Literature Honors Program; for 679HB, Turkish 679HA.

DEPARTMENT OF PHILOSOPHY

There are several courses offered each year in philosophy that should be of interest to undergraduates who have strong interests outside philosophy. In addition to the introductory courses (Philosophy 301, 304, 305, and 310) and the basic sequence in the history of philosophy (Philosophy 329K and 329L), the courses listed below are of particular relevance to students who are interested in the indicated areas.

- ▶ Business: Philosophy 312, 322, and 325L.
- ▶ Communications: Philosophy 311, 312, 313, and 332.
- ▶ Computer science: Philosophy 313K, 344K, 358, 363, and 363L.
- ▶ Law: Philosophy 311, 312, 313, 318, 325K, 342, and 347.
- ▶ Linguistics: Philosophy 313K, 332, 344K, and 358.
- ▶ Literature: Philosophy 346, 348, 349, 356, 361K, and 366K.
- ▶ Mathematics: Philosophy 313K, 344K, 344M, and 358.
- ▶ Natural sciences: Philosophy 322, 363, and 363L.
- ▶ Premedicine and pre dentistry: Philosophy 312, 318, 322, 325M, and 363.
- ▶ Social sciences: Philosophy 311K, 322, 363, and 363L.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

PHILOSOPHY: PHL

LOWER-DIVISION COURSES

- 301 (TCCN: PHIL 1301). Introduction to Philosophy.** Primarily for lower-division students. A survey of principal topics and problems in areas such as ethics, theory of knowledge, and philosophy of religion. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 301 and 610QA may not both be counted.
- 301K (TCCN: PHIL 2316). Ancient Philosophy.** Primarily for lower-division students. An introduction to the philosophical achievements of the ancient world, concentrating on Plato and Aristotle. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 301L. Early Modern Philosophy.** Primarily for lower-division students. An introduction to the philosophical achievements of the seventeenth and eighteenth centuries, concentrating on such figures as Descartes, Hume, and Kant. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 302. World Philosophy.** Primarily for lower-division students. Basic issues of philosophy in Western and non-Western traditions, such as the nature of philosophy, its relation to religion and science, the self, knowledge, and virtue. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Asian Studies 301M (Topic 7: *World Philosophy*) and Philosophy 302 may not both be counted.
- 302C. Ethics and Enlightenment.** Primarily for lower-division students. A study of non-Western ethics, especially in Hindu and Buddhist traditions. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 303. Human Nature.** Primarily for lower-division students. Theories of human nature, such as those of Plato, Christianity, Marxism, and existentialism. Modern psychological and biological theories are included, as the interplay of nature and nurture in determining human conduct is explored. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 303M. Mind and Body.** Primarily for lower-division students. Introduction to philosophical issues about the nature of mind and its relation to body: What is mind? Do people have free will? How does psychology relate to neuroscience? Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 304. Contemporary Moral Problems.** Primarily for lower-division students. Philosophical examination of selected moral problems arising out of contemporary society and culture. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

- 305 (TCCN: PHIL 2321). Introduction to the Philosophy of Religion.** Same as Religious Studies 305. Primarily for lower-division students. A critical examination of various conceptions of God and of the relationship of the human and the divine. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 305 and Religious Studies 311 (Topic 2: *Introduction to the Philosophy of Religion*) may not both be counted.
- 306. Philosophical Thinkers.** Primarily for lower-division students. An introduction to major areas of philosophy through the study of selected philosophical thinkers. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary.
- 310. Knowledge and Reality.** An introduction to basic issues in epistemology and metaphysics. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 310 and 610QA may not both be counted. Prerequisite: Some sections are restricted to philosophy majors, some to students with a University grade point average of at least 3.00 or consent of instructor; these sections are identified in the *Course Schedule*.
- 610Q. Problems of Knowledge and Valuation.** Restricted to students in the Plan II Honors Program. Methods and aims of selected sciences, arts, and philosophy in the attainment of knowledge and in providing the basis for valuation. Three lecture hours and one discussion hour a week for two semesters. Philosophy 301 and 610QA may not both be counted; Philosophy 310 and 610QA may not both be counted; Philosophy 610QB and 318 may not both be counted. Prerequisite: For 610QA, admission to the Plan II Honors Program; for 610QB, Philosophy 610QA.
- 311. Argument.** Argument as a kind of discourse: deductive and inductive arguments; principles of reasoning; fallacies; practical applications. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 311K. Games and Decisions.** Introduction to the theories of games and rational decision, with applications to ethical, social, and political issues. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 312 (TCCN: PHIL 2303). Introduction to Logic.** Logical structure of sentences and arguments; elementary symbolic methods; applications. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May not be counted by students with prior credit for Philosophy 313, 313K, 313Q, or 344K.
- 313. Introductory Symbolic Logic.** Introduction to symbolic logic (through first-order predicate logic); interpretations; formal proofs, consistency; some practical applications. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q.
- 313K. Logic, Sets, and Functions.** Sets, relations, functions, sentential and predicate logic, proof techniques, algorithms, and elementary metatheory. Mathematically oriented. Three lecture hours and one laboratory hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q. Prerequisite: Three years of high school mathematics.
- 313Q. Logic and Scientific Reasoning.** Introduction to formal proofs, semantics, quantifiers, inductive methods, decision theory, and scientific reasoning. Three lecture hours and one laboratory hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q. Philosophy 313Q and Tutorial Course 310 may not both be counted. Prerequisite: Admission to the Plan II Honors Program.
- 316K. Science and Philosophy.** Introduction to scientific method, including discussion of the nature and goals of science. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May not be counted by students with credit for Philosophy 363.
- 317K. Introduction to the Philosophy of the Arts.** Classic issues in the philosophy of art and beauty, illustrated from the fine arts and contemporary media: literature, drama, music, painting, film, and television. Three lecture hours a week for one semester.
- 318 (TCCN: PHIL 2306). Introduction to Ethics.** Study of basic principles of the moral life, with critical examination of traditional and contemporary theories of the nature of goodness, happiness, duty, and freedom. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 610QB and 318 may not both be counted.
- 318K (TCCN: PHIL 2307). Introduction to Political Philosophy.** Views of major political philosophers on humanity, nature, and society; discussions of contemporary political ideologies. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Philosophy.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Philosophy. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321K. Theory of Knowledge.** Systematic and detailed study of major issues in the theory of knowledge, such as the distinction between knowledge and belief, the criteria of knowledge, the justification of knowledge-claims, and perception. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- 322. Science and the Modern World.** The historical development and impact of scientific ideas through the modern period to the present. Three lecture hours a week for one semester.

- 322K. History of Ethics.** Survey of ethical theories from ancient times through the nineteenth century. Three lecture hours a week for one semester.
- 323K. Metaphysics.** Problems of substance, change, categories of being, mind, body, space and time, approached either systematically or historically. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- 323M. Philosophy of Mind.** Problems concerning the nature of mind and mental phenomena: the relation between mind and body, knowledge of other minds, the computational model of mind, mental causation, intentionality, and consciousness. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- 325C. Environmental Ethics.** Moral issues concerning the relation of human beings to the environment, including biodiversity, resource depletion, and animal rights. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 325K. Ethical Theories.** Major traditional and contemporary ethical theories discussed and critically examined. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- 325L. Business, Ethics, and Public Policy.** Issues in ethics and politics that are relevant to the organization of business and industry and the distribution of power in society; topics include the role of industry; concepts of profit, property, and moral responsibility. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 325M. Medicine, Ethics, and Society.** Moral, legal, religious, and political implications of developments in medicine; topics include abortion, euthanasia, sterilization, psychosurgery, genetic engineering; concepts of health, cure, insanity, and death. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 327. Contemporary Philosophy.** Currents of contemporary thought; past topics include feminism, philosophy, and science; ideas of the twentieth century; twentieth-century philosophy of mind. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 328. Nineteenth-Century Philosophy.** Major figures in nineteenth-century European philosophy, including Hegel, Schopenhauer, Kierkegaard, Nietzsche, and Mill. Three lecture hours a week for one semester. Prerequisite: Three semester hours of coursework in philosophy.
- 329K. History of Ancient Philosophy.** Same as Classical Civilization 348 (Topic 4: *History of Ancient Philosophy*). Development of Western philosophy from the pre-Socratics to the early Christian era; emphasis on Plato and Aristotle. Three lecture hours and one discussion hour a week for one semester. Classical Civilization 342 (Topic: *History of Ancient Philosophy*) and Philosophy 329K may not both be counted. Prerequisite: Six semester hours of coursework in philosophy.
- 329L. Early Modern Philosophy: Descartes to Kant.** Three lecture hours and one discussion hour a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- 329M. Philosophical Classics.** Intensive study of one or two important philosophers or philosophical works from the eighteenth century or earlier. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Three semester hours of coursework in philosophy.
Topic 1: Kant's Critique of Pure Reason. An intensive study of Kant's *Critique of Pure Reason*, focusing especially on his "Copernican revolution," his theories of categories and concepts, and his rejection of metaphysics.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Philosophy.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Philosophy. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329U. Perspectives on Science and Mathematics.** An examination of five notable episodes in the history of science: Galileo's conflict with the Catholic Church, Isaac Newton's formulation of the laws of motion, Charles Darwin's proposal of the theory of evolution by natural selection, the development of the atomic bomb, and the discovery of the double helix structure of DNA. Three lecture hours a week for one semester. Only one of the following may be counted: History 329U, 366N (Topic: *Perspectives on Science and Mathematics*), Philosophy 329U. Prerequisite: Upper-division standing and consent of instructor.
- 330K. Ancient Philosophy after Aristotle.** Same as Classical Civilization 330K. Epicureans, Stoics, Skeptics, Plotinus and the Neoplatonist tradition. Three class hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- 332. Philosophy of Language.** Contemporary theories of meaning and linguistic structure, and their relationships to epistemology, metaphysics, and ethics. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.
- 334K. Modern Thinkers.** Critical study of the philosophical implications of the works of selected modern thinkers; for example, Nietzsche, Sartre, Camus, and Freud. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Three semester hours of coursework in philosophy.
Topic 1: Modernity and Postmodernity.
- 342. Political Philosophy.** Critical examination of leading theories of the state, including analysis of such concepts as sovereignty, obligation, rights, and freedom. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary.

- 344K. Intermediate Symbolic Logic.** Same as Mathematics 344K. A second-semester course in symbolic logic: formal syntax and semantics, basic metatheory (soundness, completeness, compactness, and Löwenheim-Skolem theorems), and further topics in logic. Three lecture hours a week for one semester. Prerequisite: Philosophy 313, 313K, or 313Q.
- 344M. Philosophy of Mathematics.** Philosophical issues concerning mathematics and its foundations, such as the correlation of mathematics to logic, mathematical truth, and mathematical knowledge. Three lecture hours a week for one semester.
- 346. Aesthetics.** Study of selected topics in the philosophy of art; may be restricted to one or several specific art forms or media: literature, painting, music, film, television, or theatre. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 347. Philosophy of Law.** The significance and function of law in political and ethical contexts; comparison of common and statutory to scientific and moral law; readings from among Plato, Kant, Hegel, Bentham, Austin, Hart, Dworkin, Feinberg, and others. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.
- 348. Asian Philosophy.** Comparative and historical studies in the philosophical and religious traditions of the East, with emphasis on India and China. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
Topic 2: Indian Philosophies. Same as Asian Studies 372 (Topic 2: *Indian Philosophies*) and Religious Studies 341 (Topic 1: *Indian Philosophies*).
- 349. History of Medieval and Renaissance Philosophy.** Philosophical thought from Augustine through Cusanus and Vico, with emphasis on its cultural bearing. Three lecture hours a week for one semester. Prerequisite: Three semester hours of coursework in philosophy.
- 354. Philosophy in Context.** Philosophical texts and arguments in a broad intellectual and cultural context, or other texts studied for their philosophical content. Typical topics include Locke and the Glorious Revolution; materialism and modern science; Thucydides on power and justice. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 356. Philosophy of Religion.** Meaning and function of religion; religious belief and its validity; religious values in the modern world. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary.
- 358. Philosophical Logic.** Issues in philosophical logic and its applications, such as theories of meaning, logical paradoxes, epistemic logic, deontic logic, modal logic, existence, and identity. Three lecture hours a week for one semester. Prerequisite: Philosophy 313, 313K, or 313Q.
- 361K. Philosophy in Literature.** Formulation, analysis, and criticism of philosophical ideas in selected literary works. Three lecture hours a week for one semester.
- 363. Scientific Method.** History, exposition, and analysis of such fundamental concepts in the natural and social sciences as explanation, prediction, discovery, confirmation, laws, hypotheses, theories. Three lecture hours a week for one semester.
- 363L. Topics in Philosophy of Science.** Past topics include philosophy of biology; scientific hypotheses and evidence; philosophical consequences of quantum mechanics. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary.
- 365. Selected Problems in Philosophy.** Past topics include Jewish ethics; change, truth, and justice. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
Topic 1: Freudians and Feminisms. Same as Germanic Civilization 362E (Topic 1: *Freudians and Feminisms*) and Women's and Gender Studies 345 (Topic 10: *Freudians and Feminisms*). English 322 (Topic 4: *Freudians and Feminisms*) and Philosophy 365 (Topic 1) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.
Topic 2: Introduction to Cognitive Science. Same as Cognitive Science 360 (Topic 1: *Introduction to Cognitive Science*) and Linguistics 373 (Topic 7: *Introduction to Cognitive Science*).
Topic 3: Cultural Politics of Kant and Hegel. Same as Germanic Civilization 360E (Topic 2: *Cultural Politics of Kant and Hegel*). English 322 (Topic 5: *Cultural Politics of Kant and Hegel*) and Philosophy 365 (Topic 3) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.
Topic 4: Contemporary European Social Theory. Same as Government 335M (Topic 8: *Contemporary European Social Theory*) and Sociology 352M (Topic 7: *Contemporary European Social Theory*). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
Topic 5: Contemporary American Social Theory. Same as Government 335M (Topic 9: *Contemporary American Social Theory*) and Sociology 352M (Topic 8: *Contemporary American Social Theory*). Government 335M (Topic: *Social Theory*) and Philosophy 365 (Topic 5) may not both be counted. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- 366K. Existentialism.** Same as Religious Studies 356E. Existentialism and its relationship to literature, psychoanalysis, and Marxism. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 366K and Religious Studies 361 (Topic: *Existentialism*) may not both be counted.

- 371H. Philosophy Honors.** Close study of major works of philosophy. Three lecture hours and one discussion hour a week for one semester. May be repeated for credit. Prerequisite: Six semester hours of coursework in philosophy and a University grade point average of at least 3.50.
- 375M. Major Seminar.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in philosophy.
- 679H. Honors Tutorial Course.** Supervised individual reading for one semester, followed by research and writing to produce a substantial paper on a special topic in philosophy, to be completed during the second semester. Prerequisite: For 679HA, admission to the Philosophy Honors Program; for 679HB, Philosophy 679HA.
- 379K. Conference Course.** Intensive tutorial study of selected problems in philosophy. May be repeated for credit. Prerequisite: Nine semester hours of upper-division coursework in philosophy and consent of instructor and the undergraduate adviser in philosophy.

PLAN II HONORS PROGRAM

SOCIAL SCIENCE: S S

LOWER-DIVISION COURSE

- 301. Honors Social Science.** An introduction to the study of the individual, society, or culture using the methods of one of the social sciences. Three lecture hours a week for one semester. With consent of the director of Plan II, may be repeated once for elective credit. Prerequisite: Admission to the Plan II Honors Program.

TUTORIAL COURSE: T C

LOWER-DIVISION COURSES

- 302. First-Year Signature Course: Plan II.** Restricted to first-year Plan II students. Small-group seminar involving reading, discussion, writing, and oral reporting around a central interdisciplinary topic. Designed to introduce undergraduates to scholarly analysis from an interdisciplinary perspective. Includes an introduction to University resources, such as research facilities, museums, and attendance at University lectures or performances as assigned. Multiple sections may be offered in the fall and spring with various topics and instructors. Three lecture hours a week for one semester. Some sections may require additional meeting times; these are identified in the *Course Schedule*. Only one of the following may be counted: Tutorial Course 301, 302, Undergraduate Studies 302, 303.

- 603. Composition and Reading in World Literature.** Reading of masterpieces of world literature and intensive training in writing and in critical analysis of literature. Three lecture hours a week for two semesters. Only one of the following may be counted: English 603A, Rhetoric and Writing 306, 306Q, Tutorial Course 603A; only one of the following may be counted: Comparative Literature 315, English 603B, 316K, Tutorial Course 603B. Prerequisite: For 603A, admission to the Plan II Honors Program; for 603B, Tutorial Course 603A.
- 310. Modes of Reasoning.** Introduction to forms of quantitative reasoning: computer science, game theory, operations research, or statistics and probability. Three lecture hours a week for one semester. Philosophy 313Q and Tutorial Course 310 may not both be counted. Prerequisite: Admission to the Plan II Honors Program.

UPPER-DIVISION COURSES

- 325. Topics in the Arts and Sciences.** Analysis of various topics within the arts and sciences through reading, research, written reports, and discussion. Three lecture hours a week for one semester. With consent of the director of Plan II, may be repeated for credit. Prerequisite: Upper-division standing in the Plan II Honors Program or consent of instructor.
- 125K. Topics in the Arts and Sciences.** Analysis of topics in the arts, sciences, and social sciences through reading, discussion, and lectures. The equivalent of one lecture hour a week for one semester. May be repeated for credit. Some topics are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Upper-division standing in the Plan II Honors Program or consent of instructor.
- 330. Special Topics in Plan II.** Restricted to Plan II majors. Three lecture hours a week for one semester, with additional hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.
- 357. The Junior Seminar.** Seminar sections of about fifteen students. The subjects vary, but in each the attempt is made through careful reading, discussion, and written work to analyze and compare varied approaches to topics of lasting importance. Three lecture hours a week for one semester. Students must take this course twice with different topics to fulfill degree requirements; with consent of the director of Plan II, a third topic may be taken as an elective. Prerequisite: Upper-division standing in Plan II.
- 359T. Essay Course.** Directed reading followed by the writing of an essay. Conference course. Prerequisite: Two semesters of Tutorial Course 357 and consent of the director.
- 660H. Thesis Course.** Directed reading followed by the writing of a substantial essay. Conference course for two semesters. Prerequisite: For 660HA, two semesters of Tutorial Course 357 and consent of the director; for 660HB, Tutorial Course 660HA.
- 365. Conference Course.** Directed reading and writing on an interdisciplinary topic. May be repeated for credit. Prerequisite: Upper-division standing in Plan II and consent of instructor and the director of Plan II.

165K. Conference Course. May be repeated for credit. Prerequisite: Upper-division standing in Plan II and consent of instructor and the director of Plan II.

DEPARTMENT OF PSYCHOLOGY

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

PSYCHOLOGY: PSY

LOWER-DIVISION COURSES

- 301 (TCCN: PSYC 2301). Introduction to Psychology.** Basic problems and principles of human experience and behavior. Three lecture hours a week for one semester, or the equivalent in independent study.
- 304 (TCCN: PSYC 2308). Introduction to Child Psychology.** General introduction to physical, social, and cognitive development from conception onward. Three lecture hours a week for one semester. Psychology 304 and 333D may not both be counted. Prerequisite: Psychology 301 with a grade of at least C.
- 305. Introduction to Cognitive Psychology.** Introduction to the study of how people perceive, act, communicate, and reason. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.
- 308. Biopsychology.** Introduction to the biological bases of psychological processes and behavior. Overview of the physiology and anatomy of the nervous system, followed by a survey of brain mechanisms of perception, cognition, learning, and emotion; biological perspectives on drug action and mental disease. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.
- 309 (TCCN: PSYC 2316). Personality.** Research and theory concerning personality structure, dynamics, development, and assessment. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.
- 317 (TCCN: PSYC 2317). Statistical Methods in Psychology.** Recommended for majors who plan to do graduate work in psychology or related fields. Measures of central tendency and variability; statistical inference; correlation and regression. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.
- 418. Statistics and Research Design.** Students may not enroll in Psychology 418 more than twice. Survey of statistics, including central tendency, variability and inference, and scientific methodology used in psychological research. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C, a major in psychology, and credit for one of the following: Mathematics 302, 303D, 305G, 408C, 408D, 408K (or 308K), 408L (or 308L), 408M (or 308M), 316.

319K. Social Psychology. Theory and research on the analysis of human conduct in social settings. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Psychology. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Psychology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 323. Perception.** Theory and research in the ways we extract information from the environment. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 323P. Perceptual Systems: Neurons, Behavior, and Evolution.** An introduction to perceptual systems, with an emphasis on perception in human and nonhuman primates. Topics include the physics of perceptual stimuli, the neural processing of perceptual information, the performance of human and other primates in perceptual tasks, and the evolution of perceptual systems. Three lecture hours a week for one semester. Psychology 323P and 341K (Topic: *Perceptual Systems: Neurons/Behavior/Evolution*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.

- 323S. Sex Differences in Cognition and Perception.** Examination of facts, theories, and implications of sex differences in human cognition and perception. Topics include genetic and hormonal origins of sex differences, structural differences in the body and brain, verbal abilities, spatial abilities, learning, memory, sensory-motor abilities, and the auditory, olfactory, visual, and other sensory systems. Three lecture hours a week for one semester. Psychology 323S and 341K (Topic: *Sex Differences in Cognition and Perception*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 325K. Advanced Statistics.** Advanced statistical theory and methods for analysis of behavioral sciences data; topics include analysis of variance and covariance, regression, and nonparametric techniques. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 326K. Principles of Conditioning and Learning.** Laws of animal and human learning, and the underlying mechanisms. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Psychology.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Psychology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 332. Behavioral Neuroscience.** Neuroscientific study of behavioral functions: fundamental structure and function of the human nervous system, sensory systems and perception, motor systems and behavior, motivation and learning, brain disorders and maladaptive behavior. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 332C. Hormones and Behavior.** Neuroscientific study of hormones and behavior in animals and humans. Includes sexual behavior, sexual differentiation, parental behavior, aggressive behavior, feeding and drinking, stress, learning, and memory. Three lecture hours a week for one semester. Psychology 332C and 341K (Topic: *Hormones and Behavior*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333C. Controversial Issues in Development.** An exploration of questions in developmental psychology that are currently in dispute. Topics may include stem cell research, treatment of juveniles in the legal system, physician-assisted suicide, and methods of sex education. Three lecture hours a week for one semester. Psychology 333C and 341K (Topic: *Controversial Issues in Development*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.

- 333D. Introduction to Developmental Psychology.** Physical, social, and cognitive development in humans. Three lecture hours a week for one semester. Psychology 304 and 333D may not both be counted. Psychology 333D and Women's and Gender Studies 345 (Topic 6: *Introduction to Developmental Psychology*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333E. Identity Formation.** An introduction to historical theories of and current research on identity, with particular focus on identity development in the domains of occupation, religion, politics and morality, gender, ethnicity, and adoption. Three lecture hours a week for one semester. Psychology 333E and 341K (Topic: *Identity Formation*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333F. Fantasy and Reality.** Examination of how children and adults decide what is real and what is not. Topics include the fantasy-reality distinction, magical thinking, and religious cognition. Three lecture hours a week for one semester. Psychology 333F and 341K (Topic: *Fantasy and Reality*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333M. Infant Development.** Examination of genetic and environmental determinants of social, perceptual, and cognitive development in infants from theoretical and research perspectives. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333N. Cognitive Development.** Overview of the development of thinking from infancy through childhood. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333P. Child Language.** Examination of theory and research concerning the development of language in the child. Three lecture hours a week for one semester. Only one of the following may be counted: Linguistics 373 (Topic 1: *Child Language*), 373 (Topic: *Language Acquisition*), Psychology 333P. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333R. Social Development in Children.** Development of social behavior (for example, sex typing and aggression) and social relationships. Three lecture hours a week for one semester. Psychology 333R and Women's and Gender Studies 345 (Topic 19: *Social Development in Children*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.

- 333T. Adolescent Development.** Physical, cognitive, social, and personality development during adolescence. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333V. Family Violence.** Examination of the forms of family violence, the effects of violence on children's development, and the causes of and solutions to this problem. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 333W. Moral Development.** An introduction to theory and research on morality. Topics include culture and morality, Freudian and social learning perspectives on moral development, Kohlberg's theory of morality, challenge to Kohlberg's theory, and cognitive, familial, and emotional influence on morality. Three lecture hours a week for one semester. Psychology 333W and 341K (Topic: *Moral Development*) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 334D. Psychology of Human Mating.** Mate selection, sources of conflict, and mating over the life span, studied in the context of evolutionary psychology and sexual selection theory. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 334E. Evolutionary Psychology.** Fundamentals of evolutionary psychology, including issues of natural and sexual selection, adaptation, and domain-specific psychological mechanisms. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 337. Psychology of Language.** Consideration of approaches to the study of language, its development in children, and its functioning; important research from psychology and linguistics. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 338K. Psychology of Reading.** Theory and research on the reading process and its acquisition. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 339. Behavior Problems of Children.** Adjustment difficulties during childhood and adolescence; causation and treatment. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.

- 341K. Selected Topics in Psychology.** Topics of contemporary interest that may vary from semester to semester. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- Topic 4: Health Psychology.**
- Topic 7: Epidemiology.**
- Topic 8: Learning and the Brain.**
- Topic 12: Personality Assessment.** Theoretical and methodological issues involved in trying to understand and measure personality.
- Topic 14: Robot Cognition.**
- Topic 15: History of Modern Psychology.** A survey of the diverse roots of modern psychology, the competing schools that influenced psychology's development, and the perspectives that guide scholarship in present-day psychology. Psychology 341K (Topic 15) and 341K (Topic: *History and Systems of Psychology*) may not both be counted.
- Topic 16: Psychology of Fundamentalism.** Psychological research and theory on religious fundamentalism. Considers the nature of different forms of religious fundamentalism, and possible psychological mechanisms that motivate fundamentalism. Includes topics such as the development of fundamentalism, the movement from fundamentalism to terrorism, and fundamentalism and the family.
- Topic 17: Psychology and Religion.** An exploration of the psychological processes involved in religion. Discusses seminal psychological theories of religion, such as the work of James, Freud, Jung, and Maslow. Discussion of empirical work includes topics such as the development of religion across the life span, religious experience, conversion, and the effects of religion on mental and physical health.
- Topic 18: Language and Thought.**
- 343K. Substance Abuse.** Causes of substance abuse: the evolutionary perspective, sex differences, predisposition, biological and cognitive theories; emphasis on food and alcohol. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 345. Individual Differences.** Study of person-to-person variation in intelligence, personality, and interests, with an emphasis on genetic and environmental determinants, developmental processes, and their relation to real-world outcomes. Three lecture hours a week for one semester. Psychology 341K (Topic: *Individual Differences*) and 345 may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 346K. Psychology of Sex.** Development of sex from genes to human behavior. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 350. Motivation.** Theory and research on motivation; biological and social determinants. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.

- 352. Abnormal Psychology.** Biological and social factors in the development and treatment of psychopathology. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 353K. Psychopharmacology.** The pharmacology and the neurochemical, neurophysiological, and psychological effects of psychoactive drugs, with regard to their use as therapeutic and behavioral research tools. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 355. Cognition.** Theoretical and critical analysis of the development, nature, and function of the thought process. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 355D. Animal Cognition.** An introduction to animal intelligence and the evolution of mind. Examines what is known about intelligence in other animals, how intelligence is revealed in social and problem-solving behavior, and the ways in which human intelligence is structured by its evolutionary past. Three lecture hours a week for one semester. Psychology 341K (Topic: *Animal Cognition*) and 355D may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 355R. Reasoning and Decision Making.** Survey of psychological research on how people reason and make decisions. Topics include mental models, causality, analogy, heuristics, emotion, motivation, culture, and decision making. Three lecture hours a week for one semester. Psychology 341K (Topic: *Reasoning and Decision Making*) and 355R may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 357. Undergraduate Research.** Supervised research experience. May be repeated for credit. Offered on the pass/fail basis only. May not be counted toward a major in psychology. Prerequisite: At least thirty semester hours of college coursework, Psychology 301 with a grade of at least C, and consent of instructor.
- 458. Experimental Psychology.** Techniques of psychological research illustrated in a series of laboratory experiments. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Upper-division standing, a major in psychology, Psychology 301 and 418 with a grade of at least C in each, and a University grade point average of at least 3.25.
- 158H. Honors Research Tutorial.** Enrollment restricted to students in the Psychology Honors Program. Individual instruction. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, Psychology 301 and 418 with a grade of at least C in each, and consent of the honors adviser.
- 359. Selected Topics: Readings: Tutorial.** Supervised reading in selected topics of significance; area of intensive study is chosen by the student in consultation with the instructor. Individual instruction. May be repeated for credit. Offered on the pass/fail basis only. May not be counted toward a major in psychology. Prerequisite: Upper-division standing, Psychology 301 with a grade of at least C, and consent of instructor.
- 359H. Honors Research I.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Psychology 301 and 418 with a grade of at least C in each, six semester hours of upper-division coursework in psychology, a grade point average of at least 3.50 in psychology courses taken at the University, a University grade point average of at least 3.25, and consent of the honors adviser.

- 364. Introduction to Clinical Psychology.** Introduction to techniques of assessment and treatment of psychopathology. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 365G. Gender and Racial Attitudes.** Advanced introduction to the psychological study of gender and racial attitudes in children and adults, with emphasis on the causes, consequences, and revision of an individual's gender and racial stereotypes. Three lecture hours a week for one semester. Psychology 341K (Topic: *Gender and Racial Attitudes*) and 365G may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 365M. Cross-Cultural Psychology.** Impact of national culture on social-psychological processes and on the ways people function in multicultural organizations. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 371. Learning and Memory.** Analysis of theory and research in learning. Three lecture hours a week for one semester. Psychology 341K (Topic: *Brain Mechanisms of Learning and Memory*) and 371 may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 303, 304, 305, 306.
- 377P, 677P. Undergraduate Practicum.** Field experience in applied psychology. Students are supervised by faculty members and by practitioners in community agencies. One lecture hour and ten or twenty hours of fieldwork a week for one semester. May be repeated for credit. Offered on the pass/fail basis only. May not be counted toward a major in psychology. Prerequisite: Upper-division standing and consent of the practicum supervisor.
- 379H. Honors Research II.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Psychology 301 and 418 with a grade of at least C in each, Psychology 458 and 359H, and consent of the honors adviser.

DEPARTMENT OF RELIGIOUS STUDIES

RELIGIOUS STUDIES: R S

LOWER-DIVISION COURSES

- 302. History of the Religions of Asia.** Same as Asian Studies 301R. Eastern religions: an introduction to the basic forms and the historical development of the religious traditions of India, China, and Japan. Three lecture hours a week for one semester.
- 304. Judaism, Christianity, and Islam: An Introduction.** Same as History 304R, Islamic Studies 311 (Topic 2: *Judaism, Christianity, and Islam: An Introduction*), and Jewish Studies 311 (Topic 2: *Judaism, Christianity, and Islam: An Introduction*). Examines the intertwined historical development of the religions of Judaism, Christianity, and Islam, and explores the principal beliefs and practices of Jews, Christians, and Muslims. Three lecture hours a week for one semester.
- 305. Introduction to the Philosophy of Religion.** Same as Philosophy 305. Primarily for lower-division students. A critical examination of various conceptions of God and of the relationship of the human and the divine. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Religious Studies 305 and 311 (Topic 2: *Introduction to the Philosophy of Religion*) may not both be counted.
- 306. Topics in Comparative Religion.** Three lecture hours a week for one semester. Additional hours are required for some topics; these topics are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 310. Introduction to the Study of Religion.** Introduction to scholarly methods in the study of religion. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 301M (Topic 5: *Introduction to the Study of Religion*), Religious Studies 310, Sociology 313K.
- 312. Topics in the Religions of Asia.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

- 312C. Introduction to Buddhism.** Same as Asian Studies 301M (Topic 11: *Introduction to Buddhism*). A structural and historical overview of Buddhism through the examination of various schools, doctrines, biographical narratives, and contemporary ethical issues. Three lecture hours a week for one semester. Religious Studies 312 (Topic: *Introduction to Buddhism*) and 312C may not both be counted.
- 312D. Introduction to Hinduism.** Same as Asian Studies 301M (Topic 12: *Introduction to Hinduism*). Three lecture hours a week for one semester. Religious Studies 312 (Topic: *Introduction to Hinduism*) and 312D may not both be counted.
- 313. Topics in Judaism.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 313M. Jewish Civilization: Beginnings to 1492.** Same as History 306N (Topic 10: *Jewish Civilization: Beginnings to 1492*) and Jewish Studies 304M. Introduction to the history, culture, and religion of the Jewish people from around 1000 BC to the end of the medieval period. Subjects may include ancient Israel, late Second Temple sectarianism, the rise of Christianity, rabbinic Judaism, medieval Jewish philosophy, Jewish mysticism, and Hebrew poetry. Three lecture hours a week for one semester. Only one of the following may be counted: History 306N (Topic: *Jewish Civilization I*), Jewish Studies 311 (Topic: *Jewish Civilization I*), Religious Studies 313 (Topic: *Jewish Civilization I*), 313M.
- 313N. Jewish Civilization: 1492 to the Present.** Same as History 306N (Topic 11: *Jewish Civilization: 1492 to the Present*) and Jewish Studies 304N. Subjects may include trends toward secularization, the emancipation of European Jewry, the emergence of American Jewry, the Holocaust, the establishment of the State of Israel, and the Arab-Israeli conflict. Three lecture hours a week for one semester. Only one of the following may be counted: Jewish Studies 311 (Topic: *Jewish Civilization: 1492 to the Present*), Religious Studies 313 (Topic: *Jewish Civilization: 1492 to the Present*), 313N.
- 314. Topics in Islam.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 315. Topics in Christian History.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 315N. Introduction to the New Testament.** Examines representative examples of the texts found in the Christian New Testament and selected noncanonical writings. Focuses on historical setting and systematic methods of interpretation. Three lecture hours a week for one semester. Only one of the following may be counted: Classical Civilization 304C (Topic: *Introduction to the New Testament*), Religious Studies 315 (Topic: *Introduction to the New Testament*), 315N.
- 316K. Topics in Religions of the Americas.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 317. Topics in the Religions of Africa.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 318. The Rise of Christianity.** Same as Classical Civilization 318. Introduction to the origins and development of Christianity. Three lecture hours a week for one semester. Classical Civilization 304C (Topic: *The Rise of Christianity*) and Religious Studies 318 may not both be counted.
- 319. Introduction to Islam.** Same as History 306N (Topic 7: *Introduction to Islam*) and Islamic Studies 310. The beliefs, theology, history, and main social and legal institutions of Islam, including the concept of God and society, the role of women, and Islamic government and movements. Three lecture hours a week for one semester. Middle Eastern Studies 310 (Topic 1: *Introduction to Islam*) and Religious Studies 319 may not both be counted.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Religious Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Religious Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321. History of Hindu Religious Traditions.** Same as Anthropology 324L (Topic 23: *History of Hindu Religious Traditions*), Asian Studies 340 (Topic 4: *History of Hindu Religious Traditions*), and History 364G (Topic 1: *History of Hindu Religious Traditions*). History of major doctrines, practices, and institutions that shaped the development of Hinduism; how religions adapt to social and cultural change and often provide the catalyst for change. Three lecture hours a week for one semester. History 366N (Topic 5: *History of Hindu Religious Traditions*) and Religious Studies 321 may not both be counted. Prerequisite: Upper-division standing.
- 322. History of Indian Buddhism.** Same as Asian Studies 340 (Topic 5: *History of Indian Buddhism*). The institutional, social, economic, and doctrinal history of Buddhism in India. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 325. Prophet of Islam: His Life and Times.** Same as History 364G (Topic 2: *Prophet of Islam: His Life and Times*) and Islamic Studies 340 (Topic 1: *Prophet of Islam: His Life and Times*). A detailed study of the prophet Muhammad's life and message, and of the means by which his life was recorded and popularized. Three lecture hours a week for one semester. Only one of the following may be counted: History 366N (Topic 6: *Prophet of Islam: His Life and Times*), Middle Eastern Studies 321K (Topic 6: *Prophet of Islam: His Life and Times*), Religious Studies 325. Prerequisite: Upper-division standing.

- 325G. The Qur'an.** Same as Arabic 372 (Topic 2: *The Qur'an*), Islamic Studies 340 (Topic 2: *The Qur'an*), and Middle Eastern Studies 320 (Topic 14: *The Qur'an*). The history, language and style, and themes of the Qur'an. Three lecture hours a week for one semester. Middle Eastern Languages and Cultures 340 (Topic 3: *The Qur'an*) and Religious Studies 325G may not both be counted. Prerequisite: Upper-division standing.
- 326. History of Religion in America since 1800.** Same as History 351P. Survey of religious thought and institutions from the Second Great Awakening to the present; emphasis given to Protestantism challenged by science, industrialism, immigration, urbanism, religious heterogeneity, and indifference, and to revivalism, reform, and the social gospel. Three lecture hours a week for one semester. Religious Studies 326 and 361 (Topic 12: *History of Religion in America since 1800*) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 327. The History of Religion in America to 1800.** Same as History 351N. Survey of religious thought, practices, and institutions in the colonies and early republic. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Religious Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Religious Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated program. May be repeated for credit when the topics vary.
- 335. Jesus in History and Tradition.** Same as Classical Civilization 348 (Topic 10: *Jesus in History and Tradition*). Critical issues, scholarly debates, and historical methods in studying the development of the Christian tradition regarding the figure of Jesus. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 337. Religion and Society.** Same as Sociology 343. The growth and decline of religious groups and traditions; "cults" and new religions; comparative sociology of religion; the United States religious landscape; religion and individual health and well-being; spirituality and other aspects of social life. Three lecture hours a week for one semester. Religious Studies 337 and 361 (Topic 16: *Religion and Society*) may not both be counted. Prerequisite: Upper-division standing.
- 341. Topics in Religions of South Asia.** Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Indian Philosophies.** Same as Asian Studies 372 (Topic 2: *Indian Philosophies*) and Philosophy 348 (Topic 2: *Indian Philosophies*).

Topic 2: Diversity of Indian Traditions. Same as Asian Studies 372 (Topic 19: *Diversity of Indian Traditions*). Art and architecture of South Asia from 1200 to 1900, within the context of Indian culture. Three lecture hours a week for one semester. Art History 372 (Topic: *Diversity of Indian Traditions*) and Religious Studies 341 (Topic 2) may not both be counted. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

Topic 3: Gender, Sexuality, and the Family in Indian Religions and Cultures. Same as Anthropology 324L (Topic 40: *Gender, Sexuality, and the Family in Indian Religions and Cultures*), Asian Studies 372 (Topic 25: *Gender, Sexuality, and the Family in Indian Religions and Cultures*), and Women's and Gender Studies 340 (Topic 25: *Gender, Sexuality, and the Family in Indian Religions and Cultures*). A comprehensive historical overview of gender issues as they are represented in the textual traditions of South Asia.

Topic 5: Gandhi and Gandhism. Same as Asian Studies 361 (Topic 6: *Gandhi and Gandhism*) and History 350L (Topic 5: *Gandhi and Gandhism*). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

Topic 6: Muslim India before 1750. Same as Asian Studies 346M and History 346M. History, art and architecture, and religions of India during the period of Muslim rule from the tenth to the eighteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

Topic 7: Formation of Indian Art. Same as Asian Studies 372 (Topic 18: *Formation of Indian Art*). The major achievements of South Asia up to 500 CE, within the context of Indian culture. Three lecture hours a week for one semester. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

Topic 8: Buddhist Art. Same as Asian Studies 372 (Topic 24: *Buddhist Art*). Three lecture hours a week for one semester. Art History 372 (Topic: *Buddhist Art*) and Religious Studies 341 (Topic 8) may not both be counted. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

Topic 9: The Taj Mahal and the Diversity of Indian Art. Three lecture hours a week for one semester. Only one of the following may be counted: Art History 372 (Topic: *The Taj Mahal and the Diversity of Indian Art*), Asian Studies 372 (Topic: *The Taj Mahal and the Diversity of Indian Art*), Religious Studies 341 (Topic 9), 351 (Topic: *The Taj Mahal and the Diversity of Indian Art*).

- Topic 10: Early Art of India.** Same as Asian Studies 372 (Topic 15: *Early Art of India*). Artistic achievement of South Asia up to 1000 CE, with a focus on the function and meaning of works of art within the context of Indian culture. Three lecture hours a week for one semester. Art History 372 (Topic: *Early Art of India*) and Religious Studies 341 (Topic 10) may not both be counted. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.
- 341G. Yoga as Philosophy and Practice.** Three lecture hours a week for one semester. Only one of the following may be counted: Philosophy 356 (Topic: *Yoga as Philosophy and Practice*), Religious Studies 341G, 361 (Topic: *Yoga as Philosophy and Practice*). Prerequisite: Upper-division standing.
- 342. Topics in Religions of Central Asia.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 344. The Age of Reformation.** Same as History 343. Examines late medieval religion, the rise of Protestant movements, and the Catholic response in their cultural, political, and social contexts. Three lecture hours a week for one semester. Religious Studies 344 and 361 (Topic 26: *The Age of Reformation*) may not both be counted. Prerequisite: Upper-division standing.
- 345. Islamic Spain and North Africa to 1492.** Same as History 375D and Middle Eastern Studies 321K (Topic 4: *Islamic Spain and North Africa to 1492*). An introduction to the impact of Islam on Spain and North Africa, with emphasis on social, economic, and cultural development. Three lecture hours a week for one semester. Religious Studies 345 and 361 (Topic 13: *Islamic Spain and North Africa to 1492*) may not both be counted. Prerequisite: Upper-division standing.
- 346. Topics in the Religions of the United States.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Religion in American Political Thought.** Same as Government 335M (Topic 5: *Religion in American Political Thought*). Religious Studies 346 (Topic 2) and 361 (Topic 9: *Religion in American Political Thought*) may not both be counted. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- 346C. Religion and Visual Culture in the United States.** Focuses on artifacts or “visual culture,” and considers how religion mediates artifacts and how artifacts mediate religion. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: American Studies 325 (Topic: *Religion and Visual Culture in the United States*), Religious Studies 346 (Topic: *Religion and Visual Culture in the United States*), 346C.
- 352. Topics in Religions of East Asia.** Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Japanese Religion and Society.** Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: *Japanese Religion and Society*), Asian Studies 372 (Topic: *Japanese Religion and Society*), Religious Studies 352 (Topic 2). Prerequisite: Upper-division standing.
- Topic 3: Religion and Rebellion in Modern East Asia.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- Topic 4: Ritual and Religion in Korea.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- Topic 5: Ritual and Religion in Chinese Society.** Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: *Ritual and Religion in Chinese Society*), Asian Studies 361 (Topic: *Ritual and Religion in Chinese Society*), Religious Studies 352 (Topic 5), 361 (Topic: *Ritual and Religion in Chinese Society*). Prerequisite: Upper-division standing.
- Topic 6: The Asian Perspective on Death and Dying.** Only one of the following may be counted: Anthropology 324L (Topic: *The Asian Perspective on Death and Dying*), Asian Studies 361 (Topic: *The Asian Perspective on Death and Dying*), Religious Studies 351 (Topic: *The Asian Perspective on Death and Dying*), 352 (Topic 6). Prerequisite: Upper-division standing.
- Topic 7: Religion in Japanese History.** Same as Asian Studies 340 (Topic 9: *Religion in Japanese History*). Examines religious concepts and practices in wider contexts of modern Japanese culture and society. Focuses on the critical understanding of the individual and collective aspects of Japanese spiritual life. Three lecture hours a week for one semester.
- 353. Topics in Religion and Culture of the Biblical World.** Three lecture hours a week for one semester; additional hours may be required by some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 353D. The Dead Sea Scrolls.** Same as History 364G (Topic 3: *The Dead Sea Scrolls*), Jewish Studies 364 (Topic 4: *The Dead Sea Scrolls*), and Middle Eastern Studies 320 (Topic 13: *The Dead Sea Scrolls*). Three lecture hours a week for one semester. Only one of the following may be counted: History 366N (Topic 8: *The Dead Sea Scrolls*), Jewish Studies 361 (Topic 4: *The Dead Sea Scrolls*), Middle Eastern Languages and Cultures 341 (Topic 14: *The Dead Sea Scrolls*), Religious Studies 353D, 361 (Topic 31: *The Dead Sea Scrolls*). Prerequisite: Upper-division standing.

- 354D. The Bible and History.** Same as History 372P, Jewish Studies 364 (Topic 3: *The Bible and History*), and Middle Eastern Studies 320 (Topic 3: *The Bible and History*). The critical uses of biblical and extrabiblical data in the reconstruction of the history of the biblical period. Three lecture hours a week for one semester. Only one of the following may be counted: Jewish Studies 361 (Topic 3: *The Bible and History*), Middle Eastern Languages and Cultures 341 (Topic 1: *The Bible and History*), Religious Studies 354D, 361 (Topic 14: *The Bible and History*). Prerequisite: Upper-division standing.
- 355. The Bible as Literature.** Same as English 358J. In-depth literary study of the Bible, with emphasis on the formal features of narrative, hymn, prophecy, apocalypse, gospel, and epistle. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 355D. Reformation Theology.** Same as Germanic Civilization 360E (Topic 1: *Reformation Theology*) and History 362G (Topic 1: *Reformation Theology*). Three lecture hours a week for one semester. Only one of the following may be counted: English 322 (Topic 10: *Reformation Theology*), History 366N (Topic 3: *Reformation Theology*), Religious Studies 355D. Prerequisite: Upper-division standing.
- 355K. The Bible in British and American Literature.** Same as English 358K. The reading of biblical masterpieces as literature; consideration of different versions of the Bible and their influence on English and American literature. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.
- 356E. Existentialism.** Same as Philosophy 366K. Existentialism and its relationship to literature, psychoanalysis, and Marxism. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Religious Studies 361 (Topic: *Existentialism*) and 356E may not both be counted.
- 357. Topics in the Religions of Europe.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Heresy and the Inquisition.** Same as History 350L (Topic 33: *Heresy and the Inquisition*). Only one of the following may be counted: Religious Studies 357 (Topic 1), 355E (Topic 1: *Heresy and the Inquisition*), 361 (Topic 27: *Heresy and the Inquisition*). Prerequisite: Upper-division standing and consent of instructor.
- Topic 2: Byzantine Art.** Same as Art History 329J. Examination of early Christian and medieval art and architecture in the eastern Roman empire, including related traditions (Coptic, Armenian, Georgian, Crusader, Norman).
- Topic 4: Midnight Sun People: The Sami.** Same as Germanic Civilization 327E (Topic 12: *Midnight Sun People: The Sami*) and Scandinavian 327 (Topic 10: *Midnight Sun People: The Sami*). Only one of the following may be counted: Anthropology 324L (Topic: *Midnight Sun People*), English 322 (Topic: *Midnight Sun People*), Religious Studies 357 (Topic 4), 361 (Topic: *Midnight Sun People*).
- 358. Topics in the Religions of the Middle East.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 2: Medieval Islam: Faith and History.** Same as History 350L (Topic 34: *Medieval Islam: Faith and History*) and Middle Eastern Studies 321K (Topic 7: *Medieval Islam: Faith and History*). Religious Studies 358 (Topic 2) and 361 (Topic 28: *Medieval Islam: Faith and History*) may not both be counted. Prerequisite: Upper-division standing.
- Topic 4: Sufism: Islamic Mysticism and Spirituality.** Same as Islamic Studies 372 (Topic 10: *Sufism: Islamic Mysticism and Spirituality*) and Middle Eastern Studies 320 (Topic 16: *Sufism: Islamic Mysticism and Spirituality*). Muslim debates of Sufism; the historical development of Sufi beliefs regarding theology, religious laws, expression, and popular social practices. Only one of the following may be counted: Islamic Studies 340 (Topic: *Sufism: Islamic Mysticism and Spirituality*), Middle Eastern Studies 320 (Topic: *Sufism: History and Doctrines*), Religious Studies 358 (Topic 4). Prerequisite: Upper-division standing.
- Topic 5: Veiling in the Muslim World.** Same as Asian Studies 372 (Topic 14: *Veiling in the Muslim World*), Islamic Studies 372 (Topic 2: *Veiling in the Muslim World*), Middle Eastern Studies 322K (Topic 17: *Veiling in the Muslim World*), and Women's and Gender Studies 340 (Topic 11: *Veiling in the Muslim World*). Prerequisite: Upper-division standing.
- Topic 6: The Islamic Middle East in the Visual Arts.** Same as Islamic Studies 372 (Topic 1: *The Islamic Middle East in the Visual Arts*) and Middle Eastern Studies 322K (Topic 16: *The Islamic Middle East in the Visual Arts*). Prerequisite: Upper-division standing.
- Topic 7: Popular Iranian Rituals and Traditions.** Same as Asian Studies 361 (Topic 18: *Popular Iranian Rituals and Traditions*), Islamic Studies 372 (Topic 3: *Popular Iranian Rituals and Traditions*), and Middle Eastern Studies 322K (Topic 18: *Popular Iranian Rituals and Traditions*). Adoption of old Persian cultural heritage into Islamic practices, past and present. Prerequisite: Upper-division standing.
- 358Q. Supervised Research.** Individual instruction. Prerequisite: Upper-division standing.
- 360. Topics in Religions of Sub-Saharan Africa.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 362. Independent Research in Religious Studies.** Faculty-directed research. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.
- 365. Topics in Ancient Religion.** Three lecture hours a week for one semester; additional hours may be required by some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

- Topic 1: Rome and Jerusalem.** Same as Ancient History and Classical Civilization 325 (Topic 3: *Rome and Jerusalem*), History 321G, Jewish Studies 365 (Topic 7: *Rome and Jerusalem*), and Middle Eastern Studies 320 (Topic 2: *Rome and Jerusalem*). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Only one of the following may be counted: Jewish Studies 361 (Topic 2: *Rome and Jerusalem*), Middle Eastern Languages and Cultures 341 (Topic 7: *Rome and Jerusalem*), Religious Studies 361 (Topic 24: *Rome and Jerusalem*), 365 (Topic 1). Prerequisite: Upper-division standing.
- Topic 2: Introduction to Germanic Religion and Myth.** Same as European Studies 347 (Topic 3: *Introduction to Germanic Religion and Myth*) and Germanic Civilization 340E (Topic 1: *Introduction to Germanic Religion and Myth*). Only one of the following may be counted: English 322 (Topic 2: *Introduction to Germanic Religion and Myth*), European Studies 361 (Topic 6: *Introduction to Germanic Religion and Myth*), Religious Studies 361 (Topic 8: *Introduction to Germanic Religion and Myth*), 365 (Topic 2). Prerequisite: Upper-division standing.
- 366. Topics in Religions of the Americas.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 368. Topics in Religions of Latin America.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 373. Topics in Comparative Religion.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Religious Studies 373 and 375S may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 373M. Biomedicine, Ethics, and Culture.** Three lecture hours a week for one semester. Religious Studies 373 (Topic: *Biomedicine, Ethics, and Culture*) and 373M may not both be counted.
- 375S. Advanced Seminars in Religious Studies.** Discussion and research-based study of topics in religious studies. Includes theoretical approaches to the study of religion. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Religious Studies 373 and 375S may not both be counted unless the topics vary. Prerequisite: Upper-division standing and at least six semester hours of coursework in religious studies.
- 679H. Honors Tutorial Course.** Supervised individual reading for one semester, followed by research and writing to produce a substantial paper on a specific topic in religious studies, to be completed during the second semester. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Religious Studies Honors Program; for 679HB, Religious Studies 679HA.

DEPARTMENT OF RHETORIC AND WRITING

The Department of Rhetoric and Writing provides lower- and upper-division writing instruction. Courses include the required core course Rhetoric and Writing 306, lower-division elective courses, and upper-division courses in rhetoric and writing. The department also administers the Undergraduate Writing Center, which supports writing instruction in all undergraduate courses, the Computer Writing and Research Laboratory, which offers innovative approaches for integrating computers into writing instruction, and the Writing Across the Curriculum Initiative, which oversees substantial writing component certification for the College of Liberal Arts.

In addition to meeting the prerequisite for Rhetoric and Writing 306, all students must also take a designated placement examination, administered by the Division of Instructional Innovation and Assessment, before enrolling in the course. The student should obtain an examination score before seeing an adviser for approval to register. Those who receive placement credit for Rhetoric and Writing 306 may elect to register for Rhetoric and Writing 309S, *Critical Reading and Persuasive Writing*.

If a student has received either a passing or a failing grade or the symbol Q in Rhetoric and Writing 306, he or she may not earn credit by examination for this course.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

RHETORIC AND WRITING: RHE

LOWER-DIVISION COURSES

306 (TCCN: ENGL 1301). Rhetoric and Writing. An introductory writing course that includes instruction in practical reasoning and the principles of rhetoric. Three lecture hours a week for one semester. Only one of the following may be counted: English 603A, Rhetoric and Writing 306, 306Q, Tutorial Course 603A. Prerequisite: A passing score on the writing section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).

- 306Q (TCCN: ENGL 1306). Rhetoric and Writing for Nonnative Speakers of English.** Enrollment limited to nonnative speakers of English. An introductory writing course that includes instruction in practical reasoning and the principles of rhetoric, as well as grammar and mechanics of standard American English. Five lecture hours a week for one semester. Only one of the following may be counted: English 603A, Rhetoric and Writing 306, 306Q, Tutorial Course 603A. Prerequisite: Students must present their scores on the Test of English as a Foreign Language (TOEFL) to the Rhetoric and Writing Office prior to registering.
- 309K, 409K. Topics in Writing.** A writing course focused on studying and practicing methods of rhetorical analysis within the contexts of disputed issues of academic, political, or cultural significance. Three or four lecture hours a week for one semester. May be repeated once for credit when the topics vary. Prerequisite: Rhetoric and Writing 306 or 306Q.
- 309S. Critical Reading and Persuasive Writing.** A writing course designed to teach advanced rhetorical analysis and advocacy on public issues. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306 or 306Q.
- 310. Intermediate Expository Writing.** An intensive writing workshop, focusing on style and readability. Three lecture hours a week for one semester. Rhetoric and Writing 309L and 310 may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.
- 312. Writing in Digital Environments.** A writing course focused on using, interpreting, and analyzing traditional and emerging technologies. Taught using networked computers. Three lecture hours a week for one semester. Rhetoric and Writing 309M and 312 may not both be counted. Prerequisite: Rhetoric and Writing 306.
- 315. Introduction to Visual Rhetoric.** A writing course designed to teach students to analyze and produce visual and non-verbal forms of rhetoric. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Rhetoric and Writing.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Rhetoric and Writing. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 328. Topics in Professional and Technical Writing for Liberal Arts Majors.** For liberal arts majors only. A professional and technical writing course exploring topics such as writing for nonprofit organizations, writing for government, and writing for industry. Designed for students in nontechnical fields. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.
- Topic 1: Magazine Writing and Publishing.** Introduction to magazine writing, editing, and publishing, with an emphasis on the nonfiction article.
- Topic 2: Writing for Nonprofits.** Studies the writing genres and rhetorical strategies that are routinely used in nonprofit organizations. Covers business reports, grant writing, and feature writing.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Rhetoric and Writing.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Rhetoric and Writing. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330C. Advanced Studies in Digital Rhetoric.** An advanced course that examines the role of information technologies in communication. Taught using networked computers. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.
- Topic 1: Rhetorics of Cyberspace.** Examines the ways cyberspace is represented, critiqued, and employed in writing and film. Explores the social, ethical, and political implications of networked culture.
- Topic 2: Designing Text Ecologies.** Explores the function and interaction of texts in the workplace. Emphasis on research, analysis, and design of the strategic, tactical, and operational aspects of texts.
- 330D. History of Rhetoric.** An advanced survey of figures and movements in the history of rhetoric, from classical to contemporary. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.
- Topic 1: Sophistry and the Invention of Rhetoric.** Examines the role of sophists and sophistry in the development and practice of rhetoric as an art, from antiquity to modern times.
- Topic 2: Kairos and the Rhetorical Situation.** Introduction to kairos, a key concept in rhetorical theory from ancient to modern times, that focuses attention on making a text appropriate for its historical situation. Explores why some writing succeeds at attracting attention and inspiring action, while some writing fails.

UPPER-DIVISION COURSES

- 321. Principles of Rhetoric.** Examines major terms, issues, and approaches in the theory and practice of rhetoric and writing. Three lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.
- 325M. Advanced Writing.** An advanced course designed to improve and refine writing. Three lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

- Topic 3: Deliberating War.** Studies the recurrent means of making arguments for and against war, and the role of rhetoric in public deliberation. Rhetoric and Writing 330D (Topic: *Pro- and Anti-War Rhetoric*) and 330D (Topic 3) may not both be counted.
- Topic 4: Rhetoric and Racism.** Explores theories of rhetoric by examining arguments about group identity, from Athenian discussions of “barbarism” in the fourth century BC to nineteenth-century arguments about citizenship.
- Topic 5: History of Public Argument.** A survey of the practice and theory of argumentation, with particular attention to its civic and political uses and implications.
- 330E. Rhetorical Theory and Analysis.** An advanced examination of rhetorical theories and their applications. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.
- Topic 1: Rhetoric of Science in Popular Media.** Rhetorical analysis of scientific discourse and how it is represented in popular media, including news reports, magazines, and popular nonfiction.
- Topic 2: Demagoguery.** Examines material produced by rhetors commonly considered demagogues and assesses the scholarly discussions of these individuals.
- Topic 3: Democracy and the Media.** Rhetorical analysis, with particular attention to the effects of technologies and journalistic institutions on public deliberation.
- 360M. Rhetoric and Writing for Teachers of English.** Designed for students seeking a secondary school teaching certificate or those in the UTeach-Liberal Arts program. An advanced course that examines theories of writing and writing pedagogy. Three lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.
- 366. Internship in Rhetoric and Writing.** Research and staff experience working in an appropriate nonprofit, public-, or private-sector entity. Ten to twelve hours a week for one semester. Offered on the pass/fail basis only. May be repeated once for credit when the internships vary. Prerequisite: Upper-division standing, twelve semester hours of coursework in rhetoric and writing, and consent of instructor.
- 367R. Conference Course in Rhetoric and Writing.** Supervised work on specific projects in rhetoric and writing. Three conference hours a week for one semester. May be repeated for credit. Prerequisite: Completion of at least thirty-six semester hours of coursework; English 316K; and approval of written application by the supervising instructor.
- 368C. Writing Center Internship.** Intensive reading, writing, and discussion in writing center theory and philosophy, tutoring methods, and writing pedagogy, as well as a review of standard American English usage and mechanics; followed by a supervised apprenticeship as a peer consultant in the Undergraduate Writing Center. Two lecture hours and two apprenticeship hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework; English 316K; and approval of written application by instructor.
- 368E. Editing for Publication.** Advanced instruction in revising and editing for publication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.
- Topic 1: The Book: Prospectus to Proofs.** Designed to make students better writers and more careful editors, the course includes creation of a simulated book from proposal stage to editing of final page proofs.
- 379C. Advanced Topics in Rhetoric and Writing.** An advanced course focused on specific theories or practices of rhetoric and writing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, including English 316K or the equivalent, and consent of instructor.

ROTC COURSES

DEPARTMENT OF AIR FORCE SCIENCE

The Air Force Reserve Officer Training Corps (AFROTC) was activated at the University of Texas in September, 1947. The program is designed to commission career-oriented officers who meet specific Air Force requirements. The AFROTC objective is to place on active duty lieutenants who demonstrate dedication to their assignments, willing acceptance of responsibility, critical and creative thinking, and the ability to speak and write effectively. Most cadets incur a four-year active-duty commitment. However, pilots incur a ten-year active-duty service commitment after completing specialized undergraduate pilot training, and navigators incur a six-year commitment after completing specialized undergraduate navigator training. The minimum service obligation for intelligence and air battle management career fields is six years. Graduate education is also possible under the auspices of the Air Force while on active duty.

Extracurricular activities available through AFROTC include intramural athletics, parades, ceremonies, parties, dinners, picnics, field trips to Air Force installations, and membership in national military societies.

AFROTC courses are taught by Air Force officers and are approved for college credit toward the cadet's degree program in amounts determined by the college concerned. Students may choose from several programs.

AFROTC scholarships are available to selected cadets. These scholarships, available to freshmen and sophomores, are for two and a half to four years; they cover full tuition costs, laboratory expenses, and incidental fees and provide an allowance for textbooks and a monthly stipend. Scholarships are awarded on the basis of overall

merit, with particular attention paid to academic achievement. Recipients must maintain academic standards in order to retain the scholarships. Other scholarships are also available for upper-division cadets. Additional information is available from the chair of the department.

Air force science courses are designed to prepare selected students for a commission in the United States Air Force through the AFROTC program. Students who do not hold AFROTC scholarships may take lower-division courses with no military obligation. Scholarship students and selected students who elect to take upper-division courses do so on contract and, upon graduation and commissioning, enter active duty in the Air Force.

AIR FORCE SCIENCE: AFS

LOWER-DIVISION COURSES (GENERAL MILITARY COURSES)

- 100. Leadership Laboratory.** Various leadership techniques, including drill and ceremonies, customs and courtesies, and uniform standards. Two laboratory hours a week for one semester. Offered on the pass/fail basis only.
- 102K. The Foundations of the United States Air Force I.** Introductory course exploring the overall roles and missions of the United States Air Force and career fields available in the Air Force. Emphasis on military customs and courtesies, appearance standards, Air Force core values, and written communication. One lecture hour a week for one semester. Offered in the fall semester only. Prerequisite: Concurrent enrollment in Air Force Science 100.
- 102L. The Foundations of the United States Air Force II.** Continuation of Air Force Science 102K, with an introduction to American military history and emphasis on personal communication. One lecture hour a week for one semester. Offered in the spring semester only. Prerequisite: Concurrent enrollment in Air Force Science 100.
- 111K. The Evolution of USAF Air and Space Power I.** Key historical events and milestones in the development of air power as a primary instrument of United States national security. One lecture hour a week for one semester. Offered in the fall semester only. Prerequisite: Concurrent enrollment in Air Force Science 100.
- 111L. The Evolution of USAF Air and Space Power II.** Continuation of Air Force Science 111K. One lecture hour a week for one semester. Offered in the spring semester only. Prerequisite: Concurrent enrollment in Air Force Science 100.

UPPER-DIVISION COURSES (PROFESSIONAL OFFICER COURSES)

- 120L. Leadership Laboratory.** Leadership laboratory course for upper-division students. Further development of leadership skills through leadership positions within the cadet corps. Includes training of freshman and sophomore students as well as a practicum in Air Force unit operation. Two laboratory hours a week for one semester. Offered on the pass/fail basis only.
- 321. Air Force Leadership Studies I.** Study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. Three lecture hours a week for one semester. Offered in the fall semester only. Prerequisite: Air Force Science 102K, 102L, 111K, and 111L; concurrent enrollment in Air Force Science 120L; and a four- or five-week field training course or equivalent ROTC or military training.
- 322. Air Force Leadership Studies II.** Continuation of Air Force Science 321. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Air Force Science 321 and concurrent enrollment in Air Force Science 120L.
- 331. National Security Affairs.** Evolution of the role of national security in a democratic society, with emphasis on policy formulation, competing values, and organizations. Area studies and the impact of developing nations on United States national security. Three lecture hours a week for one semester. Offered in the fall semester only. Prerequisite: Air Force Science 322 and concurrent enrollment in Air Force Science 120L.
- 332. Current Issues and Preparation for Active Duty.** Acculturation to active duty. Includes study of the evolution and jurisdiction of military law, officership, and current Air Force issues. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Air Force Science 331, and concurrent enrollment in Air Force Science 120L or consent of the department chair.

DEPARTMENT OF MILITARY SCIENCE

The Army Reserve Officers' Training Corps (ROTC) was established at the University of Texas in September, 1947. As a senior division unit, it is designed to provide a course of military instruction that will permit qualified students to prepare themselves for commissions as second lieutenants while they pursue other academic courses leading to baccalaureate or advanced degrees from the University.

Upon being commissioned a second lieutenant, each student has the opportunity to serve in the active Army, Army Reserve, or National Guard.

The Army ROTC program, in addition to providing

a basic foundation in military subjects, is designed to develop the highest qualities of leadership, character, and citizenship through the wide variety of extracurricular activities it sponsors. Such activities include parades, ceremonies, social events, a Ranger detachment, and intramural athletic teams.

The Army ROTC program is normally a four-year program divided into a basic course and an advanced course. The basic course is conducted during the first two years and the advanced course during the last two years. Certain students may qualify for advanced placement in the program based on previous military training in Junior ROTC, a service academy, active duty in a military service, credit for other college courses, or completion of a special four-week summer camp, normally between the sophomore and junior year.

The Department of the Army has determined that a need exists for all Army ROTC cadets to have a demonstrated proficiency in selected disciplines. These courses are called Professional Military Education (PME) and must be completed prior to graduation. A list of courses that fulfill PME requirements is available from the chair of the Department of Military Science.

Two-, three-, and four-year scholarship programs are offered to selected cadets. The four-year scholarship program is administered by the Department of the Army, but selection is based on the Professor of Military Science Order of Merit List (OML). Applicants must apply while in high school. The remaining programs are administered directly through the Department of Military Science.

Scholarship students receive \$300 to \$500 a month for up to ten months for each year of their scholarship. The scholarship pays for required tuition and mandatory fees, laboratory expenses, and books. Nonscholarship students receive \$450 to \$500 a month during the advanced course. For additional information, contact the scholarship and enrollment officer.

MILITARY SCIENCE: M S

LOWER-DIVISION COURSES

000. Leadership Laboratory. Open only to students in associated military science courses. Leadership responsibilities for planning, coordination, execution, and evaluation of training and other activities. Self-confidence and team-building leadership skills that can be applied throughout life. One and one-half laboratory hours a week for one semester. Required of all military science students. Prerequisite: Concurrent enrollment in another military science course.

- 101. Basic Military Science I-A.** Designed to increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations, and basic marksmanship. Fundamental concepts of leadership in a profession. One one-hour lecture/practice session a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000.
- 103. Basic Military Science I-B.** Principles of effective leading. Designed to reinforce self-confidence through participation in physically and mentally challenging exercises with upper-division ROTC students. Communication skills that improve individual performance and group interaction. Relationship of organizational ethical values to the effectiveness of a leader. One one-hour lecture/practice session a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000.
- 210. Basic Military Science II-A.** Ethics-based leadership skills designed to develop individual abilities and contribute to effective team-building. Focus on oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation, and basic military tactics. Fundamentals of ROTC's Leadership Assessment Program. Two lecture/practice hours a week for one semester, and a weekend field training exercise. Prerequisite: Concurrent enrollment in Military Science 000.
- 212. Basic Military Science II-B.** Introduction to individual and team aspects of military tactics in small-unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security, and methods of pre-execution checks. Practical exercises with upper-division ROTC students. Techniques for training others as an aspect of continued leadership development. Two lecture/practice hours a week for one semester, and a weekend field training exercise. Prerequisite: Concurrent enrollment in Military Science 000.

UPPER-DIVISION COURSES

- 320. Advanced Military Science III-A.** Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Use of small-unit defensive tactics and opportunities to plan and conduct training for lower-division students. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000 and approval of departmental representative.
- 320K. Advanced Military Science III-B.** Continued study of methods covered in Military Science 320. Students analyze tasks; prepare written or oral guidance for team members to accomplish tasks; delegate tasks and supervise; plan for and adapt to the unexpected in organizations under stress; examine and apply lessons from leadership case studies; examine the importance of ethical decision making in enhancing team performance. Three lecture/practice hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000 and approval of departmental representative.

- 375. Leadership and Ethics (IV-A).** Military leadership and professional ethics; post and installation support system; introduction to the military justice system. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000 and approval of departmental representative.
- 375K. Transition to Lieutenant (IV-B).** Fundamentals of the military justice system; training and logistical management systems; military social functions; role of the second lieutenant. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000 and approval of departmental representative.
- 379. Advanced Military Science V-A.** Advanced study and research on historic and contemporary military subjects and events. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000.
- 379K. Advanced Military Science V-B.** Advanced study and research on historic and contemporary military subjects and events. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000.

DEPARTMENT OF NAVAL SCIENCE

The Naval Reserve Officers Training Corps (NROTC) was established at the University of Texas in September, 1940, to offer the naval science courses necessary to qualify University students for commissions in the United States Navy or Marine Corps.

Qualified students may apply for the four-year or two-year Navy-Marine Scholarship Program or college program (nonscholarship) and earn a commission in the Navy or Marine Corps.

NROTC scholarship students are appointed midshipmen, United States Naval Reserve, by the Secretary of the Navy, and granted the compensation and benefits authorized by law. While students attend the University, the Navy pays tuition, the cost of textbooks, fees of an instructional nature, and a subsistence allowance of \$250 to \$450 a month during the academic year. During drill periods and summer training periods, midshipmen wear government-furnished uniforms. Students should submit scholarship applications to a naval recruiting station before December 1 of each year or to the Department of Naval Science after the first semester of enrollment in the college program. Additional information is available from the chair of the department.

NAVAL SCIENCE: N S

LOWER-DIVISION COURSES

- 000. Drill.** Three laboratory hours a week for one semester.
- 302. Introduction to Naval Science.** A general introduction to sea power and the naval service, including the mission, organization, regulations, warfare components, and personnel programs. Three lecture hours a week for one semester.
- 603. Naval Ships Systems I and II.** Introduction to types, structures, and purposes of naval ships and weapons systems. Three lecture hours a week for two semesters.
- 312. Sea Power and Maritime Affairs.** A consideration of the influence of sea power, naval history, and maritime affairs on current events and national policy. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.

UPPER-DIVISION COURSES

- 326. Evolution of Warfare.** Explores the forms of warfare employed by great leaders in history as they relate to the evolution of warfare. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.
- 329. Navigation and Naval Operations I.** An introduction to piloting, a survey of navigational aids, and a study of the Rules of the Nautical Road. Three lecture hours a week for one semester.
- 330. Leadership and Ethics.** Principles of leadership and ethics reinforced through seminar discussion and case studies. Discussion of the duties and responsibilities of a naval officer. Three lecture hours a week for one semester. Prerequisite: Naval Science 335 and consent of instructor.
- 335. Leadership and Management.** Study of leadership and management theory in organizations, with emphasis on examining the leadership process in the context of the dynamic interaction of the leader, the followers, and the situation. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.
- 362. Amphibious Warfare.** Defines the concept of amphibious warfare, explores its doctrinal origins, and traces its evolution as an element of naval policy during the twentieth century. Three lecture hours a week for one semester.
- 369. Navigation and Naval Operations II.** Study of the celestial sphere and nautical astronomy to determine positions on the earth by mathematical analysis, and an introduction to relative motion and the maneuvering board. Three lecture hours a week for one semester.

CENTER FOR RUSSIAN, EAST EUROPEAN, AND EURASIAN STUDIES

RUSSIAN, EAST EUROPEAN, AND EURASIAN STUDIES: REE

LOWER-DIVISION COURSES

- 301. Introduction to Russian, East European, and Eurasian Studies.** An introduction to the former Soviet Union and Eastern Europe through each of the major disciplines represented in the program: language, literature, anthropology, geography, history, government, sociology, and economics. Three lecture hours a week for one semester. History 306N (Topic 4: *Introduction to Russian, East European, and Eurasian Studies: History*) and Russian, East European, and Eurasian Studies 301 may not both be counted. Government 314 (Topic 4: *Introduction to Russian, East European, and Eurasian Studies: Political Science*) and Russian, East European, and Eurasian Studies 301 may not both be counted.
- 302. Topics in Russian, East European, and Eurasian Studies.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 318Q. Supervised Research.** Individual instruction.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Russian, East European, and Eurasian Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Russian, East European, and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. Introduction to an East European Language.** An overview of the structure and vocabulary of an East European language necessary for a reading knowledge of the language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any degree.
- 325. Topics in Language, Literature, and Culture.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Fulfills the basic Russian, East European, and Eurasian studies requirement in language, literature, and culture. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Gypsy Language and Culture. Linguistic introduction to Romani; relationship to languages of India; history from 280 BC; modern dialects and international standard language; history and culture as reflected in the language. Only one of the following may be counted: Asian Studies 372 (Topic 13: *Gypsy Language and Culture*); Linguistics 322; Russian, East European, and Eurasian Studies 325 (Topic 1).

Topic 3: Readings in Russian Literature I. Prose and poetry of the first half of the nineteenth century. Prerequisite: Russian 612, 312L, or the equivalent.

Topic 4: Readings in Russian Literature II. Prose and poetry of the second half of the nineteenth century. Prerequisite: Russian 612, 312L, or the equivalent.

Topic 5: The Polish Experience. Same as Polish 324 (Topic 1: *The Polish Experience*). A historical, sociopolitical picture of Poland's complex cultural history. Prerequisite: Upper-division standing or consent of instructor.

Topic 6: Survey of Twentieth-Century Russian Literature I. Short prose, poetry, and drama, 1890 to 1930. Prerequisite: Six semester hours of upper-division coursework in Russian or consent of instructor.

Topic 7: Survey of Twentieth-Century Russian Literature II. Short prose, poetry, and drama, 1930 to the present. Prerequisite: Russian, East European, and Eurasian Studies 325 (Topic 6).

Topic 8: Yiddish Drama and Film in Translation. Same as Germanic Civilization 327E (Topic 8: *Yiddish Drama and Film in Translation*), Jewish Studies 361 (Topic 5: *Yiddish Drama and Film in Translation*), and Slavic 324 (Topic 2: *Yiddish Drama and Film in Translation*). Jewish life in Poland and Russia before the Holocaust, and the transition to American Jewish life, as revealed in plays and films produced in Eastern Europe and in the United States. No knowledge of Yiddish is required. English 322 (Topic 34: *Yiddish Drama and Film in Translation*) and Russian, East European, and Eurasian Studies 325 (Topic 8) may not both be counted. Prerequisite: Upper-division standing.

Topic 9: The Russian Novel. Same as English 322 (Topic 37: *The Russian Novel*) and Russian 356 (Topic 1: *The Russian Novel*). European Studies 361 (Topic: *The Russian Novel*) and Russian, East European, and Eurasian Studies 325 (Topic 9) may not both be counted. Prerequisite: Upper-division standing.

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Russian, East European, and Eurasian Studies. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Russian, East European, and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

- 335. Topics in History, Economics, and Government.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Fulfills the basic Russian, East European, and Eurasian studies requirement in history, economics, and government. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Marxist Economics. An introduction to the Marxian economic theory of capitalism through the study of Karl Marx's *Capital*, volume I, and of its contemporary relevance. Economics 357K and Russian, East European, and Eurasian Studies 335 (Topic 1) may not both be counted. Prerequisite: Upper-division standing, and Economics 304K and 304L with a grade of at least C in each; or consent of instructor.

Topic 2: Governments and Politics of Eastern Europe. Same as Government 324J and European Studies 348 (Topic 1: *Governments and Politics of Eastern Europe*). European Studies 361 (Topic 14: *Governments and Politics of Eastern Europe*) and Russian, East European, and Eurasian Studies 335 (Topic 2) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

Topic 3: Governments and Politics of Russia. Issues of nationalism and state-building facing Russia and its neighbors. Evaluation of the post-Soviet experience from the perspectives of both domestic and foreign policy. Government 336M and Russian, East European, and Eurasian Studies 335 (Topic 3) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

Topic 4: Politics in Southeast Europe. Only one of the following may be counted: European Studies 361 (Topic 13: *Politics in Southeast Europe*); Government 328N; Russian, East European, and Eurasian Studies 335 (Topic 4). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 5: History of Russia to 1917. Same as History 343L. Survey of Russian history from seventeenth-century Muscovy to the fall of the Romanovs in 1917. Prerequisite: Upper-division standing.

Topic 6: History of Russia since 1917. Same as History 343M. A survey of Russian history from the revolution of 1917 to the collapse of the Soviet Union. Prerequisite: Upper-division standing.

Topic 7: Political Development in Eastern Europe and Latin America. Only one of the following may be counted: Government 365N (Topic 4: *Political Development in Eastern Europe and Latin America*); Latin American Studies 337M (Topic 6: *Political Development in Eastern Europe and Latin America*); Russian, East European, and Eurasian Studies 335 (Topic 7).

Topic 8: Politics in Southern Europe. Comparative analysis of development politics in capitalist and socialist systems in southwestern and southeastern Europe. Only one of the following may be counted: European Studies 361 (Topic 12: *Politics in Southern Europe*); Government 328M; Russian, East European, and Eurasian Studies 335 (Topic 8). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 9: German Unification: Problems and Prospects. Same as Germanic Civilization 360E (Topic 4: *German Unification: Problems and Prospects*) and Government 365N (Topic 7: *German Unification: Problems and Prospects*). A brief history of Germany since 1815, the contemporary German state and its institutions, and perspectives for the current decade. Only one of the following may be counted: Germanic Civilization 360E (Topic: *German Reunification: Problems and Prospects*); Government 365N (Topic: *German Reunification: Problems and Prospects*); Russian, East European, and Eurasian Studies 335 (Topic 9). Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

Topic 10: The Military in Politics. Only one of the following may be counted: Government 365N (Topic 3: *The Military in Politics*); Latin American Studies 337M (Topic 9: *The Military in Politics*); Russian, East European, and Eurasian Studies 335 (Topic 10). Prerequisite: Six semester hours of lower-division coursework in government.

Topic 11: Germany in the Twentieth Century. Same as History 337N. Survey of German political and military institutions, economic development, culture, and society. Prerequisite: Upper-division standing.

Topic 12: Stalinist Russia. Same as History 350L (Topic 41: *Stalinist Russia*). Prerequisite: Upper-division standing and consent of instructor.

Topic 13: Russian Economic Development since 1917. The growth of the planned economy in industry, agriculture, and labor. Economics 346K and Russian, East European, and Eurasian Studies 335 (Topic 13) may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C in each, and six additional semester hours of coursework in social science; or consent of instructor.

Topic 14: Political Economy of International Crises. Examines several dimensions of the ongoing crises in the world economic order and the interrelationships among them. Problem areas covered are neoliberalism, international money, debt, famine, immigration, and energy shocks. Economics 357L and Russian, East European, and Eurasian Studies 335 (Topic 14) may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C in each, and six additional semester hours of coursework in social science.

Topic 15: Understanding the Cold War. Same as Government 360N (Topic 4: *Understanding the Cold War*). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

- 345. Topics in Sociology, Geography, and Anthropology.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Fulfills the basic Russian, East European, and Eurasian studies requirement in sociology, geography, and anthropology. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Post-Soviet Societies. Only one of the following may be counted: Russian, East European, and Eurasian Studies 345 (Topic 1); Sociology 321K (Topic 1: *Post-Soviet Societies*); Women's and Gender Studies 345 (Topic: *Post-Soviet Societies*).

Topic 2: Regions and Cultures of Europe. Spatial patterns in Europe, with emphasis on cultural, historical, and political geography. Only one of the following may be counted: Geography 326; 385 (Topic: *Regions and Cultures of Europe*); Russian, East European, and Eurasian Studies 345 (Topic 2). Prerequisite: Upper-division standing.

Topic 3: Shamanism in Central Asia. Only one of the following may be counted: Anthropology 324L (Topic 30: *Shamanism in Central Asia*); Middle Eastern Studies 326 (Topic 1: *Shamanism in Central Asia*); Religious Studies 342 (Topic 1: *Shamanism in Central Asia*); Russian, East European, and Eurasian Studies 345 (Topic 3). Prerequisite: Upper-division standing.

- 351. Reading Seminar: Transitions in Russia and Eastern Europe.** First in a sequence of three courses. Students explore transitions from communism in a broad comparative and interdisciplinary context. Through reading, discussion, and training in research methods, students prepare for the research portion of the sequence by defining and planning a project. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, admission to the Transitions Program, and consent of instructor.
- 352. Research Seminar: Transitions in Russia and Eastern Europe.** Second in a sequence of three courses. Students carry out research planned in Russian, East European, and Eurasian Studies 351 and meet with local experts in Berlin, Prague, and Moscow. Research facilitates more specialized examination of important currents in transitions in Russia and Eastern Europe. The equivalent of three lecture hours a week for one semester. Prerequisite: Upper-division standing; admission to the Transitions Program; Russian, East European, and Eurasian Studies 351; and consent of instructor.
- 353. Writing Seminar: Transitions in Russia and Eastern Europe.** Third in a sequence of three courses. Students produce a research paper based on readings, discussion, and research conducted in Russian, East European, and Eurasian Studies 351 and 352. The paper presents the student's findings and analysis of a particular aspect of transition in Russia and Eastern Europe. The equivalent of three lecture hours a week for one semester. Prerequisite: Upper-division standing; admission to the Transitions Program; Russian, East European, and Eurasian Studies 352; and consent of instructor.
- 358Q. Supervised Research.** Individual instruction. Prerequisite: Upper-division standing.
- 379C. Conference Course.** May be repeated for credit. Prerequisite: Consent of the undergraduate adviser in Russian, East European, and Eurasian studies.

679H. Honors Tutorial Course. Intensive reading and research planned with and approved by the honors adviser, followed by completion of a thesis. Required of Russian, East European, and Eurasian studies majors who plan to seek special honors in Russian, East European, and Eurasian studies. Prerequisite: For 679HA, upper-division standing, admission to the Russian, East European, and Eurasian Studies Honors Program, and consent of the honors adviser; for 679HB, Russian, East European, and Eurasian Studies 679HA.

DEPARTMENT OF SLAVIC AND EURASIAN STUDIES

Before enrolling for the first time in any language offered by the Department of Slavic and Eurasian Studies, all students with any knowledge of the language, however acquired, must take a placement test to determine the course for which they should register. Information on placement tests for Polish and Russian is available from the Division of Instructional Innovation and Assessment, 2616 Wichita. Information about testing in other languages is available from the department office.

The normal two-year sequence of lower-division courses in Czech and Russian is 506, 507, 412K, and 412L. In Polish and Serbian/Croatian, it is 506, 507, 312K, and 312L.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

CZECH: CZ

LOWER-DIVISION COURSES

601C. Intensive Czech I. Not open to native or heritage speakers of Czech. Emphasis on developing oral proficiency in Czech using intensive methods of instruction. Six lecture hours a week for one semester. Czech 601C and 506 may not both be counted. Czech 601C and 507 may not both be counted.

301K. Introduction to Czech Civilization. Introduction to selected topics in the culture of the Czech and Slavic people. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree.

Topic 1: Robots and Beer Pubs: Czech Culture. Introduction to the Czech people and culture, and how terms of Czech origin, such as "robot" and "pilsner beer," became common throughout the world. Also examines Czech art history and architecture.

- 506 (TCCN: CZECH 1511). First-Year Czech I.** Five lecture hours a week for one semester. Czech 601C and 506 may not both be counted.
- 507 (TCCN: CZECH 1512). First-Year Czech II.** Five lecture hours a week for one semester. Czech 601C and 507 may not both be counted. Prerequisite: Czech 506.
- 611C. Intensive Czech II.** Not open to native or heritage speakers of Czech. Continuing intensive development of proficiency in Czech, with a focus on speaking and the reading of authentic texts. Six lecture hours a week for one semester. Czech 611C and 312K, 412K may not both be counted. Czech 611C and 312L, 412L may not both be counted. Prerequisite: Czech 601C or 507.
- 312K, 412K. Second-Year Czech I.** Three or four lecture hours a week for one semester. Czech 611C and 312K, 412K may not both be counted. Prerequisite: Czech 507.
- 312L, 412L. Second-Year Czech II.** Three or four lecture hours a week for one semester. Czech 611C and 312L, 412L may not both be counted. Prerequisite: Czech 312K or 412K.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Czech.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Czech.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330. Modern Czech Literature.** A study of Czech literature from the 1860s to the present. The course is conducted in English; Czech majors are required to complete additional coursework in Czech. Three lecture hours a week for one semester. Czech 330 and Russian, East European, and Eurasian Studies 325 (Topic: *Modern Czech Literature*) may not both be counted. Prerequisite: Upper-division standing or consent of instructor.
- 379. Conference Course in Czech Language or Literature.** Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in Czech, or upper-division standing and consent of instructor.
- 679H. Honors Tutorial Course.** Supervised individual research on a literary honors paper of some length. Must be taken for special honors in addition to the major requirement. Prerequisite: For 679HA, upper-division standing, a University grade point average of at least 3.00, and a grade point average in Czech of at least 3.50; for 679HB, Czech 679HA.

UPPER-DIVISION COURSES

- 324. Topics in Czech Studies.** Study of a selected aspect or aspects of Czech culture: literature, theatre, film, visual arts, folklore. Readings and lectures in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any degree. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Crime and Punishment and Czech Writers.** Examination of the influence of Dostoyevsky's *Crime and Punishment* on twentieth-century Czech writers.
- Topic 2: Twentieth-Century Czech Fiction.** A survey of twentieth-century Czech prose fiction.
- Topic 3: Milan Kundera and World Literature.** Explores the life and works of Milan Kundera, from his communist past to present postmodern Francophilia.
- 325. Third-Year Czech I.** Three lecture hours a week for one semester. Prerequisite: Czech 312L.
- 326. Third-Year Czech II.** Continuation of Czech 325. Three lecture hours a week for one semester. Prerequisite: Czech 325.
- 328. Topics in Advanced Czech.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Czech 312L or 412L. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.

POLISH: POL

LOWER-DIVISION COURSES

- 601C. Intensive Polish I.** Not open to native or heritage speakers of Polish. Emphasis on developing oral proficiency in Polish using intensive methods of instruction. Six lecture hours a week for one semester. Polish 601C and 506 may not both be counted. Polish 601C and 507 may not both be counted.
- 506. First-Year Polish I.** Emphasis on four-skills proficiency. Five lecture hours a week for one semester. Polish 601C and 506 may not both be counted.
- 507. First-Year Polish II.** Emphasis on four-skills proficiency. Five lecture hours a week for one semester. Polish 601C and 507 may not both be counted. Prerequisite: Polish 506.
- 611C. Intensive Polish II.** Not open to native or heritage speakers of Polish. Continuing intensive development of proficiency in Polish, with a focus on speaking and the reading of authentic texts. Six lecture hours a week for one semester. Polish 611C and 312K may not both be counted. Polish 611C and 312L may not both be counted. Prerequisite: Polish 601C or 507.
- 312K. Second-Year Polish I.** Emphasis on four-skills proficiency. Three lecture hours a week for one semester. Polish 611C and 312K may not both be counted. Prerequisite: Polish 507.
- 312L. Second-Year Polish II.** Emphasis on four-skills proficiency. Three lecture hours a week for one semester. Polish 611C and 312L may not both be counted. Prerequisite: Polish 312K.

UPPER-DIVISION COURSES

- 321. Introduction to the Polish Language I.** Designed to give students a rapid introduction to fundamentals of the language. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree.
- 322. Introduction to the Polish Language II.** Continuation of Polish 321. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Polish 321 or consent of instructor.
- 324. Topics in Polish Studies.** Selected aspects of Polish history or culture. Readings and lectures in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any degree. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: The Polish Experience.** Same as Russian, East European, and Eurasian Studies 325 (Topic 5: *The Polish Experience*). A historical, sociopolitical picture of Poland's complex cultural history. Prerequisite: Upper-division standing or consent of instructor.
- 379. Conference Course in Polish Language or Literature.** May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in Polish or consent of instructor.

RUSSIAN: RUS

LOWER-DIVISION COURSES

- 601C. Intensive Russian I.** Not open to native or heritage speakers of Russian. Emphasis on developing oral proficiency in Russian using intensive methods of instruction. Six lecture hours a week for one semester. May not be counted by students with credit for Russian 804, 506, 506T, 507, or 507T.
- 804. Accelerated First-Year Russian.** Designed primarily for language majors. Covers the same material as Russian 506 and 507, but in one semester. Eight lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Russian 804, 505S, 506, 506T. Only one of the following may be counted: Russian 804, 507, 507T. Russian 601C and 804 may not both be counted.
- 505S. Intensive First-Year Russian I.** Intensive introduction to proficiency in four skills in Russian (listening, speaking, reading, and writing), in preparation for study abroad program. Thirteen and one-half class hours a week for the first summer term. Only one of the following may be counted: Russian 804, 505S, 506, 506T.
- 506 (TCCN: RUSS 1511). First-Year Russian I.** Five lecture hours a week for one semester. Only one of the following may be counted: Russian 804, 505S, 506, 506T. Russian 601C and 506 may not both be counted.
- 506T. First-Year Russian for Special Purposes I.** Possible sections include Russian for science and technology and Russian for business. Five lecture hours a week for one semester. Only one of the following may be counted: Russian 804, 505S, 506, 506T. Russian 601C and 506T may not both be counted.
- 507 (TCCN: RUSS 1512). First-Year Russian II.** Five lecture hours a week for one semester. Only one of the following may be counted: Russian 804, 507, 507T. Russian 601C and 507 may not both be counted. Prerequisite: Russian 506 or 506T or appropriate score on Russian placement examination.
- 507T. First-Year Russian for Special Purposes II.** Possible sections include Russian for science and technology and Russian for business. Five lecture hours a week for one semester. Only one of the following may be counted: Russian 804, 507, 507T. Russian 601C and 507T may not both be counted. Prerequisite: Russian 506, 506T, or appropriate score on Russian placement examination.
- 611C. Intensive Russian II.** Not open to native or heritage speakers of Russian. Continuing intensive development of proficiency in Russian, with a focus on speaking and the reading of authentic texts. Six lecture hours a week for one semester. Only one of the following may be counted: Russian 611C, 612, 312K, 412K, 312M, 515S. Only one of the following may be counted: Russian 611C, 612, 312L, 412L. Prerequisite: Russian 601C, 804, 507, or 507T.
- 612. Accelerated Second-Year Russian.** Designed primarily for language majors. Covers the same material as Russian 412K and 412L, but in one semester. Six lecture hours a week for one semester. Only one of the following may be counted: Russian 611C, 612, 312K, 412K, 312M, 515S. Only one of the following may be counted: Russian 611C, 612, 312L, 412L. Prerequisite: Russian 804, 507, 507T, or appropriate score on Russian placement examination.
- 412K. Second-Year Russian I.** Four lecture hours a week for one semester. Only one of the following may be counted: Russian 611C, 612, 312K, 412K, 312M, 515S. Prerequisite: Russian 804, 507, 507T, or appropriate score on Russian placement examination.
- 412L. Second-Year Russian II.** Four lecture hours a week for one semester. Only one of the following may be counted: Russian 611C, 612, 312L, 412L. Prerequisite: Russian 412K (or 312K), 312M, or appropriate score on Russian placement examination.
- 312M. Second-Year Russian I—Technical.** Three lecture hours a week for one semester. Only one of the following may be counted: Russian 611C, 612, 312K, 412K, 312M, 515S. Prerequisite: Russian 804, 507, 507T, or appropriate score on Russian placement examination.
- 515S. Intensive Second-Year Russian I.** Intensive extension and development of proficiency in four skills in Russian (listening, speaking, reading, and writing), in preparation for study abroad program. Thirteen and one-half class hours a week for the first summer term. Only one of the following may be counted: Russian 611C, 612, 312K, 412K, 312M, 515S. Prerequisite: Russian 507, 507T, 804, or appropriate score on Russian placement examination.
- 316C. Masterworks of Russian Literature in Translation.** Introduction to the masterpieces of the Russian literary tradition in English translation, emphasizing cultural and social context. Conducted in English. Three lecture hours a week for one semester.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Russian. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 324. Third-Year Russian I.** Oral expression, reading, and composition. Three lecture hours a week for one semester. Russian 324 and 525S may not both be counted. Prerequisite: Russian 612, 412L (or 312L), or appropriate score on Russian placement examination.
- 325. Third-Year Russian II.** Oral expression, reading, and composition. Three lecture hours a week for one semester. Prerequisite: Russian 324 or appropriate score on Russian placement examination.
- 525S. Intensive Third-Year Russian I.** Intensive work in advanced composition and conversation skills in Russian, in preparation for study abroad program. Thirteen and one-half class hours a week for the first summer term. Russian 324 and 525S may not both be counted. Prerequisite: Russian 612, 412L (or 312L), or appropriate score on Russian placement examination.
- 326. Topics in Fourth-Year Russian I.** A fourth-year course designed to enhance the student's skills in a variety of functional areas. Topics may include advanced oral communication, stylistics, Russian for business, literary translation of legal and business documents, scientific and technical translation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 327. Fourth-Year Russian II.** Continuation of Russian 326. Three lecture hours a week for one semester. Prerequisite: Russian 326.
- 328C. Russian for Heritage Speakers I.** Designed for heritage Russian language speakers who have had little or no formal training in the language. Focuses on reading, writing, grammar, and communication skills for formal and professional situations. Three lecture hours a week for one semester. Russian 326 (Topic: *Russian for Russians*) and 328C may not both be counted. Prerequisite: Russian 412L, or an appropriate score on the Russian Placement Test and consent of instructor.
- 328D. Russian for Heritage Speakers II.** Continuation of Russian 328C. Three lecture hours a week for one semester. Russian 326 (Topic: *Russian for Russians*) and 328D may not both be counted. Prerequisite: Russian 328C.
- 329. Survey of Original Texts in Russian Literature.** Introduction to the reading and analysis of original literary texts representing prose, poetry, and drama, with emphasis on each work's cultural and historical background. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Two years of coursework in Russian, or the equivalent.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Russian.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 330. Topics in Russian Culture.** Study of a selected aspect or aspects of Russian culture, including theatre, film, visual arts, folklore. Readings and lectures in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Contemporary Russian Culture.** European Studies 361 (Topic 3: *Contemporary Russian Culture*) and Russian 330 (Topic 1) may not both be counted. Prerequisite: Upper-division standing or consent of instructor.
- 356. Russian Literature in Translation.** A survey of nineteenth- and/or twentieth-century Russian literature. Lectures and readings in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: The Russian Novel.** Same as English 322 (Topic 37: *The Russian Novel*) and Russian, East European, and Eurasian Studies 325 (Topic 9: *The Russian Novel*). European Studies 361 (Topic: *The Russian Novel*) and Russian 356 (Topic 1) may not both be counted. Prerequisite: Upper-division standing.
- 360. Study of an Individual Writer.** Readings in translation of selected works of one major Russian writer. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.
- 369. Topics in Russian Linguistics.** Introduction to selected topics in the structure or history of Russian. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Six semester hours of upper-division coursework in Russian or consent of instructor.

- 379. Conference Course in Russian Language or Literature.** May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in Russian or consent of instructor and the chair of the department.
- 679H. Honors Tutorial Course.** Supervised individual research on a literary or linguistic problem, which culminates in an honors paper of some length. Must be taken for special honors in addition to the major requirement. Prerequisite: For 679HA, upper-division standing, a University grade point average of at least 3.00, and a grade point average in Russian of at least 3.50; for 679HB, Russian 679HA.
- 322. Introduction to Serbian/Croatian II.** Continuation of Serbian/Croatian 321. Designed to complete the student's study of the structure of the language and to introduce readings in Serbian and Croatian. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Serbian/Croatian 321 or consent of instructor.
- 379. Conference Course in Serbian/Croatian.** May be repeated for credit. Prerequisite: Serbian/Croatian 321 and 322 and consent of instructor.

SLAVIC: SLA

LOWER-DIVISION COURSES

- 601C. Intensive Serbian/Croatian I.** Not open to native or heritage speakers of Serbian/Croatian. Emphasis on developing oral proficiency in Serbian/Croatian using intensive methods of instruction. Six lecture hours a week for one semester. Serbian/Croatian 601C and 506 may not both be counted. Serbian/Croatian 601C and 507 may not both be counted.
- 506. First-Year Serbian/Croatian I.** Emphasis on proficiency in four skills: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Serbian/Croatian 601C and 506 may not both be counted.
- 507. First-Year Serbian/Croatian II.** Emphasis on proficiency in four skills: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Serbian/Croatian 601C and 507 may not both be counted. Prerequisite: Serbian/Croatian 506.
- 611C. Intensive Serbian/Croatian II.** Not open to native or heritage speakers of Serbian/Croatian. Continuing intensive development of proficiency in Serbian/Croatian, with a focus on speaking and the reading of authentic texts. Six lecture hours a week for one semester. Serbian/Croatian 611C and 312K may not both be counted. Serbian/Croatian 611C and 312L may not both be counted. Prerequisite: Serbian/Croatian 601C or 507.
- 312K. Second-Year Serbian/Croatian I.** Emphasis on proficiency in four skills: listening, speaking, reading, and writing. Three lecture hours a week for one semester. Serbian/Croatian 611C and 312K may not both be counted. Prerequisite: Serbian/Croatian 507.
- 312L. Second-Year Serbian/Croatian II.** Emphasis on proficiency in four skills: listening, speaking, reading, and writing. Three lecture hours a week for one semester. Serbian/Croatian 611C and 312L may not both be counted. Prerequisite: Serbian/Croatian 312K.
- 301. Introduction to Slavic Civilization.** Introduction to selected topics in the cultures of the Slavic peoples. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree.
- 318Q. Supervised Research.** Individual instruction.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Slavic.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. Literature and Nationalism in the Balkans.** Examination of the literary and political movements among the Balkan nationalities in the nineteenth and early twentieth centuries. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 361 (Topic 8: *Literature and Nationalism in the Balkans*); Russian, East European, and Eurasian Studies 325 (Topic: *Literature and Nationalism in the Balkans*); Slavic 320. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing or consent of instructor.
- 321. The Jewish Experience in Eastern Europe.** A panorama of the sociocultural history of the Jews of Eastern Europe of the past three centuries. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing or consent of instructor.
- 321. Introduction to Serbian/Croatian I.** Designed to give qualified students a rapid introduction to the fundamentals of the language. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing and fulfillment of the foreign language requirement for the Bachelor of Arts degree, or consent of instructor.

324. Seminar on Slavic and East European Studies. Examination of selected topics in the cultures and societies of Central and Eastern Europe. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 2: Yiddish Drama and Film in Translation. Same as Germanic Civilization 327E (Topic 8: *Yiddish Drama and Film in Translation*); Jewish Studies 361 (Topic 5: *Yiddish Drama and Film in Translation*); and Russian, East European, and Eurasian Studies 325 (Topic 8: *Yiddish Drama and Film in Translation*). Jewish life in Poland and Russia before the Holocaust, and the transition to American Jewish life, as revealed in plays and films produced in Eastern Europe and in the United States. No knowledge of Yiddish is required. English 322 (Topic 34: *Yiddish Drama and Film in Translation*) and Slavic 324 (Topic 2) may not both be counted. Prerequisite: Upper-division standing.

325. Topics in Jewish Life and Culture in Eastern Europe. Study of a selected aspect or aspects of Jewish life in Eastern Europe—literature, theatre, visual arts, folklore, religious movements—with emphasis on relationships with Slavic and other East European cultures. Readings and lectures in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: The New York Jew: A Literary Archetype. Study of Russian Jewish immigrants from 1880 to 1990, and exploration of the question of whether there is a Jewish American literature. Prerequisite: For English majors, nine semester hours of lower-division coursework in English, including English 316K or the equivalent; for others, upper-division standing.

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Slavic. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

356. Slavic and East European Literatures in Translation. The nineteenth and twentieth centuries: representative works, chiefly prose. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing or consent of instructor.

358Q. Supervised Research. Individual instruction. Prerequisite: Upper-division standing.

379. Conference Course in Slavic and East European Languages and Literatures. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

DEPARTMENT OF SOCIOLOGY

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

SOCIOLOGY: SOC

LOWER-DIVISION COURSES

101C. Introduction to the Department of Sociology. The discipline of sociology as taught at the University. One lecture hour a week for one semester. Recommended for all sociology majors within one year of declaring the major.

302 (TCCN: SOCI 1301). Introduction to the Study of Society. The nature of human societies, social processes, social interaction, and the sociological approach. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

308 (TCCN: SOCI 1306). Topics in Introductory Sociology. A review of contemporary social topics from a sociological perspective, with the instructor selecting one topic for emphasis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Sociology 308 (Topic: *Ethnicity and Gender: La Chicana*) and 308D may not both be counted.

Topic 2: Women's Reproductive Health for Nonscience Majors. Same as Nursing 307 (Topic 1: *Women's Reproductive Health for Nonscience Majors*) and Women's and Gender Studies 301 (Topic 7: *Women's Reproductive Health for Nonscience Majors*). Overview of contemporary women's reproductive health issues, with emphasis on historical, physiological, psychosocial, and cultural influences that affect the reproductive health of women during adolescence, the childbearing years, and midlife. Pharmacy 318W and Sociology 308 (Topic 2) may not both be counted. Prerequisite: One year of high school biology, or Biology 301L or 309D or the equivalent.

Topic 3: Life-and-Death Decisions. Covers a range of ethical questions related to issues of life and death, with emphasis on four main areas: general value and definitional issues, issues of creation, issues of termination, and a comparative summary.

308C. Peace and Conflict. Theories of conflict, violence, and war; nonviolence and peace movements; arms control and conflict resolution; alternative security systems. Three lecture hours a week for one semester.

308D. Ethnicity and Gender: La Chicana. Same as Mexican American Studies 319 (Topic 1: *Ethnicity and Gender: La Chicana*) and Women's and Gender Studies 301 (Topic 6: *Ethnicity and Gender: La Chicana*). Three lecture hours a week for one semester.

- 309. Chicanos in American Society.** Same as Mexican American Studies 310. Introduction to the study of American character and its bearing on the Chicano experience. Three lecture hours a week for one semester.
- 313K. Introduction to the Sociology of Religion.** Introduction to sociological methods in the study of religion. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 301M (Topic 5: *Introduction to the Study of Religion*), Religious Studies 310, Sociology 313K.
- 317L. Introduction to Social Statistics.** Restricted to sociology majors. Measures of central tendency and dispersion, the binomial and chi-square distributions, tests of hypotheses and parameter estimation, and simple correlation and regression. Three lecture hours and one laboratory hour a week for one semester. Required of all sociology majors. Some sections are offered on the letter-grade basis only; these are identified in the *Course Schedule*.
- 317M. Introduction to Social Research.** Students may not enroll in Sociology 317M more than twice. To enroll for the second time, students must receive consent of the undergraduate adviser. The logic of scientific research, general methods of data collection and analysis, and computer applications. Two lecture hours and two laboratory hours a week for one semester. Required of all sociology majors. Prerequisite: Sociology 317L.
- 318 (TCCN: SOCI 2339). Juvenile Delinquency.** Environments in which juvenile delinquency develops; delinquent subcultures and peer groups; societal reactions in schools, courts, and other agencies. Three lecture hours a week for one semester.
- 319. Introduction to Social Demography.** Social consequences of changes in fertility, mortality, migration, population growth and composition. Three lecture hours a week for one semester.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Sociology.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Sociology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 321K. Contemporary Issues in Sociology: Special Topics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Post-Soviet Societies.** Only one of the following may be counted: Russian, East European, and Eurasian Studies 345 (Topic 1: *Post-Soviet Societies*); Sociology 321K (Topic 1); Women's and Gender Studies 345 (Topic: *Post-Soviet Societies*).
- Topic 4: Women and Socialism.** Same as Women's and Gender Studies 345 (Topic 25: *Women and Socialism*). The origins of socialism, its relationship to gender issues, and the role women have played in existing social states as revolutionaries and citizens. Prerequisite: Upper-division standing.
- Topic 5: Sociology of Intentional Community.** Literary, historical, and contemporary records of utopian ventures to create the perfect society, and how these attempts shed light on the nature of the less-than-perfect human societies in which we live. Prerequisite: Upper-division standing.
- Topic 9: Race, Gender, and Social Movements.** Exploration of social movements related to racial minorities in the United States. Focuses on Asian Americans, with comparisons drawn between them and African Americans and Latinos. Only one of the following may be counted: Asian American Studies 330 (Topic: *South Asian American Experience*), Sociology 321K (Topic 9), 321K (Topic: *South Asian American Experience*), Women's and Gender Studies 340 (Topic: *South Asian American Experience*). Prerequisite: Upper-division standing.
- Topic 10: Gender, Work, and the Labor Force.** Critical issues pertaining to workplaces and labor markets in industrial societies. Includes gender inequality in the labor market, social organization of work, types of work and employment, and changes in the labor force in industrial societies. Uses examples from East Asian countries to illustrate how the institutional context shapes women's employment behavior and economic conditions. Only one of the following may be counted: Asian Studies 361 (Topic: *Work and Labor Markets*), Sociology 321K (Topic 10), 321K (Topic: *Work and Labor Markets*), Women's and Gender Studies 322 (Topic: *Work and Labor Markets*). Prerequisite: Upper-division standing.
- 321L. Sociology of Education.** Same as African and African American Studies 321L and Women's and Gender Studies 345 (Topic 23: *Sociology of Education*). Education as a societal institution, with emphasis on the United States educational system: how the system works; the effects of the system; recent changes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

UPPER-DIVISION COURSES

- 320K. Political Sociology.** A survey of approaches to the study of the state as a social structure; political power and power systems; ideology; political parties and elites. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 321J. Religion, Violence, and Nonviolence.** Historical examination of religious beliefs and practices regarding warfare and violence. Three lecture hours a week for one semester. Only one of the following may be counted: Religious Studies 361 (Topic 15: *Religion, Violence, and Nonviolence*), 373 (Topic 1: *Religion, Violence, and Nonviolence*), Sociology 321J. Prerequisite: Upper-division standing.

- 321M. Race and Popular American Culture.** Same as African and African American Studies 321M and Radio-Television-Film 359 (Topic 2: *Race and Popular American Culture*). The intersection of African American racial politics and the changing popular media industry, especially film, music, and television. Three lecture hours a week for one semester. African and African American Studies 320 (Topic: *Race and Popular American Culture*) and Sociology 321M may not both be counted. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing.
- 322R. Race, Sport, and Identity.** Same as African and African American Studies 374D (Topic 5: *Race, Sport, and Identity*). Explores the sociological significance of sport in relation to the construction of racialized identities. Focuses primarily but not exclusively on the black experience in sport, and examines the changing meanings given to sport throughout the twentieth century. Three lecture hours a week for one semester. Only one of the following may be counted: African and African American Studies 374 (Topic: *Race, Sport, and Identity*), Sociology 321K (Topic 8: *Race, Sport, and Identity*), 322R. Prerequisite: Upper-division standing and Sociology 302.
- 322S. The Sociology of Sport.** Examines the place of sport within social theory, with particular emphasis on the understanding of sport and society found in functionalist, Weberian, Marxist, figurational, feminist, and postmodernist accounts. This theoretical framework is used to explore key social issues in sport, including gender and representation, violence and deviancy, commercialization and college sport, race and inequality, and nationalism and identity. Three lecture hours a week for one semester. Sociology 321K (Topic 7: *The Sociology of Sport*) and 322S and may not both be counted. Prerequisite: Upper-division standing and Sociology 302.
- 323. The Family.** The American family in historical and comparative perspective; emphasis on recent changes and prospects for the future. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 324K. Social Change in Developing Nations.** Overview of changing social structure in the Third World. Three lecture hours a week for one semester. Latin American Studies 325 (Topic 2: *Social Change in Developing Nations*) and Sociology 324K may not both be counted. Prerequisite: Upper-division standing.
- 325K. Criminology.** An investigation into the nature of criminal events, including homicide, rape, robbery, property crimes, and white-collar crimes. Also examines the United States criminal justice system. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and completion of six semester hours of coursework in sociology.
- 325L. Sociology of Criminal Justice.** Police, courts, and prisons: how they work; their impact on those who pass through them. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 329. Social Stratification.** The types and levels of social inequality; the institutional and group processes that generate inequality; the interplay of social, organizational, economic, and political forces that affect the degree of differential opportunities and rewards in society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing. Completion of Sociology 317L or another statistics course is recommended, but not required.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Sociology.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Sociology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.
- 330C. Death and Dying: Sociological Perspectives.** Sociological perspectives on definitions of death; group differences in mortality rates and causes of death; social meanings of death and dying; treatment of the dying and the dead; and grief and bereavement. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 330P. Sociology and Social Psychology.** Examines how individuals perceive, interact with, and affect other individuals from the perspectives of both psychology and sociology. Three lecture hours a week for one semester. Sociology 321K (Topic: *Sociology and Social Psychology*) and 330P may not both be counted. Prerequisite: Upper-division standing.
- 333K. Sociology of Gender.** Same as Women's and Gender Studies 322 (Topic 1: *Sociology of Gender*). Inequality between the sexes; men's and women's changing roles in society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 335. Society of Modern Mexico.** Same as Latin American Studies 325 (Topic 1: *Society of Modern Mexico*) and Urban Studies 354 (Topic 2: *Society of Modern Mexico*). Family, community, industrialization, and urbanization in modern Mexico. Three lecture hours a week for one semester.
- 336C. American Dilemmas.** Examines a variety of critical American social problems, including problems in the economic, political, and health care systems, as well as inequities based on income, gender, and race. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 336D. Race, Class, and Health.** Designed to introduce students to the complex relationships among race, class, gender, and health status. Investigates how health is linked to individual behaviors and to the interaction between people and their social, cultural, and physical environments. Three lecture hours a week for one semester. Only one of the following may be counted: African and African American Studies 374 (Topic: *Race, Class, and Health*), Sociology 321K (Topic: *Race, Class, and Health*), 336D. Prerequisite: Upper-division standing.

- 336C. Gender Politics in the Islamic World.** Study of the Islamic world and major sociological concepts such as gender, social organizations, culture, and politics. Examines how culture is mediated by politics, resulting in diverse interpretations of Islam and in different policies with respect to women's rights. Three lecture hours a week for one semester. Sociology 321K (Topic: *Gender Politics in the Islamic World*) and 336G may not both be counted. Prerequisite: Upper-division standing.
- 336L. Global Gender Inequality.** Patterns of gender inequality and women's movements in different cultural contexts, with emphasis on the interface between gender and social organization, and between culture and politics. Includes the legacy of colonialism, the effect of globalization, and the interaction between local and national movements and the international discourse on women's rights. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 361 (Topic: *Global Gender Inequality*), Middle Eastern Studies 322K (Topic: *Global Gender Inequality*), Sociology 321K (Topic: *Global Gender Inequality*), 336L, Women's and Gender Studies 345 (Topic: *Global Gender Inequality*). Prerequisite: Upper-division standing.
- 336P. Social Psychology and the Law.** How courts make use of social science, as well as how social scientists study the legal system. Considers the uses of social science across multiple types of legal domains, such as eyewitnesses to crime, jury trials, punishment, children in the courts, and a variety of public policy issues. Three lecture hours a week for one semester. Sociology 321K (Topic: *Social Psychology and the Law*) and 336P may not both be counted. Prerequisite: Upper-division standing.
- 338M. Politics and Culture of Contemporary Mexico.** Same as Mexican American Studies 374 (Topic 28: *Politics and Culture of Contemporary Mexico*), Government 337M (Topic 5: *Politics and Culture of Contemporary Mexico*), and Latin American Studies 325 (Topic 3: *Politics and Culture of Contemporary Mexico*). Introduction to the contemporary Mexican political system and the ways in which political change and democratization are recasting the political and civic culture of contemporary Mexico. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- 340C. Globalization.** A sociological analysis of the interrelated economic, political, and cultural aspects of globalization. Examines the consequences of globalization for nations around the world and for groups within these nations. Three lecture hours a week for one semester. Sociology 321K (Topic: *Globalization*) and 340C may not both be counted. Prerequisite: Upper-division standing.
- 340D. Violence.** An overview of the different theories of interpersonal and group violence. Includes criminological theories of violent crime, as well as feuding, ethnic and nationalist violence, political violence, and aggression in intimate relations. Three lecture hours a week for one semester. Sociology 321K (Topic: *Violence*) and 340D may not both be counted. Prerequisite: Upper-division standing.
- 340G. Sociology of Sexualities.** Review of sociological perspectives on sexuality. Examines how social institutions in U.S. society shape sexual values, beliefs, and practices. Topics include changing cultural images of sexuality, sexual identities, and social movements. Three lecture hours a week for one semester. Sociology 321K (Topic: *Sociology of Sexuality*) and 340G may not both be counted. Prerequisite: Sociology 302, and either Sociology 333K or three semester hours of coursework in women's and gender studies.
- 340L. Aging and the Life Course.** The biological, social, and psychological aspects of human aging from adolescence until death, with special emphasis on cultural norms and the social and demographic context in which aging occurs. Includes the challenges and problems of adjustment at each life stage, and the social, political, and economic consequences of increased longevity and changes in the age structure of the populations of modern societies. Three lecture hours a week for one semester. Sociology 321K (Topic: *Aging and the Life Course*) and 340L may not both be counted. Prerequisite: Upper-division standing.
- 340R. Religion and Global Change.** The global spread and transformations of the major world religions, the interactions between them, and the different social impacts these traditions have on society. Focuses mainly on Christian traditions, but includes various schools of Hinduism, Buddhism, Judaism, and Islam. Three lecture hours a week for one semester. Sociology 321K (Topic: *Religion and Global Change*) and 340R may not both be counted. Prerequisite: Upper-division standing.
- 343. Religion and Society.** Same as Religious Studies 337. The growth and decline of religious groups and traditions; "cults" and new religions; comparative sociology of religion; the United States religious landscape; religion and individual health and well-being; spirituality and other aspects of social life. Three lecture hours a week for one semester. Religious Studies 361 (Topic 16: *Religion and Society*) and Sociology 343 may not both be counted. Prerequisite: Upper-division standing.
- 344. Racial and Ethnic Relations.** Contemporary racial and ethnic problems; emphasis on minority groups in the United States. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 346. The City and Urbanization.** Same as Urban Studies 354 (Topic 6: *The City and Urbanization*). Examination of urbanization from a cross-national perspective: discrimination and racial inequality in urban labor markets. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 350M. Sociology Internship Seminar.** Restricted to students in the College of Liberal Arts. Students serve as supervised, unpaid interns in an agency, organization, or business. Provides an opportunity for students to apply the knowledge and skills acquired in sociology and other liberal arts courses. Three lecture hours and at least nine hours of fieldwork a week for one semester. Prerequisite: Upper-division standing and credit or registration for six semester hours of coursework in sociology.

- 350N. Research Internship.** Fieldwork in research and analysis on sociological problems and institutions. About ten hours of fieldwork a week for one semester. Additional lecture hours may be required. May be repeated for credit. Prerequisite: Nine semester hours of coursework in sociology, a University grade point average of at least 3.00, upper-division standing, and consent of the faculty undergraduate adviser.
- 352. Social Movements.** Characteristics of crowds, publics, and social movements; their role in social organization and social change. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 352M. Topics in Interdisciplinary Social Science.** An interdisciplinary analysis of significant social, economic, and political issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 3: Language and Speech in American Society.** Same as American Studies 321 (Topic 2: *Language and Speech in American Society*), Anthropology 325N, and Linguistics 373 (Topic 2: *Language and Speech in American Society*). Prerequisite: Upper-division standing, and Anthropology 302, 305, 307, or Linguistics 306.
- Topic 4: Language in Culture and Society.** Same as Anthropology 325M and Linguistics 373 (Topic 3: *Language in Culture and Society*). Language as a cultural resource; functions of language in society; survey of language communities. Prerequisite: Anthropology 302, 305, 307, or Linguistics 306; or consent of instructor.
- Topic 5: Family Policy Issues.** Same as Women's and Gender Studies 345 (Topic 12: *Family Policy Issues*). Consideration of liberal, conservative, and centrist views concerning the major family policy issues facing the United States and other advanced industrial societies.
- Topic 7: Contemporary European Social Theory.** Same as Government 335M (Topic 8: *Contemporary European Social Theory*) and Philosophy 365 (Topic 4: *Contemporary European Social Theory*). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- Topic 8: Contemporary American Social Theory.** Same as Government 335M (Topic 9: *Contemporary American Social Theory*) and Philosophy 365 (Topic 5: *Contemporary American Social Theory*). Government 335M (Topic: *Social Theory*) and Sociology 352M (Topic 8) may not both be counted. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- Topic 10: Sociology of South Asia.** Same as Asian Studies 361 (Topic 19: *Sociology of South Asia*). A broad overview of South Asian society and culture from a sociological perspective. Prerequisite: Upper-division standing.
- Topic 12: Australian Society and Politics.** Same as Government 365N (Topic 10: *Australian Society and Politics*). Prerequisite: Six semester hours of lower-division coursework in government.
- 353. Industrial Sociology.** The work setting; the formal organization of work; individual and collective adaptation in industrial organizations; bureaucracy as a social problem. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 354K. Sociology of Health and Illness.** Application of sociological concepts and principles to the study of health professions, medical institutions, community medical organization, and the distribution of illness. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 358C. Sociology of Entrepreneurship.** Same as African and African American Studies 358C and Management 337 (Topic 16: *Sociology of Entrepreneurship*). Examines the creation of entrepreneurial activities in the United States, including those of all racial and ethnic groups. Three lecture hours a week for one semester. African and African American Studies 374 (Topic: *Sociology of Entrepreneurship*) and Sociology 358C may not both be counted. Prerequisite: For management majors, one of the following courses with a grade of at least C, or two of the following courses with a grade of at least C in each: Management 336, 336H, Operations Management 335 (or Management 335), Operations Management 335H (or Management 335H); for others, sixty semester hours of college coursework.
- 358D. Health Policy and Health Systems.** Same as Public Health 358D. Covers the essentials of health policy and law, including the ways that policy and legal issues impact health care and public health systems. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Biology 317 or Public Health 317 with a grade of at least B-.
- 359. Labor and Labor Movements.** Overview of work organizations in the United States, with emphasis on globalization, inequality, and labor movements. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 362. Social Change.** Theories of how and why society changes, with special emphasis on technological innovations, social movements, and demographic transitions. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 366. Deviance.** Analysis of social norms, conformity, and reactions to norm violations. Topics include behavioral forms of deviance such as suicide and drug abuse and non-behavioral forms of deviance such as physical abnormality. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 368D. Social Context of Public Health.** Same as Public Health 368D. An introduction to the social and behavioral theories that inform the discipline of public health, including practical examples of the ways that these theories are used to understand health-related behaviors and health promotion. Includes data on population distributions of mortality and morbidity, health inequalities, and how underlying social structures impact the health of individuals and communities. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Biology 317 or Public Health 317 with a grade of at least B-.

- 369K. Population and Society.** The study of populations, including their growth, age structure, and patterns of fertility, mortality, and migration; the social causes and consequences of these phenomena. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 369L. Analytical Demography.** Formal demography; stable population theory; life tables and techniques of mortality estimation; estimates and projections. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and college algebra or the equivalent.
- 679H. Honors Tutorial Course.** An individual conference course to provide training in sociological research and writing. Additional meeting times to be arranged. Prerequisite: For 679HA, upper-division standing and admission to the Sociology Honors Program; for 679HB, Sociology 679HA.
- 379M. Sociological Theory.** Restricted to sociology majors. Critical examination of major sociological theories and their relevance to current research and social conditions. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and six semester hours of coursework in sociology or consent of instructor.
- 379N. Conference Course.** Supervised individual study of selected problems in sociology. May be repeated for credit. Prerequisite: Upper-division standing, Sociology 302 or the equivalent, nine semester hours of upper-division coursework in sociology or related fields, a University grade point average of at least 3.00, and consent of the faculty undergraduate adviser.
- 379P. Undergraduate Research Opportunity.** Restricted to sociology majors. Students participate in research-related activities with faculty members in the Department of Sociology. Activities may include collecting interview or survey data, analyzing statistics, synthesizing research literature, and coding qualitative data. Five to seven hours a week for one semester. May be repeated for credit but may only be taken once on the letter-grade basis. Prerequisite: Upper-division standing, Sociology 302 or the equivalent, nine semester hours of upper-division coursework in sociology or related fields, a University grade point average of at least 3.00, and consent of the faculty undergraduate adviser.

DEPARTMENT OF SPANISH AND PORTUGUESE

All students with some knowledge of Portuguese should take a placement test given by the lower-division coordinator for Portuguese.

All students with knowledge of the Spanish language, however acquired, are encouraged to be tested to determine the course for which they should register. However, students who have taken Spanish courses at the University are not eligible to take the placement test unless they obtain approval in advance from the lower-division coordinator for Spanish.

Students who have taken Spanish courses at the University of Texas at Austin should contact the depart-

mental undergraduate adviser about appropriate course sequences.

Information about the placement test for Spanish is available from the departmental undergraduate adviser.

Unless otherwise noted below or in the *Course Schedule*, all upper-division Portuguese courses are conducted in Portuguese, and all upper-division Spanish courses except Spanish 349 and 361E are conducted in Spanish.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

PORTUGUESE CIVILIZATION: PRC

LOWER-DIVISION COURSE

- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Portuguese Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320E. Portuguese and Brazilian Civilization.** Social, literary, and cultural topics of Portugal, Brazil, Portuguese Africa, and Portuguese Asia. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May be counted toward a major or a minor in Portuguese. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.
- 325E. Brazilian Studies.** Studies Brazil from several interdisciplinary perspectives. Focuses on diverse aspects of Brazilian history, social issues, literature, and culture. Taught in English. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Portuguese Civilization.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

PORTUGUESE: POR

LOWER-DIVISION COURSES

- 303S. Portuguese for Professional Purposes.** Designed for students in a variety of disciplines who require basic Portuguese language skills while studying abroad. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in Portuguese.
- 604. Accelerated First-Year Portuguese.** Designed primarily for language majors and students who demonstrate exceptional language ability or scholarship. Six lecture hours a week for one semester. Only one of the following may be counted: Portuguese 604, 406 and 407, 508. Prerequisite: Consent of the lower-division coordinator for Portuguese.
- 406 (TCCN: PORT 1411). First-Year Portuguese I.** Four lecture hours a week for one semester. Only one of the following may be counted: Portuguese 604, 406 and 407, 508.
- 407 (TCCN: PORT 1412). First-Year Portuguese II.** Four lecture hours a week for one semester. Only one of the following may be counted: Portuguese 604, 406 and 407, 508. Prerequisite: Portuguese 406 with a grade of at least C.
- 508. Alternate First-Year Portuguese for Spanish Students.** Designed to provide qualified Spanish students a rapid introduction to the Portuguese language; emphasis on grammar, vocabulary, and translation in the context of Brazilian culture. Five lecture hours a week for one semester. Only one of the following may be counted: Portuguese 604, 406 and 407, 508. Prerequisite: Spanish 312L with a grade of at least B.
- 612. Accelerated Second-Year Portuguese: Oral Expression, Reading, and Composition.** Covers the same material as Portuguese 312K and 312L, but in one semester. Six lecture hours a week for one semester. Only one of the following may be counted: Portuguese 612, 312K and 312L, 516. Prerequisite: Portuguese 604 or 508 with a grade of at least B, or Portuguese 407 with a grade of A; and consent of the lower-division coordinator for Portuguese.
- 312K (TCCN: PORT 2311). Second-Year Portuguese I: Oral Expression, Reading, and Composition.** Three lecture hours a week for one semester. Only one of the following may be counted: Portuguese 612, 312K and 312L, 516. Prerequisite: Portuguese 604, 407, or 508 with a grade of at least C.
- 312L (TCCN: PORT 2312). Second-Year Portuguese II: Oral Expression, Reading, and Composition.** Three lecture hours a week for one semester. Only one of the following may be counted: Portuguese 612, 312K and 312L, 516. Prerequisite: Portuguese 312K with a grade of at least C.
- 516. Alternate Second-Year Portuguese for Spanish Speakers.** For qualified Spanish-speaking students, continued practice in the Portuguese language; emphasis on oral expression, vocabulary expansion, writing, and review of grammar in the context of cultural and literary readings. Five class hours a week for one semester. Only one of the following may be counted: Portuguese 612, 312K and 312L, 516. Prerequisite: Portuguese 508 with a grade of at least B.

- 318. Conversation and Composition.** Intensive practice in oral expression, based on cultural readings, with some writing. Three lecture hours a week for one semester. Prerequisite: Portuguese 312L. With consent of the lower-division coordinator for Portuguese, Portuguese 312L may be taken concurrently.

- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Portuguese.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321. Practical Phonetics.** Recommended for Portuguese majors, especially for those preparing to teach. A thorough review of Portuguese pronunciation, phonetics, and oral reading. Three lecture hours a week for one semester. Prerequisite: Portuguese 612 or 312L.
- 322C. Conference Course in Luso-Brazilian Civilization.** Prerequisite: Portuguese 612 or 312L, and written consent of the department chair.
- 322L. Conference Course in Luso-Brazilian Literature.** Prerequisite: Portuguese 612 or 312L, and written consent of the department chair.
- 326K. Advanced Conversation and Composition.** Advanced, intensive practice in both oral and written expression based on cultural readings. Three lecture hours a week for one semester. Prerequisite: Portuguese 612, 312L, or 516.
- 327K. Brazilian Culture and Literature of the Colonial Period.** Survey of Brazilian literature and culture from the sixteenth century through the late eighteenth century. Three lecture hours a week for one semester. Portuguese 327 and 327K may not both be counted. Prerequisite: Portuguese 612, 312L, or 516.
- 327L. Brazilian Culture and Literature of the Nineteenth Century.** Survey of Brazilian prose, poetry, and drama. Includes the broad literary and cultural movements of the nineteenth century. Three lecture hours a week for one semester. Portuguese 327 and 327L may not both be counted. Prerequisite: Portuguese 612, 312L, or 516.
- 327M. Brazilian Culture and Literature of the Twentieth Century and Later.** Survey of Brazilian prose, poetry, and drama. Includes the broad literary and cultural movements of the twentieth century and later. Three lecture hours a week for one semester. Prerequisite: Portuguese 612, 312L, or 516.
- 328. Introduction to Portuguese Literature.** Main literary trends and principal writers of Portugal. Three lecture hours a week for one semester. Prerequisite: Portuguese 612, 312L, or 516.
- 329. Lusophone African Literatures and Cultures.** Introduction to Lusophone African literatures and cultures from the colonial era through independence and postindependence. Three lecture hours a week for one semester. Prerequisite: Portuguese 612, 312L, or 516.

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Portuguese.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 130D. Portuguese across Disciplines.** Students read and discuss Portuguese language materials related to the subject matter of another designated course. One lecture hour a week for one semester. May not be counted towards fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: One upper-division Portuguese course or consent of instructor.
- 341. Luso-Brazilian Civilization and Culture.** Analysis of social, political, and cultural aspects of Portugal and/or Brazil. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Portuguese 612, 312L, or 516.
- 350K. Luso-Brazilian Film.** A study of film from the Lusophone world, including Portugal, Brazil, and Africa. Three lecture hours a week for one semester. Prerequisite: Portuguese 612, 312L, or 516.
- 352. Brazilian and Spanish American Literature.** Brazilian and Latin American literature and culture from the twentieth century and later. Studies the literary trends and social roles in the region while comparing and contrasting the culture and history from both Spanish America and Brazil. Three lecture hours a week for one semester. Prerequisite: Portuguese 612, 312L, or 516.
- 362. Advanced Composition.** Translation of English texts into Portuguese and free composition; special attention to idiomatic expressions and to grammatical and syntactical features. Three lecture hours a week for one semester. Prerequisite: Portuguese 612, 312L, or 516.
- 364L. Applied Linguistics.** Introduction to the linguistic structure of Portuguese; application of linguistic principles to the teaching of Portuguese. Three lecture hours a week for one semester. Prerequisite: Portuguese 612, 312L, or 516.
- 375. Luso-Brazilian Literature.** Representative writers and significant periods of Luso-Brazilian literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in Portuguese.
- Topic 5: Brazil: An Introduction.** Same as Latin American Studies 370P (Topic 1: *Brazil: An Introduction*).
- 378H. Honors Seminar.** Honors seminar on a special topic in literature, linguistics, or civilization. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, admission to the Portuguese Honors Program, and consent of the honors adviser.
- 379H. Honors Thesis.** Supervised individual research on a topic in literature, linguistics, or civilization. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, admission to the Portuguese Honors Program, and consent of the honors adviser.

SPANISH: SPN

LOWER-DIVISION COURSES

- 301. Spanish for Graduate Students in Other Departments.** For graduate students in other departments seeking to fulfill degree language requirements. No auditors. Purpose: To introduce fundamentals of grammar and lexicon to enable students to read texts in their areas of specialization. Primary aim: To allow students to acquire reading proficiency. Also presents audio-aural aspect. Three class hours a week for one semester. Offered every fall semester. Offered on the letter-grade basis only. May not be used to fulfill the undergraduate foreign language requirement. Prerequisite: Graduate standing.
- 601D. Introductory Spanish.** Six-hour course focused on the development of multilingual literacy through the analysis and use of Spanish to achieve linguistic competence (basic verb tenses, pronouns, adjectives, conditional statements), communication and interactional competence (complimenting, thanking, requesting, giving opinions), and metalinguistic competence (parts of speech, sociolinguistic cues). Six lecture hours a week for one semester. Only one of the following may be counted: Spanish 601D, 604, 506. Only one of the following may be counted: Spanish 601D, 604, 507, 508K. Prerequisite: An appropriate score on a departmentally approved Spanish placement examination.
- 303S. Spanish for Professional Purposes.** Designed for students in a variety of disciplines who require basic Spanish language skills while studying abroad. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in Spanish.
- 604. Accelerated Beginners' Spanish.** Designed primarily for language majors and students who demonstrate exceptional language ability or scholarship. A six-hour course comparable to Spanish 506 and 507. Six lecture hours a week for one semester. Offered in the fall semester only. Only one of the following may be counted: Spanish 601D, 604, 506. Only one of the following may be counted: Spanish 601D, 604, 507, 508K. Prerequisite: Written consent of the lower-division coordinator for Spanish.
- 305. Spanish for Graduate Students in Other Departments.** No auditors. Continuation of Spanish 301. Vocabulary and grammar expansion through intense practice in reading texts according to class interests; increased emphasis on the audio-aural aspect. Three lecture hours a week for one semester. Offered every spring semester. Offered on the letter-grade basis only. May not be used to fulfill the undergraduate foreign language requirement. Prerequisite: Graduate standing, and Spanish 301 or consent of instructor.

- 506 (TCCN: SPAN 1511). First-Year Spanish I.** Designed for students who have not previously studied any Spanish. Five lecture hours a week for one semester. Only one of the following may be counted: Spanish 601D, 604, 506.
- 507 (TCCN: SPAN 1512). First-Year Spanish II.** Five lecture hours a week for one semester. Only one of the following may be counted: Spanish 601D, 604, 507, 508K. Prerequisite: Spanish 506 with a grade of at least C-.
- 508K. Alternate First-Year Spanish II.** An accelerated review of grammatical structures covered in Spanish 506, followed by study of the new material covered in Spanish 507. Five lecture hours a week for one semester. Only one of the following may be counted: Spanish 601D, 604, 507, 508K. Prerequisite: Transfer credit or credit by examination for Spanish 506, or high school coursework in Spanish, or credit for Spanish 506 earned at the University of Texas at Austin more than one calendar year ago, with a grade of at least C-.
- 610D. Intermediate Spanish I.** Six-hour course focused on the development of multilingual literacy through the analysis and use of Spanish to achieve linguistic competence (aspect, subjunctive, hypotheticals, passive voice), communication and interactional competence (apologizing, requesting, circumlocution), and metalinguistic competence (critical analysis of oral and written texts). Six lecture hours a week for one semester. Only one of the following may be counted: Spanish 610D, 612, 312K. Prerequisite: Spanish 601D, 604, 507, or 508K with a grade of at least C-.
- 611D. Intermediate Spanish II.** Six-hour course focused on the development of multilingual literacy through the analysis and use of Spanish to achieve linguistic competence (aspect, subjunctive, passive voice), communication and interactional competence (pragmatics, cultural perspectives), and metalinguistic competence (dialectal differences). Six lecture hours a week for one semester. Only one of the following may be counted: Spanish 611D, 612, 312L. Prerequisite: Spanish 610D or 312K with a grade of at least C-.
- 612. Accelerated Second-Year Spanish: Oral Expression, Reading, and Composition.** A six-semester-hour course comparable to Spanish 312K and 312L combined. Six lecture hours a week for one semester. Offered in the spring semester only. Only one of the following may be counted: Spanish 610D, 612, 312K. Only one of the following may be counted: Spanish 611D, 612, 312L. Prerequisite: Spanish 604 with a grade of at least B, or Spanish 507 or 508K with a grade of A.
- 312K (TCCN: SPAN 2311). Second-Year Spanish I.** Three lecture hours a week for one semester. Only one of the following may be counted: Spanish 610D, 612, 312K. Prerequisite: Spanish 604, 507, or 508K with a grade of at least C-.
- 312L (TCCN: SPAN 2312). Second-Year Spanish II.** Three lecture hours a week for one semester. Only one of the following may be counted: Spanish 611D, 612, 312L. Prerequisite: Spanish 312K with a grade of at least C-.
- 315N. Readings in Hispanic Literature.** Readings in various literary genres and in the literatures of the Spanish-speaking countries. Development of skills needed to read and to discuss literary texts in Spanish. Three lecture hours a week for one semester. Spanish 315N and 318 may not both be counted. May not be counted toward a major in Spanish. Prerequisite: Spanish 612 or 312L.
- 318. Conversation and Composition.** Designed to give intensive practice in oral expression, based on cultural readings, with some writing. Three lecture hours a week for one semester. Spanish 315N and 318 may not both be counted. May not be counted toward a major in Spanish. This course or the equivalent is recommended but not required for all majors in Spanish. Prerequisite: Spanish 612 or 312L.
- 319. Advanced Oral Expression.** Designed to develop listening comprehension and oral skill to an advanced level. Three lecture hours a week for one semester. May not be counted toward a major in Spanish. Recommended for all Spanish majors. Prerequisite: Consent of instructor.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Spanish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary. May not be counted toward a major in Spanish.

UPPER-DIVISION COURSES

- 322K. Civilization of Spanish America.** Same as Latin American Studies 370S (Topic 3: *Civilization of Spanish America*). Survey of the social and cultural evolution of the Spanish American countries. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Spanish 612 or 312L.
- 325K. Introduction to Spanish American Literature through Modernism.** Same as Latin American Studies 370S (Topic 4: *Introduction to Spanish American Literature through Modernism*). Main literary trends and principal writers in Spanish America from the sixteenth century through Modernism. Three lecture hours a week for one semester. Prerequisite: Spanish 612 or 312L.
- 325L. Introduction to Spanish American Literature since Modernism.** Same as Latin American Studies 370S (Topic 5: *Introduction to Spanish American Literature since Modernism*). Main literary trends and principal writers in Spanish America since Modernism. Three lecture hours a week for one semester. Prerequisite: Spanish 612 or 312L.
- 326K. Introduction to Spanish Literature before 1700.** Main literary trends and principal writers from the Middle Ages through the Golden Age. Three lecture hours a week for one semester. Prerequisite: Spanish 612 or 312L.

- 326L. Introduction to Spanish Literature since 1700.** Main trends and principal writers, with emphasis on the Romantics, the Realists of the nineteenth century, the Generation of '98, and contemporary figures. Three lecture hours a week for one semester. Prerequisite: Spanish 612 or 312L.
- 327G. Advanced Grammar and Composition I.** Study and practice of Spanish grammar, focusing on grammar points of particular concern to English speakers. Includes oral exercises and guided composition. Three lecture hours a week for one semester. Spanish 327 and 327G may not both be counted. Prerequisite: Spanish 612 or 312L.
- 327W. Advanced Grammar and Composition II.** Designed to develop writing skills needed for upper-division coursework in Spanish. Emphasizes grammar using various topics in Spanish language, literature, and culture. Explores different compositional styles. Three lecture hours a week for one semester. Prerequisite: Spanish 327G (or 327) with a grade of at least C-.
- 328. Spanish Civilization.** A survey of the social, political, and cultural history of Spain. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Spanish 612 or 312L.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Spanish.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary. May not be counted toward a major in Spanish.
- 130D. Spanish across Disciplines.** Students read and discuss Spanish language materials related to the subject matter of another designated course. One lecture hour a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: One upper-division Spanish course or consent of instructor.
- 341K. Spanish-Language Literature of the Southwest.** Same as Mexican American Studies 374 (Topic 13: *Spanish-Language Literature of the Southwest*) and Latin American Studies 370S (Topic 6: *Spanish-Language Literature of the Southwest*). The study of culturally valuable Chicano literary texts; related readings in Mexican and other Hispanic works. Three lecture hours a week for one semester. Prerequisite: Spanish 612 or 312L.
- 345L. Introduction to Hispanic Linguistics.** Introduction to the study of the Spanish language through different areas of linguistics such as phonology, morphology, syntax, semantics, sociolinguistics, and second-language acquisition. Three lecture hours a week for one semester. Prerequisite: Spanish 346.
- 346. Practical Phonetics.** Recommended for Spanish majors, especially for those preparing to teach. A thorough review of Spanish pronunciation, phonetics, and oral reading. Three lecture hours a week for one semester. Prerequisite: Spanish 327G (or 327).
- 347L. Linguistics in Translation.** Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in Spanish. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Language, Culture, and Society in Latin America.**
- 349. Literature in Translation.** Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in Spanish. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 350. Studies in Hispanic Life and Culture.** Sequel to Spanish 322K and 328, approaching in a more specialized way the study of important currents in Hispanic civilization. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Spanish 350 and 350K may not both be counted unless the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: The Mexican Revolution.** Same as Latin American Studies 370S (Topic 7: *The Mexican Revolution*). Prerequisite: Spanish 322K or 328.
- Topic 2: Essay in Mexican Thought and Culture.** Same as Mexican American Studies 374 (Topic 21: *Essay in Mexican Thought and Culture*) and Latin American Studies 370S (Topic 13: *Essay in Mexican Thought and Culture*). Prerequisite: Spanish 322K or 328.
- Topic 4: The Indian in Spanish American Literature.** Same as Latin American Studies 370S (Topic 17: *The Indian in Spanish American Literature*). Prerequisite: Spanish 322K or 328.
- Topic 5: Latin American Civilization: The New World.** Same as Latin American Studies 370S (Topic 18: *Latin American Civilization: The New World*). Prerequisite: Spanish 322K or 328.
- Topic 6: Tracking Cultures: Literary and Cultural Points of Contact.** Prerequisite: Upper-division standing and consent of instructor.
- Topic 7: Tracking Cultures: Cultural Itineraries in Spain and Morocco.** Prerequisite: Upper-division standing and consent of instructor.
- Topic 8: Cultures in Contact in Medieval Spain.** Jewish Studies 361 (Topic: *Cultures in Contact in Medieval Spain*) and Spanish 350 (Topic 8) may not both be counted. Prerequisite: Spanish 322K or 328.
- Topic 9: History of the Spanish Civil War.** Prerequisite: Spanish 322K or 328.
- Topic 10: Business in Hispanic Life and Culture.** Same as Latin American Studies 370S (Topic 19: *Business in Hispanic Life and Culture*). Prerequisite: Spanish 322K or 328.

- Topic 11: Mexican and Mexican American Ballads.** Same as Latin American Studies 370S (Topic 20: *Mexican and Mexican American Ballads*) and Mexican American Studies 374 (Topic 29: *Mexican and Mexican American Ballads*). Examines the *corrido* genre in the nineteenth and twentieth centuries, with special focus on its pivotal role in the Mexican Revolution and in the collision between cultures in the border zone. Prerequisite: Spanish 322K or 328.
- 350K. Topics in Hispanic Film.** A study of film from the Hispanic world, including Spain and Latin America. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Spanish 350 and 350K may not both be counted unless the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- 351. *Don Quijote*.** Intensive analysis of Cervantes' novel. Three lecture hours a week for one semester. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- 352. Topics in Spanish and Spanish American Literature.** Major writers and works of Spanish and Spanish American literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Spain in 1492.** Spanish 350 (Topic: *Spain in 1492*) and 352 (Topic 1) may not both be counted. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- Topic 2: Literature of the Spanish Civil War.** Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- Topic 3: The Latin American Short Story.** Examination of the most representative Latin American authors as a course of study in the art of storytelling, literary history, individual poetics, and narrative theories. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- 353. Introduction to Hispanic Sociolinguistics.** Studies different aspects of Hispanic sociolinguistics, including concepts such as language contact and variation, bilingualism and multilingualism, the intersection of societal factors with linguistic expression, and linguistic identity. Three lecture hours a week for one semester. Prerequisite: Spanish 345L.
- 361E. Experimental Design in Phonetics.** Studies the basics of experimental design, including research question formulation, data collection, and analysis. Covers a wide range of published experimental methods in phonetics and phonology. Conducted in English. Three lecture hours a week for one semester. Prerequisite: Linguistics 344K or Spanish 346.
- 362K. Spanish Drama and Poetry.** Topics may focus on drama, poetry, a combination of the two, and themes expressed in one or both genres. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- 364K. Spanish American Drama and Poetry.** Main trends and principal writers, with emphasis on poetry. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- Topic 2: Contemporary Spanish American Poetry.** Same as Latin American Studies 370S (Topic 9: *Contemporary Spanish American Poetry*).
- 364L. Applied Linguistics.** Practical application of linguistic principles to the teaching of Spanish. Three lecture hours a week for one semester. Prerequisite: Spanish 346.
- 365C. Conference Course in Hispanic Civilization.** Prerequisite: Spanish 612 or 312L; and written consent of the department chair.
- 365G. Conference Course in Hispanic Linguistics.** Prerequisite: Spanish 612 or 312L; and written consent of the department chair.
- 365K. Contemporary Spanish American Prose.** Same as Latin American Studies 370S (Topic 10: *Contemporary Spanish American Prose*). Novels, short stories, and essays from different regions of Hispanic America. Three lecture hours a week for one semester. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- 365L. Conference Course in Hispanic Literature.** Prerequisite: Spanish 612 or 312L; and written consent of the department chair.
- 366K. Nineteenth-Century Spanish Literature.** Literary trends, with intensive and extensive reading of representative works. Three lecture hours a week for one semester. Prerequisite: Spanish 325K, 325L, 326K, or 326L.
- 367K. Syntax and Stylistics.** Examination of Spanish syntax and style: the study of literary language and style, translation of idiomatic English, free composition, oral expression, rhetoric, and style. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May be taught in English or Spanish, depending on the topic. Topics taught in English may not be counted toward fulfillment of the foreign language requirement for any degree; they may not be counted toward a major in Spanish without the consent of the chair of the Department of Spanish and Portuguese. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Advanced Oral Expression for Teachers.** Restricted to students in the language teaching concentration. Prerequisite: Spanish 327G (or 327).
- Topic 2: Comparative Structure of English and Spanish.** Same as Latin American Studies 370S (Topic 11: *Comparative Structure of English and Spanish*). Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.
- Topic 3: Spanish Grammar.** Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.
- Topic 4: Translation Principles and Practice.** Same as Latin American Studies 370S (Topic 12: *Translation Principles and Practice*). Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.
- Topic 5: Interpretation Principles and Practice.** Same as Latin American Studies 370S (Topic 14: *Interpretation Principles and Practice*). Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.

Topic 6: Literary Translation: Analysis and Criticism. Same as Latin American Studies 370S (Topic 15: *Literary Translation: Analysis and Criticism*). Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.

Topic 7: Spanish for Health Care Professionals. Same as Mexican American Studies 374 (Topic 30: *Spanish for Health Care Professionals*). Designed to build fluency in both spoken and written Spanish that will enable the health care professional to communicate effectively with monolingual patients, to attend conferences or classes in Spanish, and to explain medical literature to patients. Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.

Topic 8: Rhetoric and Composition for Native Speakers. Same as Mexican American Studies 374 (Topic 31: *Rhetoric and Composition for Native Speakers*). Writing and oral expression for use in academic and professional settings. Prerequisite: Spanish 327G (or 327) and six additional semester hours of upper-division coursework in Spanish.

368L. Spanish Language Structure. Advanced treatment of the syntax and morphology of the Spanish language for Spanish majors concentrating in Hispanic linguistics. Three lecture hours a week for one semester. Spanish 367K (Topic: *Structure of the Spanish Language*) and 368L may not both be counted. Prerequisite: Spanish 345L.

372. Topics in Spanish Literature Since 1900. Intensive study of significant works and themes, and well as their literary and cultural contexts. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

373. Early Spanish Literature. Writers and texts from the medieval and/or the Renaissance period of Spanish literature. Three lecture hours a week for one semester. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

374K. Colonial Spanish American Literature. Main trends and principal writers of the colonial period in Spanish America. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

Topic 1: Writing the Conquest. Same as Latin American Studies 370S (Topic 16: *Writing the Conquest*). The forging of Spanish-American civilization and many of its persistent dilemmas seen through the examination of an exuberant and original body of narrative texts. Spanish 350 (Topic: *Writing the Conquest*) and 374K (Topic 1) may not both be counted.

375. National Literatures of Spanish America. Selected representative works from the national literatures of Spanish America. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

376. Topics in Golden Age Literature. Critical study of significant Golden Age works. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

Topic 1: Golden Age Drama.

Topic 2: Prose and Drama of Golden Age Spain. Only one of the following may be counted: Spanish 376 (Topic 2), 376 (Topic: *Prose and Drama of the Golden Age*), 376 (Topic: *Golden Age Prose and Drama*).

Topic 3: Cervantes.

378H. Honors Seminar. Honors seminar on a special topic in literature, linguistics, or civilization. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, admission to the Spanish Honors Program, and consent of the honors adviser.

379H. Honors Thesis. Supervised individual research on a literary, linguistic, or cultural topic. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, admission to the Spanish Honors Program, and consent of the honors adviser.

UTEACH-LIBERAL ARTS

UTEACH-LIBERAL ARTS: UTL

LOWER-DIVISION COURSES

101. Introduction to the Teaching Profession. Weekly seminar with a University faculty member plus a field experience in an area elementary school under the supervision of a cooperating teacher. Course readings and instruction complement the field experience. Seminar topics include basic classroom management, lesson design, assessment, technology, diversity, and special student populations. One class hour a week for one semester; at least ten hours of fieldwork a semester are also required. Offered on the letter-grade basis only. Prerequisite: Successful admission into the UTeach-Liberal Arts program and consent of the UTeach adviser in the College of Liberal Arts.

202. Introduction to Teaching in the Middle School. Weekly seminar with a University faculty member plus a field experience in an area middle school under the supervision of a cooperating teacher. Course readings and instruction complement field experience. Seminar topics include classroom management, lesson design, assessment, technology, diversity, special student populations, conferencing techniques, and school organization. Two class hours a week for one semester; at least twenty hours of fieldwork a semester are also required. Offered on the letter-grade basis only. Prerequisite: UTeach-Liberal Arts 101 with a grade of at least B, and consent of the UTeach adviser in the College of Liberal Arts.

303E. Teaching English in the High School. Weekly seminar with a University faculty member, plus field experience in an area high school under the supervision of a cooperating teacher. Course readings and instruction complement field experience. Seminar topics include state and national standards, curriculum design and implementation, the role of technology in education, and teaching strategies with a special focus on innovative strategies for teaching literature and writing. Three lecture hours a week for one semester; at least forty-five hours of fieldwork a semester are also required. Offered on the letter-grade basis only. UTeach-Liberal Arts 303 and 303E may not both be counted. Prerequisite: UTeach-Liberal Arts 101 and 202 with a grade of at least B in each; concurrent enrollment in Curriculum and Instruction 370S (Topic 1: *Advanced Methods in English, Language Arts, and Reading*); and consent of the UTeach adviser in the College of Liberal Arts.

- 303L. Teaching Languages Other Than English in the High School.** Weekly seminar with a University faculty member, plus field experience in an area high school under the supervision of a cooperating teacher. Course readings and instruction complement the field experience. Seminar topics include state and national standards and their implementation, teaching for proficiency, curriculum design, assessment, best practices, the instructional environment, and the role of technology in teaching languages other than English. Three lecture hours a week for one semester; at least forty-five hours of fieldwork a semester are also required. Offered on the letter-grade basis only. UTeach-Liberal Arts 303 and 303L may not both be counted. Prerequisite: UTeach-Liberal Arts 101 and 202 with a grade of at least *B* in each; concurrent enrollment in Curriculum and Instruction 370S (Topic 5: *Advanced Methods in Foreign Language*); and consent of the UTeach adviser in the College of Liberal Arts.
- 303S. Teaching Social Studies in the High School.** Weekly seminar with a University faculty member, plus field experience in an area high school under the supervision of a cooperating teacher. Course readings and instruction complement the field experience. Seminar topics include social studies topics, standards, curriculum design and implementation, teaching strategies, technology, and vertical and horizontal teaming in social studies. Three lecture hours a week for one semester; at least forty-five hours of fieldwork a semester are also required. Offered on the letter-grade basis only. UTeach-Liberal Arts 303 and 303S may not both be counted. Prerequisite: UTeach-Liberal Arts 101 and 202 with a grade of at least *B* in each; concurrent enrollment in Curriculum and Instruction 370S (Topic 3: *Advanced Methods in Social Studies*); and consent of the UTeach adviser in the College of Liberal Arts.
- 304. Middle School Teaching for Postbaccalaureate Certification.** Designed for college graduates seeking teacher certification. Students observe and teach in a middle school under the supervision of a mentor teacher, and participate in a weekly seminar. Seminar topics may include classroom management, lesson design, assessment, technology, diversity, special student populations, conference techniques, and professional development. Three lecture hours and two hours of fieldwork a week for one semester. May not be counted toward any degree. Prerequisite: Consent of the UTeach adviser in the College of Liberal Arts.

UPPER-DIVISION COURSES

- 320. Topics in Teaching the Liberal Arts.** Introduction to various topics related to middle grades, secondary, and all-level teaching certification. Topics may include history, social studies, English language arts, and languages other than English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of the UTeach adviser in the College of Liberal Arts.

- 341R. Overcoming Reading Difficulties.** Restricted to UTeach-Liberal Arts students. Subjects may include the basic terminology related to special needs students, recognizing differences in learning disabilities, evaluating teaching methods and materials, and teaching strategies that address the needs of special needs students, with a special focus on reading strategies. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Rhetoric and Writing 379C (Topic: *Overcoming Reading Difficulties*) and UTeach-Liberal Arts 341R may not both be counted. Prerequisite: Applied Learning and Development 322 and consent of instructor.

CENTER FOR WOMEN'S AND GENDER STUDIES

WOMEN'S AND GENDER STUDIES: WGS

LOWER-DIVISION COURSES

- 301. Introductory Topics in Women's and Gender Studies.** Three lecture hours a week for one semester, or as required for the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history. Prerequisite: Varies with the topic.
- Topic 2: Introduction to Child Psychology.** General introduction to physical, social, and cognitive development from conception onward. Prerequisite: Psychology 301 with a grade of at least *C*.
- Topic 4: Family Relationships.** Same as Human Development and Family Sciences 304. The process of family interaction over the life cycle. Application of research findings to the understanding of relationships.
- Topic 5: Child Development.** Same as Human Development and Family Sciences 313. Motor, language, cognitive, social, and emotional development in the family context. Human Development and Family Sciences 313H and Women's and Gender Studies 301 (Topic 5) may not both be counted. Prerequisite: Psychology 301 with grade of at least *C*-, and credit or registration for Human Development and Family Sciences 113L.
- Topic 6: Ethnicity and Gender: La Chicana.** Same as Mexican American Studies 319 (Topic 1: *Ethnicity and Gender: La Chicana*) and Sociology 308D.
- Topic 7: Women's Reproductive Health for Nonscience Majors.** Same as Nursing 307 (Topic 1: *Women's Reproductive Health for Nonscience Majors*) and Sociology 308 (Topic 2: *Women's Reproductive Health for Nonscience Majors*). Overview of contemporary women's reproductive health issues, with emphasis on historical, physiological, psychosocial, and cultural influences that affect the reproductive health of women during adolescence, the childbearing years, and midlife. Pharmacy 318W and Women's and Gender Studies 301 (Topic 7) may not both be counted. Prerequisite: One year of high school biology, or Biology 301L or 309D or the equivalent.

Topic 11: United States Women, Sexuality, and Gender to 1865. Same as History 317L (Topic 5: *United States Women, Sexuality, and Gender to 1865*). Partially fulfills legislative requirement for American history.

Topic 12: Gay and Lesbian Literature and Culture. Same as English 314V (Topic 4: *Gay and Lesbian Literature and Culture*). Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Women's and Gender Studies. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Women's and Gender Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321. Introduction to Women's and Gender Studies in the Humanities.** Multidisciplinary course examining the creative work of women and the image of women in history and art. Topics in addition to the following may be offered; these are listed in the *Course Schedule*. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 4: Women and Literature: European Tradition.** Same as Scandinavian 323 (Topic 3: *Women and Literature: European Tradition*). English 322 (Topic 6: *Women and Literature: European Tradition*) and Women's and Gender Studies 321 (Topic 4) may not both be counted. Prerequisite: Upper-division standing.
- 322. Introduction to Women's and Gender Studies in the Social Sciences.** Multidisciplinary course using approaches from the social sciences to examine gender constructs and male/female roles. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.
- Topic 1: Sociology of Gender.** Same as Sociology 333K. Inequality between the sexes; men's and women's changing roles in society. Prerequisite: Upper-division standing.
- Topic 4: Feminist Theory.** Same as Government 335M (Topic 7: *Feminist Theory*). Government 370L (Topic: *Introduction to Feminist Theory*) and Women's and Gender Studies 322 (Topic 4) may not both be counted. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.
- 323. Introduction to Women's and Gender Studies in the Natural Sciences.** Examination of gender constructs and male and female roles and differences and similarities, using approaches from the natural sciences. Three lecture hours a week for one semester, or as required for the topic. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.
- Topic 2: Human Physical Growth and Development.**
- 324. Introduction to Women's and Gender Studies in Communication.** Multidisciplinary course examining issues of women, gender, and sexuality in media industries, texts, and audiences. Three lecture hours a week for one semester, or as required for the topic. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Gender and Communication.** Prerequisite: Upper-division standing.
- Topic 2: Women and Media Culture.** Introduction to the study of women's relations to media culture. Three lecture hours and two and one-half screening hours a week for one semester. Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.
- 125. Special Topics in Women's and Gender Studies.** Analysis of special topics in women's and gender studies through reading, discussion, and lectures. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Women's and Gender Studies.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Women's and Gender Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 340, 440. Cross-Cultural Topics in Women's and Gender Studies.** Women's experiences in different cultures. Three or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic.
- Topic 2: Women and Family in Asia.** Women's and Gender Studies 340 (Topic 2) is same as Asian Studies 372 (Topic 5: *Women and Family in Asia*). Prerequisite: Upper-division standing or consent of instructor.
- Topic 3: African American Family.** Women's and Gender Studies 340 (Topic 3) is same as African and African American Studies 374 (Topic 1: *African American Family*) and Social Work 360K (Topic 2: *African American Family*).
- Topic 5: German Women Filmmakers.** Women's and Gender Studies 340 (Topic 5) is same as Germanic Civilization 361E (Topic 5: *German Women Filmmakers*). Only one of the following may be counted: English 322 (Topic 14: *German Women Filmmakers*), European Studies 361 (Topic 15: *German Women Filmmakers*), Women's and Gender Studies 340 (Topic 5). Prerequisite: Upper-division standing.

Topic 8: Women in Asian Societies. Women's and Gender Studies 340 (Topic 8) is same as Asian Studies 361 (Topic 14: *Women in Asian Societies*) and History 350L (Topic 25: *Women in Asian Societies*). Prerequisite: Upper-division standing.

Topic 10: Iranian Women Writers. Women's and Gender Studies 340 (Topic 10) is same as Persian 361 (Topic 3: *Iranian Women Writers*) and Middle Eastern Studies 324K (Topic 1: *Iranian Women Writers*). Prerequisite: Upper-division standing.

Topic 11: Veiling in the Muslim World. Women's and Gender Studies 340 (Topic 11) is same as Asian Studies 372 (Topic 14: *Veiling in the Muslim World*), Islamic Studies 372 (Topic 2: *Veiling in the Muslim World*), Middle Eastern Studies 322K (Topic 17: *Veiling in the Muslim World*), and Religious Studies 358 (Topic 5: *Veiling in the Muslim World*). Prerequisite: Upper-division standing.

Topic 12: Women in Modern Japanese Fiction. Women's and Gender Studies 340 (Topic 12) is same as Asian Studies 372 (Topic 17: *Women in Modern Japanese Fiction*). Prerequisite: Upper-division standing or consent of instructor.

Topic 14: Self-Revelation in Women's Writing. Women's and Gender Studies 340 (Topic 14) is same as African and African American Studies 374 (Topic 26: *Self-Revelation in Women's Writing*), Comparative Literature 323 (Topic 4: *Self-Revelation in Women's Writing*), and Middle Eastern Studies 322K (Topic 26: *Self-Revelation in Women's Writing*). Only one of the following may be counted: English 376L (Topic 9: *Self-Revelation in Women's Writing*), Middle Eastern Languages and Cultures 374 (Topic 3: *Self-Revelation in Women's Writing*), Women's and Gender Studies 340 (Topic 14). Prerequisite: Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing.

Topic 17: Italian Women Writers. Women's and Gender Studies 340 (Topic 17) is same as English 322 (Topic 38: *Italian Women Writers*) and Italian Civilization 349 (Topic 5: *Italian Women Writers*). Prerequisite: Upper-division standing.

Topic 18: Women and Gender in China. Women's and Gender Studies 340 (Topic 18) is same as Asian Studies 372 (Topic 21: *Women and Gender in China*) and History 350L (Topic 46: *Women and Gender in China*). Prerequisite: Upper-division standing or consent of instructor.

Topic 19: Contemporary India. Exploration of urban and rural inequality through classic and contemporary novels, ethnographies, and films that highlight gender relations. Prerequisite: Upper-division standing.

Topic 21: Mass Media and Minorities. Survey of the mass communication issues that affect minorities, including alienation; fragmentation; media access; and criticism and feedback for minority groups based on racial or ethnic background, age, gender, disability, social or economic class, and sexual orientation. Prerequisite: Upper-division standing.

Topic 22: Muslim Women: Past and Present I. Prerequisite: Upper-division standing.

Topic 23: Muslim Women: Past and Present II. Prerequisite: Upper-division standing.

Topic 24: Nationalism and Gender in South Asia. Women's and Gender Studies 340 (Topic 24) is same as Anthropology 324L (Topic 36: *Nationalism and Gender in South Asia*) and Asian Studies 361 (Topic 26: *Nationalism and Gender in South Asia*). Explores why nationalist movements often make the reform of women's roles central to their political projects.

Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures. Women's and Gender Studies 340 (Topic 25) is same as Anthropology 324L (Topic 40: *Gender, Sexuality, and the Family in Indian Religions and Cultures*), Asian Studies 372 (Topic 25: *Gender, Sexuality, and the Family in Indian Religions and Cultures*), and Religious Studies 341 (Topic 3: *Gender, Sexuality, and the Family in Indian Religions and Cultures*). A comprehensive historical overview of gender issues as they are represented in the textual traditions of South Asia.

345. Topics in Women's and Gender Studies. Three lecture hours a week for one semester, or as required for the topic. May be repeated for credit when the topics vary. Some topics partially fulfill legislative requirement for American history. Prerequisite: Varies with the topic.

Topic 1: Child Development.

Topic 2: The Family. Family history and origins; comparative family systems; the American family; social antecedents of family structure and process; family formation and dissolution; family and society.

Topic 4: Guidance in Adult-Child Relationships. Same as Human Development and Family Sciences 366. Theory and implementation of positive child and adult interactions, communication, and guidance strategies. Two lecture hours a week for one semester, and four laboratory hours a week to be arranged as a four-hour block between 8:30 AM and 4:45 PM, Monday through Thursday. Prerequisite: Human Development and Family Sciences 313 and 113L, and three semester hours of upper-division coursework in human development and family sciences, education, psychology, or sociology.

Topic 5: Women and Sport. Same as Kinesiology 352K (Topic 3: *Women and Sport*).

Topic 6: Introduction to Developmental Psychology. Physical, social, and cognitive development in humans. Psychology 333D and Women's and Gender Studies 345 (Topic 6) may not both be counted.

Topic 8: Gender-Based Discrimination. Same as American Studies 370 (Topic 6: *Gender-Based Discrimination*) and Government 357M (Topic 1: *Gender-Based Discrimination*). Studies the substance of laws that relate to gender-based roles, and the participation of women in the legal process. Prerequisite: Upper-division standing, a University grade point average of at least 3.50, six semester hours of lower-division coursework in government, and consent of department received prior to registering.

Topic 9: Women in Classical Antiquity. Same as Classical Civilization 348 (Topic 7: *Women in Classical Antiquity*).

Topic 10: Freudians and Feminisms. Same as Germanic Civilization 362E (Topic 1: *Freudians and Feminisms*) and Philosophy 365 (Topic 1: *Freudians and Feminisms*). English 322 (Topic 4: *Freudians and Feminisms*) and Women's and Gender Studies 345 (Topic 10) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

Topic 11: Women's Rights Movement in the United States. Same as History 341N. A survey of the women's movement in the United States from the seventeenth century to the present. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

Topic 12: Family Policy Issues. Same as Sociology 352M (Topic 5: *Family Policy Issues*). Consideration of liberal, conservative, and centrist views concerning the major family policy issues facing the United States and other advanced industrial societies.

Topic 13: Isak Dinesen/Karen Blixen. Same as Germanic Civilization 323E (Topic 1: *Isak Dinesen/Karen Blixen*) and Scandinavian 373 (Topic 6: *Isak Dinesen/Karen Blixen*). English 322 (Topic 7: *Isak Dinesen/Karen Blixen*) and Women's and Gender Studies 345 (Topic 13) may not both be counted. Prerequisite: Upper-division standing.

Topic 14: Social Dramas of Henrik Ibsen. Same as English 322 (Topic 17: *Social Dramas of Henrik Ibsen*) and Scandinavian 323 (Topic 2: *Social Dramas of Henrik Ibsen*). Men and women in their public and private lives. Prerequisite: Upper-division standing.

Topic 15: Contemporary Women Authors. Same as African and African American Studies 374F (Topic 4: *Contemporary Women Authors*) and English 370W (Topic 2: *Contemporary Women Authors*). African and African American Studies 374 (Topic 13: *Contemporary Women Authors*) and Women's and Gender Studies 345 (Topic 15) may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 17: Language and Gender. Same as English 364S. Linguistic, social, and political dimensions of gender-related speech differences. Only one of the following may be counted: English 370W (Topic 4: *Language and Gender*), Linguistics 373 (Topic: *Language and the Sexes*), Women's and Gender Studies 345 (Topic 17). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 19: Social Development in Children. Development of social behavior (for example, sex typing and aggression) and social relationships. Psychology 333R and Women's and Gender Studies 345 (Topic 19) may not both be counted. Prerequisite: Upper-division standing, Psychology 301 with a grade of at least C, Psychology 304 or 333D, and Psychology 418 or an equivalent statistics course with a grade of at least C.

Topic 21: Male-Female Communication. Same as Communication Studies 365K. Studies of speech patterns related to the concepts of male and female, including sexism in speaking, patterns of male and female speaking, patterns of listening to males and females, speech in courtship and family, speech and sexual discrimination in careers. Prerequisite: Upper-division standing.

Topic 23: Sociology of Education. Same as African and African American Studies 321L and Sociology 321L. Education as a societal institution, with emphasis on the United States educational system: how the system works; the effects of the system; recent changes. Prerequisite: Upper-division standing.

Topic 25: Women and Socialism. Same as Sociology 321K (Topic 4: *Women and Socialism*). The origins of socialism, its relationship to gender issues, and the role women have played in existing socialist states as revolutionaries and citizens. Prerequisite: Upper-division standing.

Topic 26: American Dilemmas. Examination of critical American social problems and how these problems are a natural outgrowth of the existing social structure. Prerequisite: Upper-division standing.

Topic 28: Cult Movies and Gender Issues. Three lecture hours and two and one-half screening hours a week for one semester. Prerequisite: Upper-division standing.

Topic 29: Witches, Workers, and Wives. Prerequisite: Upper-division standing.

Topic 30: Gay and Lesbian Literature and Culture. Same as English 370W (Topic 8: *Gay and Lesbian Literature and Culture*). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 33: The History of Witchcraft. Study of the prosecution of people, most of them women, for the crime of witchcraft in Europe and colonial America between 1450 and 1750. Prerequisite: Upper-division standing.

Topic 34: Leadership in America. Same as American Studies 370 (Topic 10: *Leadership in America*) and Government 370L (Topic 2: *Leadership in America*) Introduction to the concepts of leadership and the application of those concepts in public and political leadership. Prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, a University grade point average of at least 3.50, and consent of department received prior to registering.

Topic 35: Psychosocial Issues in Women's Health. Psychosocial issues in women's physical and mental health. Includes a broad definition of women's health that considers traditional reproductive issues, disorders that are more common in women than in men, and the leading causes of death in women. Covers gender influences on health risk behaviors, and societal influences on women's health through a consideration of social norms and roles. Prerequisite: Upper-division standing.

Topic 36: Feminist Media Theory. Survey of basic theories related to the structure and process of film and video communication. Three lecture hours and two and one-half screening hours a week for one semester.

Topic 37: Women in Postwar America. Same as American Studies 370 (Topic 30: *Women in Postwar America*) and History 350R (Topic 8: *Women in Postwar America*). History 350L (Topic 58: *Women in Postwar America*) and Women's and Gender Studies 345 (Topic 37) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 38: History of Sexuality in America. Same as History 350R (Topic 13: *History of Sexuality in America*). History 350L (Topic 55: *History of Sexuality in America*) and Women's and Gender Studies 345 (Topic 38) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 39: Gender, Sexuality, and Migration. Same as English 370W (Topic 9: *Gender, Sexuality, and Migration*). Only one of the following may be counted: Asian American Studies 320 (Topic: *Gender, Sexuality, and Migration*), English 370W (Topic: *Cultures of Immigration and Dislocation*), Women's and Gender Studies 345 (Topic 39). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 40: Virginia Woolf. English 370W (Topic 10: *Major Authors: Virginia Woolf*) and Women's and Gender Studies 345 (Topic 40) may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

Topic 41: American Food. Same as American Studies 370 (Topic 26: *American Food*). Studies diverse American food cultures from a humanities perspective, exploring connections between global, national, and local communities. Uses scholarship in the field of food studies as well as cookbooks, novels, poetry, photographs, songs, documentaries, and oral histories to investigate the past and present of American food communities. Prerequisite: Upper-division standing.

Topic 42: Nature and Gender in America. Same as American Studies 370 (Topic 27: *Nature and Gender in America*). Study of the connections between nature and gender in American national narratives. Explores how Americans of differing classes, races, genders, sexual orientation, and ages have shaped and experienced changing ideas of America, wilderness, domestication, and society over time and in different regions of the country. Prerequisite: Upper-division standing.

Topic 43: Animals and American Culture. Same as American Studies 370 (Topic 28: *Animals and American Culture*) and History 350R (Topic 9: *Animals and American Culture*). Explores the role of animals in American history, culture, and society. History 350L (Topic 60: *Animals and American Culture*) and Women's and Gender Studies 345 (Topic 43) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

Topic 44: Women Radicals and Reformers. Same as American Studies 370 (Topic 29: *Women Radicals and Reformers*). Traces traditions of women's radical activism and reform beginning with the Enlightenment and the American Revolution and continuing to the present, with concentration on the twentieth century. Prerequisite: Upper-division standing.

Topic 45: Comparative Cultures of Beauty. Same as American Studies 370 (Topic 24: *Comparative Cultures of Beauty*) and Asian American Studies 320 (Topic 2: *Comparative Cultures of Beauty*). Examines the intersections of race, class, and culture in contemporary and historical constructions of beauty in American society; and how class, gender, and race may shape definitions of beauty. Prerequisite: Upper-division standing.

356. Introduction to Feminist Research Methods. Introduction to feminist research methods across a range of traditional disciplines. Designed to prepare students to analyze research within gender studies and to develop their own research skills. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

358Q. Supervised Research. Supervised individual research on an issue in women's and gender studies. Individual instruction. Prerequisite: Upper-division standing and written consent of the supervising faculty member; consent forms are available in the Center for Women's and Gender Studies.

360. Research and Thesis in Women's and Gender Studies. Individual project or paper to be completed under the direction of a women's and gender studies faculty member. Conference course. Prerequisite: Upper-division standing and written consent of the supervising faculty member; consent forms are available in the Center for Women's and Gender Studies.

379L. Internship in Women's and Gender Studies. Experience working in the community or for a nonprofit agency. Six to nine hours of work a week for one semester. Prerequisite: At least twelve semester hours of coursework in women's and gender studies and written consent of the supervising faculty member; consent forms are available in the Center for Women's and Gender Studies.

379S. Senior Seminar. Intensive study of selected topics in women's and gender studies. Three lecture hours a week for one semester. May not be repeated for credit. Prerequisite: Completion of at least ninety semester hours of coursework, including nine hours in women's and gender studies.

12. College of Natural Sciences

Mary Ann Rankin, PhD, *Dean*
 David A. Laude, PhD, *Senior Associate Dean, Academic Affairs*
 Sacha E. Kopp, PhD, *Associate Dean, Curriculum and Programs*
 Kay T. Thomas, MPA, *Associate Dean, External Relations*
 Reginald C. Baptiste, MD, *Associate Dean, Health Professions*
 Michael P. Marder, PhD, *Associate Dean, Mathematics and Science Education*
 Peter J. Riley, PhD, *Associate Dean, Research and Facilities*
 Catherine A. Stacy, PhD, *Assistant Dean, Academic Initiatives*
 Ramon Cardona, BBA, *Assistant Dean, Business Affairs*
 Sarah L. Simmons, PhD, *Assistant Dean, Honors, Research, and International Studies*
 Michael W. Raney, PhD, *Assistant Dean, Student Affairs and First-Year Initiatives*
 Susan C. Harkins, EdD, *Assistant Dean, Texas Interdisciplinary Plan*
<http://cns.utexas.edu/>

GENERAL INFORMATION

ARTS AND SCIENCES EDUCATION

The academic program offered cooperatively by the College of Natural Sciences and the College of Liberal Arts provides what is sometimes referred to as a “liberal arts” or an “arts and sciences” education. No matter what area of knowledge a student intends to specialize in, the program of study will require courses in both colleges. The colleges work together to ensure that the individual interests and needs of the students pursuing an arts and sciences program are met.

Guidelines for developing a coherent plan of study are provided by major requirements, by sequential prerequisites, and by optional patterns of emphasis. Departmental majors, areas of specialization, and interdepartmental programs are designed to enable every student to study at least one field in depth. These programs are sufficiently broad in scope to allow students in the same major to develop quite different plans of study in pursuit of their individual interests and goals. Each student should choose courses that are intellectually challenging and that contribute to his or her long-term objectives.

Arts and sciences students are required to take a certain number of courses in the natural sciences, the social and behavioral sciences, and the humani-

ties. Consequently, whatever their fields of study, they have the opportunity to learn something about the basic differences in the ways questions are raised and answered in several fields of inquiry, and about the techniques for validating the answers and putting the results to use. At the same time, they may gain some of the philosophical and historical perspectives that illuminate and give form to general or specialized knowledge and help to reveal its relevance.

Both teachers and students sometimes make the assumption that independent and creative study is exclusively for the gifted. In fact, the primary requirement is that the student be highly motivated, although he or she must also demonstrate ability. The departments that make up the two arts and sciences colleges encourage all qualified students to work independently in special honors courses and seminars and in conference, studio, or laboratory work. The student is free to define a major, to determine whether a given assignment will be an adventure or a chore, free to develop its latent possibilities or merely satisfy its explicit demands. True creativity presupposes more than a gift for innovation; it requires an unceasing commitment to thinking and working at one’s highest level.

As competence is gained in a chosen field, the mind should be progressively sharpened, disciplined, and enriched. The student who leaves arts and sciences studies with an enhanced understanding of self and

humankind, of cultural and historical heritage, of the world and the universe, and of the moral values that make it possible to live a meaningful life, will have made the most of education, having gained something over and above the objective of vocational preparedness.

STUDENT PROGRAMS

The College of Natural Sciences offers the following programs to supplement the degree plans described in this chapter. Additional information is given at <http://cns.utexas.edu/>.

BIOLOGY SCHOLARS PROGRAM

The Biology Scholars Program (BSP) is designed to provide lower-division biology students with a broader understanding of the study of biology and a strong sense of community as they begin their academic careers. Throughout the two-year program, BSP provides academic support, resources for peer-led study, and community service opportunities. Each semester, BSP students take a specialized critical thinking seminar on topics that range from the study of biological sciences to graduate and professional careers in biology. These classes emphasize working in small groups and help BSP students develop strong problem-solving and study skills.

EMERGING SCHOLARS PROGRAM

The Emerging Scholars Program (ESP) is designed to help highly motivated mathematics, science, and engineering students toward continued academic success in essential first-year math and science courses. ESP students work closely with faculty members and with other high-achieving students in a supplemental workshop designed to enrich their course experience and intensify their understanding of the course material. The ESP experience is currently available in calculus and chemistry. Students are invited to participate during the spring of their senior year of high school on the basis of strong academic credentials and history of achievement in mathematics and sciences.

FRESHMAN RESEARCH INITIATIVE

The Freshman Research Initiative introduces undergraduate students to the world of scientific research at the beginning of their academic careers by integrating a three-semester research experience into coursework

required for the degree. All students begin with an introductory research methods course in the first semester, followed by two semesters of work on real, cutting-edge research projects in fields like biology, biochemistry, nanotechnology, molecular biology, astronomy, physics, and artificial intelligence. After finishing the course sequence, interested students are assisted in joining faculty or other research laboratories for further work.

TEXAS INTERDISCIPLINARY PLAN

The Texas Interdisciplinary Plan (TIP) transforms the learning experience for its students by creating small academic communities that promote academic excellence and leadership. TIP offers a collection of selective academic programs that serve about nine hundred students each year, including TIP Scholars, TIP Fellows, Getting Ready for Advanced Degrees (GRAD), and the TIP Mentor Academy. While each program is unique, all incorporate assisted registration for courses, mentoring, tutoring, and academic and social connections. Admission criteria differ for each program. More information is available from the TIP office.

The Texas IP Certificate is described on page 515.

UNDERGRADUATE RESEARCH

One advantage that the University offers undergraduates is the opportunity to participate in state-of-the-art research with some of the world's most respected scientists. Each department in the College of Natural Sciences supports undergraduate research programs in which students may earn University credit. Students may also earn special departmental honors for exceptional research. The college holds an annual Undergraduate Research Forum to recognize and reward students who participate in research. Additional opportunities vary from department to department; information is available in the Office for Honors, Research, and International Study.

UTEACH-NATURAL SCIENCES

UTeach-Natural Sciences is an innovative teacher preparation program that allows students to pursue middle grades and secondary school teacher certification within a four-year mathematics, science, or computer science degree program. While learning the subject matter of their majors, students also learn how to teach. Upon completing the program, students graduate with

a bachelor's degree and are recommended for a middle grades or secondary school teaching certificate. The UTeach-Natural Sciences program invites students to explore their interest in teaching as early as the freshman year. Through courses taught by some of Texas's most respected secondary school math and science teachers, students learn quickly whether they are suited to the profession. More information about teacher certification requirements is given on page 515.

WOMEN IN NATURAL SCIENCES

The Women in Natural Sciences (WINS) Honors Residential Program is designed to promote the involvement and success of women in the sciences. Students live together in an honors dormitory during their first year and participate in socially and educationally enriching activities. In their first semester they take an innovative small seminar class in which they are introduced to faculty members in their areas of interest. Through the seminar and a wide range of academic, cultural, and social events, WINS students are connected with other students and faculty members who share their interest in science.

HONORS PROGRAMS

University-wide honors are described in chapter 1 and in *General Information*. In addition, the College of Natural Sciences encourages academic excellence through programs such as the Dean's Scholars Honors Program and Turing Scholars in Computer Science. Students may also graduate with departmental honors as described later in this chapter and may earn membership in one or more of the honorary scholastic societies open to undergraduates.

DEAN'S SCHOLARS HONORS PROGRAM

The Dean's Scholars Honors Program is a comprehensive honors degree program for highly motivated and talented students. The key features of the program are a first-semester research methods course; a breadth requirement, usually completed during the first four semesters, that exposes students to various forms of scientific inquiry; and at least two semesters of supervised research and writing that culminate in an honors thesis. Students in good standing in the Dean's Scholars Honors Program may follow the honors option for the appropriate bachelor of science degree. The honors degree option is available in most fields in the college.

Application to the Dean's Scholars Honors Program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available at <http://cns.utexas.edu/ds/> and in the program office. Students may enter the program as freshmen, as transfer students, or after they have enrolled at the University. In general, students who have completed more than fifty semester hours of college coursework are not considered for admission.

Factors in the admission decision are the student's high school and/or University grades, class rank, the rigor of the courses the student has taken, the quality of the required application essays, faculty recommendations, and the student's interest and aptitude in math and science as demonstrated by relevant extracurricular activities.

To remain in good standing in the Dean's Scholars Honors Program, students must maintain an in-residence grade point average of at least 3.25 after thirty hours in residence, of at least 3.40 after sixty hours in residence, and of at least 3.50 after ninety hours in residence. Students who fail to maintain the required grade point average will usually be dismissed from the program. Under special circumstances and at the discretion of the departmental honors adviser, a student may be allowed to continue under academic review.

TURING SCHOLARS IN COMPUTER SCIENCE

The Department of Computer Science offers a comprehensive honors degree program for highly motivated and talented students. The key features of the program are an intensive, accelerated freshman- and sophomore-year program; special Turing Scholars sections of many advanced computer science courses; a second-semester freshman-year course that introduces students to the research activities of the department; and at least two semesters of supervised research and writing. Upon completion of both a sequence of Turing Scholars courses, approved by the program director, and an approved thesis, students graduate as Turing Scholars in Computer Science.

Students in the Turing Scholars program pursue the BSCS, option II. Application to the program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available in the Department of Computer Science and online. Students may enter the program either as freshmen or after they have enrolled at the University. Factors in the admission decision are the student's high school grades and class rank, the rigor of the courses

the student has taken, the quality of the required application essays, and the student's interest and aptitude in math, science, and computing as demonstrated by extracurricular activities.

More information about the degree program is given later in this chapter.

TRANSCRIPT-RECOGNIZED CERTIFICATE PROGRAMS

Undergraduate certificate programs encourage students to explore academic areas that support and extend their degree plans. The following certificates require at least eighteen semester hours of coursework, some of which may also be used to fulfill degree requirements. Undergraduates who complete the certificate requirements in conjunction with their degree requirements or within one year after earning the degree will receive a certificate and recognition on their University transcript. A maximum of nine hours in the certificate program may be taken after completion of the undergraduate degree. At least half of the required coursework in the certificate program must be completed in residence at the University.

CERTIFICATE IN COMPUTATIONAL SCIENCE AND ENGINEERING

The Certificate in Computational Science and Engineering is described on page 8.

THE ELEMENTS OF COMPUTING PROGRAM

The Elements of Computing Program, administered by the Department of Computer Science, is designed to support computational work in disciplines other than computer science and to provide students with skills in the use of computer applications. Any non-computer science major may take any elements of computing course for which he or she meets the prerequisite. No application process is required.

To earn the Elements of Computing Certificate, students must complete eighteen semester hours of coursework with a grade of at least C- in each course. The following courses are required:

- ▶ One core course: C S 303E, *Elements of Computers and Programming*, or the equivalent
- ▶ Five of the following courses, including at least three upper-division courses:
 - C S 301K, *Foundations of Logical Thought*
 - C S 302, *Computer Fluency*

- C S 313E, *Elements of Software Design*
- C S 320N, *Topics in Computer Science for Nonmajors* (approved topics only)
- C S 324E, *Elements of Graphics and Visualization*
- C S 326E, *Elements of Networking*
- C S 327E, *Elements of Databases*
- C S 329E, *Topics in Elements of Computing*

With the approval of the certificate program faculty committee, other appropriate courses may be counted toward the elective requirement.

CERTIFICATE IN SCIENTIFIC COMPUTATION

The Certificate in Scientific Computation helps undergraduates equip themselves with the mathematical, statistical, and computer-based tools necessary to investigate complex systems in a variety of applications. It is designed to appeal to students across the University in science, engineering, economics, premedicine, sociology, and many other disciplines. The program is administered by the Division of Statistics and Scientific Computation. To be admitted, a student must be in good standing in an approved undergraduate degree program and must have earned a grade of at least C- in each certificate course he or she has completed. Students may apply for admission to the program at any point in their undergraduate study; they are encouraged to apply as early as possible so that they can be advised throughout the program.

The following coursework is required. Students must also complete Mathematics 408D or 408M as a prerequisite. No single course or topic may be used to meet more than one of these requirements.

1. Statistics and Scientific Computation 222.
2. One course in linear algebra, discrete mathematics, or differential equations chosen from the following: Mathematics 340L, 341, 362M, 372K, Statistics and Scientific Computation 329C.
3. Two courses in scientific computing, chosen from two of the following areas:
 - a. *Numerical methods*: Aerospace Engineering 311, Chemical Engineering 348, Civil Engineering 379K, Computer Science 323E, 323H, 367, Mathematics 348, Petroleum and Geosystems Engineering 310, Statistics and Scientific Computation 335.
 - b. *Statistical methods*: Biomedical Engineering 335, Electrical Engineering 351K, Mathematics 358K, 378K.
 - c. *Other computing topics*: Computer Science 324E, 327E, 329E (approved topics), 377,

Mathematics 346, 362M, 368K, 372K, 375T (approved topics), 376C, Mechanical Engineering 367S, Statistics and Scientific Computation 329D, 374C, 374D, 374E.

4. One of the following courses in applied computational science: Aerospace Engineering 347, Biology 321G, Biomedical Engineering 341, 342, 346, 377T (approved topics), Chemistry 368 (approved topics), Computer Science 324E, 329E (approved topics), Economics 363C, Electrical Engineering 379K (approved topics), Geological Sciences 325K, Mathematics 375T (approved topics), 374M, Physics 329.
5. An independent research course: Statistics and Scientific Computation 479R.

TEXAS IP CERTIFICATE

The Texas Interdisciplinary Plan (Texas IP) Certificate allows students to pursue an integrated course of study with a focus on the development and application of critical thinking skills. The curriculum is designed to complement the student's major with an interdisciplinary sequence of courses that may encompass the humanities, the social sciences, the natural sciences, and the arts. Students have the opportunity to present an original work in a capstone seminar. Those who plan to pursue the certificate should apply to the program adviser for admission no later than the end of their sophomore year. More information about the Texas IP Certificate is given at <http://www.utexas.edu/tip/TexasIP/>.

Students must meet the following requirements:

1. *Critical Thinking Seminar*: One of the following courses: Liberal Arts 302, Philosophy 311, Natural Sciences 301C (*Research Methods*), 302, 311, Undergraduate Studies 303 (*Thinking About Thinking Across the Disciplines*).
2. *Critical Writing Seminar*: Rhetoric and Writing 309K or 309S. Selected courses in the Department of Rhetoric and Writing may be substituted on a petition basis.
3. Three additional courses, including at least three semester hours of upper-division coursework, from an interdisciplinary topic area prescribed by the Texas Interdisciplinary Plan; or, with approval of the Texas IP Faculty Advisory Panel, a three-course interdisciplinary topic area designed by the student.

4. *Senior Capstone Seminar*: Liberal Arts 371 or Natural Sciences 371.

In the College of Liberal Arts, a student whose major includes a minor may use the Texas IP curriculum as the minor if he or she completes the Texas IP coursework and if the minor is not specified by the major department. Final approval of the Texas IP minor coursework rests with the College of Liberal Arts associate dean for academic affairs or the associate dean's authorized representative.

In the College of Natural Sciences, the Texas IP Certificate may be used to complement any major. Some certificate courses will also fulfill degree requirements established by the student's major department and given later in this chapter; however, some of the eighteen hours required for the certificate may be in addition to the number of hours required for the degree.

UTEACH TEACHER CERTIFICATION

UTeach-Natural Sciences prepares students in the College of Natural Sciences and the Jackson School of Geosciences for single-field teacher certification in mathematics or computer science or for composite certification with biology, chemistry, geological sciences, or physics as the primary teaching field. Composite certification that includes engineering is also available through UTeach-Engineering, in collaboration with the Cockrell School of Engineering. Composite certification requires forty-eight semester hours of coursework, consisting of twenty-four hours in one science, twelve in a second science, and six each in two additional sciences.

Students can complete the courses for certification as electives within a standard bachelor's degree program; lists of the required content courses and additional certification requirements are available in the UTeach-Natural Sciences office. However, students are strongly encouraged to consider the teaching options in biology, chemistry, geological sciences, mathematics, nutrition, and physics. These incorporate not only the required coursework in the major but also the professional development courses, supporting courses, and courses in other sciences that are required for certification.

To graduate and be recommended for certification, the student must have a University grade point average of at least 2.50. He or she must have earned a grade of at least C- in each of the professional development

courses listed below and must pass the final teaching portfolio review. Information about the portfolio review and additional certification requirements is available from the UTeach-Natural Sciences academic adviser.

Students must adhere to current certification requirements, even if they differ from those listed in a University catalog.

PROFESSIONAL DEVELOPMENT SEQUENCE

All students seeking teacher certification must complete the following courses:

UTS 101, *Secondary Teacher Education Preparation:*

STEP 1

UTS 110, *Secondary Teacher Education Preparation:*

STEP 2

UTS 170, *Student Teaching Seminar*

EDC 650S, *Secondary School Teaching Practicum*

EDC 365C, *Knowing and Learning in Math and Science*

EDC 365D, *Classroom Interactions*

EDC 365E, *Project-Based Instruction*

Students seeking middle grades certification must also complete the following courses. To be recommended for certification, the student must earn a grade of at least C- in each course.

EDC 339E, *Secondary School Literacy Across the Disciplines*

EDP 363M, Topic 3: *Adolescent Development*; or both PSY 301, *Introduction to Psychology*, and 304, *Introduction to Child Psychology*

SUPPORTING COURSES

BIO 337, Topic 2: *Research Methods: UTeach*; CH 368, Topic: *Research Methods—UTeach*; or PHY 341, Topic: *Research Methods—UTeach*

HIS 329U, *Perspectives on Science and Mathematics*; or PHL 329U, *Perspectives on Science and Mathematics*

Interested students are encouraged to apply for admission to the program at any time during their undergraduate careers. Applications are available in the Office of Special Projects in the College of Natural Sciences. Applicants must be considering a teaching career in middle grades or secondary school science, computer science, or mathematics and must meet grade point average requirements. Students who are interested in teaching earlier grades should consult the College of Education.

STUDY ABROAD OPPORTUNITIES

Students are encouraged to incorporate an international experience into their course of study. In addition to the traditional study abroad programs, students may take advantage of programs specifically designed for science study, including faculty-led courses, Maymester courses, and research abroad. The Office for Honors, Research, and International Study provides information sessions, one-on-one advising, and resources for science students interested in these programs.

SCHOLARSHIPS

A number of scholarship funds established by individuals, foundations, and industrial or research organizations are available to students in the college. Awards are made for reasons ranging from academic promise to financial need. More information about scholarships is given at <http://cns.utexas.edu/honors-scholarships/scholarships-fellowships/>.

ADMISSION AND REGISTRATION

ADMISSION TO THE COLLEGE

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

THE ENTRY-LEVEL MAJOR

All new freshman and transfer students are admitted into the College of Natural Sciences in an entry-level major. After completing a specified set of entry-level mathematics and science courses required for the degree with a grade of at least C- in each course, students are admitted to the major and option they plan to pursue.

ADMISSION-TO-MAJOR REQUIREMENTS

THE MAJOR IN COMPUTER SCIENCE

Several programs are available to undergraduates who wish to major in computer science. Each program involves an admission process in addition to the student's application for admission to the University. All students may apply to the University as entry-level

computer science majors and later seek admission to one of the computer science programs as described in this chapter; those seeking admission to the Turing Scholars program may also apply to that program when they apply for admission to the University.

Admission requirements for the Bachelor of Arts with a major in computer science, the Bachelor of Science in Computer Science, option I, and the Integrated Program are given below. Those for the Bachelor of Science in Computer Science, option II, Turing Scholars honors, and option III, computer science honors, are given on pages 543–544.

BACHELOR OF ARTS AND BACHELOR OF SCIENCE IN COMPUTER SCIENCE, OPTION I

To apply for admission to either the BA or the BSCS, option I, degree program, the student must earn a grade of at least C- in each of four basic sequence courses: Computer Science 307, 313K, 315, and Mathematics 408C or 408N. He or she must complete at least two of these courses in residence at the University. These requirements apply both to entry-level computer science students and to other University students seeking admission to one of these two computer science programs.

Applications are evaluated after the end of each fall semester, spring semester, and summer session by the Department of Computer Science Admission Committee. Students whose applications are denied may reapply through the supplemental admission process the following semester. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the College of Natural Sciences Transitional Advising Center (TRAC) for information about the application process and application deadlines.

THE INTEGRATED PROGRAM IN COMPUTER SCIENCE

The Integrated Program is a curriculum of undergraduate and graduate coursework that allows the student to earn the BSCS and the MSCS degrees at the same time. The curriculum includes the same coursework as the traditional master's degree program, as well as the opportunity for research.

Students in the Integrated Program are expected to become leaders in the profession. Highly motivated students with the personal qualities and intellectual capacity to establish successful careers in higher education and industry are encouraged to apply.

Undergraduates typically follow option I, II, or III for their first three years, then enter the Integrated Program in their fourth year. Admission is granted only for the fall semester; January 2 is the application deadline for those who wish to begin the program the following fall. By the end of the spring semester in which they apply, students must have completed at least sixty semester hours of coursework, including Computer Science 345 or 345H, 352 or 352H, and 353 or 357.

Admission is based on the applicant's grade point average, letters of recommendation, statement of purpose, and SAT Reasoning Test or ACT scores, as well as other relevant examples of academic ability and leadership. An applicant with a University grade point average of less than 3.50 is unlikely to be admitted. Admission may be restricted by the availability of instructional resources. Application materials and information about deadlines are published by the Department of Computer Science at <http://www.cs.utexas.edu/>.

Before beginning the fifth year, students in the Integrated Program must be admitted to the Graduate School. Application forms must be completed by January 2 of the student's fourth year. Before the application deadline, students must have completed the prescribed work common to all BSCS options. They must earn an acceptable score on the Graduate Record Examinations General Test (GRE) and must have their test scores reported to the University. Students usually take the GRE in the fall semester of their fourth year.

THE COORDINATED PROGRAM IN DIETETICS

Freshman and transfer applicants to the University who plan to enter the Coordinated Program in Dietetics (CPD) should begin in the entry-level major in nutrition. When they have met the requirements described below, students may apply for admission to the CPD.

Prior to applying for admission to the CPD, students must complete at least sixty semester hours of the coursework required for the Bachelor of Science in Nutrition, option I, including Biology 365R and 365S; Chemistry 369 or both 339K and 339L; and Nutrition 307, 107L, 312, 112L, 315, and 326. A list of other recommended courses is available from the School of Human Ecology. Students must have a grade point average of

at least 2.70 in coursework taken in residence at the University. Students should consult advisers in the School of Human Ecology for information about the application process and deadlines. Application materials are available from the school.

The number of applicants to the CPD may exceed the number that can be adequately instructed by the faculty and accommodated within available facilities. Admission decisions are based on the student's biology, chemistry, and nutrition grade point average, his or her University grade point average, and other factors. These factors include, but are not limited to, the difficulty of the student's coursework, work or volunteer experience, leadership, commitment to the profession of dietetics, and personal interview. Students whose applications are denied may reapply.

THE BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE¹

Students must be admitted to the Bachelor of Science in Environmental Science degree program; they may apply for admission after completing the following requirements:

The student must earn a grade of at least C- in Biology 311C, Chemistry 301, Mathematics 408C or 408N; and a grade of at least B- in Geological Sciences 401 or 303. To be competitive for admission, the student must have a grade point average of at least 2.75 in these four courses.

Applications are evaluated after the end of each fall and spring semester. Students whose applications are denied may reapply through the supplemental admission process the following semester. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the College of Natural Sciences Transitional Advising Center (TRAC) for information about the application process and application deadlines.

More information about the degree program is given on pages 546–547.

THE MAJOR IN PUBLIC HEALTH

To apply for admission to the public health degree program, the student must have earned a grade of at least C- in Biology 311C, Chemistry 301, and Mathemat-

ics 408C or 408N; and a grade of at least B- in Public Health 317. To be competitive for admission, the student must have a grade point average of at least 2.75 in these four courses.

Applications are evaluated after the end of each fall and spring semester. Students whose applications are denied may reapply through the supplemental admission process the following semester. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the College of Natural Sciences Transitional Advising Center (TRAC) for information about the application process and application deadlines.

THE MAJOR IN TEXTILES AND APPAREL

The number of qualified students who want to major in textiles and apparel exceeds the number who can be adequately instructed by the faculty and accommodated within available facilities. The following policies have been adopted to provide the best possible educational experience for qualified students.

Freshman and transfer applicants to the University who plan to major in textiles and apparel should apply for admission as human ecology majors. When they have met the requirements described below, students may apply for admission to the textiles and apparel degree program. Students in the human ecology major have priority to register for Textiles and Apparel 205 and 105L. Students who are not in the human ecology or textiles and apparel major may register for textiles and apparel courses if space is available.

To apply for admission to the major, students first must earn a grade of at least C- in each of the following basic sequence courses: Mathematics 408C or 408N, Chemistry 301, Textiles and Apparel 205 and 105L; at least six hours of this coursework must be completed in residence at the University. The student must also have a grade point average of at least 2.50 in coursework taken in residence at the University. Also included in the admission process for the apparel design specialization within option I is an assessment of basic machine sewing and construction skills. These requirements apply both to students with a major in human ecology and to other University students seeking admission to the textiles and apparel degree program. Students should consult advisers in the

1. Final approval is pending for the Bachelor of Science in Environmental Science.

School of Human Ecology for information about the application process and deadlines. Application materials are available from the school.

Applications are evaluated each long-session semester by the Textiles and Apparel Admission Panel. Students whose applications are denied may reapply. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors. These factors may include, but are not limited to, the difficulty of the student's course load, course repetitions, life experiences, and performance on an assessment of apparel construction and design skills.

ADMISSION TO THE FIELD EXPERIENCE PROGRAMS

All textiles and apparel students must complete a field experience. Admission to the field experience programs is subject to the approval of the faculty admission panel. Option I, apparel design and conservation, includes a three-semester-hour field experience, the Apparel Design or Conservation Internship Program, offered as Textiles and Apparel 352D; students usually complete the internship during the senior year. The student must apply for admission to the internship program the semester before he or she plans to enter it. Application forms are available from the School of Human Ecology. Before they apply, students must complete the following courses with a grade of at least C- in each: Textiles and Apparel 205, 105L, 212K, 212L, 316L, 319, 126, 226L, 164K (Topic 1: *Flat Pattern*), and 264L (Topic 1: *Flat Pattern*).

Option II, retail merchandising, includes a nine-semester-hour field experience program, the Retail Merchandising Internship Program, offered as Textiles and Apparel 315K, 352M, and 355P; students normally complete the internship during the senior year. The student must apply for admission to the program the semester before he or she plans to enter it; materials, information about deadlines, and directions for application are available from the School of Human Ecology. Before they apply, students must complete the following courses with a grade of at least C- in each: Textiles and Apparel 205, 105L, 212K, 212L, 316Q, 319, and 376; Marketing 320F or Advertising 318J; Accounting 310F; Mathematics 408C, 408N, or the equivalent; Mathematics 316, Statistics and Scientific Computation 303, 305, or 306 or Educational Psychology 371; and Communication Studies 306M. Before beginning the internship, students must successfully complete competitive interviews with representatives from participating retail establishments.

ACADEMIC POLICIES AND PROCEDURES

ACADEMIC ADVISING

Academic advising is a responsibility shared by advisers and students. Advisers help students clarify their values and goals, assist with the selection of courses, and monitor and evaluate students' progress toward their degrees. Each student is assigned an academic adviser in his or her proposed field of study; students are expected to communicate with their advisers before registration each semester.

ACADEMIC POLICIES

CALCULUS PLACEMENT

Calculus is a required course for all natural sciences degrees. To enroll in a calculus course in the college, students must first take the online ALEKS placement exam. ALEKS assesses the strengths and weaknesses of a student's mathematical knowledge, reports its findings to the student, and then provides the student with a learning environment for improving his or her math knowledge. Scores necessary for placement into specific mathematics and statistics courses are posted by the Student Division at <http://cns.utexas.edu/academics/aleks/>. Students may take the ALEKS exam multiple times to achieve the score they desire. More information about ALEKS scores and course placement is available from academic advisers.

REPETITION OF A COURSE

No student may enroll in any course in the College of Natural Sciences more than twice, even if the course is needed to meet degree requirements, without first obtaining the written consent of his or her major adviser and of the department that offers the course; students in colleges other than the College of Natural Sciences need only departmental approval. A symbol of *Q* or *W* counts as an enrollment unless it has been approved by the dean's office for nonacademic reasons.

A student in the College of Natural Sciences may not repeat any course in which he or she has earned a grade of C- or better.

Departments in the college may have additional requirements for students who repeat courses.

CONCURRENT ENROLLMENT

Concurrent enrollment is enrollment simultaneously at the University and at another educational institution or in University Extension. Math and science courses may not be taken concurrently and will not be counted toward a degree unless they are specifically approved in advance by the College of Natural Sciences. The college permits concurrent enrollment with certain restrictions. Students must see their academic advisers to petition for approval. No more than 30 percent of the semester hours required for any degree in the college may be completed online with University Extension.

UNDERGRADUATES IN A GRADUATE COURSE

The College of Natural Sciences encourages undergraduates who excel academically and would benefit from further challenges to enroll in graduate courses. With permission, undergraduates may count graduate courses toward their undergraduate degrees or may reserve them for graduate credit. To enroll in a graduate course, undergraduates must meet the University's eligibility requirements and must receive permission from the course instructor, the graduate adviser for the field in which the course is offered, and the college. Undergraduates reserving courses for graduate credit must also receive permission from the graduate dean. More information is given in "Coursework in the Graduate School and the School of Law," pages 10–11.

PETITIONS FOR DEGREE REQUIREMENTS

Petitions for exceptions to degree requirements, other than the University-wide core curriculum, are handled through an online petition system. Academic advisers initiate petitions on the student's behalf and route them through departmental faculty advisers. The most common reason for petitioning is to request the substitution of transfer coursework for a specific degree requirement. Final decisions on all petitions are made by the dean's office. Degree requirements are very rarely waived outright.

NATURAL SCIENCES CAREER SERVICES

Natural Sciences Career Services, Painter Hall 5.03, offers career planning and job search assistance for students and alumni. Career Services helps students with all aspects of their career planning and job search, including planning for graduate school.

Career advisers are available to assist students individually, and workshops are held throughout the year. The staff offers interview tips, sets up mock interviews, and helps students with career planning, résumé writing, job search techniques, and business and professional etiquette.

Career Services helps students seeking full-time positions after graduation and those seeking part-time, intern, and cooperative education positions related to their academic majors and career goals. Job postings are available and on-campus interviews are held throughout the year. A Career Expo held every fall and spring brings students and employers together to discuss job openings and career information. Many employer information sessions are scheduled on campus and a résumé referral service is available for students and employers.

A resource room provides a library of career information, including information on career options, company literature, employment and salary information, company contacts, books, and videotapes. Web access is available for students to register, submit their résumés, and sign up for interviews. Registered students are also contacted weekly by e-mail with career information.

Education Career Services, part of the College of Education, assists all University students who have completed a teacher certification program. Certification candidates must register with Education Career Services, George I. Sánchez Building 294, at the beginning of their student-teaching semester. The office also assists those who wish to find teaching jobs at the college level or in private schools, community colleges, or overseas schools in which certification is not required.

As a complement to the assistance available from the college, the Sanger Learning and Career Center provides counseling and testing and help choosing an academic major.

The University makes no promise to secure employment for each graduate.

HEALTH PROFESSIONS ADVISING OFFICE

Health Professions Advising, Painter Hall 5.03, provides students with the information they need to make informed academic and career decisions. Full-time counselors and part-time peer advisers help students select courses to meet professional school admission requirements, advise them about health career options and alternatives, and provide up-to-date information about professional schools in Texas, across the country, and around the world. Counselors offer students concerned and realistic counseling and conduct workshops on topics relevant to professional school application and

interviewing procedures. In addition, a Health Professions Fair and Health Professions Lecture Series are held every spring.

Students interested in applying to pharmacy, medical, dental, physical therapy, physician assistant, occupational therapy, veterinary, osteopathic, or optometry schools or other health profession programs are encouraged to make an appointment with a counselor in Health Professions Advising to go over prerequisites for these programs and to discuss their goals and plans.

DEPARTMENTAL HONORS

DEPARTMENTAL HONORARY SOCIETIES

Several departments within the College of Natural Sciences sponsor honorary scholastic and professional societies. For information about eligibility criteria and activities, the student should consult the appropriate department office or the faculty adviser for the society.

The University sponsors chapters of the following national organizations of interest to students in natural sciences: Alpha Chi Sigma, professional chemical fraternity; Alpha Epsilon Delta, honorary fraternity for students who have completed at least three semesters of premedical coursework; Beta Beta Beta, honorary biological society; Omicron Nu, honorary human ecology society; Pi Mu Epsilon, honorary mathematical society; Sigma Pi Sigma, honorary physics society; Upsilon Pi Epsilon, honorary computer science society.

DEPARTMENTAL HONORS PROGRAMS

Most departments in the College of Natural Sciences offer departmental honors programs to their majors. Minimum requirements for the completion of all such programs include (1) a University grade point average of at least 3.00; (2) a three-semester-hour thesis or research project, or a reasonable equivalent, with a grade of at least *B-*; some programs may require a higher grade; (3) completion, with a grade point average of at least 3.50, of the coursework required for a major in the field in which the student seeks honors; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

The statement “Special Honors in (name of field)” appears on the transcript of each graduate certified as having completed the honors program.

ASTRONOMY DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in astronomy should apply to the honors adviser for admis-

sion to the honors program no later than the beginning of the fourth year; application by the end of the third year is recommended. A University grade point average of at least 3.00 and a combined University grade point average in physics and astronomy of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) Astronomy 379H, *Honors Tutorial Course*, in which the student completes a supervised research project; the student may take a second semester of Astronomy 379H if necessary to complete the project; two semesters in this course may be counted toward the major requirement; (2) a written report and oral presentation on the research project, approved by the research supervisor and the honors adviser; (3) a University grade point average of at least 3.00 and a combined University grade point average in physics and astronomy of at least 3.50; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

BIOCHEMISTRY DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in biochemistry should apply to the honors adviser for admission to the honors program no later than the beginning of the senior year. A University grade point average of at least 3.00 and a grade point average in biochemistry and chemistry of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Biochemistry; (2) two semesters of Chemistry 379H, *Chemistry Honors Tutorial Course*; (3) a thesis and a presentation based on research; the research topic and the thesis must be approved by the supervising faculty member and the undergraduate faculty adviser; (4) a University grade point average of at least 3.00 and a grade point average in biochemistry and chemistry of at least 3.50; (5) completion at the University of at least sixty semester hours of coursework counted toward the degree; and (6) approval of the honors adviser.

BIOLOGY DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in biology should apply to the honors adviser for admission to the honors program no later than the beginning of the senior year. A University grade point average of at least 3.00 and a grade point average in

biology of at least 3.50 are required for admission. The requirements for graduation with special departmental honors, which are in addition to the requirements of the major, are (1) two semesters of Biology 379H, *Honors Tutorial Course*; (2) a thesis based on original research and approved by the supervising faculty member and the honors adviser; honors students in the human biology option must select both a thesis supervisor and a second reader, one of whom must be a tenure-track faculty member or senior lecturer in the School of Biological Sciences; (3) a University grade point average of at least 3.00 and a grade point average in biology of at least 3.50; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

CHEMISTRY DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in chemistry should apply to the honors adviser for admission to the honors program no later than the beginning of the senior year. A University grade point average of at least 3.00 and a grade point average in chemistry of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Chemistry; (2) two semesters of Chemistry 379H, *Chemistry Honors Tutorial Course*; (3) a thesis and a presentation based on research; the research topic and the thesis must be approved by the supervising faculty member and the undergraduate faculty adviser; (4) a University grade point average of at least 3.00 and a grade point average in chemistry of at least 3.50; (5) completion at the University of at least sixty semester hours of coursework counted toward the degree; and (6) approval of the honors adviser.

COMPUTER SCIENCE DEPARTMENTAL HONORS PROGRAM

Students seeking special departmental honors must meet with a faculty adviser at least two semesters before they plan to graduate to discuss potential research topics and the requirements for receiving special departmental honors. The requirements for graduation with special departmental honors are (1) Computer Science 379H, *Computer Science Honors Thesis*, with a grade of at least B-; (2) a University grade point average of at least 3.00 and a grade point average in computer science of at least 3.50; (3) a thesis, written on the subject of the student's research and approved in comprehensive examination by a committee consisting of at least three

faculty members, including the honors adviser; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

HUMAN DEVELOPMENT AND FAMILY SCIENCES DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in human development and family sciences should apply to the Departmental Honors Committee for admission to the honors program no later than the beginning of the senior year. The requirements for admission are a University grade point average of at least 3.00 and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Human Development and Family Sciences; (2) Human Development and Family Sciences 379H, *Honors Tutorial Course*; this course may be repeated once for credit; (3) completion of an honors thesis and an accompanying presentation, both of which must be approved by a committee consisting of the research supervisor and another faculty member; (4) a University grade point average of at least 3.00, a grade point average in Human Development and Family Sciences 379H of at least 3.00, and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree and for honors; and (5) completion at the University of at least sixty semester hours of coursework counted toward the degree.

HUMAN ECOLOGY DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in human ecology must follow the requirements of the departmental honors program in human development and family sciences, nutrition, or textiles and apparel.

MATHEMATICS DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in mathematics should apply to the honors adviser for admission to the honors program at least two semesters before their expected graduation. A University grade point average of at least 3.00 and a grade point average in mathematics of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) Mathematics 379H, *Honors Tutorial Course*; (2) a thesis on the subject of the student's research or project approved in comprehen-

sive examination by a committee consisting of at least three faculty members; (3) a University grade point average of at least 3.00 and a grade point average in mathematics of at least 3.50; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree. In order to fulfill the first requirement, students must meet the prerequisite of Mathematics 379H—Mathematics 365C, 367K, 373K, or 374G with a grade of at least A-, and another of these courses with a grade of at least B-; and consent of the honors adviser.

NUTRITION DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in nutrition should apply to the Departmental Honors Committee for admission to the honors program no later than the beginning of the senior year. The requirements for admission are a University grade point average of at least 3.00 and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Nutrition; (2) Nutrition 379H, *Honors Tutorial Course*; this course may be repeated once for credit; (3) completion of an honors thesis and an accompanying presentation, both of which must be approved by a committee consisting of the research supervisor and another faculty member; (4) a University grade point average of at least 3.00, a grade point average in Nutrition 379H of at least 3.00, and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree and for honors; and (5) completion at the University of at least sixty semester hours of coursework counted toward the degree.

PHYSICS DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in physics should apply to the honors adviser for admission to the honors program near the end of the third year. A University grade point average of at least 3.00 and a grade point average in physics of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) Physics 379H, *Honors Tutorial Course*; (2) a written honors thesis approved by faculty readers assigned by the department; (3) a University grade point average of at least 3.00 and a grade point average in physics of at least 3.50; and (4) completion at the University of at least sixty semester

hours of coursework counted toward the degree.

TEXTILES AND APPAREL DEPARTMENTAL HONORS PROGRAM

Majors who plan to seek special departmental honors in textiles and apparel should apply to the Departmental Honors Committee for admission to the honors program no later than the beginning of the senior year. The requirements for admission are a University grade point average of at least 3.00 and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Textiles and Apparel; (2) Textiles and Apparel 379H, *Honors Tutorial Course*; this course may be repeated once for credit; (3) completion of an honors thesis and an accompanying presentation, both of which must be approved by a committee consisting of the research supervisor and another faculty member; (4) a University grade point average of at least 3.00, a grade point average in Textiles and Apparel 379H of at least 3.00, and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree and for honors; and (5) completion at the University of at least sixty semester hours of coursework counted toward the degree.

GRADUATION

SPECIAL REQUIREMENTS OF THE COLLEGE

All students must fulfill the general requirements for graduation given in chapter 1. Students in the College of Natural Sciences must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. For the Bachelor of Arts, Plan I, these sixty hours must include at least eighteen hours in the major. For all other degrees offered by the College of Natural Sciences, thirty of these sixty hours must be taken in the College of Natural Sciences or the College of Liberal Arts.
2. All University students must complete in residence at least twenty-four of the last thirty semester hours counted toward the degree. For students seeking the Bachelor of Science in

Medical Laboratory Science, this rule applies to the academic work completed at the University.

3. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. Additional hours in the professional or major sequence in many cases are required by individual natural sciences degree programs.
4. An Air Force, Army, or Naval Reserve Officer Training Corps student who elects the basic and/or advanced program in air force science, military science, or naval science will not be approved for graduation until the student's government contract is completed or the student is released from the ROTC.
5. A candidate for a degree must be registered in the College of Natural Sciences either in residence or in absentia the semester or summer session the degree is to be awarded. Graduation applications must be submitted no later than the date given in the academic calendar. The application and supplemental in absentia instructions are available via the college's academics Web page, <http://cns.utexas.edu/academics/>.

APPLYING FOR A DEGREE

An electronic degree audit is created for each student each semester. The student should view the audit through IDA, the University's Interactive Degree Audit system. The degree audit tells the student the courses he or she must take and the requirements he or she must fulfill to receive the degree. The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the requirements for the degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill all these requirements. The student should speak with his or her assigned academic adviser before registering if in doubt about any requirement.

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must file an online graduation application form via the academics section of the college's Web site, <http://cns.utexas.edu/academics/>. This should be done during the first week of classes, if possible, but in no event later than the deadline to apply for an undergraduate degree; this date is given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

GRADUATING WITH HONORS

The University recognizes no more than the top 20 percent of each college's graduating class as graduating with University Honors. To be eligible, an undergraduate must have completed at least sixty semester hours of coursework in residence at the University. Graduation with University Honors is based on the average of all grades earned in courses taken in residence at the University, whether the courses were passed, failed, or repeated. Courses taken pass/fail are counted in the sixty-hour minimum, but only letter grades (including *Fs* in pass/fail courses) are used to determine the grade point average.

Detailed requirements for graduation from the College of Natural Sciences with University Honors are given in *General Information*.

DEGREES

The College of Natural Sciences offers the Bachelor of Arts, Plan I, and several bachelor of science degrees. The requirements of the Bachelor of Arts, Plan I, begin on page 525. The Bachelor of Arts, Plan II, a broad liberal arts honors program for outstanding students, is described on pages 343–346. Plan II emphasizes the humanities but also permits a concentration equivalent to a major in science.

The bachelor of science degrees are listed on pages 5–6. The requirements of these degrees are given on pages 529–568.

A student may not earn more than one Bachelor of Arts degree or more than one Bachelor of Science in Environmental Science degree from the University.

The title of a graduate's degree appears on his or her diploma, but the major does not. Both the degree and the major appear on the graduate's University transcript.

APPLICABILITY OF CERTAIN COURSES

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses and Kinesiology 119 may not be counted toward a degree in the College of Natural Sciences. However, they are counted as courses for which the student is enrolled, and the grades are included in the grade point average.

ROTC COURSES

ROTC units are maintained on campus by the Departments of Air Force Science, Military Science, and Naval Science. Information about each program is available from the chair of the department.

Nine semester hours of coursework in air force science, military science, or naval science may be counted toward any degree in the College of Natural Sciences. Such credit may be used only as electives or to fulfill the writing requirement, and only by students who are commissioned by the University ROTC program.

BIBLE COURSES

No more than twelve semester hours of Bible courses may be counted toward a degree.

ADMISSION DEFICIENCIES

Students admitted to the University with deficiencies in high school units must remove them by the means prescribed in *General Information*.

COURSES TAKEN ON THE PASS/FAIL BASIS

No more than sixteen semester hours taken on the pass/fail basis may be counted toward the Bachelor of Arts, Plan I. In general, only electives may be taken on the pass/fail basis. Complete rules on registration on the pass/fail basis are given in *General Information*.

COURSES IN A SINGLE FIELD

No more than thirty-six hours may be counted in any one field of study, including the major, unless major requirements state otherwise. No more than thirty-six hours may be counted in any one college or school other than the College of Liberal Arts or the College of Natural Sciences.

BACHELOR OF ARTS, PLAN I

The requirements for the Bachelor of Arts under Plan I are designed to give each student flexibility in the selection of courses to meet individual needs.

A total of 120 semester hours is required. Thirty-six hours must be in upper-division courses. At least thirty hours, including eighteen hours of upper-division coursework, must be completed in residence at the University; at least twenty-four of the last thirty hours

must be completed in residence at the University. Provided residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the hours required for the degree), or, with the approval of the dean, by work transferred from another institution. Up to sixteen semester hours of classroom and/or correspondence coursework may be taken on the pass/fail basis; this coursework may be counted only as electives.

All students must complete the University's core curriculum, described in chapter 2. The specific requirements for the Bachelor of Arts, Plan I, consist of prescribed work, major and minor requirements, and electives. In some cases, a course that fulfills one of these requirements may also be counted toward the core curriculum.

Courses in the major and minor may also be used to fulfill prescribed work requirements unless expressly prohibited. A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills another requirement may also be used to fulfill the writing requirement if the course carries a writing flag.

The student must fulfill the University requirements for graduation given in chapter 1 and the requirements of the College of Natural Sciences given earlier in this chapter. University graduation requirements include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded; for the BA, Plan I, the student must also earn a grade point average of at least 2.00 in courses taken at the University and counted toward the major requirement. The student should also refer to the description of his or her major in the section "Majors and Minors" below, since some majors include higher minimum scholastic requirements.

More information about grades and the grade point average is given in *General Information*.

PRESCRIBED WORK

1. *Writing*: Two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

2. *Foreign language*: Four semesters or the equivalent in a single foreign language.

The foreign language requirement is the attainment of a certain proficiency, as well as the completion of a specified number of courses; however, the courses taken to gain proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

To achieve proficiency in a foreign language as rapidly as possible, qualified students are urged to take intensive foreign language courses. Information about these courses is available from the departments that offer them.

Courses used to fulfill the foreign language requirement must be language courses; literature-in-translation courses, for example, may not be counted.

3. *Social science*: Three semester hours chosen from a list of approved courses, in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum. The course(s) must be in a field of study taught in the College of Liberal Arts and must be in a different field of study from the course used to fulfill the social and behavioral sciences requirement of the core.

Courses on the approved list are primarily in anthropology, economics, geography, linguistics, psychology, and sociology, but not every course in these fields is approved. Courses that are approved to count toward any core curriculum area other than social and behavioral sciences may not be counted toward this requirement.

The list is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

4. *Mathematics*: Three semester hours in mathematics, excluding Mathematics 301, 316K, and 316L.
5. *Natural science*: Six semester hours in natural sciences, in addition to the courses counted toward the science and technology requirements of the core curriculum. Courses used to fulfill this requirement must be chosen from the fields of study listed below; no more than three hours may be in either the history of science or the philosophy of science.

To satisfy the mathematics and science and technology requirements of the core curriculum

and the natural science requirement of the BA, Plan I, a student may count (1) no more than twelve hours in mathematics, computer science, and statistics and scientific computation combined; and (2) no more than nine hours in any single field of study.

- a. Astronomy
 - b. Biology
 - c. Chemistry
 - d. Geological sciences
 - e. Marine science
 - f. Nutrition
 - g. Physical science
 - h. Physics
 - i. Mathematics (excluding Mathematics 301), computer science, statistics and scientific computation
 - j. Other alternative science courses approved by the dean
 - k. Approved alternative courses in history of science and philosophy of science
6. *Cultural expression, human experience, and thought*: Three semester hours chosen from a list of approved courses. The course(s) must be in a field of study taught in the College of Liberal Arts. A course counted toward any requirement of the core curriculum may not also be counted toward this requirement.

A list of approved courses is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

ELECTIVES

In addition to the core curriculum, prescribed work, and major and minor, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve hours of Bible; nine hours of air force science, military science, or naval science; sixteen hours completed on the pass/fail basis; thirty-six hours in any one field of study offered in the College of Liberal Arts or the College of Natural Sciences, unless major requirements state otherwise; and thirty-six hours in any other single college or school of the University.

MAJORS AND MINORS

Major requirements. The Bachelor of Arts, Plan I, requires the completion of all requirements for one major.

The number of semester hours required in the major varies with the field selected. Unless the requirements of the major state otherwise, a major consists of at least twenty-four but no more than forty-two semester hours, with at least twelve hours in upper-division courses. Of these twelve hours, six must be completed in residence. At least eighteen hours of coursework in the major, including six hours of upper-division coursework, must be completed in residence at the University.

Minors. Students in most majors must also fulfill the requirements of a minor. The requirements of the minor are established by the major department and are given with the major requirements below. Additional restrictions may be imposed by the academic department(s) in which the student takes the courses used to fulfill the requirements of the minor; before planning to use a course to fulfill the minor requirement, the student should consult the department that offers the course.

Astronomy

Major: Physics 301, 101L, 315, 115L, 316, and 116L; nine semester hours of upper-division coursework in astronomy, including at least two of the following courses: Astronomy 352K, 352L, 353, 358, and 364; and six additional upper-division hours in astronomy and/or physics. *Minor for astronomy majors:* Six semester hours of coursework (other than astronomy, lower-division physics, lower-division mathematics, and Mathematics 427K) approved by the undergraduate adviser; and either six semester hours of upper-division physics in addition to the courses used to fulfill the major requirement or six semester hours of upper-division coursework approved by the undergraduate adviser.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

All astronomy majors should consult the astronomy undergraduate adviser regularly about the choice of appropriate courses in both the major and the minor. Qualified students are encouraged to carry out a supervised research project by taking a conference course, such as Astronomy 375 or 379H. No more than six of the hours counted toward the major requirement may be earned in conference courses.

Biochemistry

Biochemistry majors must take either Mathematics 408C and 408D or Mathematics 408N, 408S, and 408M; and eight semester hours of physics: either

Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; or 317K, 117M, 317L, and 117N.

Major: Chemistry 301 or 301H, 302 or 302H, 204 or 317; either 118K, 118L, 318M, and 318N, or 210C, 310M, and 310N; 339K, 339L, 353M, 153K, 455, 369L, and 370. *Minor for biochemistry majors:* Either Biology 311C, 311D, and 325 or Biology 315H and 325H; six additional semester hours in biology, three of which are chosen from Biology 328, 339, 345, 361T, 365R or 371M, and 365S; and three additional hours chosen from the preceding list or from Biology 320, 126L and 326R, 330, 331L, 344, 347, 349, and 360K.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

Biology

In addition to the requirements below, biology majors must complete Mathematics 408C or 408N, Chemistry 301 or 301H, 302 or 302H, and 204; and one of the following: (1) Chemistry 210C, 310M, and 310N; (2) eight hours of coursework in physics, including laboratory work; or (3) six hours of coursework in computer science, including at least three hours of upper-division work.

Major: The following coursework:

1. Either Biology 311C, 311D, and 325 or Biology 315H and 325H.
2. Biology 205L, 206L, or 208L.
3. Six semester hours in core biology courses, consisting of three hours in each of the following areas.
 - a. Cellular, developmental, and molecular biology: Biology 320, 344, 349.
 - b. Ecology and evolution: Biology 357, 370, 373.
4. Eighteen additional semester hours of coursework, consisting of three hours in each of the following six areas. No course may be counted toward more than one of the six areas in requirement 4. No course may be counted toward both requirement 3 and requirement 4. The courses counted toward requirement 4 must include at least three laboratory courses.
 - a. Cellular, developmental, and molecular biology: Biology 320, 320L, 323L, 325L, 325T, 126L, 326R, 328D, 330, 230L, 331L, 332, 333, 335, 336, 339, 339M, 344, 347, 349, 349L, 350M, 360K, 160L, 366, 366R, 368L, Chemistry 369.
 - b. Physiology and neurobiology: Biology 322, 122L, 328, 329, 129L, 336, 339, 345, 345E, 359K, 359R, 360K, 160L, 361, 361L, 361T, 365D, 365L,

365N, 365P, 365R, 365S, 365T, 365W, 366C, 371L, 371M.

- c. Ecology and evolution: Biology 318M, 321L, 340L, 448L, 351, 352, 453L, 354L, 455L, 456L, 357, 458L, 359J, 262, 262L, 363, 364, 369L, 370, 471G, 373, 373L, 375, Marine Science 352C, 354Q.
- d. Animal biology: Biology 321L, 438L, 340L, 346, 448L, 453L, 354L, 455L, 359J, 359K, 359R, 361T, 365S, 369L, 371L, 478L, Marine Science 354, 354C.
- e. Plant biology: Biology 322, 122L, 324 and 124L, 327 and 127L, 328, 328D, 350M, 351, 352, 262, 262L, 363, 374 and 174L, Marine Science 352D.
- f. Microbiology: Biology 126L, 326R, 329, 129L, 330, 230L, 333, 339, 364, Marine Science 354E.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

Chemistry

Chemistry majors must take Mathematics 408C and 408D or Mathematics 408N, 408S, and 408M; and eight semester hours of physics: either Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; or 317K, 117M, 317L, and 117N.

Major: Chemistry 301 or 301H, 302 or 302H, 204 or 317; either 210C, 310M, and 310N, or 118K, 118L, 318M, and 318N; 353, 153K, 354 or 354L, 154K, 456, and 376K. *Minor for chemistry majors:* Either (1) twelve semester hours of biology, geological sciences, mathematics, physics, or, with written consent of the department chair and approval of the dean, a field of study outside the College of Natural Sciences or the Jackson School of Geosciences; or (2) Computer Science 303E, 313E, and six hours chosen from Computer Science 323E, 324E, 326E, 327E, and 329E. Students who complete the second option may simultaneously fulfill some of the requirements of the Elements of Computing Certificate, described on page 514.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

Computer Science

An undergraduate may not enroll in any computer science course more than once without written consent of an undergraduate adviser in computer science. No student may enroll in any computer science course more than twice. No student may take more than three

upper-division computer science courses in a semester without written consent of an undergraduate adviser in computer science.

Major: Computer Science 307, 310 or 310H, 313K or 313H, 315 or 315H, 336 or 336H, 337 or 337H, 341 or 341H, 352 or 352H, 372 or 372H, and at least twelve additional semester hours of approved upper-division coursework in computer science.² Computer Science 370 may be counted toward the degree only once.

Minor for computer science majors: Mathematics 408C, 408D, Electrical Engineering 316, and one of the following courses: Mathematics 427K, 328K, 340L, 341, 343K, 343L, 344K, 346, 348, 358K, 362K, 362M, 364K, 364L, 367K, 372K, 373K, 374G, 374K, 374M, 376C, 378K.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

With the exception of Computer Science 307, 313K, and 315, all computer science courses that may be counted toward a degree in computer science are restricted to students who have been admitted to the computer science major or have the consent of the undergraduate faculty adviser.

Human Ecology

Human ecology majors must complete the following, with a grade of at least C- in each course: Mathematics 408N or the equivalent; Statistics and Scientific Computation 303, 304, or 305; either (a) Chemistry 301 or 301H, 302 or 302H, and Biology 311C, or (b) Chemistry 301 or 301H and Biology 311C and 311D; and two to four additional hours in astronomy, biology, chemistry, computer science, geological sciences, mathematics, and/or physics. Courses designed for nonscience majors may not be counted toward this requirement. This coursework also meets the core curriculum mathematics and science and technology requirements.

Major: Thirty semester hours of coursework in the School of Human Ecology, including at least fifteen hours of upper-division coursework and at least six hours chosen from each of the following areas: (a) Human Development and Family Sciences 304, 312, 313, 113L, 315L, 322, and 337; (b) Nutrition 306, 307, 107L, 312, 112L, 315, 316, 218, 118L, 326 and 126L, 321, 331, 332, and 338W; and (c) Textiles and Apparel 205, 105L, 316Q, 319, 325L, and 325M.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

To develop a meaningful and coherent degree

2. Computer science courses with numbers ending in *H* are intended for students pursuing the Bachelor of Science in Computer Science, option II, the Turing Scholars program, and option III, computer science honors. Students outside these options may enroll in these courses only with the special consent of the honors director.

program, the student should select courses with the assistance of faculty and academic advisers.

Mathematics

Undergraduates seeking a Bachelor of Arts degree with a major in mathematics must choose either the standard option or the middle grades or secondary school teaching option.

Major, standard option: At least twenty-four semester hours of upper-division coursework in mathematics. Mathematics 301, 302, 303D, 305G, and equivalent courses may not be counted toward the total number of hours required for the degree. Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

The student must complete the following:

1. Mathematics 408C and 408D.
2. Mathematics 340L or 341.
3. Mathematics 328K, 343K, or 373K.
4. Mathematics 361K or 365C.
5. Mathematics 362K.
6. At least one course chosen from the following: Mathematics 333L, 339J, 339U, 343L, 343M, 344K, 348, 358K, 361, 367K, 368K, 372K, 374M, 376C, 378K. This requirement is intended to broaden the student's training.

Major, options in mathematics for middle grades and secondary school teaching: At least twenty-four semester hours of upper-division coursework in mathematics. Mathematics 301, 302, 303D, 305G, and equivalent courses may not be counted toward the total number of hours required for the degree. Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

The teaching options are designed to give students the mathematical background appropriate for teaching middle grades and secondary school mathematics, but students must meet additional requirements, including grade point average requirements, to obtain certification. Lists of the combined requirements of the UTeach-Natural Sciences certification programs and these options are available from the UTeach-Natural Sciences academic adviser. The UTeach-Natural Sciences program is described on pages 515–516.

All students must complete the following:

1. Mathematics 408C and 408D.
2. Mathematics 340L or 341.
3. Mathematics 315C, 325K, 333L, 358K, and 362K.
4. Mathematics 326K or 360M or Science 360

(Topic: *Math Domain*). Students seeking middle grades mathematics certification must complete Mathematics 326K.

5. Mathematics 361K or 365C.
6. Mathematics 328K, 343K, or 373K.

Students pursuing teacher certification through the UTeach-Natural Sciences program must also complete the following:

7. Biology 337 (Topic 2: *Research Methods—UTeach*), Chemistry 368 (Topic: *Research Methods—UTeach*), or Physics 341 (Topic: *Research Methods—UTeach*).
8. History 329U or Philosophy 329U.
9. Eighteen semester hours of professional development coursework: Curriculum and Instruction 650S and UTeach-Natural Sciences 101, 110, 350, 355, 360, and 170.

Physics

Students majoring in physics must complete Chemistry 301 or 301H, 302 or 302H, and 204.

Major: Physics 315, 115L, 355, and at least fifteen semester hours of upper-division coursework in physics, including Physics 336K, 352K, and 353L.

First minor for physics majors: Twelve semester hours of mathematics, of which six must be in upper-division coursework; the upper-division coursework must include three hours in differential equations.

Second minor for physics majors: Six semester hours, of which three must be in upper-division coursework, in any one of the following: biology, chemistry, geological sciences, philosophy, psychology; or in courses offered in the College of Education or the Cockrell School of Engineering. Courses used to fulfill specific degree requirements other than the writing requirement may not also be used to fulfill this requirement.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

BACHELOR OF SCIENCE IN ASTRONOMY

Astronomy tells us about the place of humankind in the universe: how Earth was created, how the Sun was formed, how galaxies form and evolve. It tells us where the universe is going and where it came from. Astronomers address these questions at a fundamental level. Their goal is to determine the basic and controlling properties of the universe and to transmit that knowledge to society. The Bachelor of Science in As-

tronomy is designed to give students an understanding of the universe and to prepare them to participate in the advancement of this exciting search.

Two options are available: astronomy and astronomy honors. Students who plan to follow option II, astronomy honors, must be admitted to the Dean's Scholars Honors Program as described on page 513.

PRESCRIBED WORK COMMON TO BOTH OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSAs must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Option I: One of the following foreign language/culture choices. Students in option II are exempt from this requirement.³
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. At least thirty-six semester hours of upper-division coursework.
4. At least eighteen semester hours of upper-division coursework, including at least twelve semester hours in physics and astronomy, must be completed in residence at the University.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: ASTRONOMY

5. Six semester hours in biology, chemistry, computer science, and/or geological sciences. Chemistry 301 or 301H and the courses in the Elements of Computing Certificate program may be counted toward this requirement; any other course to be counted must meet major requirements in the department that offers it.
6. Mathematics 408C and 408D, or the equivalent; and 427K, 427L, and 340L. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
7. Physics 301, 101L, 315, 115L, 316, 116L, 336K, 352K, 353L, 355, 362K, 369, and 373.
8. Twelve semester hours of upper-division coursework in astronomy, including Astronomy 352K, 353, and 358. Astronomy 351 is recommended.
9. Nine additional semester hours of upper-division coursework in physics and/or astronomy.
10. Enough additional coursework to make a total of 123 semester hours.

OPTION II: ASTRONOMY HONORS

5. Breadth requirement: An honors mathematics course, Chemistry 301H, and nine additional hours of coursework chosen from honors courses in the college. Credit earned by examination may not be counted toward this requirement.
6. Physics 301, 101L, 315, 115L, 316, and 116L.
7. Twelve semester hours of upper-division coursework in astronomy approved by the departmental honors adviser.
8. Nineteen semester hours of upper-division coursework in physics approved by the departmental honors adviser.
9. Three additional semester hours of upper-division coursework in astronomy or physics.
10. Natural Sciences 301C.
11. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
12. Astronomy 379H and either a three-semester-hour upper-division research course approved by the departmental honors adviser or a second section of Astronomy 379H.
13. Fifteen additional hours of coursework approved

³ Students in either option who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.

- by the departmental honors adviser.
14. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
 15. Enough additional coursework to make a total of 120 semester hours.

SPECIAL REQUIREMENTS

Students in both options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate under option II, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 12 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

BACHELOR OF SCIENCE IN BIOCHEMISTRY

The degree of Bachelor of Science in Biochemistry is intended to prepare students for professional careers as chemists, either upon graduation or after graduate study in chemistry or related fields. In addition, it may serve as the basis for work in many areas outside pure chemistry, such as materials science, medicine and other health-related fields, pharmacology, patent law, business, and environmental science. The computation option is intended to prepare students for the workplace by giving them opportunities to develop hands-on computation skills. The honors option is intended to prepare students for academic or research careers.

Students who plan to follow option III, biochemistry honors, must be admitted to the Dean's Scholars Honors Program as described on page 513.

PRESCRIBED WORK COMMON TO ALL OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSBioch must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Options I and II: One of the following foreign language/culture choices. Students in option III are exempt from this requirement.⁴
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. At least thirty-six semester hours of chemistry:
 - a. General chemistry: Chemistry 301 or 301H, 302 or 302H, and 204 or 317.
 - b. Organic chemistry: Chemistry 118K, 118L, 318M, and 318N; or 210C, 310M, and 310N.
 - c. Biochemistry: Chemistry 339K, 339L, 369L, and 370.
 - d. Physical chemistry: Chemistry 153K and 353M.
 - e. Analytical chemistry: Chemistry 455.
4. At least thirty-six semester hours of upper-division coursework.
5. At least eighteen semester hours of upper-division coursework, including at least twelve semester hours of upper-division coursework in chemistry, must be completed in residence at the University.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: BIOCHEMISTRY

6. Mathematics 408C and 408D, or 408N, 408S, and 408M; and at least three semester hours of upper-division coursework in mathematics or computer science.
7. One of the following sequences: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; 317K, 117M, 317L, and 117N.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and nine additional semester hours

4. Students in all options who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.

in biology, chosen from the following courses. These nine hours must include at least three hours in each of the following areas; a single course may not fulfill this requirement in more than one area.

- a. Cellular and developmental biology: Biology 320, 126L and 326R, 330, 331L, 344, 347, 349, 360K.
 - b. Physiology: Biology 328, 339, 345, 361T, 365R or 371M, 365S.
9. Nine semester hours of coursework in the College of Natural Sciences (excluding chemistry), the Cockrell School of Engineering, and the Jackson School of Geosciences. Any course designed for science or engineering majors may be counted. With the exception of the courses in the Elements of Computing Certificate program, a course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it. No more than six hours of laboratory or field research coursework in the Jackson School or any department in the College of Natural Sciences or the Cockrell School may be counted.
 10. At least six semester hours chosen from the following courses: Chemistry 431,* 341,* 354, 354L, 367L, 369K,* 369T,* 371K,* 375K or 475K, and 376K.* At least three of these hours must be in a laboratory course; courses marked with an asterisk fulfill this laboratory requirement. No more than three semester hours in Chemistry 369K may be counted toward this requirement; three additional hours may be counted as electives. No more than three semester hours in Chemistry 371K may be counted toward this requirement; three additional hours may be counted as electives.
 11. A total of forty-two semester hours of chemistry.
 12. Enough additional coursework to make a total of 127 semester hours.

OPTION II: COMPUTATION

Students who complete option II may simultaneously fulfill some of the requirements of the Certificate in Scientific Computation, which is described on pages 514–515.

6. Mathematics 408C and 408D, or 408N, 408S, and 408M; and either Statistics and Scientific Computation 329C or Mathematics 340L or 341.
7. One of the following sequences: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N;

317K, 117M, 317L, and 117N.

8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and nine additional semester hours in biology, chosen from the following courses. These nine hours must include at least three hours in each of the following areas; a single course may not fulfill this requirement in more than one area.
 - a. Cellular and developmental biology: Biology 320, 126L and 326R, 330, 331L, 344, 347, 349, 360K.
 - b. Physiology: Biology 328, 339, 345, 361T, 365R or 371M, 365S.
9. Chemistry 368 (Topic: *Computational Chemistry*).
10. Statistics and Scientific Computation 222, and three of the following courses. The student must complete coursework from at least two of the following areas.
 - a. Numerical methods: Chemical Engineering 348, Civil Engineering 379K, Computer Science 323E, 323H, 367, Mathematics 348, Statistics and Scientific Computation 335.
 - b. Statistical methods: Biomedical Engineering 335, Mathematics 358K, 378K.
 - c. Other computing topics: Computer Science 324E, 327E, 329E (approved topics), 377, Mathematics 346, 362M, 368K, 372K, 376C, Mechanical Engineering 367S, Statistics and Scientific Computation 329D, 374C, 374D, 374E.
11. Three semester hours chosen from the following laboratory courses: Chemistry 431, 341, 369K, 369T, 371K, and 376K.
12. A total of forty-two semester hours of chemistry.
13. Enough additional coursework to make a total of 127 semester hours.

OPTION III: BIOCHEMISTRY HONORS

6. Breadth requirement: An honors mathematics course, Biology 315H and 325H, Chemistry 301H and 302H, and three additional semester hours of coursework chosen from honors courses in the college. Credit earned by examination may not be counted toward this requirement.
7. Natural Sciences 301C.
8. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
9. Chemistry 379H and either a three-semester-hour upper-division research course approved by the departmental honors adviser or a second section of Chemistry 379H.

10. Twenty-eight additional semester hours of coursework approved by the departmental honors adviser.
11. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
12. Enough additional coursework to make a total of 120 semester hours.

SPECIAL REQUIREMENTS

Students in all options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate under option III, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 9 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

ORDER AND CHOICE OF WORK

The student must consult the undergraduate adviser each semester regarding order and choice of work.

BACHELOR OF SCIENCE IN BIOLOGY

The Bachelor of Science in Biology degree program offers ten options. The options have certain prescribed work in common, and each option has additional requirements. Many fields in the study of biological systems require broadly based training that transcends the classical boundaries of biology. In planning a program of work to meet his or her degree requirements, a student interested in specializing in these interdisciplinary areas should choose courses both in biology and in sciences that complement biology. Students who plan to complete the program within four years will have little flexibility in course selection unless they plan a schedule in advance. More information is given in "Order and Choice of Work" below.

Students who plan to follow option IX, biology honors, must be admitted to the Dean's Scholars Honors Program as described on page 513.

PRESCRIBED WORK COMMON TO ALL OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSBio must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Options I–VII and X: One of the following foreign language/culture choices. Students in options VIII and IX are exempt from this requirement.⁵
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. At least twenty-four semester hours of upper-division coursework beyond Biology 325 in biology and approved related fields, including at least one course from each of the following areas. In most options, the student must use specific courses to meet this requirement; these courses are listed in "Additional Prescribed Work for Each Option."
 - a. Cellular, developmental, and molecular biology: Biology 320, 326R, 344, 349.
 - b. Physiology and neurobiology: Biology 328, 361T, 365R, 365S.
 - c. Ecology, evolution, and behavior: Biology 357, 359K, 370, 373.
4. At least eighteen semester hours of upper-division coursework in biology must be completed in residence at the University. All students must complete at least thirty-six semester hours of upper-division coursework.

5. Students in all options who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.

ADDITIONAL PRESCRIBED WORK
FOR EACH OPTION

OPTION I: ECOLOGY, EVOLUTION, AND BEHAVIOR

5. Mathematics 408C and 408D, or 408N and 408S.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
7. Chemistry 301 or 301H, 302 or 302H, and 204.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
9. At least four laboratory courses in biology. Three of these courses must be upper-division. One of the four courses must have a field component; the following courses may be used to meet this requirement: Biology 321L, 340L, 453L, 354L, 455L, 456L, 369L, 373L, Marine Science 352D, 354, 354C.
10. Biology 318M and three hours of coursework chosen from the following: Chemistry 310M, computer science courses at the level of Computer Science 313E or 307, Geological Sciences 401 or 303, and upper-division mathematics courses.
11. In fulfilling requirement 3 above, the student must complete the following courses. No single course may be used to meet more than one of these requirements.
 - a. Ecology: Biology 357, 373, or Marine Science 320.
 - b. Evolution: Biology 370.
 - c. Behavior and comparative physiology: Biology 322 and 122L, 359K, or 361T.
 - d. One of the following taxon-based diversity courses or pairs of courses: Biology 321L, 324 and 124L, 327 and 127L, 340L, 342L, 448L, 352, 353F, 453L, 354L, 455L, 262, 262L, 369L, Marine Science 352D, 354, 354C, 354E.
 - e. Six additional hours chosen from the following:
 - i. Evolution: Biology 458L, 363, 472L, 374 and 174L, 478L.
 - ii. Ecology: Biology 456L, 364, 364E, 373L, Marine Science 120L, 352C.
 - iii. Behavior: Biology 438L, 359J, 359R.
 - iv. Conservation biology: Biology 359, 375, Marine Science 354Q.

12. Enough additional coursework to make a total of 126 semester hours.

OPTION II: HUMAN BIOLOGY

5. Mathematics 408C and 408D, or 408N and 408S.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
7. Chemistry 301 or 301H, 302 or 302H, and 204.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
9. At least four laboratory courses in biology and related fields. Three of these courses must be upper-division. The student must complete Biology 205L, 206L, or 208L. Anthropology 432L, 348, Kinesiology 324K, and Marine Science 120L may be counted toward this requirement, but the student must complete at least one upper-division laboratory course in biology.
10. Biology 318M and Chemistry 210C, 310M, and 310N.
11. In fulfilling requirement 3 above, the student must complete Biology 346, at least six semester hours in area a below, and at least three hours each in areas b through e.
 - a. Cellular and molecular biology: Biology 320, 320L, 323L, 325L, 126L and 326R, 344. Biology 323L, 325L, 126L, and 326R may not be counted both toward requirement 11a and toward requirement 12a, 12b, or 12c.
 - b. Anatomy: Anthropology 432L, Biology 446L, 478L, Kinesiology 324K.
 - c. Physiology: Biology 345E, 361T, 365R, 365S, 371M.
 - d. Behavior and psychology: Anthropology 350M, Biology 359K, 359R, Psychology 332.
 - e. Evolution and ecology: Anthropology 348, Biology 357, 364, 370, 373. Biology 373 may not be counted both toward requirement 11e and toward requirement 12f.
12. In fulfilling requirement 3 above, the student must complete at least fifteen semester hours of coursework, including at least nine hours of upper-division work, in one of the following concentrations.
 - a. Cellular, molecular, and developmental biology: Chemistry 369 and twelve hours chosen

- from the following courses: Biology 320L, 323L, 126L, 326R, 328D, 330, 230L, 331L, 332, 337 (Topic: *Genomics*), 339M, 345, 349, 349L, 365N, 366R, 379J.
- Genetics and biotechnology: Chemistry 369 and twelve hours chosen from the following courses: Biology 325L, 325T, 126L, 326R, 347, 366, 366R, 368L, 379G, 379J, Philosophy 325M.
 - Pathogenesis and immunity: Chemistry 369 and twelve hours chosen from the following courses: Biology 126L, 326R, 329, 129L, 330, 230L, 336, 347, 360K, 160L, 360M, 361, 361L, 365T.
 - Social aspects of health and disease: Bio-medical Engineering 301, Geography 357, Pharmacy 350K, Philosophy 325M, Sociology 319, 330C, 336C, 354K, Women's and Gender Studies 345 (Topic 35: *Psychosocial Issues in Women's Health*).
 - Problems of developing countries: Biology 351, Geography 340D, 342C, 346, 356, 357, 358, Sociology 319, 324K, 346, 369K, 369L.
 - Human impact on the environment: Architecture 350R (Topic 1: *Modern American City*), Biology 359, 373, 373L, 375, 478T, Geography 334, 335N, 336C, 346, 366K, 367K, Marine Science 320, 120L, 354Q, Philosophy 325C, Sociology 319. Biology 373 may not be counted both toward requirement 11e and toward requirement 12f.
- Biology 137 (Topic 1: *Senior Seminar in Human Biology*), completed on the pass/fail basis in the student's senior year.
 - Enough additional coursework to make a total of 126 semester hours.

OPTION III: MARINE AND FRESHWATER BIOLOGY

- Mathematics 408C and 408D, or 408N and 408S.
- An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
- Chemistry 301 or 301H, 302 or 302H, 204, 210C, 310M, and 310N.
- Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
- At least four laboratory courses in biology. Three

of these courses must be upper-division. The student must complete Biology 205L, 206L, or 208L.

- Biology 318M.
- Geological Sciences 307 or Marine Science 307; Biology 101C (Topic: *Marine Science Seminar*); and three semester hours in geological sciences, chosen from courses that may be counted toward the requirements for a major in geological sciences.
- In fulfilling requirement 3 above, the student must complete the following courses.
 - Biology 126L and 326R.
 - Marine Science 320 and 120L.
 - At least twenty-one semester hours of coursework chosen from the following: Biology 321L, 327, 127L, 328, 128L, 354L, 361T, 370, 375, Geological Sciences 422K, Marine Science 440, 352C, 352D, 353 (Topic 17: *Marine Fish Physiology*), 354C, 354Q, 354T, 354U, 367K, 170, 270, 370, Biology 448L or Marine Science 354, Biology 364 or Marine Science 354E. Six hours of this coursework must be completed at the Marine Science Institute at Port Aransas.
- Enough additional coursework to make a total of 126 semester hours.

OPTION IV: MICROBIOLOGY

- Mathematics 408C and 408D, or 408N and 408S.
- An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
- Chemistry 301 or 301H, 302 or 302H, 204, 210C, 310M, 310N, and either 369 or both 339K and 339L.
- Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
- Five semester hours of upper-division laboratory coursework, chosen from Biology 129L, 230L, 160L, and 361L.
- In fulfilling requirement 3 above, the student must complete the following courses.
 - Biology 126L, 326R, 330, 360K, and 366.
 - Six semester hours chosen from the following,

with at least one hour in a laboratory course: Biology 329, 129L, 230L, 332, 335, 336, 339M, 160L, 361, 361L, 361P, 364. A course counted toward requirement 9 may not also be counted toward requirement 10b.

11. Enough additional coursework to make a total of 126 semester hours.

OPTION V: CELL AND MOLECULAR BIOLOGY

5. Mathematics 408C and 408D, or 408N and 408S.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N.
7. Chemistry 301 or 301H, 302 or 302H, 204, 210C, 310M, 310N, and either 339K and 339L or 369 and 353M.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
9. At least four laboratory courses in biology. Three of these courses must be upper-division.
10. In fulfilling requirement 3 above, the student must complete the following courses.
 - a. Biology 320 and 344.
 - b. Biology 126L, 326R, 349, 370, and one of the following: 320L, 331L, 349L.
 - c. Biology 328, 365R, or 365S.
 - d. At least six semester hours chosen from the following: Biology 318M, 323L, 325L, 329, 129L, 330, 230L, 332, 333, 335, 336, 337J, 339, 339M, 343M, 345, 345E, 347, 349L, 350M, 360K, 160L, 360M, 365D, 365L, 365N, 365T, 365W, 366, 366R.
11. Enough additional coursework to make a total of 126 semester hours.

OPTION VI: NEUROBIOLOGY

5. Mathematics 408C and 408D, or 408N and 408S.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
7. Chemistry 301 or 301H, 302 or 302H, 204, 210C, 310M, and 310N.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-

division biology courses.

9. At least four laboratory courses in biology. The student must complete Biology 205L or 206L, and at least nine semester hours chosen from the following courses: Biology 320L, 325L, 331L, 365L, 366L, 366P, 366S, 371L, 478L, Electrical Engineering 374L.
10. In fulfilling requirement 3 above, the student must complete the following courses.
 - a. Biology 320, 344, 349, 370, and either 365R or 371M.
 - b. Six semester hours chosen from the following courses: Biology 359K, 365D, 365N, 365T, 365W, 366C, 366D, 366F, Psychology 353K.
 - c. Six semester hours chosen from the following courses: Biology 318M, 321G, 337J, 465M, Chemistry 353 or 353M, 354, 369 or both 339K and 339L, 370, Computer Science 313E, 323E, 324E, 326E, 327E, Electrical Engineering 411, 313, 325, 438, 338K, 351K, 374K.
 - d. Three additional semester hours chosen from the following courses: Computer Science 303E, Psychology 308, 332, 353K.
11. Enough additional coursework to make a total of 126 semester hours.

OPTION VII: PLANT BIOLOGY

5. Mathematics 408C and 408D, or 408N and 408S.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; Physics 302K, 102M, 302L, and 102N.
7. Chemistry 301 or 301H, 302 or 302H, 204, 210C, 310M, and 310N.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
9. At least four laboratory courses in biology. Three of these courses must be upper-division. The student must complete Biology 205L, 206L, or 208L. Biology 177, 277, or 377 may be counted only once toward the laboratory requirement.
10. In fulfilling requirement 3 above, the student must complete at least twenty-four hours of coursework chosen from the following: Biology 320, 320L, 322 and 122L, 323L, 324 and 124L, 327 and 127L, 328, 128L, 331L, 343M, 350M, 351, 262 and 262L, 363, 370, 472L, 373, 373L, 374 and 174L, 375.

11. Eleven additional semester hours of upper-division coursework in the College of Natural Sciences or the Jackson School of Geosciences. A course may not be counted toward this requirement if it does not fulfill major requirements in the department that offers it.
12. Enough additional coursework to make a total of 126 semester hours.

OPTION VIII: TEACHING

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school science teacher in Texas; the student chooses either composite science certification with biology as the primary teaching field or life science certification. However, completion of the course requirements does not guarantee the student's certification. Information about additional certification requirements is available from the UTeach-Natural Sciences academic adviser.

5. Mathematics 408C and 408D, or 408N and 408S.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
7. Chemistry 301 or 301H, 302 or 302H, 204, and either Chemistry 310M, 310N, and 210C or 310M and 369.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
9. At least four laboratory courses in biology. Three of these courses must be upper-division. The student must complete Biology 205L, 206L, or 208L.
10. In fulfilling requirement 3 above, the student must complete the following courses.
 - a. Biology 320, 126L, 326R, 370, and either 324 and 124L or 322 and 122L.
 - b. At least three semester hours chosen from the following courses in physiology, neurobiology, and behavior: Biology 322, 122L, 328, 328D, 128L, 329, 129L, 438L, 339, 345, 359J, 359K, 359R, 360K, 160L, 361, 361L, 361T, 365L, 465M, 365N, 365R, 365S, 371L, 371M.
 - c. One of the following courses with a substantial field component: Biology 321L, 340L, 342L, 453L, 455L, 456L, 373L, Marine Science 352D, 354, 354C.
11. One of the following research methods courses: Biology 328D, 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic: *Research Methods—UTeach*), Physics 341 (Topic: *Research Methods—UTeach*).
12. History 329U or Philosophy 329U.
13. One of the following:
 - a. For composite science certification: Six semester hours of coursework in geological sciences. Courses intended for nonscience majors may not be counted toward this requirement. The remaining composite certification content requirements are met by the chemistry and physics courses used to fulfill requirements 6 and 7.
 - b. For life science certification: Biology 373 and three additional semester hours of biology chosen from the courses listed in requirement 10b.
14. Eighteen semester hours of professional development coursework: Curriculum and Instruction 650S, UTeach-Natural Sciences 101, 110, 350, 355, 360, 170.
15. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; and Curriculum and Instruction 339E.
16. Enough additional coursework to make a total of 126 semester hours.

OPTION IX: BIOLOGY HONORS

5. Breadth requirement: An honors mathematics course; Biology 315H and 325H; Chemistry 301H and 302H; and one of the following: a three-hour honors-designated computer science course; a three-hour honors-designated statistics course; Physics 301 and 101L; Physics 315 and 115L; or Physics 316 and 116L. Credit earned by examination may not be counted toward this requirement.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N. Courses used to satisfy this requirement may also be counted toward requirement 5.
7. Chemistry 204, 118K, 118L, 318M, and 318N.
8. In fulfilling requirement 3 above, the student must complete Biology 320 or 344, 349, 365R, 370, and at least twelve additional semester

hours of upper-division coursework in biology chosen from a list available in the student's advising office.

9. Three upper-division laboratory courses in biology. Biology 377 or 379H may be used as only one of the three required upper-division laboratory courses. Courses used to fulfill this requirement may also be counted toward requirement 8.
10. Natural Sciences 301C.
11. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
12. Two semesters of Biology 379H.
13. Fifteen additional semester hours of coursework approved by the departmental honors adviser.
14. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
15. Enough additional coursework to make a total of 120 semester hours.

OPTION X: COMPUTATIONAL BIOLOGY

5. Mathematics 408C and 408D, or 408N, 408S, and 408M; Statistics and Scientific Computation 329C or Mathematics 340L or 341; Mathematics 362K; and Mathematics 358K or 378K.
6. Computer Science 305J; Computer Science 307 or Statistics and Scientific Computation 222; and one of the following courses: Computer Science 323E, 323H, 324E, 327E, 329E, 337, 367, Statistics and Scientific Computation 329D, 335, 374D, 374E, Mathematics 348, 372K, 376C.
7. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N.
8. Chemistry 301 or 301H, 302 or 302H, and 204.
9. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
10. In fulfilling requirement 3 above, the student must complete Biology 321G, 370, and six additional hours of upper-division coursework in biology.
11. At least four laboratory courses in biology. Three of these courses must be upper-division. Biology 321G fulfills one of these upper-division requirements.
12. Enough additional coursework to make a total of 126 semester hours.

SPECIAL REQUIREMENTS

Students in all options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in each of the professional development courses listed in requirement 14 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 15. For information about the portfolio review and additional teacher certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

To graduate under the honors option, students must remain in good standing in the Dean's Scholars Honors Program, must submit an honors thesis approved by the departmental honors adviser, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

ORDER AND CHOICE OF WORK

Students begin the Bachelor of Science in Biology degree program with six hours of introductory biology for science majors (Biology 311C and 311D), as well as Chemistry 301 or 301H and 302 or 302H and Mathematics 408C and 408D or 408N and 408S. The genetics course, Biology 325, is prerequisite to other upper-division biology courses. Students should consult with academic advisers about specific concentrations within biology, about appropriate courses in mathematics and physical sciences, and about course load and the balance between laboratory and nonlaboratory work. Most students select an option by the end of the second year and take at least twenty-one hours of upper-division coursework in the major in the third and fourth years.

BACHELOR OF SCIENCE IN CHEMISTRY

Four degree plans lead to the Bachelor of Science in Chemistry. Option I, chemistry, is intended to prepare students for professional careers as chemists, either upon graduation or after graduate study in chemistry

or related fields. Option II, computation, is intended to prepare students for the workplace by giving them opportunities to develop hands-on computation skills. Option III, teaching, is intended to prepare students to enter the teaching profession. Option IV, chemistry honors, is intended to prepare students for academic or research careers. Students who plan to follow option IV, must be admitted to the Dean's Scholars Honors Program as described on page 513.

The four degree plans may also serve as the basis for work in many areas outside pure chemistry, such as materials science, medicine and other health-related fields, pharmacology, patent law, business, computation, or environmental science. After general chemistry courses, depending on his or her background, the student makes an intensive core study of some of the major areas of chemistry—organic, physical, inorganic, and analytical chemistry. The chemistry coursework in these degree plans culminates in approximately three semesters of advanced work, allowing each student to study more broadly by taking courses in some areas of chemistry not covered in the core courses, such as macromolecular chemistry, biochemistry, or other areas of physical chemistry, or more deeply by taking advanced special topics courses in areas of special interest and by undertaking research projects. Throughout the curricula, emphasis is placed on laboratory experience—synthesis, separations and analysis, structure identification and determination, measurement of rates of reactions, determinations of energy changes accompanying reactions. Supporting work in mathematics and physics is an integral part of the degree programs. Compared to the program leading to the Bachelor of Arts degree, the Bachelor of Science in Chemistry degree programs are more thorough and demanding and potentially more rewarding to the student planning a career in chemistry.

PRESCRIBED WORK COMMON TO ALL OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSCh must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in

the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

2. Options I and II: One of the following foreign language/culture choices. Students in options III and IV are exempt from this requirement.⁶
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. The following courses:
 - a. General chemistry: Chemistry 301 or 301H, 302 or 302H, and 317.
 - b. Organic chemistry: Chemistry 118K, 118L, 318M, and 318N; or 210C, 310M, and 310N.
 - c. Biochemistry: Chemistry 339K or 369.
 - d. Physical chemistry: Chemistry 353, 153K, 154K, and either 354 or 354L.
 - e. Inorganic chemistry: Chemistry 431.
 - f. Analytical chemistry: Chemistry 456 and 376K.
4. Thirty-six semester hours of upper-division coursework.
5. At least eighteen semester hours of upper-division coursework, including at least twelve semester hours of upper-division coursework in chemistry, must be completed in residence at the University.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: CHEMISTRY

6. Mathematics 408C and 408D, or 408N, 408S, and 408M; and at least three semester hours of upper-division coursework in mathematics or computer science.
7. One of the following sequences: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; 317K, 117M, 317L, and 117N.
8. Six semester hours chosen from the following courses: Chemistry 339L, 341,* 354, 367L, 368, 369K,* 369L,* 370, 371K,* 375K, and 475K. At least three of these six hours must be in a laboratory course; courses marked with an asterisk may be used to fulfill this laboratory require-

6. Students in all options who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.

ment. Chemistry 341 and 368 may be repeated for credit toward this requirement when the topics vary. No more than three semester hours in Chemistry 369K may be counted toward this requirement; three additional hours may be counted as electives. No more than three semester hours in Chemistry 371K may be counted toward this requirement; three additional hours may be counted as electives.

9. Nine semester hours of coursework in the College of Natural Sciences (excluding chemistry), the Cockrell School of Engineering, and the Jackson School of Geosciences. Any course designed for science or engineering majors may be counted. With the exception of courses in the Elements of Computing Certificate program, a course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it. No more than six hours of laboratory or field research from the Jackson School or any department in the College of Natural Sciences or the Cockrell School may be counted.
10. Enough additional coursework to make a total of 127 semester hours.

OPTION II: COMPUTATION

Students who complete option II may simultaneously fulfill some of the requirements of the Certificate in Scientific Computation, which is described on pages 514–515.

6. Mathematics 408C and 408D, or 408N, 408S, and 408M; and Statistics and Scientific Computation 329C or Mathematics 340L or 341.
7. One of the following sequences: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; 317K, 117M, 317L, and 117N.
8. Chemistry 368 (Topic: *Computational Chemistry*).
9. At least three semester hours chosen from the following laboratory courses: Chemistry 431, 341, 369K, 369T, 371K, and 376K.
10. Statistics and Scientific Computation 222 and three of the following courses. The student must complete coursework from at least two of the following areas.
 - a. Numerical methods: Chemical Engineering 348, Civil Engineering 379K, Computer Science 323E, 323H, 367, Mathematics 348, Statistics and Scientific Computation 335.
 - b. Statistical methods: Biomedical Engineering 335, Mathematics 358K, 378K.
 - c. Other computing topics: Computer Science 324E, 327E, 329E (approved topics), 377, Mathematics 346, 362M, 368K, 372K, 376C, Mechanical Engineering 367S, Statistics and Scientific Computation 329D, 374C, 374D, 374E.
11. A total of forty-two semester hours of chemistry.
12. Enough additional coursework to make a total of 127 semester hours.

OPTION III: TEACHING

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school science teacher in Texas; the student chooses one of the following areas: composite science certification with chemistry as the primary teaching field; physical sciences certification; or physical science, mathematics, and engineering certification. However, completion of the course requirements does not guarantee the student's certification. Information about additional teacher certification requirements is available from the UTeach-Natural Sciences academic adviser.

6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. History 329U or Philosophy 329U.
8. One of the following sequences:
 - a. For students seeking composition science certification: Physics 301, 101L, 316, and 116L; or 303K, 103M, 303L, and 103N; or 317K, 117M, 317L, and 117N.
 - b. For students seeking either physical sciences certification or physical science, mathematics, and engineering certification: Physics 301, 101L, 316, 116L, 315, and 115L; or 303K, 103M, 303L, 103N, 315, and 115L.
9. The requirements of one of the following certification areas:
 - a. For composite science certification:
 - i. Biology 311C and 311D.
 - ii. Six hours of coursework in geological sciences; courses intended for nonscience majors may not be counted toward this requirement.
 - iii. Enough additional approved coursework in biology, geological sciences, or physics to provide the required twelve hours in a second field.
 - iv. Chemistry 368 (Topic: *Research Methods—UTeach*) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that

- includes a substantial research component.
- v. In place of requirements 3c through 3f of the prescribed work above, the following courses, for a total of at least thirty-four semester hours of chemistry: Chemistry 339K and 339L, or 369; 353; and 455 or 456.
- b. For physical sciences certification:
 - i. Mathematics 427K and 427L.
 - ii. Chemistry 153K, 354L, and 154K.
 - iii. Chemistry 354 and three hours of upper-division coursework in physics.
 - iv. Chemistry 368 (Topic: *Research Methods—UTeach*) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that includes a substantial research component.
 - v. In place of requirements 3c through 3f of the prescribed work above, the following courses, for a total of at least thirty-four semester hours of chemistry: Chemistry 339K and 339L, or 369; 353, 153K, 354, 354L, and 154K; and 455 or 456.
 - c. For physical science, mathematics, and engineering certification:
 - i. Mathematics 315C, 326K or 360M or 375T (Topic: *Discovery: Introduction to Advanced Study in Mathematics*), 427K, and 333L.
 - ii. Chemical Engineering 379 (Topic: *Fundamentals of Engineering and Design*), 379 (Topic: *Engineering Energy Systems*), and Mechanical Engineering 379M (Topic: *Design of Machines and Systems*).
 - iii. Chemistry 368 (Topic: *Research Methods—UTeach*) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that includes a substantial research component.
 - iv. In place of requirements 3c through 3f of the prescribed work above, the following courses, for a total of at least thirty-four semester hours in chemistry: Chemistry 353 and 153K, 455, and 369.
 10. Eighteen semester hours of professional development coursework: Curriculum and Instruction 650S, UTeach-Natural Sciences 101, 110, 350, 355, 360, 170.
 11. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; and Curriculum and Instruction 339E.
 12. Enough additional coursework, if needed, to make a total of 126 semester hours.

OPTION IV: CHEMISTRY HONORS

6. Breadth requirement: An honors mathematics course, Chemistry 301H and 302H, Physics 301, 101L, 316, and 116L, and a three-semester-hour honors course in biology or computer science. Credit earned by examination may not be counted toward this requirement.
7. Chemistry 317.
8. Natural Sciences 301C.
9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
10. Chemistry 379H and a three-semester-hour upper-division research course approved by the departmental honors adviser, or six hours of Chemistry 379H.
11. Twenty-two additional hours of coursework approved by the departmental honors adviser.
12. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
13. Enough additional coursework to make a total of 120 semester hours.

SPECIAL REQUIREMENTS

Students in all options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in each of the professional development courses listed in requirement 11 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 12. For information about the portfolio review and additional teacher certification requirements, consult the UTeach-Natural Sciences academic adviser.

To graduate under option IV, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 10 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

ORDER AND CHOICE OF WORK

Students are strongly recommended to take the chemistry/biochemistry–major sections of the following courses: Chemistry 301 or 301H (if taken), 302 or 302H, 118K, 118L, 318M, and 318N. Students planning a graduate program are strongly recommended to take Physics 301, 101L, 316, 116L, 315, and 115L.

Students in option II should consult the undergraduate adviser each semester regarding order and choice of work; those in option III should consult the UTeach-Natural Sciences academic adviser.

The following order of work is recommended as a typical minimum program for option I. It assumes that the student has high school credit in trigonometry, college algebra, and the first semester of general chemistry; is able to earn credit by examination for Chemistry 301; and is able to score well enough on the ALEKS placement examination to take Mathematics 408C or 408N in the first semester of the freshman year. Many students meet some of the following course requirements by credit by examination.

First year: Chemistry 302 or 302H, and 317; Mathematics 408C and 408D, or 408N, 408S, and 408M; Physics 301 and 101L, or 303K and 103M, or 317K and 117M (to be taken after Mathematics 408C or 408N); Rhetoric and Writing 306; six semester hours to fulfill core curriculum requirements.

Second year: Chemistry 118K, 118L, 318M, and 318N, or 210C, 310M, and 310N; any coursework needed to meet a core curriculum requirement; three semester hours to be counted toward requirement 4 of the prescribed work; English 316K; Physics 316 and 116L, or 303L and 103N, or 317L and 117N; an upper-division mathematics course (such as Mathematics 427K) or an upper-division computer science course.

Third year: Chemistry 339K or 369, 353, 153K, 354L, 456; six semester hours of American and Texas government; six semester hours of American history; three semester hours of electives; a three-semester-hour course to fulfill a core curriculum requirement; three semester hours to be counted toward requirement 4 of the prescribed work.

Fourth year: Chemistry 431, 154K, 376K, and courses to fulfill requirement 8 of the prescribed work. The student must also take enough additional coursework to fulfill requirements 4, 5, 9, and 10 of the prescribed

work. It is recommended that the majority of the elective courses taken to fulfill requirements 4 and 9 be chosen from upper-division courses in biology, chemistry, chemical engineering, mathematics, and physics.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

The Bachelor of Science in Computer Science (BSCS) degree program provides a strong technical background for students planning to begin careers upon graduation and for those interested in graduate study in computer science. This program allows students to take more coursework in computer science and related technical areas than does the Bachelor of Arts degree program.

In addition to three options leading to the BSCS, students may apply to option IV, the Integrated Program, which leads to simultaneous completion of the BSCS and the Master of Science in Computer Science (MSCS). The requirements for the BSCS, option IV, are given below. The requirements for the MSCS are described in the graduate catalog. In brief, they are nine semester hours of graduate-level diversity coursework in computer science, consisting of three hours in each of three areas; fifteen additional hours of graduate coursework in computer science; and six hours of approved graduate coursework in a supporting area. The student must complete two semesters in residence in the Graduate School.

Students who would like to pursue any of the following options must first be admitted to the degree program. The admission processes for options I, II, and IV are described on pages 516–517; the admission process for option III is described in the section “Dean’s Scholars Honors Program,” page 513.

PRESCRIBED WORK COMMON TO ALL OPTIONS

All students pursuing an undergraduate degree must complete the University’s core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSCS must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified

in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

2. Options I, II, and IV: One of the following foreign language/culture choices. Students in option III are exempt from this requirement.⁷
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. At least forty-two semester hours of upper-division coursework.
4. At least eighteen semester hours of upper-division coursework in computer science must be completed in residence at the University.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: COMPUTER SCIENCE

5. Mathematics 408C and 408D, or 408N, 408S, and 408M; either 340L or 341; and one of the following: Mathematics 427K, 328K, 343K, 343L, 344K, 346, 348, 358K, 362K, 362M, 364K, 364L, 367K, 372K, 373K, 374G, 374K, 474M, 376C, 378K.
6. One of the following sequences of coursework:
 - a. Either Biology 311C, 311D, and 325 or Biology 315H and 325H, and Biology 205L, 206L, or 208L.
 - b. Chemistry 301 or 301H, 302 or 302H, and 204.
 - c. Geological Sciences 401 and either 404C or 405.
 - d. Physics 303K, 303L, 103M, and 103N.
7. An additional sequence chosen from those in requirement 6 above, or one of the following:
 - a. At least three hours of upper-division coursework in biology approved by the undergraduate adviser.
 - b. Chemistry 118K, 118L, 318M, and 318N, or Chemistry 210C, 310M, and 310N, or at least six hours of upper-division coursework in chemistry approved by the undergraduate adviser.
 - c. Geological Sciences 416K and 426P, or at

least six hours of upper-division coursework in geological sciences approved by the undergraduate adviser.

- d. Physics 315 and at least three hours of upper-division coursework in physics approved by the undergraduate adviser.
- e. At least six hours of upper-division coursework in mathematics approved by the undergraduate adviser. A course may not be counted toward both requirement 5 and requirement 8.
 - f. Electrical Engineering 313 and 331.
8. Electrical Engineering 316.
9. At least forty-five semester hours in computer science, consisting of Computer Science 307, 310 or 310H, 313K or 313H, 315 or 315H, 336 or 336H, 337, 341 or 341H, 345 or 345H, 352 or 352H, 372 or 372H, and fifteen additional hours of approved upper-division coursework.⁸
10. Enough additional coursework to make a total of 127 semester hours.

OPTION II: TURING SCHOLARS HONORS

5. Mathematics 408C and 408D, or 408N, 408S, and 408M; either 340L or 341; and one of the following: Mathematics 427K, 328K, 343K, 343L, 344K, 346, 348, 358K, 362K, 362M, 364K, 364L, 367K, 372K, 373K, 374G, 374K, 474M, 376C, 378K.
6. One of the following sequences of coursework:
 - a. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 205L, 206L, or 208L.
 - b. Chemistry 301 or 301H, 302 or 302H, and 204.
 - c. Geological Sciences 401 and either 404C or 405.
 - d. Physics 303K, 303L, 103M, and 103N.
7. An additional sequence chosen from those in requirement 6 above, or one of the following:
 - a. At least three hours of upper-division coursework in biology approved by the undergraduate adviser.
 - b. Chemistry 118K, 118L, 318M, and 318N, or Chemistry 210C, 310M, and 310N, or at least six hours of upper-division coursework in chemistry approved by the undergraduate adviser.
 - c. Geological Sciences 416K and 426P, or at least six hours of upper-division coursework in geological sciences approved by the undergraduate adviser.

7. Students in all options who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.
8. Computer science courses with numbers ending in *H* are intended for students in option II, the Turing Scholars program, and option III, computer science honors. Students outside these options may enroll in these courses only with the special consent of the honors director.

- d. Physics 315 and at least three hours of upper-division coursework in physics approved by the undergraduate adviser.
- e. At least six hours of upper-division coursework in mathematics approved by the undergraduate adviser. A course may not be counted toward both requirement 5 and requirement 7.
- f. Electrical Engineering 313 and 331.
- 8. Electrical Engineering 316.
- 9. Computer Science 310 or 310H, 313K or 313H, and 315 or 315H.
- 10. At least thirty-four semester hours of upper-division coursework in computer science, including Computer Science 336 or 336H, 337 or 337H, 341 or 341H, 345 or 345H, 352 or 352H, 372 or 372H, 178H, and 379H. The courses the student chooses to fulfill this requirement must be approved by the Turing Scholars program director; at least five of them, in addition to Computer Science 178H and 379H, must be honors courses. The honors thesis the student completes in Computer Science 379H must be approved by the program director.
- 11. Enough additional coursework to make a total of 127 semester hours.

OPTION III: COMPUTER SCIENCE HONORS

- 5. Breadth requirement: An honors mathematics course; Computer Science 310H, 313H, and 315H; one of the following two-semester sequences: Biology 315H and 325H, Chemistry 301H and 302H, Physics 301, 101L, 316, and 116L; and either an additional three hours chosen from these courses or Physics 315 and 115L. Credit earned by examination may not be counted toward this requirement.
- 6. At least six semester hours of upper-division coursework in mathematics.
- 7. Computer Science 336H, 352H, 372H, and twelve additional hours of upper-division coursework in computer science.
- 8. Natural Sciences 301C.
- 9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
- 10. Computer Science 379H and a three-semester-hour upper-division research course approved by the departmental honors adviser.
- 11. Twenty-nine additional semester hours of coursework approved by the departmental honors adviser.

- 12. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
- 13. Enough additional coursework to make a total of 120 semester hours.

OPTION IV: INTEGRATED PROGRAM

- 5. Mathematics 408C and 408D, or 408N, 408S, and 408M; either 340L or 341; and one of the following: Mathematics 427K, 328K, 343K, 343L, 344K, 346, 348, 358K, 362K, 362M, 364K, 364L, 367K, 372K, 373K, 374G, 374K, 474M, 376C, 378K.
- 6. One of the following sequences of coursework:
 - a. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 205L, 206L, or 208L.
 - b. Chemistry 301 or 301H, 302 or 302H, and 204.
 - c. Geological Sciences 401 and either 404C or 405.
 - d. Physics 303K, 303L, 103M, and 103N.
- 7. An additional sequence chosen from those in requirement 6 above, or one of the following:
 - a. At least three hours of upper-division coursework in biology approved by the undergraduate adviser.
 - b. Chemistry 118K, 118L, 318M, and 318N, or Chemistry 210C, 310M, and 310N, or at least six hours of upper-division coursework in chemistry approved by the undergraduate adviser.
 - c. Geological Sciences 416K and 426P, or at least six hours of upper-division coursework in geological sciences approved by the undergraduate adviser.
 - d. Physics 315 and at least three hours of upper-division coursework in physics approved by the undergraduate adviser.
 - e. At least six hours of upper-division coursework in mathematics approved by the undergraduate adviser. A course may not be counted toward both requirement 5 and requirement 7.
 - f. Electrical Engineering 313 and 331.
- 8. Electrical Engineering 316.
- 9. At least thirty-nine semester hours in computer science, consisting of Computer Science 307, 310 or 310H, 313K or 313H, 315 or 315H, 336 or 336H, 337, 345 or 345H, 352 or 352H, 353 or 357, 372 or 372H, and nine additional hours of approved upper-division coursework.⁹
- 10. Enough additional coursework to make a total of 120 semester hours.

⁹ Computer science courses with numbers ending in *H* are intended for students in option II, the Turing Scholars program, and option III, computer science honors. Students outside these options may enroll in these courses only with the special consent of the honors director.

SPECIAL REQUIREMENTS

Students in all options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

With the exception of Computer Science 307, 313K, and 315, all computer science courses that may be counted toward a degree in computer science are restricted to students who have been admitted to the computer science major or have the consent of the undergraduate faculty adviser.

An undergraduate may not enroll in any computer science course more than once without written consent of an undergraduate adviser in computer science. No student may enroll in any computer science course more than twice. No student may take more than three upper-division computer science courses in a semester without written consent of an undergraduate adviser in computer science.

ADDITIONAL REQUIREMENTS FOR OPTION II

Students in option II, the Turing Scholars program, must maintain a University grade point average of at least 3.30 and a grade point average in computer science of at least 3.30; in rare circumstances, this grade point average requirement will be waived for students whose honors thesis has been judged by the Department of Computer Science Undergraduate Thesis Committee to be truly outstanding. In addition to this grade point average requirement, students in option II must know and abide by the academic and disciplinary policies given in this catalog and in *General Information*. Those who fail to do so will be considered for academic dismissal from the Turing Scholars program. Under special circumstances and at the discretion of the director, a student will be allowed to continue in the program under academic review. A student who is academically dismissed from the program may enter another computer science program if he or she fulfills the scholastic standards for continuance in the University given in *General Information*. Students in scholastic difficulty should discuss their problems with a Turing Scholars program academic adviser and the director.

ADDITIONAL REQUIREMENTS FOR OPTION III

To graduate under option III, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 10 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

ADDITIONAL REQUIREMENTS FOR OPTION IV

Satisfactory Progress

Students are expected to make continuous progress toward the degree by completing required computer science coursework each semester. Those who fail to take program coursework two long-session semesters in a row will be removed from the program and re-enrolled in the BSCS option (I, II, or III) that they were following before admission to the Integrated Program. Students will be notified before this action is taken; they must meet with their academic adviser upon being notified.

Probation

The student is placed on probation if his or her grade point average in required undergraduate computer science courses falls below 3.00. Except with the consent of the undergraduate adviser or the graduate adviser, a student on probation may not take graduate computer science courses.

Dismissal

The student is dismissed from the Integrated Program if (1) he or she fails to improve his or her academic performance significantly while on probation, or (2) he or she will not achieve a grade point average of 3.00 even by earning grades of A in all remaining required undergraduate and graduate computer science courses.

Like all students, those in the Integrated Program must know and abide by the academic and disciplinary policies given in this catalog and in *General Information*. Those who fail to do so will be considered for academic dismissal from the program. Under special circumstances and at the discretion of the director, a student may be allowed to continue in the program under academic review. A student who is academically dismissed from the program may enter another computer science program if he or she fulfills the scholastic standards for continuance in the University given in *General Information*. Students in scholastic difficulty should discuss their problems with an academic adviser

and the undergraduate faculty adviser.

Graduation

To receive the BSCS and MSCS degrees through the Integrated Program, a student must have a grade point average of at least 3.00 in the coursework in the MSCS Program of Work. He or she must also have a grade point average in graduate computer science coursework of at least 3.00.

ORDER AND CHOICE OF WORK

The student must consult the faculty adviser each semester regarding order and choice of work.

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE¹⁰

The Bachelor of Science in Environmental Science degree program is designed for students interested in an interdisciplinary scientific perspective on environmental and sustainability issues, analysis, and management. The degree program provides the broad foundation in physical, life, and social sciences needed for a career or graduate study in environmental science and related fields such as climate change, ecology, and conservation. Students who complete the program successfully will be able to assess environmental issues critically from multiple perspectives; to perform field, laboratory, and computer analyses; and to conduct original research. The program is designed to prepare graduates for careers in local, state, and federal government laboratories and nonprofit agencies, environmental consulting firms, environmental education and outreach agencies, and universities and other research settings. The degree is offered by the Jackson School of Geosciences with a major in geological sciences, by the College of Liberal Arts with a major in geographical sciences, and by the College of Natural Sciences with a major in biological sciences. The degree programs share common prescribed work, but each major has its own specific requirements. Students may earn only one Bachelor of Science in Environmental Science degree from the University.

Students must apply for admission to the degree program after completing prerequisite coursework. To be competitive for admission, students should have a grade point average of at least 2.75. More information about admission requirements is given on page 518.

The BSEnviroSci curriculum consists of 126 semes-

ter hours of coursework. All students must complete the University's core curriculum, described in chapter 2. The specific degree requirements consist of prescribed work and major requirements. In some cases, a course that is required for the degree may also be counted toward the core curriculum.

A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills another requirement may also be used to fulfill the writing requirement if the course carries a writing flag.

PRESCRIBED WORK

1. *Mathematics*: Mathematics 408C, or 408N and 408S.
2. *Chemistry*: Chemistry 301 or 301H; 302 or 302H; and 204.
3. *Physics*: Physics 317K and 117M, or another four-hour calculus-based physics sequence.
4. *Biological sciences*: Biology 311C and 311D, or 315H.
5. *Ecology*: Biology 373 and 373L, or Marine Science 320 and either 120L or 152T (Topic: *Marine Ecology*).
6. *Geological sciences*: Geological Sciences 401 or 303, 346C, and an approved geological sciences course in sustainability.
7. *Geography*: Geography 335N.
8. *Field experience*: One course in each of the following areas:
 - a. *Introductory field seminar*: Environmental Science 311.
 - b. *Senior field/research experience*: Environmental Science 371, Biology 377 (with prior approval of the faculty adviser), 478T.
9. *Research methods*: Environmental Science 331.
10. *Environmental and sustainability themes*: One course in each of the following thematic areas:
 - a. *Environmental and sustainability policy, ethics, and history*: Geography 334, 336C, 340D, 342C, 356C, 356T (approved topics), Philosophy 325C.
 - b. *Geographic information systems*: Geography 360G, 462K, Geological Sciences 327G.
 - c. *Climates and oceans*: Biology 456L, Geography 333K, 356T (approved topics), Geological Sciences 371C (approved topics), 377P, Marine Science 320, 440, 354Q, 354T, 367K. Marine Science 320 may not be used to satisfy both requirement 5 and requirement 10.

10. Final approval of the Bachelor of Science in Environmental Science is pending.

- d. *Environmental economics, sustainability, and business*: Economics 304K, 330T.
- 11. Environmental Science 141 and 151.

MAJOR REQUIREMENTS

All students must complete at least fifteen semester hours of upper-division coursework in biology, including one upper-division laboratory/field course in addition to the laboratory/field courses that are part of the prescribed work. The student must complete Biology 311C, 311D, and 325, or 315H and 325H, with a grade of at least C- in each before progressing to other upper-division biology courses.

Twenty-six semester hours of coursework are required, consisting of the following:

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. One of the following foreign language/culture choices.¹¹
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. Three hours in statistics chosen from Biology 318M and Statistics and Scientific Computation 318M and 321; with the consent of the undergraduate adviser, an upper-division statistics or probability course may be used to fulfill this requirement.
4. Three hours in conservation and environmental biology chosen from Biology 351, 359, 375, and Marine Science 352 (Topic: *Concepts in Marine Conservation Biology*).
5. Biology 325 or 325H, and 370.
6. One of the following taxon/systems-based diversity courses or pairs of courses: Biology 321L, 324 and 124L, 327 and 127L, 337 (Topic: *Natural History of the Protists*), 340L, 342L, 448L, 353F, 453L, 354L, 455L, 262 and 262L, 364, 369L, 471G,

Marine Science 352 (Topic: *Principles of Estuarine Ecology*), 352 (Topic: *Marine Invertebrates*), 352D, 354C, 354E, 354U, Geological Sciences 479M.

7. One of the following physiology, neurobiology, and behavior courses or pairs of courses: Biology 322 and 122L, 328 and 128L, 438L, 339, 345E, 346, 359J, 359K, 359R, 361, 361T, 465M, 365R, 365S, 371L, Marine Science 355C.
8. Enough additional coursework to make a total of 126 hours.

SPECIAL REQUIREMENTS

Students must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

BACHELOR OF SCIENCE IN HUMAN DEVELOPMENT AND FAMILY SCIENCES

The Bachelor of Science in Human Development and Family Sciences focuses on the study of human development, individuals in a family context, relationships, and well-being within the family and the broader social, economic, community, and governmental environment. Students in the program are expected to develop knowledge and understanding about human development and family dynamics through classroom experiences, observation of children and families, and research. They have opportunities to apply their knowledge through practicum experiences in research and placements in the field. The program is designed to give students excellent preparation for graduate training that leads to careers in academia, research, medicine, and other health professions, as well as for employment in a field involving work with children, families, and adults.

Students seeking the Bachelor of Science in Human Development and Family Sciences must choose one of the five options described below. Those who plan to follow option V must be admitted to the Dean's Scholars Honors Program as described on page 513.

11. Students who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.

PRESCRIBED WORK COMMON TO ALL OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSHDFS must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Students who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their language deficiency.
3. Psychology 301; and six semester hours, at least three of which must be upper-division, chosen from courses in economics, social or cultural anthropology, and psychology. Neither Psychology 304 nor 333D may be counted toward this degree.
4. At least thirty-six semester hours of upper-division coursework.
5. Eighteen semester hours in the School of Human Ecology must be completed in residence at the University.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: EARLY CHILDHOOD

This option is designed to provide the necessary foundation for further study or a career in working with children in applied settings.

6. Educational Psychology 371 or Mathematics 316; Mathematics 408C or 408N.
7. Chemistry 301 or 301H; Biology 311C; Biology 311D or Chemistry 302, 302H, or 314N; and three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for nonscience majors may not be counted toward this requirement; students

should consult the School of Human Ecology for a list of courses that may be counted.

8. Nine semester hours from an approved list of supporting courses available from the School of Human Ecology. Students should confer with their advisers about courses appropriate to their career goals.
9. Twenty-eight semester hours in the School of Human Ecology, consisting of Nutrition 306; Human Development and Family Sciences 304, 312, 313, 113L, 315L, and 340; six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355; and three additional hours of coursework in human development and family sciences. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355 is restricted to students whose applications have been approved. Applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.
10. Human Development and Family Sciences 338 and 378L; and six additional semester hours chosen from Human Development and Family Sciences 339, 345, 351, 358, 362, 366, and 378K (Topic 6: *Introduction to Early Childhood Intervention*).
11. Enough additional coursework to make a total of 120 semester hours.

OPTION II: HUMAN DEVELOPMENT

This option involves the study of development across the life span.

6. Educational Psychology 371 or Mathematics 316; Mathematics 408C or 408N.
7. Chemistry 301 or 301H; Biology 311C; Biology 311D or Chemistry 302, 302H, or 314N; and three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for nonscience majors may not be counted toward this requirement; students should consult the School of Human Ecology for a list of courses that may be counted.
8. Nine semester hours from an approved list of supporting courses available from the School of Human Ecology. Students should confer with their advisers about courses appropriate to their career goals.

9. Twenty-eight semester hours in the School of Human Ecology, consisting of Nutrition 306; Human Development and Family Sciences 304, 312, 313, 113L, 315L, and 340; six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355; and three additional hours of coursework in human development and family sciences. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355 is restricted to students whose applications have been approved. Applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.
10. Human Development and Family Sciences 378L; six semester hours chosen from Human Development and Family Sciences 335, 351, and 371; and three additional semester hours chosen from Human Development and Family Sciences 335, 339, 343, 345, 351, 358, 371, and 372K.
11. Enough additional coursework to make a total of 120 semester hours.

OPTION III: FAMILIES AND PERSONAL RELATIONSHIPS

This option involves the study of the formation and maintenance of close relationships, especially couple and family relationships.

6. Educational Psychology 371 or Mathematics 316; Mathematics 408C or 408N.
7. Chemistry 301 or 301H; Biology 311C; Biology 311D or Chemistry 302, 302H, or 314N; and three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for nonscience majors may not be counted toward this requirement; students should consult the School of Human Ecology for a list of courses that may be counted.
8. Nine semester hours from an approved list of supporting courses available from the School of Human Ecology. Students should confer with their advisers about courses appropriate to their career goals.
9. Twenty-eight semester hours in the School of Human Ecology, consisting of Nutrition 306; Human Development and Family Sciences 304, 312, 313, 113L, 315L, and 340; six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355; and three additional hours of coursework in human development and family sciences. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355 is restricted to students whose applications have been approved. Applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.
10. Human Development and Family Sciences 337, and either 356 or 372K.
11. Six additional semester hours chosen from Human Development and Family Sciences 322, 335, 345, 347, 356, 358, 360, 371, and 372K.
12. Enough additional coursework to make a total of 120 semester hours.

OPTION IV: FAMILIES AND SOCIETY

This option involves the study of the family and its interactions with larger socioeconomic systems, such as the economy, work, the media, public policy, and government.

6. Educational Psychology 371 or Mathematics 316; Mathematics 408C or 408N.
7. Chemistry 301 or 301H; Biology 311C; Biology 311D or Chemistry 302, 302H, or 314N; and three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for nonscience majors may not be counted toward this requirement; students should consult the School of Human Ecology for a list of courses that may be counted.
8. Nine semester hours from an approved list of supporting courses available from the School of Human Ecology. Students should confer with their advisers about courses appropriate to their career goals.
9. Twenty-eight semester hours in the School of Human Ecology, consisting of Nutrition 306; Human Development and Family Sciences 304, 312, 313, 113L, 315L, and 340; six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355; and three additional hours of coursework in human development and family sciences. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355 is restricted to students whose applications have been approved. Applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.
10. Human Development and Family Sciences 337, and either 356 or 372K.
11. Six additional semester hours chosen from Human Development and Family Sciences 322, 335, 345, 347, 356, 358, 360, 371, and 372K.
12. Enough additional coursework to make a total of 120 semester hours.

to students whose applications have been approved. Applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.

10. Human Development and Family Sciences 347 and 362; and six additional semester hours chosen from Human Development and Family Sciences 322, 339, 343, 360, 366, and 378K (Topic 6: *Introduction to Early Childhood Intervention*).
11. Enough additional coursework to make a total of 120 semester hours.

OPTION V: HUMAN DEVELOPMENT AND FAMILY SCIENCES HONORS

This option is designed to prepare students for academic or research careers.

6. Breadth requirement: A calculus course and a statistics course, one of which must be a designated honors course; Biology 315H and 325H; Chemistry 301H and 302H; and three additional hours of honors-designated or approved coursework in biology, chemistry, computer science, mathematics, statistics and scientific computation, or physics. Credit earned by examination may not be counted toward this requirement.
7. Human Ecology 115H and 225H.
8. Human Development and Family Sciences 304H, 312, 313H, 113L, 315L, and fifteen semester hours chosen from the following: Human Development and Family Sciences 335, 337, 339, 343, 345, 347, 351, 356, 358, 362, 371, 372K, 378L, and approved social science courses.
9. Natural Sciences 301C.
10. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
11. Human Development and Family Sciences 355H and 379H.
12. Twenty-one additional semester hours of coursework approved by the departmental honors adviser.
13. Six hours of coursework in the College of Liberal Arts or the College of Fine Arts.
14. Enough additional coursework to make a total of 120 semester hours.

SPECIAL REQUIREMENTS

Students in all options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate under option V, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 11 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

BACHELOR OF SCIENCE IN INTERDISCIPLINARY SCIENCE

PRESCRIBED WORK COMMON TO BOTH OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSIntrdiscSci must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Students who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their language deficiency.
3. History 329U or Philosophy 329U.
4. Eighteen semester hours of professional development coursework: Curriculum and Instruction 650S, UTeach-Natural Sciences 101, 110, 350, 355, 360, 170.

ADDITIONAL PRESCRIBED WORK
FOR EACH OPTION

**OPTION I: MIDDLE GRADES TEACHING IN
MATHEMATICS AND SCIENCE**

This option is designed to fulfill the course requirements for certification in Texas as a middle grades teacher in the composite teaching field of mathematics/science. However, completion of the course requirements does not guarantee the student's certification. For information about additional certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

5. Curriculum and Instruction 339E.
6. Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304.
7. The following foundation courses:
 - a. Mathematics 408C and 408D, or 408N, 408S, and 408M; and Mathematics 315C, 326K, 427K, 333L, and 362K. Students who plan to take physics courses to fulfill requirement 8 must also complete Mathematics 340L or 341.
 - b. Chemistry 301 or 301H, 302 or 302H, and 204.
 - c. Students who plan to use biology or geological sciences courses to fulfill requirement 8 must complete Physics 302K, 102M, 302L, and 102N or an equivalent sequence; those who plan to use chemistry or physics must complete Physics 301, 101L, 316, and 116L.
 - d. Computer Science 303E or the equivalent.
 - e. Biology 311C and 311D, and 205L, 206L, or 208L.
 - f. Three semester hours of coursework in geological sciences.
 - g. Three semester hours of coursework in astronomy or marine science.
 - h. Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic: *Research Methods—UTeach*), or Physics 341 (Topic: *Research Methods—UTeach*).
8. One of the following concentrations:
 - a. Mathematics 325K; 328K, 341, or 340L; 358K; and either 360M or 375T (Topic: *Discovery: Introduction to Advanced Study in Mathematics*).
 - b. Biology: Twelve hours of coursework chosen from Biology 320, 325, 126L, 326R, 365R, 370, 373, and either 324 and 124L or 322 and 122L.
 - c. Chemistry: Twelve hours of coursework chosen from Chemistry 210C, 310M, 310N, 353, 455, and either 339K and 339L or 369.
 - d. Geological sciences: Twelve hours of coursework chosen from Geological Sciences 404C or 405, 416K, 416M, 420K or 320L, and 335.
 - e. Physics: Twelve hours of coursework chosen from Physics 315, 115L, 329, 333, 336K, 338K, 352K, 355, and 373.
9. Enough additional coursework to make a total of at least 126 semester hours.

**OPTION II: SECONDARY SCHOOL TEACHING IN
COMPUTER SCIENCE AND MATHEMATICS**

This option is designed to fulfill the course requirements for certification as a secondary school teacher in Texas, but completion of the course requirements does not guarantee the student's certification. For information about additional certification requirements, consult the UTeach-Natural Sciences academic adviser.

5. Three semester hours in anthropology, economics, geography, linguistics, psychology, or sociology.
6. Three semester hours in architecture, art (including art history, design, studio art, visual art studies), classics (including classical civilization, Greek, Latin), fine arts, music (including music, instruments, ensemble), philosophy (excluding courses in logic), or theatre and dance.
7. The following courses:
 - a. Mathematics 408C and 408D, or 408N, 408S, and 408M; and Mathematics 315C, Mathematics 325K or Philosophy 313K, Mathematics 333L, 326K or 360M, 341 or 340L, 358K, and 362K.
 - b. Computer Science 303E or 305J, 307, 310, 315, 326E or 356, 327E or 347, and 349.
 - c. Six additional hours in computer science chosen from Computer Science 323E, 324E or 354, 336, 337, 345, 352, and 372.
 - d. Physics 303K, 103M, 303L, and 103N; or 317K, 117M, 317L, and 117N.
 - e. Management Information Systems 302F.
 - f. Information Studies 312.
 - g. Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic: *Research Methods—UTeach*), or Physics 341 (Topic: *Research Methods—UTeach*).
8. Enough additional coursework to make a total of at least 126 semester hours.

SPECIAL REQUIREMENTS

Students in both options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate and be recommended for certification, students must have a University grade point average of at least 2.50 and must pass the final teaching portfolio review. Information about the portfolio review and additional teacher certification requirements is available from the UTeach-Natural Sciences academic adviser.

BACHELOR OF SCIENCE IN MATHEMATICS

As an alternative to the Bachelor of Arts degree, the Bachelor of Science in Mathematics is designed with a twofold purpose: to offer students a more extensive scientific program that may better prepare them for graduate study or employment, and to recognize students who choose to pursue a more demanding program. Students are given the opportunity to develop greater breadth and depth in their mathematical programs as well as to combine mathematics with a concentration in another scientific discipline.

To accomplish these goals, the minimum number of semester hours is increased and the maximum limit is removed. Specialization in one additional scientific area is encouraged, and the foreign language requirement is shortened by one semester.

Students seeking the Bachelor of Science in Mathematics must select one of six options: actuarial science, applied mathematics, mathematical sciences, pure mathematics, mathematics for secondary teaching, and mathematics honors. Students who choose the option in mathematical sciences must also select a specialization in either scientific computation or statistics, probability, and data analysis. Students who plan to follow option VI, mathematics honors, must be admitted to the Dean's Scholars Honors Program as described on page 513.

None of the following courses may be counted toward the degree: Mathematics 301, 302, 303D, 305G.

PRESCRIBED WORK COMMON TO ALL OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSMath must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Options I–IV: Courses 506 and 507 (or the equivalent) in a single foreign language, and a three-semester-hour course in the same language for which 507 is a prerequisite; or as much of this coursework as required by the student's score on the appropriate language placement test. Students in options V and VI are exempt from this requirement.

For students in all options who enter the University with fewer than two high school units in a single foreign language, the first two semesters in a language (or the equivalent) may not be counted toward the total number of hours required for the degree.
3. Forty-two semester hours of upper-division coursework.
4. Eighteen semester hours in mathematics must be completed in residence at the University.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: ACTUARIAL SCIENCE

5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. Actuarial Foundations 329.
8. Economics 304K and 304L.
9. Accounting 310F or both 311 and 312.
10. Finance 357.

11. At least thirty-two semester hours of upper-division coursework in mathematics and supporting areas, consisting of
 - a. One of the following courses: Mathematics 328K, 343K, 361, 361K, 365C, 367K, 373K.
 - b. Mathematics 340L or 341.
 - c. Mathematics 362K and either 358K or 378K.
 - d. Mathematics 339J, 339U, and two courses chosen from Mathematics 339V, 339W, 349P, and 349R.
 - e. Enough additional coursework to provide a total of at least thirty-two hours. In addition to upper-division mathematics courses, the following courses in supporting areas may be counted toward this requirement: Economics 420K, Finance 354, 367, 377 (Topic 2: *Financial Risk Management*), Legal Environment of Business 320F, 323, Management Information Systems 325, Risk Management 357E, 369K, 377. Courses used to satisfy this requirement may not be counted toward requirement 12.
12. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, engineering courses, and courses counted toward requirement 11e may not be used to fulfill this requirement.
13. Enough additional coursework to make a total of 126 semester hours.

OPTION II: APPLIED MATHEMATICS

5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. Computer Science 303E or the equivalent.
8. Thirty-two semester hours of upper-division coursework in mathematics, consisting of the following courses. The student should consult the applied mathematics adviser for information on other courses that may be counted toward this requirement.
 - a. Mathematics 340L or 341.
 - b. Mathematics 427K, 348, 362K, and 374M.
 - c. Mathematics 361 and 365C.
 - d. Mathematics 343K or 373K.
 - e. Enough of the following coursework to provide a total of at least thirty-two hours: Mathematics 346, 365D, 368K, 372K, 376C.
9. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, and engineering courses may not be used to fulfill this requirement.
10. Enough additional coursework to make a total of 126 semester hours.

OPTION III: MATHEMATICAL SCIENCES

Specialization in Statistics, Probability, and Data Analysis

5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. Computer Science 303E or the equivalent.
8. At least thirty-two semester hours of upper-division coursework in mathematics and related areas, consisting of
 - a. Mathematics 325K or Computer Science 336.
 - b. Mathematics 427K and 362K.
 - c. Mathematics 340L or 341.
 - d. Mathematics 361K or 365C.
 - e. Mathematics 358K and 378K.
 - f. Mathematics 328K, 343K, 346, or 373K.
 - g. Additional coursework chosen from the following: Computer Science 327E or 347, Economics 341K, 350K (Topic 4: *Advanced Econometrics*), 350K (Topic 6: *Advanced Microeconomic Theory*), 350K (Topic 7: *Applied Economic Analysis*), 354K, Electrical Engineering 366L, 379K (Topic 15: *Information Theory*), Geography 360G, 360L, Mathematics 339J, 339U, 339V, 343L, 343M, 346, 348, 349P, 349R, 365D, 368K, 373L, 374G, 474M, Mechanical Engineering 366L, 366Q, 366R, 367S, Psychology 325K, Risk Management 357E. Courses used to satisfy this requirement may not be counted toward requirement 9.

Most of these courses have substantial prerequisites, sometimes including courses in other departments. Some have restricted enrollment. The student is responsible for meeting prerequisites and other requirements for enrollment in the courses selected to fulfill this requirement. Courses should be chosen in consultation with the specialization adviser to form a coherent program consistent with the student's background and goals.

Educational Psychology 371 may not be counted toward this degree if it is taken after Mathematics 358K or 378K.

9. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, engineering courses, and courses counted toward requirement 8g may not be used to fulfill this requirement.
10. Enough additional coursework to make a total of 126 semester hours.

Specialization in Scientific Computation

Students who complete this specialization may simultaneously fulfill some of the requirements of the Elements of Computing Certificate or the Certificate in Scientific Computation. These certificate programs are described on pages 514–515.

5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. Statistics and Scientific Computation 222 and Computer Science 307; or Computer Science 307 and 315.
8. At least thirty-two semester hours of upper-division coursework in mathematics and related areas, consisting of
 - a. Mathematics 340L or 341.
 - b. Mathematics 427K, 348, 362K, and 368K.
 - c. Mathematics 361K or 365C.
 - d. Students who fulfill the requirements of the Elements of Computing Certificate or the Certificate in Scientific Computation may count up to six hours of upper-division certificate coursework toward this requirement. Computer Science 323E may not be counted toward this requirement. Courses used to satisfy this requirement may not be counted toward requirement 9.
 - e. Additional coursework chosen from the following: Mathematics 325K or 328K (but not both), 427L, 343K or 373K (but not both), 343L, 346, 358K, 361, 365D, 372K, 474M, 376C, 378K.
9. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, engineering

courses, and courses counted toward requirement 8e may not be used to fulfill this requirement.

10. Enough additional coursework to make a total of 126 semester hours.

OPTION IV: PURE MATHEMATICS

5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. At least thirty-two semester hours of upper-division coursework in mathematics, consisting of
 - a. Mathematics 340L or 341.
 - b. Mathematics 427K, 361, 362K, 365C, and 373K.
 - c. One of the following two-course sequences: Mathematics 427K and 372K, 358K and 378K, 362K and 339J, 348 and 368K, 365C and 365D, 367K and 365G, 367K and 367L, 373K and 373L.
 - d. Additional hours of upper-division coursework in mathematics chosen with the approval of the mathematics adviser. Either Mathematics 343K or 361K may be counted toward this requirement, but not both.
8. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, and engineering courses may not be used to fulfill this requirement.
9. Enough additional coursework to make a total of 126 semester hours.

OPTION V: TEACHING

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school mathematics teacher in Texas; the student chooses either mathematics certification or physical science, mathematics, and engineering certification. However, completion of the course requirements does not guarantee the student's certification. For information about additional certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

Students are encouraged to become familiar with a variety of mathematical software relevant to middle grades or secondary teaching, such as computer geometry systems, spreadsheets, and statistical software.

Whenever possible, the student should take courses and sections of courses that use these types of software.

5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
6. History 329U or Philosophy 329U.
7. Mathematics 408C and 408D, or 408N, 408S, and 408M.
8. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, and engineering courses may not be used to fulfill this requirement.
9. Mathematics 315C.
10. Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic: *Research Methods—UTeach*), or Physics 341 (Topic: *Research Methods—UTeach*). The course used to fulfill this requirement may also be counted toward requirement 5 above if it is in the same field of study as the other courses counted toward requirement 5. Students are encouraged to take at least one course to fulfill requirement 5 before taking research methods.
11. The requirements of one of the following certification areas:
 - a. For mathematics certification: At least thirty-two semester hours of upper-division coursework in mathematics, consisting of
 - i. Mathematics 340L or 341.
 - ii. Mathematics 325K, 333L, 358K, and 362K.
 - iii. Mathematics 326K, 360M, 375T (Topic: *Discovery: Introduction to Advanced Study in Mathematics*), or Science 360 (Topic: *Math Domain*). Students seeking middle grades mathematics certification must complete Mathematics 326K.
 - iv. Mathematics 361K or 365C.
 - v. Mathematics 328K, 343K, or 373K.
 - vi. Mathematics 427K or 378K.
 - vii. Enough of the following coursework to provide a total of at least thirty-two semester hours: Mathematics 326K, 427K, 328K, 339J, 339U, 343K, 343L, 348, 360M, 361, 365C, 365D, 368K, 373K, 373L, 175T (Topic: *Seminar for Prospective Teachers*), 375T (Topic: *Discovery: Introduction to Advanced Study in Mathematics*), 378K. A course used to fulfill requirements iii through vii may not also be counted toward requirement ivii.
 - b. For physical science, mathematics, and engineering certification:
 - i. Mathematics 325K, 427K, 328K, 333L, 341, and 358K.
 - ii. Mathematics 361K or 365C.
 - iii. Mathematics 326K, 360M, 375T (Topic: *Discovery: Introduction to Advanced Study in Mathematics*), or Science 360 (Topic: *Math Domain*).
 - iv. Physics 301, 101L, 316, 116L, 315, and 115L.
 - v. Chemistry 301 or 301H, 302 or 302H, and 204.
 - vi. Chemical Engineering 379 (Topic: *Fundamentals of Engineering and Design*), 379 (Topic: *Engineering Energy Systems*), and Mechanical Engineering 379M (Topic: *Design of Machines and Systems*).
- viii. A three-semester-hour supporting course that uses mathematics but is in a field other than mathematics. The following courses may be used to fulfill this requirement: Accounting 310F or 311, Architectural Engineering 323K, Astronomy 307, 352K, 352L, 358, 367M, Chemistry 301 or 301H, 303, Civil Engineering 321, 341, Computer Science 307, Economics 420K, Electrical Engineering 302, 366, 366L, Geological Sciences 346C, 354, 476K, Geography 360L, Government 341M, Human Development and Family Sciences 322, Mechanical Engineering 320, 326, 366L, 366Q, 366R, Petroleum and Geosystems Engineering 310, Physics 301, 303K, 303L, Psychology 325K, 332, Sociology 369L. The supporting course may not also be counted toward other requirements in the prescribed work.
12. Eighteen semester hours of professional development coursework: Curriculum and Instruction 650S, UTeach-Natural Sciences 101, 110, 350, 355, 360, 170.
13. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; Curriculum and Instruction 339E; and Mathematics 326K.
14. Enough additional coursework to make a total of 126 semester hours.

OPTION VI: MATHEMATICS HONORS

5. Breadth requirement: An honors mathematics course; one of the following two-semester sequences: Biology 315H and 325H, Chemistry 301H and 302H, or Physics 310, 101L, 316, and 116L; and nine additional semester hours chosen from the preceding courses, Computer Science 315H, and Physics 315 and 115L. Credit earned by examination may not be counted toward this requirement.
6. An honors section of Mathematics 427K, and six semester hours of coursework chosen from Mathematics 365C, 367K, and 373K.
7. Twenty additional semester hours of upper-division coursework in mathematics approved by the departmental faculty adviser.
8. Natural Sciences 301C.
9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
10. Mathematics 379H.
11. Thirty additional semester hours of coursework approved by the departmental honors adviser.
12. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
13. Enough additional coursework to make a total of 120 semester hours.

SPECIAL REQUIREMENTS

Students in all options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in each of the professional development courses listed in requirement 12 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 13. For information about the portfolio review and additional teacher certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

To graduate under option VI, students must remain in good standing in the Dean's Scholars Honors Program, must submit an honors thesis approved by the departmental honors adviser, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCE

The student preparing for a career in medical laboratory science completes at least one hundred hours of academic work at the University. After this work is completed, the student enters an accredited school of medical laboratory science (or medical technology) for an additional twelve to sixteen months of clinical education. After completion of this education, the student is awarded the Bachelor of Science in Medical Laboratory Science and is eligible for national certifying examinations administered by the National Credentialing Agency for Laboratory Personnel (NCA) and the American Society for Clinical Pathology (ASCP). Successful completion of these exams results in national certification as a medical laboratory scientist or medical technologist.

The purpose of this degree program is to meet the increasing demand for laboratory professionals in hospital and clinic laboratories, research, industry, public health, education, and laboratory management. Medical laboratory science is also an excellent foundation for graduate study in medicine, dentistry, management, education, and other disciplines.

PRESCRIBED WORK

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSMedLabSci must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

2. One of the following foreign language/culture choices.¹²
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. Mathematics 408C or 408N.
4. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 318M, 320 or 329 or 330, 126L, 326M or 326R, 344 or 366R, 360K, 160L, 361, 361L, and 365S.
5. Chemistry 301 or 301H, 302 or 302H, 204, 210C, 310M, 310N, and 369.
6. Eight semester hours of physics, in one of the following sequences: Physics 317K, 117M, 317L, and 117N; or 302K, 102M, 302L, and 102N.
7. Enough additional elective coursework, if necessary, to make a total of at least one hundred semester hours of academic work completed at the University before the clinical education program.
8. Twelve to sixteen months of clinical education in a program of medical laboratory science (or medical technology) accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). The student must apply to and be accepted into a clinical education program. The faculty adviser in the School of Biological Sciences and the clinical education program director work closely with each student to ensure his or her success in the program. Upon completion of the clinical education program, the student must submit a letter from the program director verifying completion of coursework and a transcript showing grades in all courses in the program to The University of Texas at Austin, Office of the Dean, College of Natural Sciences, 1 University Station G2500, Austin TX 78712. To be counted toward the degree, the coursework must be approved by the faculty adviser in the School of Biological Sciences and the dean. None of the coursework completed in the clinical education program may be used to fulfill in-residence degree requirements, requirements 1 through 7 of the prescribed work above, or the requirements for a second bachelor's degree.

SPECIAL REQUIREMENTS

Students must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

ORDER AND CHOICE OF WORK

The student should consult with his or her academic and faculty advisers each semester regarding order and choice of work and balancing the laboratory load. To complete the program within four years, it may be necessary for the student to take some courses during the summer.

BACHELOR OF SCIENCE IN NUTRITION

Nutrition is an integrative science with the overall objective of improving the health and well-being of individuals and groups. Nutritional inquiry encompasses not only the roles of electrons, atoms, molecules, genes, cells, organs, and complex organisms in biological life processes but also the links between life science and health, behavior, education, population, culture, and economics. The Bachelor of Science in Nutrition degree program includes six options, described below.

For students pursuing careers in dietetics, courses in behavioral and clinical nutrition and food systems management provide the academic preparation required for dietetics practice. The Didactic Program in Dietetics (DPD) meets the coursework requirements that qualify graduates to apply to a dietetic internship. The Coordinated Program in Dietetics (CPD) includes both the coursework and the supervised practice necessary to be eligible to write the examination to become a registered dietitian. The DPD and CPD are accredited by the Commission on Accreditation of Dietetics Education of the American Dietetic Association (ADA), 120 S. Riverside Plaza, Suite 2000, Chicago IL 60606, (800) 877-1600.

The nutritional sciences option requires courses in science and research in order to prepare students for graduate study or professional school. Graduates may seek employment in private or publicly funded research programs or, upon completion of graduate study, may engage in college or university teaching or

12. Students who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.

nutrition research. This option also allows students to fulfill requirements for postgraduate study in medicine, dentistry, and other health professions.

Students who select the nutrition in business option may earn a Business Foundations Certificate and seek employment in areas such as sales and customer support in the food industry.

The teaching option allows students to meet the state certification requirements to teach composite science in secondary and/or middle grades. There is no certification for teaching nutrition or health in Texas public schools.

The honors option is intended to prepare students for academic or research careers. Students who plan to follow the honors option must be admitted to the Dean's Scholars Honors Program as described on page 513. In addition to taking a core of research, writing, and seminar courses in the College of Natural Sciences, students in this option consult with the nutritional sciences honors adviser to develop a coherent individual program of rigorous and challenging courses from across the University.

Students in the international nutrition option gain firsthand knowledge of nutrition issues in other countries through a study abroad experience. Students combine the study of nutrition with a broad range of courses to prepare for experience studying and practicing nutrition in another culture.

PRESCRIBED WORK COMMON TO ALL OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSNtr must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Students who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their language deficiency.

3. At least thirty-six semester hours of upper-division coursework, of which at least twenty-four must be in nutrition. Eighteen hours of upper-division coursework in nutrition must be completed in residence at the University. The amount of upper-division coursework in nutrition required for option IV may differ because of teacher certification requirements.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: DIETETICS

Students in dietetics may select either the Didactic Program in Dietetics (DPD) or the Coordinated Program in Dietetics (CPD). Students who complete the DPD with at least four upper-division nutrition courses completed in residence will receive a Verification Statement that qualifies them to apply for an accredited dietetic internship. DPD graduates who complete a dietetic internship may become active members of the American Dietetic Association (ADA) and are eligible to write the examination to become a registered dietitian.

Students interested in the Coordinated Program in Dietetics must apply for admission after completing sixty semester hours of prerequisite coursework. Information about admission is given on pages 517–518. Upon completing the CPD, which includes approximately one thousand hours of supervised practice, graduates immediately qualify for active membership in the ADA and to write the examination to become a registered dietitian.

Students who are admitted to the CPD should consult the faculty adviser each semester regarding order and choice of work. During the fourth year, the following courses must be taken in the indicated term: *fall semester*: Nutrition 245C; *spring semester*: Nutrition 372C, 372F, 373S; *summer session*: Nutrition 374C and 374P. Because these courses are taught only once a year, a student who does not take them at the indicated time may be unable to complete the program.

4. At least six semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 and 113L.
5. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.
6. Three semester hours of statistics chosen from Statistics and Scientific Computation 303, 304, and 305.

7. Chemistry 301 or 301H, 302 or 302H, 204, 310M, and either 369 or both 339K and 339L.
8. Biology 311C, 365R, and 365S.
9. Accounting 310F or 311.
10. Twenty-one semester hours of core nutrition coursework:
 - a. Nutrition 312, 112L, 326, and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
 - b. Nutrition 307, 107L, 338W, 342, and 365 (Topic 1: *Vitamins and Minerals*; Topic 2: *Nutrition and Genes*; or Topic 3: *Epidemiological and Statistical Methods in Nutrition*). Students in the CPD must complete Nutrition 371 instead of 365.
11. At least twenty-eight additional semester hours in nutrition, consisting of the following:
 - a. Behavioral and clinical nutrition:
 - i. CPD: Nutrition 315, 218, 118L, 330, 332, and 370.
 - ii. DPD: Nutrition 315, 218, 118L, 332, 370, 371, and either Nutrition 330 or 365 (Topic 2: *Nutrition and Genes*).
 - b. Food systems management: Nutrition 334, 234L, and 355M.
 - c. Research:
 - i. CPD: Nutrition 373S.
 - ii. DPD: One of the following: Nutrition 324 and 124L, 355, 366L, 379H, Statistics and Scientific Computation 318, 318M, 321, 352. With the approval of the faculty undergraduate adviser, DPD students may count Nutrition 352 toward this requirement.
 - d. Professional development:
 - i. CPD: Nutrition 245C.
 - ii. DPD: Nutrition 162.
12. Students in the CPD must complete an additional fifteen semester hours of supervised practice: Nutrition 345M, 372C, 372F, 374C, and 374P.
13. Enough additional coursework to make a total of 126 semester hours.

OPTION II: NUTRITIONAL SCIENCES

4. At least six semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 and 113L.
5. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.

6. Three semester hours of statistics chosen from Statistics and Scientific Computation 303, 304, and 305.
7. Chemistry 301 or 301H, 302 or 302H, 204, 210C, 310M, 310N, and either 369 or both 339K and 339L.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 365R or 365S.
9. One of the following four-semester-hour sequences: Physics 301 and 101L, 302K and 102M, 303K and 103M, or 317K and 117M.
10. Twenty-one semester hours of core nutrition coursework:
 - a. Nutrition 312, 112L, 326, and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
 - b. Nutrition 307, 107L, 338W, 342, and 365 (Topic 1: *Vitamins and Minerals*; Topic 2: *Nutrition and Genes*; or Topic 3: *Epidemiological and Statistical Methods in Nutrition*). Students may substitute either Chemistry 455 or Biology 126L and 326R for Nutrition 307 and 107L.
11. Twelve additional semester hours of nutrition, including the following:
 - a. Nutritional sciences: Nutrition 365 or 371. The same topic of Nutrition 365 may not be counted both toward this requirement and toward requirement 10b.
 - b. Behavioral and clinical nutrition: Nutrition 315, 218 and 118L, 330, 332, 360, or 370.
 - c. Research: Three semester hours of coursework chosen from Nutrition 366L, Biology 325L, 331L, and Chemistry 369L.
12. Enough additional coursework to make a total of 126 semester hours.

OPTION III: NUTRITION IN BUSINESS

4. At least six semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 and 113L.
5. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.
6. Three semester hours of statistics chosen from Statistics and Scientific Computation 303, 304, and 305.
7. Chemistry 301 or 301H, 302 or 302H, 204, 310M, and either 369 or both 339K and 339L.

8. Biology 311C, 365R, and 365S.
9. Twenty-one semester hours of core nutrition coursework:
 - a. Nutrition 312, 112L, 326, and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
 - b. Nutrition 307, 107L, 338W, 342, and 365 (Topic 1: *Vitamins and Minerals*; Topic 2: *Nutrition and Genes*; or Topic 3: *Epidemiological and Statistical Methods in Nutrition*).
10. At least seventeen additional semester hours of nutrition, including the following:
 - a. Behavioral and clinical nutrition: Six hours chosen from Nutrition 315, 218 and 118L, 330, 332, 360, 370, and 371.
 - b. Food systems management: Nutrition 334 and 234L.
 - c. Research: Nutrition 324 and 124L, 355, 366L, or 379H. With departmental approval, students in option III may substitute Nutrition 352.
11. Fifteen semester hours chosen from Accounting 310F or 311, Advertising 305 or 318J, Communication Studies 316L, Finance 320F, Human Development and Family Sciences 322, Legal Environment of Business 320F, Management 320F, 325, Management Information Systems 302F, Marketing 320F, and Nutrition 355M.
12. Enough additional coursework to make a total of 126 semester hours.

OPTION IV: TEACHING

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school teacher in Texas, but completion of the course requirements does not guarantee the student's certification. For information about additional requirements, students should consult the UTeach-Natural Sciences academic adviser.

4. At least six semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 and 113L.
5. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.
6. Three semester hours of statistics chosen from Statistics and Scientific Computation 303, 304, and 305.
7. Chemistry 301 or 301H, 302 or 302H, 204, 310M, and either 369 or both 339K and 339L.
8. Biology 311C, 311D, 365R, and 365S.
9. For students with biological sciences as the primary teaching area, Biology 325 and 370; for students with chemistry as the primary teaching area, Chemistry 210C, 310N, and 455.
10. History 329U or Philosophy 329U.
11. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 302K, 102M, 302L, and 102N; 303K, 103M, 303L, and 103N; or 317K, 117M, 317L, and 117N.
12. Six semester hours of coursework in geological sciences; courses intended for nonscience majors may not be counted toward this requirement.
13. Twenty-one semester hours of core nutrition coursework:
 - a. Nutrition 312, 112L, 326, and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
 - b. Nutrition 307 and 107L, or Biology 126L and 326R, or Chemistry 455.
 - c. Nutrition 338W, or Biology 337 (Topic 2: *Research Methods: UTeach*), or Chemistry 368 (Topic: *Research Methods—UTeach*).
 - d. Nutrition 342 or Chemistry 339L.
 - e. Nutrition 365 (Topic 1: *Vitamins and Minerals*; Topic 2: *Nutrition and Genes*; or Topic 3: *Epidemiological and Statistical Methods in Nutrition*) or Biology 325 or 325H.
14. Six semester hours in addition to the core nutrition coursework, consisting of one of the following research courses: Nutrition 366L, Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic: *Research Methods—UTeach*), or Physics 341 (Topic: *Research Methods—UTeach*); and three additional hours of upper-division coursework in nutrition.
15. Eighteen semester hours of professional development coursework: Curriculum and Instruction 650S, UTeach-Natural Sciences 101, 110, 350, 355, 360, and 170.
16. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: *Adolescent Development*) or Psychology 301 and 304; and Curriculum and Instruction 339E.
17. Enough additional coursework to make a total of 126 semester hours.

OPTION V: NUTRITION HONORS

4. Breadth requirement: A calculus course and a statistics course, one of which must be a designated honors course; Biology 315H and 325H; Chemistry 301H and 302H; and three additional hours of honors-designated or approved coursework in biology, chemistry, computer science, mathematics, statistics and scientific computation, or physics. Credit earned by examination may not be counted toward this requirement.
 5. At least three semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 and 113L.
 6. Chemistry 204, 310M, and 310N, and either 369 or both 339K and 339L.
 7. Biology 365R and 365S.
 8. Nutrition 312, 112L, 326, 126L, 342, 365 (Topic 1: *Vitamins and Minerals*), 366L, and twelve additional semester hours of nutrition or related coursework approved by the departmental honors adviser.
 9. Natural Sciences 301C.
 10. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
 11. Nutrition 379H and a three-semester-hour upper-division research course approved by the departmental honors adviser.
 12. Ten semester hours of additional coursework approved by the departmental honors adviser.
 13. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
 14. Enough additional coursework to make a total of 120 semester hours.
4. Economics 304K or 304L, and at least three semester hours chosen from Psychology 301, Sociology 302, and Anthropology 302.
 5. Six semester hours chosen from the following: Geography 339K, 357, Mexican American Studies 307, 318, Sociology 335, 354K.
 6. Fourth-semester-level proficiency, or the equivalent, in Spanish or in the language of the student's proposed area of study abroad.
 7. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.
 8. Three semester hours of statistics chosen from Statistics and Scientific Computation 303, 304, and 305.
 9. Chemistry 301 or 301H, 302 or 302H, 204, 310M, and 369.
 10. Biology 311C, 326M, and 126L.
 11. Eighteen semester hours of core nutrition coursework:
 - a. Nutrition 312, 112L, 326, and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
 - b. Nutrition 307, 107L, 338W, and 342.
 12. Fifteen additional semester hours of nutrition: Nutrition 316, 218, 118L, 321, 331, and 353.
 13. At least nine semester hours, three of which must be upper-division, chosen from one of the following areas:
 - a. Health professions: Chemistry 210C, 310N, Biology 205L or 206L, 311D, 325, 326M, 346, Nutrition 365 (Topic 1: *Vitamins and Minerals*).
 - b. Dietetics: Nutrition 315, 330, 332, 370, 371.
 - c. Behavioral science: Human Development and Family Sciences 304, 313, 113L, Psychology 304, 308, 319K, Sociology 308D, 319, 320K, 324K.
 14. Enough additional coursework to make a total of 126 semester hours.

OPTION VI: INTERNATIONAL NUTRITION

Students in this option must participate for one semester or summer session in a study abroad program in nutrition offered by the University. Students must submit a study abroad application. During the study abroad experience, students complete Nutrition 353, *Field Experience in International Nutrition*. Additional coursework in nutrition or in the language, culture, or history of the country may be available during the international study experience. All study abroad programs in nutrition must be approved in advance by the international nutrition faculty adviser. A list of other study abroad opportunities in nutrition is maintained in the main office of the School of Human Ecology.

SPECIAL REQUIREMENTS

Students in all options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in each of the professional development courses listed in requirement 15 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 16. Information about the portfolio review and additional teacher certification requirements is available from the UTeach-Natural Sciences academic adviser.

To graduate under option V, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 11, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

BACHELOR OF SCIENCE IN PHYSICS

All aspects of the physical universe are of interest to the physicist, who seeks to understand not only the smallest forms of matter and the rich phenomena present in our everyday lives but also the universe itself. Physics has played a critical role in human technological and intellectual development during the twentieth century. The tools of the physicist—observation, imagination, model building, prediction, and deduction—will enable physics to continue this influence into the new century. The Bachelor of Science in Physics degree program is designed to provide the skills, understanding, and outlook required for participation in the discovery of new knowledge about nature.

The Bachelor of Science in Physics program is balanced and broad. It is designed to give the student a strong foundation for graduate study or work in physics and, with additional training, for work in a variety of other areas, such as astronomy, astrophysics, biophysics, chemical physics, computer science, engineering, geophysics, mathematics, medicine, physics teaching, and space sciences. Students who end their formal training with the bachelor's degree may seek employment in industry, in national laboratories, or in teaching; they should consider the options in computation, radiation physics, space sciences, and teaching, which augment the broad instruction provided by the basic Bachelor of Science in Physics. For those who plan to teach physics in secondary school, the teaching option provides the courses needed for certification.

Students who plan to follow option VI, physics honors, must be admitted to the Dean's Scholars Honors Program as described on page 513.

PRESCRIBED WORK COMMON TO ALL OPTIONS

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSPhy must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Options I–IV: One of the following foreign language/culture choices. Students in options V and VI are exempt from this requirement.¹³
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. Thirty-six semester hours of upper-division coursework.
4. At least eighteen semester hours of upper-division coursework, including at least twelve semester hours of upper-division coursework in physics, must be completed in residence at the University.

ADDITIONAL PRESCRIBED WORK FOR EACH OPTION

OPTION I: PHYSICS

This option is designed to give the student a strong foundation for graduate study or work in physics and for further study or work in a variety of other areas.

5. Chemistry 302 or 302H.

13. Students in all options who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.

6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.
 7. Physics 301, 101L, 316, 116L, 315, and 115L.
 8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics. The following courses are recommended: Mathematics 340L, 361, and 362K. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
 9. Twenty-eight semester hours of upper-division coursework in physics, consisting of Physics 336K, 352K, 353L, 355, 362K, 362L, 369, 373, and 474, or their equivalents.
 10. Enough additional coursework to make a total of 126 semester hours.
- a. Statistics and Scientific Computation 222, Computer Science 307, and three of the following courses. The student must complete coursework from at least two of the following areas.
 - i. Numerical methods: Chemical Engineering 348, Civil Engineering 379K, Computer Science 323E, 323H, 367, Mathematics 348, Statistics and Scientific Computation 335.
 - ii. Statistical methods: Biomedical Engineering 335, Mathematics 358K, 378K.
 - iii. Other computing topics: Computer Science 324E, 327E, 329E, 377, Mathematics 346, 362M, 368K, 372K, 376C, Mechanical Engineering 367S, Statistics and Scientific Computation 329D, 374C, 374D, 374E.
 - b. Twelve semester hours chosen from Electrical Engineering 306, 312, 316, 319K, and 422C.
 11. Enough additional coursework to make a total of 126 semester hours.

OPTION II: COMPUTATION

This option is designed to provide the necessary foundation and hands-on skill in computation for the student who plans a career or further study in computational physics or computer science. Students who complete this option may simultaneously fulfill some of the requirements of the Certificate in Scientific Computation, which is described on pages 514–515.

5. Chemistry 302 or 302H.
6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics or statistics and scientific computation. Statistics and Scientific Computation 329C and Mathematics 362K are recommended. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
9. Twenty-four semester hours of upper-division coursework in physics, consisting of Physics 329, 336K, 338K, 352K, 353L, 355, 369, and 373, or their equivalents.
10. One of the following scientific computation options:

OPTION III: RADIATION PHYSICS

This option is designed to provide the necessary foundation for the student who plans a career or further study in nuclear engineering, radiation engineering, or health physics.

5. Chemistry 302 or 302H.
6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics. The following courses are recommended: Mathematics 340L, 361, and 362K. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
9. Twenty-four semester hours of upper-division coursework in physics, including Physics 336K, 352K, 353L, 355, 362L, 369, and 373, or their equivalents.
10. Sixteen semester hours of upper-division coursework in mechanical engineering, consisting of Mechanical Engineering 136N, 337C, 337F, 337G, 361E, and 361F.

11. Enough additional coursework to make a total of 126 semester hours.

OPTION IV: SPACE SCIENCES

This option is designed to provide the necessary foundation for the student who plans a career or further study in space sciences.

5. Chemistry 302 or 302H.
6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics. The following courses are recommended: Mathematics 340L, 361, and 362K. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
9. Twenty-four semester hours of upper-division coursework in physics, consisting of Physics 329, 336K, 352K, 353L, 355, 362K, 369, and 373, or their equivalents.
10. Either fifteen semester hours of upper-division coursework in aerospace engineering or thirteen hours in aerospace engineering and three additional hours of upper-division coursework in physics.
11. Enough additional coursework to make a total of 126 semester hours.

OPTION V: TEACHING

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school science teacher in Texas; the student chooses composite science certification with physics as the primary teaching field, physical sciences certification, physics/mathematics certification, or physical science, mathematics, and engineering certification. However, completion of the course requirements does not guarantee the student's certification. For information about additional requirements, students should consult the UTeach-Natural Sciences academic adviser.

5. Physics 301, 101L, 316, 116L, 315, and 115L.
6. Mathematics 408C and 408D or the equivalent, 427K, and 427L.

7. At least eighteen semester hours of upper-division coursework in physics, consisting of Physics 341 (Topic: *Research Methods—UTeach*), 353L, 355, and three of the following courses: Physics 329, 333, 336K, 338K, 352K, 373, Science 360 (Topic: *Physics by Inquiry*). With the consent of the program coordinator, an upper-division physics course that includes a substantial research component may be substituted for Physics 341.
8. History 329U or Philosophy 329U.
9. The requirements of one of the following certification areas:
 - a. For composite science certification:
 - i. Biology 311C and 311D.
 - ii. Chemistry 301 or 301H and 302 or 302H.
 - iii. Six hours of coursework in geological sciences; courses intended for nonscience majors may not be counted toward this requirement.
 - iv. Enough additional approved coursework in biology, chemistry, or geological sciences to provide the required twelve hours in a second field.
 - b. For physical sciences certification:
 - i. Chemistry 301 or 301H, 302 or 302H, 204 or 317, 353, 153K, 154K, 354L, and 455 or 456.
 - ii. Three additional hours of upper-division coursework in physics.
 - c. For physics/mathematics certification: Mathematics 315C, 325K, 326K or 360M, 333L, 341 or 340L, 358K, and 362K.
 - d. For physical science, mathematics, and engineering certification:
 - i. Mathematics 315C, 325K, 333L, 358K, and 362K.
 - ii. Chemistry 301 or 301H, 302 or 302H, and 204.
 - iii. Chemical Engineering 379 (Topic: *Fundamentals of Engineering and Design*), 379 (Topic: *Engineering Energy Systems*), and Mechanical Engineering 379M (Topic: *Design of Machines and Systems*).
10. Eighteen semester hours of professional development coursework: Curriculum and Instruction 650S, UTeach-Natural Sciences 101, 110, 350, 355, 360, 170.
11. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; and Curriculum and Instruction 339E.

12. At least eighteen semester hours of upper-division coursework, including at least twelve hours of upper-division work in physics taken in residence at the University.
13. Enough additional coursework to make a total of at least 126 semester hours.

OPTION VI: PHYSICS HONORS

5. Breadth requirement: Biology 315H and 325H, Chemistry 301H and 302H, and Mathematics 427K and 427L; at least one of the math courses must be a designated honors section. Credit earned by examination may not be counted toward this requirement.
6. Mathematics 340L and 361.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Physics 336K, 352K, 353L, 355, 362K, 362L, 369, 373, and 474.
9. Natural Sciences 301C.
10. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
11. Physics 379H and a three-semester-hour upper-division research course approved by the departmental honors adviser.
12. Ten additional semester hours of coursework approved by the departmental honors adviser.
13. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
14. Enough additional coursework to make a total of 120 semester hours.

SPECIAL REQUIREMENTS

Students in all options must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in each of the professional development courses listed in requirement 10 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 11. Information about the portfolio

review and additional teacher certification requirements is available from the UTeach-Natural Sciences academic adviser.

To graduate under option VI, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 11 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

BACHELOR OF SCIENCE IN PUBLIC HEALTH

The Bachelor of Science in Public Health degree program is designed to prepare graduates for entry-level positions in public health and to equip them to pursue certificate and graduate degrees in the field. The program offers broad-based training in the five core areas of public health, with a choice of six areas of specialization.

Students for whom the degree is appropriate include those interested in health careers and in dual graduate degree programs in medicine and public health. The degree is administered by the School of Biological Sciences.

Admission requirements for the program are given on page 518.

PRESCRIBED WORK

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the BSPublicHealth must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. One of the following foreign language/culture choices.¹⁴
 - a. Second-semester-level proficiency, or the equivalent, in a foreign language.

14. Students who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their foreign language deficiency.

- b. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
 - c. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. Mathematics 408C or 408N.
 4. Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
 5. Chemistry 301 or 301H, 302 or 302H, 204, 310M, and 369.
 6. Foundation courses:
 - a. Public health: Public Health 317.
 - b. Microbiology: Biology 326M or 326R, and 126L.
 - c. Nutrition and physiology: Nutrition 306 and Biology 365S.
 - d. Social and behavioral sciences: One of the following: Economics 304K, 304L, Psychology 301, Sociology 319, 354K.
 - e. Political science/government: Government 358 or Management 320F.
 7. Public health core:
 - a. Biostatistics and public health informatics: Biology 318M or Statistics and Scientific Computation 318M.
 - b. Environmental health sciences: Public Health 338.
 - c. Epidemiology: Public Health 354.
 - d. Global health: Public Health 334.
 - e. Health policy and management: Public Health 358D.
 - f. Social and behavioral sciences: Public Health 368D.
 8. At least nine hours of coursework in one of the following areas of specialization; courses counted toward requirement 4 may not be used to fulfill this requirement.
 - a. Biostatistics and public health informatics: Biology 321G, Computer Science 303E, 329E (approved topics only), Geography 360G, Mathematics 408D or 408S, 340L, 358K, 362K, 362M, Public Health 341R.
 - b. Environmental health sciences: Biology 375, 478T, Biomedical Engineering 301, Civil Engineering 341, 342, 346, 346K, 369L, Geology 302C, 307, 346C, 476K, 476M, Geography 334C, 339K, 356T (approved topics only), 357, 360G, Marine Science 307, 354Q, Public Health 341R.
 - c. Health policy and management: Bridging Disciplines 329, Economics 304K, 304L, 330T (approved topics only), Government 335N (approved topics only), 357M (approved topics only), 358, 360N (Topic 10: *Introduction to International Relations*), 365N (Topic 9: *International Environmental Policy*), 370L (approved topics only), Human Development and Family Sciences 362, Management 320F, Philosophy 325L, 325M, 347, Public Affairs 310S (approved topics only), 325 (approved topics only), 330C, 330S (approved topics only), Public Health 341R, Sociology 354K.
 - d. Infectious diseases and public health microbiology: Biology 329, 129L, 330, 230L, 336, 337 (Topic: *Genomics and Proteomics in Human Infectious Disease Research*), 337 (Topic: *Virulence Mechanisms of Bacterial Pathogens*), 347, 360K, 160L, 361, 361L, 361P, Public Health 341R.
 - e. Nutrition: Nutrition 315, 316, 321, 331, Public Health 341R.
 - f. Social and behavioral sciences: Advertising 305, 319, 334, Communication Studies 306M, 332, 332K, 342K, 355K, 367, Geography 356T (Topic: *Gender and Health*), Health Education 329K, 335, 352K (approved topics only), 370K (approved topics only), 371K, 373, Marketing 320F, Pharmacy 350K, Public Health 341R, Social Work 310, 311, Sociology 319, 321K (approved topics only), 329, 336D, 354K, 369K, 369L, Women's and Gender Studies 345 (Topic 35: *Psychosocial Issues in Women's Health*).
 9. At least eighteen semester hours of upper-division coursework must be completed in residence at the University. All students must complete at least thirty-six semester hours of upper-division coursework.
 10. Enough additional coursework to make a total of 126 semester hours.

SPECIAL REQUIREMENTS

Students must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each foundation course, public health core course, and mathematics and science course required by the degree, and a grade point aver-

age in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

BACHELOR OF SCIENCE IN TEXTILES AND APPAREL

Students who would like to pursue the Bachelor of Science in Textiles and Apparel must first be admitted to the degree program. Information about admission is given on pages 518–519. Information is also given there about admission to the field experience programs that are part of the degree.

OPTION 1: APPAREL DESIGN AND CONSERVATION

This option incorporates principles from arts, sciences, and humanities. The apparel design specialization provides instruction in constructing, designing, and coordinating fashions and making patterns and samples as preparation for a career in the apparel industry. The conservation specialization emphasizes the chemical properties of textiles and the preservation, conservation, and exhibition of textiles and apparel in museums and other collections.

PRESCRIBED WORK

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students following the apparel design and conservation option must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses that carry a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Students who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their language deficiency.
3. Three hours of lower-division coursework in anthropology, economics, psychology, or sociology; and six hours of upper-division coursework in either (a) for the apparel design specialization, American studies, anthropology, cultural studies, psychology, or sociology, or (b) for the conservation specialization, anthropology.
4. Mathematics 408C or 408N; and Mathematics 316, Statistics and Scientific Computation 303, 305, 306, or Educational Psychology 371.
5. Chemistry 301 or 301H, 302 or 302H, and 204; and either Biology 31C (for the apparel design specialization) or Chemistry 310M (for the conservation specialization).
6. Accounting 310F, Management 320F, and Marketing 320F.
7. Either (a) for the apparel design specialization, three semester hours of studio art, or (b) for the conservation specialization, Art History 303; and nine semester hours of upper-division coursework in art history or studio art.
8. Textiles and Apparel 205, 105L, 319, 325L, 325M, 352D, 260L, and 260M; Human Development and Family Sciences 322; and one of the following sequences:
 - a. Apparel design specialization: Textiles and Apparel 212K, 212L, 316L, 126, 226L, 355C, 164K (Topics 1: *Flat Pattern*, 2: *Draping*, and 3: *Advanced Apparel Design*), 264L (Topics 1: *Flat Pattern*, 2: *Draping*, and 3: *Advanced Apparel Design*), and three semester hours chosen from Textiles and Apparel 327, 328, 355D, 355N, and 376.
 - b. Conservation specialization: Textiles and Apparel 355D; three semester hours chosen from Textiles and Apparel 327, 328, 355N, and 376; twelve semester hours chosen from Textiles and Apparel 315K, 126 and 226L, 355C, and topics of 164K and 264L; and six or seven semester hours chosen from Textiles and Apparel 212K, 212L, 316L, and 316Q.
9. Thirty-six semester hours of upper-division coursework, of which at least eighteen must be within and at least twelve must be outside the School of Human Ecology.
10. Enough additional coursework to make a total of 126 semester hours.

SPECIAL REQUIREMENTS

Students must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and

science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

ORDER AND CHOICE OF WORK

The student should consult the faculty adviser each semester about order and choice of work and balancing the laboratory load. Students should also check prerequisite requirements carefully.

OPTION II: RETAIL MERCHANDISING

This option incorporates principles from arts, sciences, and humanities and provides specialized instruction for professional careers in merchandising.

PRESCRIBED WORK

All students pursuing an undergraduate degree must complete the University's core curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students following the retail merchandising option must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag or a substantial writing component. One of these courses must be upper-division. Courses with a writing flag or a substantial writing component are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Students who enter the University with fewer than two high school units in a single foreign language must take the first two semesters in a language, or the equivalent, without degree credit to remove their language deficiency.
3. Six semester hours of economics and three semester hours of psychology, sociology, or anthropology.

4. Mathematics 408C or 408N; and Mathematics 316, Statistics and Scientific Computation 303, 305, 306, or Educational Psychology 371.
5. Chemistry 301 or 301H, 302 or 302H, and 204; and Biology 311C and 311D.
6. Art History 301.
7. Communication Studies 306M, Accounting 310F, Marketing 320F, and Advertising 318J; and six semester hours chosen from Management 320F, Management Information Systems 302F, and Legal Environment of Business 320F.
8. Forty-seven semester hours in the School of Human Ecology, including the following coursework:
 - a. Textiles and Apparel 205, 105L, 212K, 212L, 315K, 316Q, 319, 352M, 355P, 260L, 260M, and 376; and nine hours chosen from Textiles and Apparel 325L, 325M, 327, 328, 355D, 355K, 355N, and 164K and 264L.
 - b. Human Development and Family Sciences 322; Human Ecology 361; and three additional hours in human development and family sciences or nutrition.
9. Thirty-six semester hours of upper-division coursework, of which at least eighteen must be within and at least twelve must be outside the School of Human Ecology.
10. Enough additional coursework to make a total of 126 semester hours.

SPECIAL REQUIREMENTS

Students must fulfill the University-wide graduation requirements given in chapter 1 and the college requirements given earlier in this chapter. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

ORDER AND CHOICE OF WORK

The student should confer with the faculty adviser each semester regarding order and choice of work and balancing the laboratory load. Students should also check prerequisite requirements carefully.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

NATURAL SCIENCES

NATURAL SCIENCES: NSC

LOWER-DIVISION COURSES

- 001. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various natural sciences disciplines. One lecture hour a week for one semester.
- 301C. Freshman Seminar.** Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.
- 001D. Practicum in Clinical Laboratory Science.** Restricted to clinical laboratory science majors. Students participate in a twelve- to fifteen-month off-campus training program. Forty laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Completion of all organized coursework for the Bachelor of Science in Clinical Laboratory Science degree and consent of the program director.
- 302. Texas Interdisciplinary Plan: Critical Thinking Seminar.** Restricted to students in the Texas Interdisciplinary Plan or in the Gateway Program. An examination of fundamental concepts in critical thinking, including the role of intellectual virtues, an analysis of the elements of thought, Socratic thinking, and the application of universal intellectual standards. Three lecture hours a week for one semester, with additional hours to be arranged. Liberal Arts 302 and Natural Sciences 302 may not both be counted. May not be repeated for credit.
- 306J. Science for the Twenty-First Century I.** Restricted to applied learning and development majors. The first of an integrated sequence of laboratory-based courses. Subjects include energy and motion, electrical circuits, atomic theory, waves, and sound. Two lecture hours and four laboratory hours a week for one semester. Natural Sciences 306J and 309 (Topic: *Science for the Twenty-First Century I*) may not both be counted.
- 306K. Science for the Twenty-First Century II.** Restricted to applied learning and development majors. The second of an integrated sequence of laboratory-based courses. Subjects include physical and chemical properties of matter, Earth's building blocks, plate tectonics, landforms, and weathering. Two lecture hours and four laboratory hours a week for one semester. Natural Sciences 306K and 309 (Topic: *Science for the Twenty-First Century II*) may not both be counted. Prerequisite: Credit or registration for Natural Sciences 306J.
- 306L. Science for the Twenty-First Century III.** Restricted to applied learning and development majors. The third of an integrated sequence of laboratory-based courses. Subjects include properties of life, compartments of living organisms, inheritance, adaptations, variations, and disease. Two lecture hours and four laboratory hours a week for one semester. Natural Sciences 306L and 309 (Topic: *Science for the Twenty-First Century III*) may not both be counted. Prerequisite: Credit or registration for Natural Sciences 306J.
- 306M. Science for the Twenty-First Century IV.** The fourth of an integrated sequence of laboratory-based courses. Subjects include astronomy and the earth's climate. Two lecture hours and four laboratory hours a week for one semester. Natural Sciences 306M and 309 (Topic: *Science for the Twenty-First Century IV*) may not both be counted. Prerequisite: Credit or registration for Natural Sciences 306J.
- 109, 209, 309. Topics in Natural Sciences.** For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary.
- 110. Dean's Scholars Seminar.** Restricted to students in the Dean's Scholars Program. Emphasis on student participation. Format may include student speakers, outside speakers, discussions, visits to laboratories, or other projects. The equivalent of one lecture hour a week for one semester. May be repeated for credit. Offered on the pass/fail basis only.
- 311. Critical Reasoning.** Restricted to students in the Texas Interdisciplinary Plan program. An examination of the fundamental concepts in critical reasoning, including the analysis of argument, application of intellectual standards, and the role of intellectual virtues. Three lecture hours a week for one semester, with additional hours to be arranged.
- 115. Women in Natural Sciences Seminar.** The work and lives of women scientists in a sociocultural context. One lecture hour a week for one semester.

118C, 218C, 318C. Forum Seminar Series. Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321. Introduction to Peer Mentoring and Leadership.** Restricted to students in the College of Natural Sciences. Explores current theory and research related to peer mentoring and leadership within higher education. Includes interactive lectures; and the opportunity for students to identify and work through ethical choices as peer leaders; to study leadership concepts such as conflict resolution, diversity, and group dynamics; to work collaboratively; and to conduct independent research. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.
- 371. Texas Interdisciplinary Plan Seminar.** Restricted to students in the Texas Interdisciplinary Plan. An analysis of interdisciplinary themes within the arts and sciences through reading, research, discussion, and writing. Three lecture hours a week for one semester, with additional hours to be arranged. Liberal Arts 371 and Natural Sciences 371 may not both be counted. May not be repeated for credit. Prerequisite: Upper-division standing and consent of the Texas Interdisciplinary Plan adviser.

DEPARTMENT OF ASTRONOMY

ASTRONOMY: AST

LOWER-DIVISION COURSES

- 301. Introduction to Astronomy.** General introduction to astronomy for nonscience majors. The solar system, stars, galaxies, and cosmology. Three lecture hours a week for one semester. Only one of the following may be counted: Astronomy 301, 302, 303, 307.
- 101L. Astronomy Discovery Laboratory.** For nonscience majors. Hands-on projects in observational astronomy and related laboratory disciplines. Students work in small groups. Three laboratory hours a week for one semester. May not be counted by students with credit for Astronomy 103L. Prerequisite: Credit or registration for Astronomy 301.
- 302. Self-Paced Introduction to Astronomy.** General, self-paced introduction to astronomy for nonscience majors. The solar system, stars, galaxies, and cosmology. Only one of the following may be counted: Astronomy 301, 302, 303, 307.
- 303. Introduction to Astronomy with Celestial Observations.** General introduction to astronomy for nonscience majors. The solar system, stars, galaxies, and cosmology. Introduces students to the night sky and includes some observational activities. Three lecture hours a week for one semester. Only one of the following may be counted: Astronomy 301, 302, 303, 307.
- 103L. Astronomical Observations.** For nonscience majors. Observations of the night sky with the naked eye and small telescopes; indoor laboratory activities. Two laboratory hours a week for one semester. May not be counted by students with credit for Astronomy 101L, 302, or 303. Prerequisite: Credit or registration for Astronomy 301 or 307.
- 104. Undergraduate Astronomy Seminar.** Designed for astronomy majors. Discussions about current astronomical research, with different topics emphasized each semester. One lecture hour a week for one semester. Offered on the pass/fail basis only. May be repeated twice for credit when the topics vary.
- 307. Introductory Astronomy.** Introduction to astronomy for science and engineering students. The solar system, stars, galaxies, and cosmology. Three lecture hours a week for one semester. Only one of the following may be counted: Astronomy 301, 302, 303, 307. Prerequisite: Mathematics 305G or the equivalent or consent of instructor; high school trigonometry and physics are recommended.
- 309. Topics in Astronomy for Nonscience Students.** Selected topics in modern astronomy: solar system, galaxies, peculiar stars, cosmology, and others. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.
- 309L. Search for Extraterrestrial Life.** For nonscience majors. Origin of life in the solar system, existence of other planetary systems, possibilities and techniques for detection of and communication with other intelligences. Three lecture hours a week for one semester. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.
- 309N. Lives and Deaths of Stars.** For nonscience majors. How stars live and die; extremes of stars and their life cycles. Exotic objects such as white dwarfs, supernovae, neutron stars, pulsars, and black holes. Specific topics may vary with instructor. Three lecture hours a week for one semester. Astronomy 309N and 309Q may not both be counted. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.
- 309P. Astronomy in Science Fiction.** The use of astronomy and other sciences in science fiction literature. Critical analysis of selected novels as to the validity of the astronomy used. Three lecture hours a week for one semester. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.

- 309Q. Time and the Cosmos.** For nonscience majors. From the beginning of time in the Big Bang to the end of time in the black hole. Includes the early universe, the formation and evolution of single and double stars, and the supercompact objects they eventually become: white dwarfs, pulsars, and black holes. Three lecture hours a week for one semester. Astronomy 309N and 309Q may not both be counted; Astronomy 309Q and 309R may not both be counted. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.
- 309R. Galaxies, Quasars, and the Universe.** For nonscience majors. Galaxies, quasars, giant black holes; cosmic evolution; the origin and future of the universe. Three lecture hours a week for one semester. Astronomy 309Q and 309R may not both be counted. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.
- 309S. The Solar System.** For nonscience majors. The nature, origin, and evolution of our solar system, including planets, moons, and other bodies. Three lecture hours a week for one semester. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.
- 309T. The Milky Way Galaxy.** Our spiral system of stars, gas, and dust; star formation. Three lecture hours a week for one semester. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.
- 110K, 210K, 310K. Conference Course.** Supervised study of selected areas of astronomy, by arrangement with a faculty member. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Written consent of instructor.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Astronomy.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Astronomy. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Astronomy.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Astronomy. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 350L. History and Philosophy of Astronomy.** Historical influence of astronomical concepts on social, economic, literary, and scientific life; the place of astronomy in society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Astronomy 301, 302, 303, or consent of instructor.
- 351. Astronomical Instrumentation.** A hands-on course in computer-controlled optical instrumentation. Intended for natural science and engineering students interested in the practical aspects of instrument design and construction. Includes optics and optical design, electronics, machining and mechanical design, and computer interfacing. Students work in groups and as teams to design a computer-controlled optical instrument. The equivalent of three lecture hours a week for one semester. Prerequisite: Upper-division standing in the College of Natural Sciences or the Cockrell School of Engineering, or consent of instructor.
- 352K. Stellar Astronomy.** Properties of stars and starlight: principles of radiation; interpretation of stellar spectra. Observational techniques such as photometry, spectroscopy, and telescopes and detectors; variable stars; binary stars. Three lecture hours a week for one semester. Prerequisite: Physics 316 and 116L.
- 352L. Positional, Dynamical, and Kinematical Astronomy.** Coordinate systems and time; stellar positions and motions; the kinematics and dynamics of star clusters and galaxies. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mathematics 427K.
- 152M. Stellar Astronomy Laboratory.** An introduction to practical observational techniques in astronomy, designed for astronomy majors or advanced students in a physical science. Exercises on the spectroscopy, photometry, and positions of stars using a sixteen-inch telescope on campus. Three laboratory hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Physics 316 and 116L; credit or registration for Astronomy 352K is recommended.
- 353. Astrophysics.** Survey of the physics of stellar and nonstellar radiation laws, stellar atmospheres and interiors; high-energy astrophysics. Three lecture hours a week for one semester. Prerequisite: Physics 316 and 116L.
- 358. Galaxies and the Universe.** Our galaxy and its constituents; stars and interstellar matter. Properties of other galaxies; galaxy interactions and mergers; expansion and evolution of the universe. Three lecture hours a week for one semester. Prerequisite: Physics 316 or the equivalent; Astronomy 352K or 307 is recommended.

UPPER-DIVISION COURSES

- 321. Current Problems in Astronomy.** For nonscience majors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and Astronomy 301, 302, 303, or consent of instructor.
- 324. Origins: The Universe, Stars, Planets, and Life.** For nonscience majors. Cosmic origins from the Big Bang to life, and the connections among the origins of stars, planets, and life. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Astronomy 301, 302, 303, or consent of instructor.

- 364. Solar System Astronomy.** Modern studies of the solar system, including properties of the planets and smaller bodies, and the origin of planetary systems. Three lecture hours a week for one semester. Prerequisite: Physics 316 and 116L.
- 367M. Methods of Astronomy.** Same as Physical Science 367M. An introductory, self-paced course in the methods of astronomy that emphasizes learning astronomical principles through observations. Six laboratory hours a week for one semester. May not be counted toward the Bachelor of Arts, Plan I, degree with a major in astronomy. Prerequisite: Upper-division standing and nine semester hours of coursework in mathematics and/or science, including one of the following: Physical Science 303, 304, Astronomy 301, 302, 303. Equivalent preparation in mathematics, physics, chemistry, or earth sciences may be substituted with written approval of the instructor.
- 175, 275, 375. Conference Course.** May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- 376. Special Topics in Advanced Astronomy.** Designed for science majors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Up to six semester hours may be counted toward the major requirement for the Bachelor of Arts with a major in astronomy. Prerequisite: Upper-division standing and consent of instructor.
- 379H. Honors Tutorial Course.** Research project and thesis for students electing to take the honors program in astronomy. May be repeated once for credit. Prerequisite: Consent of the student's research supervisor and the departmental honors adviser.
- 301D. Biology for Business, Law, and Liberal Arts.** Designed for nonscience majors. The scientific method and the social uses of scientific information. Topics include diet and chronic disease, radiation biology, DNA fingerprinting, the biology of learning, conservation of biotic diversity, and the biology of reproduction. Three lecture hours a week for one semester. May not be counted toward a degree in biology.
- 301E. Problems in Modern Biology.** An introduction to major concepts in biology, with emphasis on topics, such as genetics, that are relevant to current issues in the field. Three lecture hours and one discussion hour a week for one semester. Biology 301E and 301L may not both be counted; Biology 301E and 301M may not both be counted. May not be counted toward a degree in biology. Prerequisite: Admission to the Plan II Honors Program.
- 301L. Molecules to Organisms.** Designed for nonscience majors. Introduction to the structure and function of organisms from the molecular to the organ system level; an integrated approach to cell and molecular biology, genetics, development, and physiology of organisms. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 301L, 302, 211, 311C; only one of the following may be counted: Biology 301L, 303, 311D, 214. Biology 301E and 301L may not both be counted. May not be counted toward a degree in biology.
- 301M. Ecology, Evolution, and Society.** Designed for nonscience majors. Introduction to environmental adaptations, diversity of organisms, species interactions, organization and processes of communities, population growth and limitations, evolution and population genetics, origin of life, and human impact on the environment. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 301M, 304, 311D, 213. Biology 301E and 301M may not both be counted. May not be counted toward a degree in biology.

SCHOOL OF BIOLOGICAL SCIENCES

BIOLOGY: BIO

LOWER-DIVISION COURSES

- 101C, 301C, 401C, 601C. Topics in Biology.** Topics in biology that are especially relevant to current issues and problems in modern society. For each semester hour of credit earned, one lecture hour a week for one semester. Some topics require one additional discussion hour or three or four additional laboratory hours a week; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. May not be counted toward a degree in biology. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: The Biology of Being Human.** Introductory biology course that covers human evolution, genetics and genomics, behavior, population growth and environmental issues.

- 102C, 202C, 302C, 402C. Conference Course.** Supervised study of selected topics in biology, by individual arrangement with the School of Biological Sciences and instructor. May be repeated for credit. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 305E. Plants, Environment, and Human Affairs.** Designed for nonscience majors. Plants and the environment, including basic ecological principles and major issues such as global warming and the biodiversity crisis; plants and society, including foods, beverages, medicines, drugs, and other plant products. Three lecture hours a week for one semester. May not be counted toward a degree in biology.
- 305F. An Introduction to the Sensory Physiology of Plants.** Designed for nonscience majors. Exploration of the ways plants sense information about their environment and adapt their growth accordingly; similarities between plant and animal sensory physiology. Three lecture hours a week for one semester. May not be counted toward a degree in biology.

- 205L. Laboratory Experiments in Biology: Cellular and Molecular Biology.** Designed to give lower-division students training in laboratory techniques and experiment design and interpretation. One lecture hour and four laboratory hours a week for one semester. Biology 205L and 309H may not both be counted. Prerequisite: Credit or registration for Biology 311C (or credit for 211).
- 406D. Native Plants.** Designed for nonscience majors. Introduction to the flora of central Texas. Involves plant identification, distribution, and consideration of edible and useful wild plants. Two lecture hours and six laboratory hours a week for one semester, including field trips. May not be counted toward a degree in biology.
- 206L. Laboratory Experiments in Biology: Structure and Function of Organisms.** The organizing principles of organismal biology, such as reproduction, development, homeostatic mechanisms, transport mechanisms, communication and effector systems, and adaptive biomechanics. Comparative study and an experimental rather than an observational context are emphasized. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Credit or registration for Biology 311D (or credit for 214).
- 307D. Biology of AIDS.** Designed for nonscience majors. Introduction to organs, cells, genes, viruses, infectious diseases, and the immune system. Basic biology of HIV, AIDS, and epidemiology. Three lecture hours and one discussion hour a week for one semester. May not be counted toward a degree in biology.
- 208L. Field Biology.** Field projects, laboratory exercises, field trips, and computer simulation exercises to acquaint students with the principles and applications of ecology and some of the experimental and descriptive methods of ecological investigations. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Credit or registration for Biology 311D (or credit for 213).
- 309D. The Human Body.** Designed for nonscience majors. Introduction to the anatomical systems of the human body, their physiological functions and interrelationships. Three lecture hours and one discussion hour a week for one semester. Biology 309D and 365R may not both be counted. May not be counted by students with credit for Biology 365S. May not be counted toward a degree in biology.
- 309F. Heredity, Evolution, and Society.** Designed for nonscience majors. An elementary course in human genetics and its social impact. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 309E, 309F, 346. May not be counted toward a degree in biology.
- 311C. Introductory Biology I.** Introduction to biological energy transformation, cell structure and physiology, and gene expression. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 301L, 302, 211, 311C. Biology 311C and 212 may not both be counted. Prerequisite: Credit or registration for Chemistry 301 or 301H.
- 311D. Introductory Biology II.** Introduction to mechanisms of inheritance, evolution, physiology, and species interactions. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 301L, 303, 311D, 214. Only one of the following may be counted: Biology 301M, 304, 311D, 213. Prerequisite: Biology 311C with a grade of at least C- (or 211 and 212 with a grade of at least C- in each).
- 315H. Advanced Introduction to Genetics: Honors.** Basic principles of genetics and cell biology. Emphasis on gene structure and regulation; transmission of heritable traits; structure and function of cells; bacterial and viral genetics; and recombinant DNA technology. Three lecture hours and one discussion hour a week for one semester. Prerequisite: A score of 5 on the College Board Advanced Placement Examination in Biology and credit or registration for Chemistry 301 or 301H.
- 317. Introduction to Public Health.** Same as Public Health 317. Overview and basic principles of public health, including the public health system, concepts and tools for measuring health in populations, the relationship between public health and the medical care system, and the role of law and government in public health. Three lecture hours a week for one semester.
- 318M. Biostatistics.** Introduction to methods of statistical analysis of biological data. Three lecture hours and one discussion hour a week for one semester. Biology 318M and Statistics and Scientific Computation 318M may not both be counted. Prerequisite: Four semester hours of coursework in biology and either Mathematics 408D or 408L.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Biology.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Biological Sciences. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320. Cell Biology.** Principles of eukaryotic cell structure and function; macromolecules, energetics, membranes, organelles, cytoskeleton, gene expression, signaling, division, differentiation, motility, and experimental methodologies. Three lecture hours and one discussion hour a week for one semester. Biology 320 and 326E may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

- 320L. Cell Biology Laboratory.** Explores the complex structures and functions of cells through direct observation and experimentation. Subjects may include regulation of gene transcription and translation, protein sorting, organelles and membrane trafficking, cytoskeletal dynamics, and cell division. Students use a combination of modern molecular biology, biochemistry, and microscopy techniques, with a strong emphasis placed on hypothesis-driven approaches, proper experimental design, and clear scientific writing and presentation. One lecture hour and five laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 320.
- 321G. Introduction to Computational Biology.** Introduces computational methods used in molecular, cellular, organismal, and population biology. Subjects include molecular bioinformatics, modeling and simulation, and network analysis. Three lecture hours and two computer lab hours a week for one semester. Prerequisite: Biology 325 or 325H; Computer Science 303E, 305J, 307, or Statistics and Scientific Computation 222; and Mathematics 408C, or 408K and 408L, with a grade of at least C- in each.
- 321L. Aquatic Entomology.** The taxonomy of aquatic insects; the use of aquatic insects in biomonitoring. Two lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Biology 321L, 370C (Topic: *Applied Aquatic Entomology*), 384K (Topic 13: *Aquatic Entomology*). Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 322. Structure, Physiology, and Reproduction of Seed Plants.** The principles of structure and functioning of higher plants; special attention to the dynamics of growth and development and reproduction. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, Chemistry 302 or 302H, and concurrent enrollment in Biology 122L.
- 122L. Structure, Physiology, and Reproduction of Seed Plants Laboratory.** Observation of structure and reproduction in seed plants and employment of experimental techniques that demonstrate physiological processes, especially processes of growth and development. Two laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Biology 322.
- 323L. Laboratory Studies in Cell Biology.** Research exercises involving light/electron microscopy, image processing, autoradiography, chromatography, fractionation, flow cytometry, spectroscopy, diffraction, antibody labeling, cell growth, and kinetics. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit or registration for Biology 320.
- 324. Survey of the Plant Kingdom.** Review of the groups of living and fossil plants, emphasizing their organization, reproduction, and evolution. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and concurrent enrollment in Biology 124L.
- 124L. Survey of the Plant Kingdom Laboratory.** Demonstration of members of various plant groups, using cultures and prepared materials, to emphasize organization, reproduction, and evolution. Two laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Biology 324.
- 325. Genetics.** Basic principles of Mendelism, molecular genetics, structure and function of genes and chromosomes, populations and evolution. Three lecture hours and one discussion hour a week for one semester. Biology 325 and 325H may not both be counted. Prerequisite: Biology 311C (or 211) and 311D (or 214), with a grade of at least C- in each.
- 325H. Genetics: Honors.** Basic principles of genetics and evolution. Emphasis on population genetics and natural selection; structure and function of organ systems; behavioral ecology; and mutational analysis of organismal development. Three lecture hours and one discussion hour a week for one semester. Biology 325 and 325H may not both be counted. Prerequisite: Biology 315H with a grade of at least C-.
- 325L. Laboratory Experience in Genetics.** Experimentation and direct observation in fundamental aspects of transmission genetics. One lecture hour, four laboratory hours, and two hours of computing work a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 325T. Human Genetics.** Genomics, cancer genetics, identification and analysis of human disease genes, and monogenic and multifactorial traits in humans. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 126L. General Microbiology Laboratory.** Introduction to microbiology laboratory techniques and experimental demonstration of principles of microbiology. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 326M or 326R (or 226R).
- 326M. Introductory Medical Microbiology and Immunology.** Designed primarily for nursing and prepharmacy students. Overview of the structure, function, and genetics of bacteria, viruses, and fungi, with emphasis on the interactions between micro-organisms and the human host. Includes principles of microbial pathogenesis, the host's innate and adaptive immune responses to infection, epidemiology, laboratory diagnosis, and antimicrobial chemotherapy and vaccines. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 311C; Biology 325 or 325H with a grade of at least C-; Chemistry 301 with a grade of at least C-; and one of the following with a grade of at least C-: Mathematics 408C, 408K, 408N, 408R, Statistics and Scientific Computation 302.
- 326R. General Microbiology.** Overview of the major areas of microbiological study, including cell structure and function, genetics, host-microbe interactions, physiology, ecology, diversity, and virology. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 302 or 302H with a grade of at least C-.

- 327. General Phycology.** A general survey of the algae and of their biology. Three lecture hours a week for one semester. Biology 327 and 388J may not both be counted. Prerequisite: Biology 324, 124L, and 325 or 325H, with a grade of at least C- in each, and concurrent enrollment in Biology 127L.
- 127L. Laboratory in General Phycology.** Survey of various algal groups, including direct observations of their biology, exposure to research techniques, and instruction in culture procedures. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 327.
- 328. Introductory Plant Physiology.** General principles of the mineral nutrition, water relations, metabolic activities, growth and development of green plants. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 302 or 302H.
- 328D. Discovery Laboratory in Plant Biology.** Learning methods of experimental design, data gathering, data interpretation, and data presentation, including original experiments relating to questions of current interest in plant physiology. Five lab hours a week for one semester. Biology 328D and 337 (Topic: *Discovery Laboratory in Plant Biology*) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 128L. Laboratory Experiments in Plant Physiology.** Introduction to experimental techniques used in the study of the mineral nutrition, water relations, metabolic activities, growth and development of green plants. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 328.
- 329. Medical Mycology.** A basic introduction to medical mycology and an overview of research involving both the fungal zoopathogen and its host. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 129L. Medical Mycology Laboratory.** Basic techniques for the identification and manipulation of fungi of medical importance. Three laboratory hours a week for one semester. Prerequisite: Biology 126L (or 341) with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 329.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Biology.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the student abroad adviser in the School of Biological Sciences. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329W. Cooperative Biological Sciences.** This course covers the work period of biological sciences students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Application through the College of Natural Sciences Career Services Office; and Biology 325 or 325H, and six additional semester hours of upper-division coursework in biology, with a grade of at least B- in each.
- 330. Animal Virology.** Mechanisms by which viruses replicate and kill or transform cells. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 230L. Virology Laboratory.** Basic experimental techniques applied to selected bacteriophages and animal viruses. Four laboratory hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H, and 126L with a grade of at least C- in each, and credit with a grade of at least C- or registration for Biology 330 or 333.
- 331L. Laboratory Studies in Molecular Biology.** The methods and principles of molecular biology in a research laboratory context. Students conduct a research project directed by a faculty member. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Biology 205L, 206L, 208L, or 126L; and Biology 325 or 325H with a grade of at least C-.
- 332. Yeast Cell Biology.** Yeast is used as a model to teach some of the more actively researched areas of cell biology, such as chromosome structure, mating type, cell-cell interaction, DNA replication, mitosis, cytoskeletal motors, cell polarity, signal transduction, cell cycle, checkpoints, secretion, protein modification, yeast genetics, and yeast technology. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 333. Molecular Genetics of Bacteriophages and Plasmids.** Mechanisms of the phage infection cycle and of plasmid replication and gene expression; transposons and transposition. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 334. Global Health.** Same as Public Health 334. Global health issues, including the principles of global health, the burden of morbidity and mortality, health determinants, health care and public health systems, socioeconomic development, and human rights. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.

- 335. Introduction to Biochemical Engineering.** Microorganisms in chemical and biochemical synthesis; genetic manipulation of cells by classical and recombinant DNA techniques. Enzyme technology; design of bioreactors and microbial fermentations; separations of biological products. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 335, Biomedical Engineering 339, Chemical Engineering 339, 379 (Topic: *Introduction to Biochemical Engineering*). Prerequisite: Biology 311C with a grade of at least C-, and either Chemistry 339K and 339L, or 369.
- 336. Tumor Biology.** Natural history and causal mechanisms of cancer; viral and chemical carcinogens. Three lecture hours a week for one semester. Biology 336 and 391M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 330 or 360K with a grade of at least C-.
- 137, 237, 337, 437. Selected Topics in Biology.** Recent developments and research methods in the biological sciences. For each semester hour of credit earned, one lecture hour a week for one semester. Some topics may require additional hours; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. Some topics are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Biology 325 or 325H with a grade of at least C-. Additional prerequisites vary with the topic and are given in the *Course Schedule*.
- Topic 1: Senior Seminar in Human Biology.** Restricted to human biology majors in their final semester. This topic is offered as 137 only. Offered on the pass/fail basis only. Additional prerequisite: Biology 346 with a grade of at least C-.
- Topic 2: Research Methods: UTeach.** Restricted to students in the UTeach-Natural Sciences program. Students perform independent inquiries and use skills from mathematics and science to solve research problems.
- 337J. Computational Biology Laboratory.** Overview of computational biology, with emphasis on nucleic acid sequence analysis and databases. Class projects and self-learning exercises. Two lecture hours and three computer laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 338. Introduction to Environmental Health.** Same as Public Health 338. Introduction to the major areas of environmental health, including hazards in the environment, the effects of environmental contaminants, and various approaches to addressing major environmental health problems. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.
- 438L. Animal Communication.** Animal communication from a multidisciplinary perspective, with emphasis on quantitative analysis, sensory processing, and evolution of signals. Three lecture hours and three laboratory hours a week for one semester, with computer laboratory hours as required. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 359K or 370 with a grade of at least C-.
- 339. Metabolism and Biochemistry of Microorganisms.** A study of the metabolic processes of microorganisms, using a biochemical approach. Three lecture hours a week for one semester. Biology 339 and 391R may not both be counted. Prerequisite: Biology 126L and 326R (or 226R) with a grade of at least C- in each, and Chemistry 310M and 310N.
- 339M. Bacterial Behavior and Signaling Mechanisms.** Advanced studies in how bacteria perceive their environment and communicate with each other. Subjects may include chemotaxis and motility, morphogenesis and development, and secretion and virulence. Taught entirely through reading and discussion of original articles. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 340L. Biology of Birds.** Anatomy, physiology, classification, and ecology of birds. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 341R. Public Health Research.** Same as Public Health 341R. Students conduct public health research, supervised by professionals at public health practice agencies or faculty at graduate schools of public health throughout Texas. An average of twelve hours of fieldwork a week for a total of at least 180 hours. May be repeated for credit. Prerequisite: Biology 325 or 325H with a grade of at least C-; students must also submit a proposal to the instructor.
- 342L. Field Ornithology.** Field course with emphasis on field study techniques, species identification by sight and sound, mist netting and banding, censusing techniques, and territory mapping. Two lecture hours and six hours of weekend fieldwork a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 340L.
- 343M. Transmembrane Signaling Mechanisms.** Mechanisms by which hormones, light, and other stimuli trigger changes in plant and animal cell metabolism. Three lecture hours a week for one semester. Biology 343M and 388C may not both be counted. Prerequisite: Biology 325 or 325H, and Chemistry 339K with a grade of at least C- in each.
- 344. Molecular Biology.** Molecular basis of cellular processes: gene structure and function, DNA replication, RNA and protein synthesis, viruses, molecular aspects of immunology and cancer, and recombinant DNA. Three lecture hours and one discussion hour a week for one semester. Biology 326D and 344 may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 345. Cell Physiology.** An integrated approach to basic processes in physiology: metabolism, transport, energetics, molecular and cellular control mechanisms. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 310M.
- 345E. Endocrinology.** Vertebrate endocrinology (primarily mammalian), with a focus on human pathophysiology. Three lecture hours and one discussion hour a week for one semester. Biology 337 (Topic: *Endocrinology*) and 345E may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

- 346. Human Biology.** Introduction to human evolution, genetics, sexuality, senescence, and population growth. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 309E, 309F, 346. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 446L. Human Microscopic and Gross Anatomy.** Designed for students preparing for biomedical research and the health professions. Focuses on microscopic and gross anatomy of human tissues and organs, with an emphasis on structure function relationships. Subjects include the effects of disease and aging in addition to normal human anatomy. Three lecture hours and four laboratory hours a week for one semester. Biology 416K and 446L may not both be counted. Prerequisite: Biology 311C; Biology 325 or 325H with a grade of at least C-; Chemistry 301 with a grade of at least C-; and one of the following courses with a grade of at least C-: Mathematics 408C, 408K, 408N, 408R, Statistics and Scientific Computation 302.
- 347. Biology and Genetics of Immune Disorders.** Immune disorders in mammals, including humans, used as models for examining basic immunological and immunogenetic principles; emphasis on immune disorders of vertebrates. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 148, 248, 348. Training Cruise(s): Research in Biological Oceanography.** Biology 148 and 348 are same as Marine Science 148 and 348 (Topic 1: *Research in Biological Oceanography*). One or more cruises of one to several days each to collect physical, chemical, oceanographic, and biological data relevant to biological processes in the sea. Preparatory instruction and postcruise sample processing and analysis. May be repeated for credit when the topics vary. Prerequisite: Biology 325 and Chemistry 302 with a grade of at least C- in each, and consent of instructor.
- 448L. Invertebrate Biology.** A study of the diversity and evolution of multicellular invertebrate animals, with emphasis on common themes in animal body construction and function. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 349. Developmental Biology.** Principles of animal development, with emphasis on developmental mechanisms. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 349L. Experiments in Animal Developmental Biology.** Methods and principles of developmental biology in a laboratory context, with emphasis on animal embryology using molecular techniques and microscopy. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 349.
- 350M. Plant Molecular Biology.** Fundamentals of plant molecular biology, including structure and expression of the chloroplast and mitochondrial genomes. Three lecture hours a week for one semester. Biology 350M and 388M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 351. Economic Botany.** An in-depth analysis of the origin of domesticated plant species, the role in nature of plant products, and the ways natural products have been altered through artificial selection. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 352. Reproductive Biology of Flowering Plants.** Pollination biology, breeding systems, reproductive strategies, and fruit and seed dispersal from evolutionary and ecological vantage points. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 353F. Field Entomology.** A field course on insects, with emphasis on field study techniques, visual identification of species, collecting techniques, and curation in the field. Meets five days a week for one hour a day during a summer-session term; additional fieldwork to be arranged, including extended field trips. Biology 353F and Biology 337 (Topic: *Field Entomology*) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 453L. Entomology.** Characteristics, importance, and biology of the major groups of insects. Two lecture hours and three laboratory hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 354. Epidemiology.** Same as Public Health 354. Introduction to basic principles and concepts in epidemiology, including descriptive epidemiology, association and causation, basic epidemiological study design, evidence-based decision analysis, and applications of epidemiology methods to basic and clinical science. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of least C-, and Biology 325 or 325H with a grade of least C-.
- 354L. Ichthyology.** Overview of the evolution, biology, and ecology of fishes, emphasizing freshwater fishes. Three lecture hours and three hours of laboratory or fieldwork a week for one semester, with field trips to be arranged. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 455L. Vertebrate Natural History.** Phylogeny, taxonomy, life histories, habits, and distribution. Two lecture hours and three hours of laboratory or fieldwork a week for one semester, with field trips to be arranged. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 456L. Limnology and Oceanography.** Same as Marine Science 440. Introduction to the study of the interactions between aquatic organisms and their environments. Two lecture hours and six laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 302 or 302H.

- 357. Evolutionary Ecology.** Principles of modern ecology, particularly as they relate to natural selection and evolutionary theory. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 458L. Systematics.** Comparative study of biological variation of living and fossil organisms, including speciation, biogeography, taxonomy, and phylogeny of genes, populations, species, and higher taxa. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 359. Global Environmental Change.** Global change as it affects terrestrial ecosystems, including feedback between ecosystems and the atmosphere. Greenhouse gases and global warming, ozone, biological invasions, and land-use change. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 322 or 324 with a grade of at least C-.
- 359J. Behavioral Ecology.** Advanced topics in behavioral ecology, with detailed consideration of animal communication, altruism, sexual selection, plant-animal interactions. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 359K or 370 with a grade of at least C-.
- 359K. Principles of Animal Behavior.** An introduction to the study of animal behavior: descriptive analysis of behavior; physiological basis of behavior; development of behavior; adaptive significance and evolution of behavior; communication and social behavior. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 359R. Animal Sexuality.** The biology of sexuality, including genetics, morphology, physiology, and psychology of sex. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 360K. Immunology.** The basic concepts of humoral and cell-associated immune phenomena. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 160L. Immunology Laboratory.** Current techniques in experimental cellular and humoral immunology. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 360K.
- 360M. Molecular Immunology.** An advanced immunology course with an emphasis on molecular models and medical relevance. Three lecture hours a week for one semester. Biology 337 (Topic: *Molecular Immunology*) and 360M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 360K with a grade of at least B-.
- 361. Human Infectious Diseases.** Etiology, pathogenesis, diagnosis, and immunobiology of the major microbial diseases, with emphasis on their prevention. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 361L. Public Health Bacteriology Laboratory.** Training in techniques required for independent work in diagnostic and epidemiological bacteriology. Two lecture hours and five laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 361P. Public Health Internship.** Students conduct goal-oriented research projects at the Texas Department of State Health Services and other sites. An average of twelve hours of fieldwork a week for a total of 180 hours of fieldwork for one semester. May be repeated for credit. Prerequisite: Biology 126L with a grade of at least B-, and Biology 326M or 326R with a grade of at least B-; students must also complete an application available at the Natural Sciences Career Services office.
- 361T. Comparative Animal Physiology.** Physiology of organ systems in animal phyla, with special emphasis on physiological adaptations of organisms to their environment. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 262. Plant Systematics.** Elementary principles of plant taxonomy as exemplified by families of flowering plants found seasonally around Austin. Two lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and concurrent enrollment in Biology 262L.
- 262L. Angiosperm Diversity Laboratory.** Practical experience in recognizing, identifying, and classifying families of flowering plants. Four laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and concurrent enrollment in Biology 262.
- 363. Plant Speciation.** Nature of species in higher plants, speciation phenomena in plants, natural hybridization, polyploidy, agamospermy, evolutionary mechanisms. Lectures, readings, discussions, demonstrations. Three lecture hours a week for one semester. Biology 363 and 387E may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 364. Microbial Ecology.** The ability of microbes to adapt to and change their environment. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 364E. Current Topics in Advanced Microbial Ecology.** Development and structure of microbial communities, microbial phylogeny, endosymbiont and symbiont relationships, biogeochemistry, elemental cycling by microbes, and the microbial ecology of disease. Emphasis on active research areas in these topics. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H, and 364 with a grade of at least C- in each.
- 365D. Principles of Drug Action.** Introduction to the basic principles of pharmacology, including how drugs get into the body, exert their actions, and are metabolized and excreted. Three lecture hours a week for one semester. Biology 337 (Topic: *Principles of Drug Action*) and 365D may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

- 365L. Neurobiology Laboratory.** An introduction to physiological, morphological, and molecular techniques used for analysis of the nervous system. Experiments and computer simulations illustrate basics of information processing by the nervous system. Student exercises are supplemented with demonstrations in faculty laboratories. Four laboratory hours and one discussion hour a week for one semester. Prerequisite: Biology 205L, 206L, or 126L with a grade of at least C-; Biology 325 or 325H with a grade of at least C-; and Biology 365R or 371M with a grade of at least C-.
- 465M. Experimental Methods in Physiology.** A lecture-laboratory course that emphasizes an experimental approach to physiological problems. One lecture hour and seven laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 345, 361T, 365R, or 371M with a grade of at least C-.
- 365N. Development and Plasticity of the Nervous System.** An introduction to the principles by which the neural tube (brain and spinal cord) develops during embryogenesis, including regionalization of the brain into forebrain, midbrain, hindbrain, and spinal cord. Particular emphasis will be given to the mechanisms that govern how neurons acquire their identity and form neuronal circuits and synapses. Developmental and congenital diseases and possible therapies, including stem cell based therapy or gene therapy. Three lecture hours a week for one semester. Prerequisite: Biology 349 with a grade of at least C-, and Biology 365R or 371M with a grade of at least C-.
- 365P. Laboratory in Integrative Physiology.** Study of human physiology using an inquiry-based approach. Students read primary scientific literature; collect, analyze, and present data; write detailed explanations of laboratory activities; and work in groups to design, execute, and present an experiment. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 361T or 365S.
- 365R. Vertebrate Neurobiology.** Introduction to the nervous system and other excitable tissues. Subjects may include membrane potentials, ion channels, synaptic transmission, learning and memory, skeletal and cardiac muscle, and how systems of neurons lead to sensation and motor output. Human diseases are used to illustrate perturbation of normal function. Three lecture hours and one discussion hour a week for one semester. Biology 309D and 365R may not both be counted; Biology 416K and 365R may not both be counted; Biology 365R and 371M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 365S. Vertebrate Systems Physiology.** Overview of body fluids, the cardiovascular system, respiration, digestion, metabolism, and endocrinology. Three lecture hours and one discussion hour a week for one semester. Biology 416K and 365S may not both be counted. Prerequisite: Biology 311C; Biology 325 or 325H with a grade of at least C-; Chemistry 301 with a grade of at least C-; and one of the following with a grade of at least C-: Mathematics 408C, 408K, 408N, 408R, Statistics and Scientific Computation 302.
- 365T. Neurobiology of Disease.** The neurobiological basis of disorders of the brain, with the main focus on mental illness. Emphasizes the neural circuitries and neurochemical events that underlie specific mental processes and behaviors. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 365R or 371M with a grade of at least C-.
- 165U. Systems Physiology Laboratory.** Using an inquiry-based approach, provides students with an opportunity for hands-on experience in human physiology. Students read primary scientific literature; collect, analyze, and present data; and write detailed reports on laboratory activities. Four laboratory hours a week for one semester. May not be counted by students with credit for Biology 416L. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit or registration for Biology 365S.
- 365W. Neurobiology of Addiction.** Study of the neurobiology of neurotransmitters, and the influence of alcohol and drugs of abuse on neurotransmitters. Three lecture hours a week for one semester. Prerequisite: Biology 365R or 371M with a grade of at least C-.
- 366. Microbial Genetics.** Molecular biology of nucleic acids; biosynthesis of macromolecules, transfer of genetic material from cell to cell, recombination, mutagenesis, and regulatory mechanisms. Three lecture hours a week for one semester. Biology 366 and 391S may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.
- 366C. Ion Channels and the Molecular Physiology of Neuronal Signaling.** Explores the role of molecular conformational changes in higher-level neuronal function and sensory transduction, including the generation and regulation of diverse types of neuronal signaling characteristics. Emphasizes a quantitative approach and the use of models to study function. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 366D. Synaptic Physiology and Plasticity.** Detailed study of the physiology of synaptic transmission in the mammalian central nervous system. Covers dendritic integration and various forms and mechanisms of synaptic plasticity. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Biology 366C, Mathematics 408D or 408L, and Physics 303L, 316, or 317L.
- 366F. Neurobiology of Synaptic Circuits.** Emphasizes synaptic connections and the structure and composition of organelles and molecules. Also explores the role of structural and functional reorganization of synapses that occurs during development or plasticity in the mature nervous system. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 366C with a grade of at least C-.

- 366L. Microscopy and Fluorescence Imaging Laboratory.** Introduction to the concepts of image formation and analysis in microscopy and fluorescence imaging. Students apply the concepts of light microscopy and put them to optimal use. Surveys imaging techniques, including electron microscopy and functional MRI. One lecture hour and five laboratory hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Physics 303L, 316, or 317L; Biology 205L or 206L; Biology 325 or 325H; and Biology 365R or 371M.
- 366P. Laboratory in Psychophysics.** Studies the principles of experimental design, execution, and interpretation by having students measure their own perceptual and behavioral responses to visual and auditory tests. Includes data analysis, statistical significance, and interpretation. Five laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 366R. Molecular Genetics.** Techniques used for studying molecular biology and transgenic organisms. Includes advanced genetics and the molecular genetics used in clinical applications. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 366S. Laboratory in Neuromolecular and Developmental Biology.** Practice with modern techniques used to study the molecular basis for nervous system development, function, and disease in vertebrate and invertebrate model systems. Subjects may include the cellular localization of neural proteins and how mutation of neural genes affects behaviors. Six laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 368L. Techniques in Molecular Genetics.** Laboratory experience in mutagenesis, transformation, transduction, isolation of plasmid and bacteriophage DNA, in vitro recombinant DNA procedures, and DNA base sequencing. One lecture hour and seven laboratory hours a week for one semester. Biology 368L and 390P may not both be counted. Prerequisite: Biology 325 or 325H, and 126L with a grade of at least C- in each.
- 369L. Herpetology.** Biology of amphibians and reptiles, including evolution, ecology, behavior, physiology, life history, and field identification. Three lecture hours and three laboratory hours a week for one semester, with weekend field trips to be arranged. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 455L, 357, 359K, or 478L with a grade of at least C-.
- 370. Evolution.** Introduction to modern evolutionary biology, focusing on the evolution of molecular, developmental, morphological, and behavioral traits. Genetic and ecological bases of evolutionary changes within populations and of evolutionary divergence in animals and plants. Three lecture hours and one discussion hour a week for one semester. Biology 370 and 385K (Topic 2: *Evolution*) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 170C, 270C, 370C, 470C. Conference Course.** Supervised study of selected topics in biology, by individual arrangement with the instructor. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Biology 325 or 325H with a grade of at least C-. Additional prerequisites vary with the topic and are given in the *Course Schedule*.
- 471G. Natural History Museum Science.** An introduction to curatorial practices in natural history museums. Three lecture hours and one discussion hour a week for one semester; students also complete a twenty- to thirty-hour curatorial project. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 371L. Experimental Physiology.** Experimental approach to physiological mechanisms by which animals adapt to their environment. One lecture hour, four laboratory hours, and two hours of computer work a week for one semester. Prerequisite: Biology 205L, 206L, 208L, or 126L with a grade of at least C-; and Biology 325 or 325H with a grade of at least C-.
- 371M. Neuronal Basis of Brain and Behavior.** The nervous system, with emphasis on vertebrate neurobiology. Three lecture hours and one discussion hour a week for one semester. Biology 365R and 371M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 472L. Taxonomic Plant Anatomy.** An advanced course emphasizing those aspects of plant anatomy that are most reliable and useful for systematic purposes. Three lecture hours and two laboratory hours a week for one semester. Biology 472L and 487G may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 374 and 174L with a grade of at least C- in each.
- 373. Ecology.** An introduction to ecology, the study of relationships among organisms and between organisms and their environment; adaptations, population, communities, and ecosystems. Includes both plants and animals and both terrestrial and aquatic ecosystems. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 373L. Ecology Laboratory.** Intensive field ecology. Includes group field experiment and observation, independent projects, and field trips to other vegetation zones. Students complete weekly write-ups of observation and data analysis, reports of independent projects, and an oral presentation on an independent project. Four laboratory hours and two workshop/lecture hours a week for one semester. Prerequisite: Credit or registration for Biology 373.
- 374. Plant Anatomy with Histological Techniques.** Tissue organization and cellular details of stems, roots, and leaves of seed plants, with emphasis on development and function. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and concurrent enrollment in Biology 174L.

- 174L. Laboratory in Plant Anatomy and Histological Techniques.** Demonstration of cellular details and tissue systems of plant organs; instruction in the preparation of plant materials for histological examination. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 374.
- 375. Conservation Biology.** Application of principles of ecology to the preservation of wild plant and animal species and to the preservation, management, and restoration of natural and seminatural ecosystems. Emphasis on scientific, biological aspects of issues such as endangered species protection, preserve design, and forest management. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 357, 359J, or 373 with a grade of at least C-.
- 177, 277, 377. Undergraduate Research.** Laboratory or field research in the various fields of biological science under the supervision of one or more faculty members. May be repeated for credit. Up to three semester hours may be counted toward the major requirement for the Bachelor of Arts degree with a major in biology. Prerequisite: Biology 325 or 325H with a grade of at least C-, and written consent of instructor.
- 478L. Comparative Vertebrate Anatomy.** Study of vertebrate morphology from developmental anatomy to the function, biomechanics, and phylogenetic relationships of living and fossil taxa. Three lecture hours and four laboratory hours a week for one semester. Biology 478L and Kinesiology 324K may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.
- 478T. Natural Resource Management.** Land management, policy and regulation development, and ecological “footprint” evaluation. Students have the opportunity for practical application of these subjects through off-campus field projects. Three lecture hours and two hours of discussion or fieldwork a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-; and one of the following courses or consent of instructor: Biology 351, 357, 373, 375, Geography 334, 346.
- 379G. Advanced Mammalian Genetics.** Molecular developmental genetics and review of classical genetics. Possible topics include but are not limited to cancer, AIDS, forensic genetics, genomics, and gene therapy. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least B-.
- 379H, 679H. Honors Tutorial Course.** Original laboratory or field research project under the direction of a faculty mentor, leading to a thesis or research presentation for students in the honors program in biology. The equivalent of three or six lecture hours a week for one semester. May be repeated for credit, but no more than six hours may be counted toward a degree in biology. Prerequisite: Consent of the student’s research supervisor and the departmental honors adviser.
- 379J. Regulation of Eukaryotic Gene Expression.** Enrollment is limited to upper-division undergraduates. Study of gene expression and its regulation in eukaryotes at the transcriptional and post-transcriptional levels. Includes transcription, RNA splicing, polyadenylation, RNA and RNA-protein interactions. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-; and Chemistry 339K and 339L, or Chemistry 369.

PUBLIC HEALTH: PBH

LOWER-DIVISION COURSE

- 317. Introduction to Public Health.** Same as Biology 317. Overview and basic principles of public health, including the public health system, concepts and tools for measuring health in populations, the relationship between public health and the medical care system, and the role of law and government in public health. Three lecture hours a week for one semester.

UPPER-DIVISION COURSES

- 334. Global Health.** Same as Biology 334. Global health issues, including the principles of global health, the burden of morbidity and mortality, health determinants, health care and public health systems, socioeconomic development, and human rights. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.
- 338. Introduction to Environmental Health.** Same as Biology 338. Introduction to the major areas of environmental health, including hazards in the environment, the effects of environmental contaminants, and various approaches to addressing major environmental health problems. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.
- 341R. Public Health Research.** Same as Biology 341R. Students conduct public health research, mentored by professionals at public health practice agencies or faculty at graduate schools of public health throughout Texas. An average of twelve hours of fieldwork a week for a total of at least 180 hours. May be repeated for credit. Prerequisite: Biology 325 or 325H with a grade of at least C-; students must also submit a proposal to the instructor.
- 354. Epidemiology.** Same as Biology 354. Introduction to basic principles and concepts in epidemiology, including descriptive epidemiology, association and causation, basic epidemiological study design, evidence-based decisions analysis, and applications of epidemiology methods to basic and clinical science. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.

358D. Health Policy and Health Systems. Same as Sociology 358D. Covers the essentials of health policy and law, including the ways that policy and legal issues impact health care and public health systems. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Biology 317 or Public Health 317 with a grade of at least B-.

368D. Social Context of Public Health. Same as Sociology 368D. An introduction to the social and behavioral theories that inform the discipline of public health, including practical examples of the ways that these theories are used to understand health-related behaviors and health promotion. Includes data on population distributions of mortality and morbidity, health inequalities, and how underlying social structures impact the health of individuals and communities. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Biology 317 or Public Health 317 with a grade of at least B-.

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

Students seeking the degree of Bachelor of Science in Chemical Engineering, Bachelor of Science in Chemistry, or Bachelor of Science in Physics must take the University of Texas at Austin Test for Credit in Chemistry 301 if they were admitted to the University with high school credit in chemistry. Engineering majors in areas other than chemical engineering are also encouraged to take the test. Students with three semesters or more of high school chemistry that included laboratory experience, or credit for Chemistry 301 or 301H, are encouraged to take the University of Texas at Austin Test for Credit in Chemistry 302. These tests are offered only in Austin. Information about them is available at <http://www.utexas.edu/academic/mec/>.

Each student planning to register for a chemistry course should consult an adviser in his or her major area to determine whether specific courses are required.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

BIOCHEMISTRY: BCH

LOWER-DIVISION COURSE

119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Biochemistry. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Chemistry and Biochemistry. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSE

129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Biochemistry. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Chemistry and Biochemistry. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

CHEMISTRY: CH

LOWER-DIVISION COURSES

301 (TCCN: CHEM 1311). Principles of Chemistry I. Three lecture hours a week for one semester. Some sections also require one enrichment/discussion hour a week; these are identified in the *Course Schedule*. Chemistry 301 and 301H may not both be counted. Prerequisite: Credit or registration for one of the following: Mathematics 408C, 408D, 408K, 408L, 408M, 427L, Statistics and Scientific Computation 302.

301H. Principles of Chemistry I: Honors. Three lecture hours a week for one semester. Chemistry 301 and 301H may not both be counted. Prerequisite: Credit or registration for Mathematics 408C or 408K, and consent of the departmental honors adviser.

302 (TCCN: CHEM 1312). Principles of Chemistry II. Development and application of concepts, theories, and laws underlying chemistry. Three lecture hours a week for one semester. Some sections also require one enrichment/discussion hour a week; these are identified in the *Course Schedule*. Chemistry 302 and 302H may not both be counted. Prerequisite: Chemistry 301 or 301H with a grade of at least C-, and credit or registration for one of the following: Mathematics 408C, 408D, 408K, 408L, 408M, 427L.

- 302H. Principles of Chemistry II: Honors.** Three lecture hours a week for one semester. Chemistry 302 and 302H may not both be counted. Prerequisite: Chemistry 301 or 301H with a grade of at least C-, Mathematics 408C or 408K with a grade of at least C-, and consent of the departmental honors adviser.
- 303. Mathematical Introduction to Theories of Matter.** Introduction to the quantum theoretic description of atoms, molecules, solids, nuclei, elementary particles, and cosmology. Matrix mechanics and group theory. Three lecture hours a week for one semester. Chemistry 303 may be used instead of either Chemistry 302 or Chemistry 301 and 302 in fulfilling the prerequisites of other chemistry courses, except by students seeking the Bachelor of Science in Chemistry degree. Chemistry 303 may be counted in addition to Chemistry 301 and 302. Not recommended by Health Professions Advising for Medical College Admission Test preparation.
- 204. Introduction to Chemical Practice.** Introduction to the techniques of modern experimental chemistry. Designed to provide basic laboratory and analytical skills. May include organic, analytical, and physical chemistry, as well as materials science. Four laboratory hours and one hour of discussion a week for one semester. Some sections may also require one hour of computer laboratory a week. Chemistry 204 and 317 may not both be counted. Prerequisite: Credit or registration for Chemistry 302.
- 304K. Chemistry in Context I.** Designed for nonscience majors. Chemistry 304K and 305 form a two-semester sequence designed to fulfill the science requirement for students not majoring in science or engineering. Issues of contemporary interest and importance, such as ozone depletion and global warming, motivate the discussion; the underlying chemistry is developed as needed. Social, political, economic, and ethical implications of scientific developments and science policy are considered. Chemistry 304K addresses the nature of matter, energy, chemical reactions, and chemical thermodynamics. Three lecture hours a week for one semester. May not be counted toward any chemistry or biochemistry degree. May not be counted by students who have earned a grade of C- or better in Chemistry 301. Not intended as preparation for Chemistry 301.
- 305. Chemistry in Context II.** Designed for nonscience majors. Chemistry 304K and 305 form a two-semester sequence designed to fulfill the science requirement for students not majoring in science or engineering. Chemistry 305 addresses water chemistry, acids and bases, elementary organic chemistry, polymers, pharmaceuticals, nutrition, and genetics. Three lecture hours a week for one semester. May not be counted toward any chemistry or biochemistry degree. May not be counted by students who have earned a grade of C- or better in Chemistry 302. Prerequisite: Chemistry 301 or 304K.
- 206K. Undergraduate Research.** Introduction to research practices; supervised individual undergraduate research in chemistry. Six to ten laboratory hours a week for one semester. May be repeated for credit. May be repeated for credit, but no more than four semester hours may be counted toward a degree in chemistry or biochemistry. Hours beyond four must be taken on the pass/fail basis. Prerequisite: Consent of the undergraduate adviser in chemistry.
- 107, 207. Conference Course.** Supervised study in chemistry. One discussion hour a week for one semester, with additional hours to be arranged. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. May not be counted toward a major or minor in chemistry or biochemistry. Prerequisite: Written consent of instructor.
- 207K. Introduction to Science Outreach in Elementary Schools.** Students develop and present level-appropriate science laboratories to students in local elementary schools. A hands-on, discovery learning approach to science is emphasized. One class hour and four hours of fieldwork a week for one semester. May be counted as an elective only. Prerequisite: Consent of the UTeach adviser in the College of Natural Sciences.
- 207L. Peer Teaching.** Students act as peer teaching assistants in other University chemistry courses, mainly large general chemistry lecture sections. Two hours of lecture and training a week for one semester, and two to three hours a week leading student group discussions. May not be counted toward any degree in chemistry or biochemistry. Prerequisite: Chemistry 301 and consent of the coordinator of the Peer Teaching Assistant Program.
- 108, 208, 308, 408. Topics in Chemistry.** For each semester hour of credit earned, one lecture hour a week for one semester; some topics may require additional discussion hours. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only. May not be counted toward a major or minor in chemistry or biochemistry.
- 210C. Organic Chemistry Laboratory.** Primarily for premedical, pre dental, life sciences, and pharmacy majors. One lecture hour and five laboratory hours a week for one semester. Only one of the following may be counted: Chemistry 210C, 110L, 118L. Prerequisite: Chemistry 204 or 317 with a grade of at least C-, Chemistry 310M with a grade of at least C-, and credit or registration for Chemistry 310N.
- 110K (TCCN: CHEM 2123). Organic Chemistry Laboratory.** Primarily for premedical, pre dental, life sciences, and pharmacy majors. One lecture hour and three laboratory hours a week for one semester. May not be counted by students with credit for Chemistry 210C. Chemistry 110K and 118K may not both be counted. Prerequisite: Chemistry 302 and 204 with a grade of at least C- in each, and credit or registration for Chemistry 310M.

- 110L (TCCN: CHEM 2125). Organic Chemistry Laboratory.** Primarily for premedical, premedical, life sciences, and pharmacy majors. One lecture hour and three laboratory hours a week for one semester. Only one of the following may be counted: Chemistry 210C, 110L, 118L. Prerequisite: Chemistry 310M with a grade of at least C-, 110K, and credit or registration for Chemistry 310N.
- 310M (TCCN: CHEM 2323). Organic Chemistry I.** Primarily for premedical, premedical, life sciences, and pharmacy majors. The development of organic chemical structure, nomenclature, and reactivity. Three lecture hours a week for one semester. Only one of the following may be counted: Chemistry 610A, 310M, 618A, 318M. Prerequisite: Chemistry 302 with a grade of at least C-, and credit or registration for Chemistry 204 or 317.
- 310N (TCCN: CHEM 2325). Organic Chemistry II.** Primarily for premedical, premedical, life sciences, and pharmacy majors. The development of organic chemical reactivity, with a focus on carbohydrates, proteins, and nucleic acids. Three lecture hours a week for one semester. Only one of the following may be counted: Chemistry 610B, 310N, 618B, 318N. Prerequisite: Chemistry 204 or 317 with a grade of at least C-, Chemistry 310M with a grade of at least C-, and credit or registration for Chemistry 210C.
- 113P. General and Organic Chemistry Laboratory.** Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Chemistry 304K.
- 314N. Elementary Organic Chemistry and Biochemistry.** A one-semester biochemistry course for human ecology and nursing students. Three lecture hours a week for one semester. May not be counted by students with credit for Chemistry 339K. May not be counted toward any chemistry degree. Prerequisite: Chemistry 310M, 310N, 110K, and 110L.
- 114P. Elementary Organic Chemistry and Biochemistry Laboratory.** Introduction to biochemical laboratory procedures. Three laboratory hours a week for one semester. Prerequisite: Chemistry 113P and credit or registration for Chemistry 314N.
- 317. Descriptive Inorganic Chemistry for Chemistry and Biochemistry Majors.** Synthesis and properties of inorganic, bioinorganic, and organometallic compounds. One lecture hour and six laboratory hours a week for one semester. Chemistry 204 and 317 may not both be counted. Prerequisite: Credit or registration for Chemistry 302.
- 118K. Organic Chemistry Laboratory.** One lecture hour and three laboratory hours a week for one semester. May not be counted by students with credit for Chemistry 210C. Chemistry 110K and 118K may not both be counted. Prerequisite: Chemistry 302 and either 204 or 317 with a grade of at least C- in each, and credit or registration for Chemistry 318M.
- 118L. Organic Chemistry Laboratory.** One lecture hour and three laboratory hours a week for one semester. Only one of the following may be counted: Chemistry 210C, 110L, 118L. Prerequisite: Chemistry 318M with a grade of at least C-, 118K, and credit or registration for Chemistry 318N.
- 318M. Organic Chemistry I.** Primarily for chemistry and chemical engineering majors. The development of organic chemical structure, nomenclature, and reactivity. Three lecture hours a week for one semester. Only one of the following may be counted: Chemistry 610A, 310M, 618A, 318M. Prerequisite: Chemistry 302 and either Chemistry 204 or 317 with a grade of at least C- in each, and credit or registration for Chemistry 118K.
- 318N. Organic Chemistry II.** Primarily for chemistry and chemical engineering majors. The development of organic chemical reactivity, with an emphasis on synthesis and polymers. Three lecture hours a week for one semester. Only one of the following may be counted: Chemistry 610B, 310N, 618B, 318N. Prerequisite: Chemistry 318M with a grade of at least C-, Chemistry 118K with a grade of at least C-, and credit or registration for Chemistry 118L.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Chemistry.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Chemistry and Biochemistry. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Chemistry.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Chemistry and Biochemistry. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329W. Cooperative Chemistry/Biochemistry.** This course covers the work period of chemistry and biochemistry students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Chemistry 310N or 318N with a grade of at least C-, application to become a member of the Cooperative Chemistry/Biochemistry Program, and consent of the Department of Chemistry and Biochemistry undergraduate adviser.

- 431. Inorganic Chemistry.** Survey of the chemistry of the elements, incorporating both descriptive and theoretical aspects. Open-ended experiments designed to illustrate a variety of synthetic techniques. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Chemistry 302, and either Chemistry 204 or 317 with a grade of at least C-.
- 339K. Biochemistry I.** Chemistry 339K and 339L should be taken as a two-semester sequence. Students who do not plan to take Chemistry 339L should register for Chemistry 369 rather than 339K. Structure and function of amino acids, proteins, carbohydrates, lipids, and nucleic acids. Three lecture hours a week for one semester. Chemistry 339K and 369 may not both be counted. Prerequisite: Chemistry 310M or 318M with a grade of at least C-, and Chemistry 310N or 318N with a grade of at least C-.
- 339L. Biochemistry II.** A second-semester biochemistry course designed for chemistry, premedical, pre dental, and life sciences majors. Biosynthesis of nucleic acids and proteins. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K with a grade of at least C-.
- 341. Special Topics in Laboratory Chemistry.** Examples of topics are physical measurements techniques; electronics for scientists; advanced synthetic chemistry (organic or inorganic); separation techniques. One lecture hour and six laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Eight semester hours of coursework in organic chemistry and consent of the undergraduate adviser.
- 644. Chemical Education: Secondary School.** Issues and techniques in secondary school teaching of chemical sciences. Three lecture hours a week for two semesters. For students seeking the Bachelor of Science in Chemistry: Teaching Option degree. May not be counted toward any other degree in chemistry or biochemistry. Prerequisite: For 644A, eight semester hours of coursework in organic chemistry and credit or registration for Chemistry 144K; for 644B, Chemistry 644A, 144K, and credit or registration for Chemistry 144L.
- 144K. Chemical Education Laboratory I.** Development of classroom demonstrations, laboratory experiments, and teaching aids for secondary school teaching of the chemical sciences. Two laboratory hours a week for one semester. For students seeking the Bachelor of Science in Chemistry: Teaching Option degree. May not be counted toward any other degree in chemistry or biochemistry. Prerequisite: Credit or registration for Chemistry 644A.
- 144L. Chemical Education Laboratory II.** Development of classroom demonstrations, laboratory experiments, and teaching aids for secondary school teaching of the chemical sciences. Two laboratory hours a week for one semester. For students seeking the Bachelor of Science in Chemistry: Teaching Option degree. May not be counted toward any other degree in chemistry or biochemistry. Prerequisite: Credit or registration for Chemistry 644B.
- 353. Physical Chemistry I.** For chemistry and chemical engineering majors. Equations of state, laws of thermodynamics, ideal and nonideal solutions, phase equilibria, thermodynamics of chemical reactions. Three lecture hours a week for one semester. Chemistry 353 and 353M may not both be counted. Prerequisite: Mathematics 408C and 408D, or two of the following: Mathematics 408K, 408L, 408M; Chemistry 302 or 302H with a grade of at least C-; and Physics 316 and 116L, 303L and 103N, or 317L and 117N.
- 153K. Physical Chemistry Laboratory.** Three laboratory hours a week for one semester. Prerequisite: Chemistry 353 or 353M with a grade of at least C-.
- 353M. Physical Chemistry I for Life Sciences.** For biochemistry and biology majors. Thermochemistry and kinetics of reactions in cells, enzyme catalysis, electrical and transport properties of membranes. Three lecture hours a week for one semester. Chemistry 353 and 353M may not both be counted. Prerequisite: Mathematics 408C and 408D, or two of the following: Mathematics 408K, 408L, 408M; Chemistry 302 or 302H with a grade of at least C-; and Physics 316 and 116L, 303L and 103N, or 317L and 117N.
- 354. Quantum Chemistry and Spectroscopy.** Fundamental principles of quantum mechanics, exactly soluble model problems, electronic structure of atoms and molecules, spectroscopy. Three lecture hours a week for one semester. Prerequisite: Mathematics 408C and 408D, or two of the following: Mathematics 408K, 408L, 408M; and Physics 316 and 116L.
- 154K. Physical Chemistry Laboratory.** Three laboratory hours a week for one semester. Prerequisite: Chemistry 353 or 353M with a grade of at least C-, and credit or registration for Chemistry 354 or 354L.
- 354L. Physical Chemistry II.** Molecular energy levels, statistical thermodynamics (macroscopic thermodynamic functions from molecular input), and physical and chemical kinetics, with emphasis on the molecular viewpoint. Three lecture hours a week for one semester. May be counted toward a biochemistry or chemistry degree. Chemistry 354, rather than this course, is recommended for students planning graduate study in chemistry. Prerequisite: Chemistry 353 or 353M with a grade of at least C-.
- 455. Fundamentals of Analytical Chemistry.** For biochemistry, engineering, and clinical laboratory science majors. Chemical and instrumental methods in analytical chemistry. Three lecture hours and three laboratory hours a week for one semester. Chemistry 455 and 456 may not both be counted. Prerequisite: Chemistry 302 and either 204 or 317, with a grade of at least C- in each.
- 456. Analytical Chemistry.** For chemistry majors. Three lecture hours and three laboratory hours a week for one semester. Chemistry 455 and 456 may not both be counted. Prerequisite: Chemistry 302 or 302H with a grade of at least C-, and Chemistry 204 or 317 with a grade of at least C-.

- 367L. Macromolecular Chemistry.** Designed for chemistry and chemical engineering students. Occurrence, preparation, structure, and properties of macromolecular substances. Three lecture hours a week for one semester. Prerequisite: Chemistry 310M and 310N or Chemistry 318M and 318N; Chemistry 210C, or 118K and 118L; and Chemistry 353 or 353M with a grade of at least C-.
- 368. Advanced Topics in Chemistry.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: 310M and 310N or Chemistry 318M and 318N; Chemistry 353 or 353M with a grade of at least C-; and Chemistry 354 or 354L with a grade of at least C-.
- 369. Fundamentals of Biochemistry.** A survey course covering the basics of protein structure and function, carbon and nitrogen metabolism, and molecular biology of macromolecules. Three lecture hours a week for one semester. Chemistry 339K and 369 may not both be counted. May not be counted by biochemistry majors. Prerequisite: Chemistry 310M or 318M with a grade of at least C-.
- 369K. Techniques of Research.** Advanced laboratory practice and introduction to research. One lecture hour and six laboratory hours a week for one semester. May be repeated for credit. May be taken for a letter grade no more than twice. No more than six semester hours may be counted toward a degree in chemistry or biochemistry. Prerequisite: Eight semester hours of coursework in organic chemistry; and six semester hours of upper-division chemistry courses approved by the undergraduate adviser's office, or consent of the undergraduate adviser in chemistry.
- 369L. Biochemistry Laboratory.** An introduction to modern fundamental techniques of biochemistry. Two lecture hours and seven laboratory hours a week for one semester. Prerequisite: Chemistry 339K and credit or registration for 339L.
- 369T. Biotechnology Laboratory.** Advanced techniques in biotechnology. Nine laboratory hours a week for one semester. Prerequisite: Consent of instructor.
- 370. Physical Methods for Biochemistry.** Theory of electrophoresis, ultracentrifugation, spectroscopy, electron microscopy, and diffraction as applied to biological macromolecules. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K.
- 371K. Science Outreach in Elementary Schools.** Students develop and present level-appropriate science laboratories to students in local elementary schools. Students also plan and create the infrastructure needed to administer the science program in concert with the science curriculum at a specific elementary school. A hands-on, discovery learning approach to science is emphasized. One class hour and six hours of fieldwork a week for one semester. May be repeated for credit. May be taken for a letter grade no more than twice. No more than six semester hours may be counted toward a degree in chemistry or biochemistry. Prerequisite: Upper-division standing, at least six hours of upper-division coursework in the College of Natural Sciences, and consent of the UTeach adviser in the College of Natural Sciences.
- 375K, 475K. Individual Study in Chemistry and Biochemistry.** Supervised reading or individual tutorial sessions on advanced topics in chemistry and biochemistry. Three or four class hours a week for one semester. May be repeated for credit. No more than six semester hours may be counted toward a degree in chemistry or biochemistry. Prerequisite: Eight semester hours of coursework in organic chemistry, Chemistry 353, and consent of the undergraduate adviser.
- 376K. Advanced Analytical Chemistry.** Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Chemistry 353 and 456 with a grade of at least C- in each.
- 379H. Chemistry Honors Tutorial Course.** Laboratory research project in a specific field of chemistry under the supervision of one or more faculty members. May be repeated once for credit. Must be taken in addition to the required hours for the Bachelor of Science in Chemistry degree. Students must enter no later than the first semester of the year of graduation. Prerequisite: Consent of the student's research supervisor and the departmental honors adviser.

DEPARTMENT OF COMPUTER SCIENCE

An undergraduate may not enroll in any computer science course more than once without written consent of an undergraduate adviser in computer science. No student may enroll in any computer science course more than twice. No student may take more than three upper-division computer science courses in a semester without written consent of an undergraduate adviser in computer science.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

COMPUTER SCIENCE: C S

LOWER-DIVISION COURSES

- 301K. Foundations of Logical Thought.** Introductory logic in the context of computing; introduction to formal notations; basic proof techniques; sets, relations, and functions. Three lecture hours a week for one semester. Some sections also require one discussion hour a week; these are identified in the *Course Schedule*.
- 302. Computer Fluency.** An introduction to the fundamental concepts of computing: how computers work, what they can do, and how they can be used effectively. Some programming is required. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Credit for Computer Science 302 may not be earned after a student has received credit for Computer Science 303E, 305J, or 307.

- 303E. Elements of Computers and Programming.** Problem solving and fundamental algorithms for various applications in science and business and on the World Wide Web. Introductory programming in a modern object-oriented programming language. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Computer Science 303E and 305J may not both be counted. Credit for Computer Science 303E may not be earned after a student has received credit for Computer Science 307.
- 105. Computer Programming.** An introduction to programming in a particular computer language. Students design and implement programs. One lecture hour a week for one semester. May be repeated for credit when the languages vary. Prerequisite: Computer Science 307, 313E, or Electrical Engineering 422C (or 322C) with a grade of at least C-.
- 305J (TCCN: COSC 1337). Introduction to Computing.** Introduction to computer science concepts. Programming in a modern object-oriented programming language. Three lecture hours and one discussion hour a week for one semester. Computer Science 303E and 305J may not both be counted. Credit for Computer Science 305J may not be earned after a student has received credit for Computer Science 307. Prerequisite: Some knowledge of and experience in computer programming; and credit with a grade of at least C- or registration for Mathematics 305G, or equivalent score on the SAT Mathematics Level 1 or Level 2 test.
- 307 (TCCN: COSC 2336). Foundations of Computer Science.** Fundamental computer science concepts: data types, data structures, algorithms, and programming; functions and recursion; abstraction and encapsulation. Correctness: specification, testing, and proving. Simple sorting and searching algorithms. Introduction to analysis of algorithms. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: One of the following: one year of programming in high school, Computer Science 303E or 305J with a grade of at least C-, or consent of instructor; and credit or registration for Mathematics 408C or 408K, or a score of at least 520 on the SAT Mathematics Level 1 or Level 2 test.
- 108. Software Systems.** Introduction to the use of a particular software system. Students build applications that exploit the system being studied. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the pass/fail basis only. Prerequisite: Computer Science 307, 313E, or Electrical Engineering 422C (or 322C) with a grade of at least C-.
- 109, 209, 309. Topics in Computer Science.** For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Only one hour may be counted toward a degree in computer science. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 310. Computer Organization and Programming.** Basic computer organization; machine representation of instructions and data; hardware/software interface. Three lecture hours and one discussion hour a week for one semester. Computer Science 310 and 310H may not both be counted. Prerequisite: Computer Science 307 with a grade of at least C-.
- 310H. Computer Organization and Programming: Honors.** Basic computer organization; machine representation of instructions and data; hardware/software interface. Three lecture hours and one discussion hour a week for one semester. Computer Science 310 and 310H may not both be counted. Prerequisite: Computer Science 315 or 315H with a grade of at least C-, and consent of the honors director.
- 313E. Elements of Software Design.** Object-oriented design of software in a modern high-level language, using software library packages. Introduction to elementary data structures and complexity of algorithms. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Prerequisite: Computer Science 303E or 305J with a grade of at least C-.
- 313H. Logic, Sets, and Functions: Honors.** Propositional and predicate logic; proof techniques, including induction, sets, relations, and functions. Introduction to the analysis of algorithms and techniques for proving properties of programs. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q. Prerequisite: Consent of the honors director.
- 313K. Logic, Sets, and Functions.** Propositional and predicate logic; proof techniques, including induction, sets, relations, and functions. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q. Prerequisite: Credit or registration for Mathematics 408C or 408K.
- 315. Algorithms and Data Structures.** Implementation of basic data structures, including stacks, queues, lists, priority queues, trees, binary search trees, graphs, and sets. Recursion. Efficient sorting and searching algorithms. Hashing. Multithreaded programs. Three lecture hours and one laboratory hour a week for one semester. Computer Science 315 and 315H may not both be counted. Prerequisite: Computer Science 307 with a grade of at least C-, and credit or registration for Computer Science 313K.
- 315H. Algorithms and Data Structures: Honors.** Data types, data structures, algorithms, and programming; functions and recursion; abstraction and encapsulation. Correctness: specification, testing, proving. Introduction to analysis of algorithms. Implementation and use of basic data structures, including stacks, queues, lists, priority queues, trees, binary search trees, graphs, sets. Efficient sorting and searching algorithms. Hashing. Multithreaded programs. Three lecture hours and one discussion hour a week for one semester. Computer Science 315 and 315H may not both be counted. Prerequisite: Consent of the honors director.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Computer Science.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Computer Science. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 120N, 220N, 320N. Topics in Computer Science for Nonmajors.** For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. May not be counted toward a degree in computer science. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 321H. Functional and Symbolic Programming: Honors.** Introduction to functional and symbolic programming and to the use of these concepts throughout computer science. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Computer Science 337 or 337H, and consent of the honors director.
- 323E. Elements of Scientific Computing.** Fundamentals of software issues related to scientific computing. Topics include floating-point computations, numerical computation errors, interpolation, integration, solution of linear systems of equations, optimization, and initial value problems of ordinary differential equations. Implementation of algorithms are investigated using MATLAB for matrix and vector computations. Examples are drawn from a variety of science and mathematics areas. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Computer Science 323E and 323H may not both be counted. Prerequisite: Computer Science 303E or the equivalent, Mathematics 408C or 408K, 408D or 408M, and credit with a grade of at least C- or registration for Mathematics 341 or 340L.
- 323H. Elements of Scientific Computing: Honors.** Fundamentals of software issues related to scientific computing. Topics include floating-point computations, numerical computation errors, interpolation, integration, solution of linear systems of equations, optimization, and initial value problems of ordinary differential equations. Implementation of algorithms are investigated using MATLAB for matrix and vector computations. Examples are drawn from a variety of science and mathematics areas. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Computer Science 323E and 323H may not both be counted. Prerequisite: Computer Science 303E, 305J, or 307; Mathematics 408D or 408M; credit with a grade of at least C- or registration for Mathematics 341 or 340L; and consent of the honors director.
- 324E. Elements of Graphics and Visualization.** Basics of two- and three-dimensional computer graphics systems, modeling and rendering, and selected graphics software APIs. Other topics may include interactive graphics, animation, graphical user interfaces, and the graphical presentation of information. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Prerequisite: Computer Science 307, 313E, or Electrical Engineering 422C (or 322C) with a grade of at least C-.
- 326E. Elements of Networking.** Introduction to the principles and basic concepts of the Internet. Networking applications and protocols. Simple client/server applications. Other topics may include network technologies and topologies, packet and circuit switching, LANS and WANS, Internet security, and network management. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Prerequisite: Computer Science 307, 313E, or Electrical Engineering 422C (or 322C) with a grade of at least C-.
- 327E. Elements of Databases.** A practical introduction to database management systems, with discussion of database administration and management. Survey of logical modeling, database design with a focus on relational databases, SQL query language, and current applications. Topics may include data integrity, performance, concurrency, transaction processing, recovery, security, and Web applications. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Prerequisite: Computer Science 307, 313E, or Electrical Engineering 422C (or 322C) with a grade of at least C-.
- 329E. Topics in Elements of Computing.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward a degree in computer science. Prerequisite: Computer Science 303E or the equivalent with a grade of at least C-.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Computer Science.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Computer Science. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329W. Cooperative Computer Science.** This course covers the work period of computer science students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. However, no more than three semester hours may be counted toward the major requirement. The student's first registration must be on the pass/fail basis; the second must be on the letter-grade basis. Prerequisite: Computer Science 336 or 336H with a grade of at least C-, and consent of the undergraduate adviser.
- 234. Technical Writing.** Application of techniques and strategies of effective technical writing, and of conventions used in documents such as letters, memos, proposals, abstracts, and reports. Two lecture hours a week for one semester. Computer Science 234 and 178 (Topic: *Technical Writing*) may not both be counted. May not be counted toward the number of hours in computer science required for the Bachelor of Science in Computer Science degree. Prerequisite: Computer Science 310 or 310H with a grade of at least C-.

- 336. Analysis of Programs.** Proofs of program correctness and a survey of mathematical techniques useful in the analysis and verification of programs. Three lecture hours a week for one semester. Computer Science 336 and 336H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 313H or 313K, 315 or 315H, and Mathematics 408C or 408L.
- 336H. Analysis of Programs: Honors.** A survey of mathematical techniques useful in the analysis and verification of programs. Three lecture hours a week for one semester. Computer Science 336 and 336H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 313H or 313K, 315 or 315H, and Mathematics 408C or 408L; and consent of the honors director.
- 337. Theory in Programming Practice.** Application of program-analysis theory to program design. Methodologies for large-scale program design. Designed to help students bring together theoretical and programming skills. Three lecture hours and one discussion hour a week for one semester. Computer Science 337 and 337H may not both be counted. Prerequisite: Computer Science 315 or 315H with a grade of at least C-; Computer Science 336 or 336H with a grade of at least C-, or consent of the honors director; and Mathematics 408C or 408L with a grade of at least C-.
- 337H. Theory in Programming Practice: Honors.** Application of program-analysis theory to program design. Methodologies for large-scale program design. Designed to help students bring together theoretical and programming skills. Three lecture hours and one discussion hour a week for one semester. Computer Science 337 and 337H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 315 or 315H, 336 or 336H, and Mathematics 408C or 408L; and consent of the honors director.
- 341. Automata Theory.** Introduction to the formal study of automata and of related formal languages with applications in computer science. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 341, 341H, Linguistics 340. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, 337 or 337H, and Mathematics 408D or 408M.
- 341H. Automata Theory: Honors.** Introduction to the formal study of automata and of related formal languages with applications in computer science. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 341, 341H, Linguistics 340. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, 337 or 337H, and Mathematics 408D or 408M; and consent of the honors director.
- 342. Neural Networks.** Biological information processing; architectures and algorithms for supervised learning, self-organization, reinforcement learning, and neuro-evolution; hardware implementations and simulators; applications in engineering, artificial intelligence, and cognitive science. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 343. Artificial Intelligence.** A survey of current artificial intelligence issues, including search, production systems, knowledge representation, knowledge-based systems, planning, natural language processing, and machine learning. Artificial intelligence programming projects are required. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 344M. Autonomous Multiagent Systems.** Introduction to autonomous agents, with an emphasis on multiagent systems. Students use a robotics simulator. Emphasis on computer science research activities, including speaking, writing, programming, and working in groups. Three lecture hours a week for one semester. Computer Science 344M and 378 (Topic: *Autonomous Multiagent Systems*) may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 344R. Robotics.** A survey of methods and techniques important for intelligent robotics. Students work in teams, applying these methods to get intelligent behavior from physical robots. Three lecture hours a week for one semester. Computer Science 344R and 378 (Topic: *Robotics*) may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 345. Programming Languages.** Survey of significant concepts underlying modern programming languages, including syntax, functions, expressions, types, polymorphism, assignment, procedures, pointers, encapsulation, classes, and inheritance, with some discussion of implementation issues. Prominent programming paradigms, such as sequential, concurrent, object-oriented, functional, and logic programming. Illustrative examples drawn from a variety of current languages. Three lecture hours a week for one semester. Computer Science 345 and 345H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 345H. Programming Languages: Honors.** Survey of significant concepts underlying modern programming languages, including syntax, functions, expressions, types, polymorphism, assignment, procedures, pointers, encapsulation, classes, and inheritance, with some discussion of implementation issues. Prominent programming paradigms, such as sequential, concurrent, object-oriented, functional, and logic programming. Illustrative examples drawn from a variety of current languages. Three lecture hours a week for one semester. Computer Science 345 and 345H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M; and consent of the honors director.

- 346. Cryptography.** A theoretical introduction to cryptography. Topics include private key cryptosystems, public key cryptosystems, digital signatures, secret sharing schemes, and the necessary mathematical background. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, 337 or 337H, and Mathematics 408D or 408M.
- 347. Data Management.** Concepts of database design and database system implementation. Data models, query processing, database design theory, crash recovery, concurrent control, and distributed databases. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 349. Contemporary Issues in Computer Science.** Social, professional, and ethical issues involved in the use of computer technology. Topics may include software engineering ethics, computer safety and reliability, constitutional issues, intellectual property, computer crime, societal impact, emerging technologies, and philosophical issues. Three lecture hours a week for one semester. Computer Science 349 and 378 (Topic: *Contemporary Issues in Computer Science*) may not both be counted. Prerequisite: Computer Science 336 or 336H with a grade of at least C-.
- 351. LISP and Symbolic Computation.** Symbolic computation for artificial intelligence, such as pattern-matching, unification, frames, flavors, semantic networks, deductive retrieval, rule-based and constraint-based inference. Substantial programming projects in LISP. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 352. Computer Systems Architecture.** Computer architecture and organizational issues; structural and behavioral characteristics of system components. Processor, memory hierarchy, and input/output issues. Evaluation of design alternatives. The relationship between hardware and software. Three lecture hours a week for one semester. Computer Science 352 and 352H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, Electrical Engineering 316, and Mathematics 408D or 408M.
- 352H. Computer Systems Architecture: Honors.** Computer architecture and organizational issues; structural and behavioral characteristics of system components. Processor, memory hierarchy, and input/output issues. Evaluation of design alternatives. The relationship between hardware and software. Three lecture hours a week for one semester. Computer Science 352 and 352H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, Electrical Engineering 316, and Mathematics 408D or 408M; and consent of the honors director.
- 353. Theory of Computation.** A survey of the theoretical bases of computation: computational complexity (including the classes P and NP) and formal models of the semantics of programming languages. Three lecture hours a week for one semester. Prerequisite: Computer Science 341 or 341H with a grade of at least C-.
- 354. Computer Graphics.** Introduction to techniques for human-machine communication through imagery. Topics include display hardware, transformations, interactive techniques, geometric modeling, two- and three-dimensional display algorithms, graphics software systems architecture, and hidden-line and surface elimination. Projects are assigned and in-depth exploration is encouraged. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, Mathematics 408D or 408M, and Mathematics 341 or 340L.
- 356. Computer Networks.** Introduction to computer networks, including common terminology, basic design issues, and types of networks and protocols. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M; and credit with a grade of at least C- or registration for Computer Science 352 or 352H.
- 357. Algorithms.** Algorithmic paradigms: divide and conquer, greedy algorithms, dynamic programming, branch and bound. NP-completeness and topics selected from the following: cryptography algorithms, approximation algorithms, randomized algorithms, parallel algorithms, lower bounds. Three lecture hours a week for one semester. Computer Science 357 and 357H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, 337 or 337H, and Mathematics 408D or 408M.
- 357H. Algorithms: Honors.** Algorithmic paradigms: divide and conquer, greedy algorithms, dynamic programming, branch and bound. NP-completeness and topics selected from the following: cryptography algorithms, approximation algorithms, randomized algorithms, parallel algorithms, lower bounds. Three lecture hours a week for one semester. Computer Science 357 and 357H may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, 337 or 337H, and Mathematics 408D or 408M; and consent of the honors director.
- 361. Introduction to Computer Security.** Computer security, both in the abstract and in the context of real systems, including recognizing potential threats to confidentiality, integrity and availability, and developing familiarity with current security-related issues in computer science. Three lecture hours a week for one semester. Computer Science 361 and 378 (Topic: *Introduction to Security*) may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.

- 367. Numerical Methods.** Topics include systems of linear equations, numerical integration, ordinary differential equations, and nonlinear equations. Construction and use of large numerical systems. Influence of data representation and computer architecture on algorithm choice and development. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 367, Mathematics 368K, Physics 329. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, Mathematics 408D or 408M, and Mathematics 341 or 340L.
- 369. Systems Modeling I.** Introduction to performance modeling, with emphasis on computer systems. Modeling methodology, queueing network models, simulation, analysis of results. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 362K.
- 370. Undergraduate Reading and Research.** Supervised study of selected problems in computer science, by individual arrangement with supervising instructor. The equivalent of three lecture hours a week for one semester. No more than three semester hours may be counted toward a degree in computer science. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M; and consent of the undergraduate adviser.
- 371D. Distributed Computing.** Models, principles, and fundamental protocols, including event ordering and global predicate detection, atomic commit, state-machine replication, rollback recovery, primary backup, consensus for synchronous and asynchronous systems, and byzantine fault-tolerance. Three lecture hours a week for one semester. Prerequisite: Computer Science 372 or 372H with a grade of at least C-, or consent of instructor.
- 371P. Object-Oriented Programming.** Programming using class derivation, inheritance, and dynamic polymorphism. Application of a simple object-oriented design methodology to several software development problems. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, 337 or 337H, and Mathematics 408D or 408M.
- 371R. Information Retrieval and Web Search.** Introduction to traditional and recent methodologies for indexing, processing, querying, and classifying unstructured and semistructured textual data, including hypertext and World-Wide Web documents. Three lecture hours a week for one semester. Computer Science 371R and 378 (Topic: *Intelligent Information Retrieval and Web Search*) may not both be counted. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 371S. Object-Oriented Software Engineering.** Object-oriented formulations of software systems as executable specifications, object-oriented analysis, design of software architectures, translation of high-level specification systems. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 372. Introduction to Operating Systems.** Basic concepts of operating systems: concurrent process management, virtual memory, file systems, scheduling, and protection. Three lecture hours a week for one semester. Computer Science 372 and 372H may not both be counted. Prerequisite: Computer Science 337 or 337H, and 352 or 352H, with a grade of at least C- in each.
- 372H. Introduction to Operating Systems: Honors.** Basic concepts of operating systems: concurrent process management, virtual memory, file systems, scheduling, and protection. Three lecture hours a week for one semester. Computer Science 372 and 372H may not both be counted. Prerequisite: Computer Science 337 or 337H, and 352 or 352H, with a grade of at least C- in each; and consent of the honors director.
- 373. Software Engineering.** Introduction to current knowledge, techniques, and theories in large software system design and development. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M.
- 375. Compilers.** Formal description of languages, lexical analysis, syntax analysis, syntax-directed translation, run-time system management, code generation, code optimization, compiler-building tools. Three lecture hours a week for one semester. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M. Computer Science 341 or 341H and 345 or 345H are recommended.
- 376. Computer Vision.** Explores computer vision, a discipline that develops methods that enable machines to interpret or analyze images and videos. Includes the study of image formation, feature detection, segmentation, multiple-view geometry, recognition and learning, and motion and tracking. Three lecture hours a week for one semester. Computer Science 376 and 378 (Topic: *Computer Vision*) may not both be counted. Prerequisite: Mathematics 408D or 408M, 340L, and 362K with a grade of at least C- in each.
- 377. Principles and Applications of Parallel Programming.** Models of parallel computation, fundamental concepts for representation of parallel computation structures, study of representative parallel programming systems, programming of parallel algorithms and computations. Three lecture hours a week for one semester. Prerequisite: Computer Science 345 or 345H with a grade of at least C-.

- 178, 378. Undergraduate Topics in Computer Science.** One or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Computer Science 178, 378, 178H, 378H. Prerequisite: Upper-division standing. Additional prerequisites vary with the topic and are given in the *Course Schedule*.
- 178H, 378H. Undergraduate Topics in Computer Science: Honors.** One or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Only one of the following may be counted unless the topics vary: Computer Science 178, 378, 178H, 378H. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D; and consent of the honors director.
- 379H. Computer Science Honors Thesis.** Directed reading, research, and/or projects in areas of computer science, under supervision of a faculty member, leading to an honors thesis. The thesis must be approved by a committee of three readers. The equivalent of three lecture hours a week for one semester, by arrangement with a faculty member. Prerequisite: The following courses, with a grade of at least C- in each: Computer Science 310 or 310H, 336 or 336H, and Mathematics 408D or 408M; nine additional semester hours of upper-division coursework in computer science, with a grade of at least C- in each course; and consent of the student's research supervisor and the departmental honors adviser.

SCHOOL OF HUMAN ECOLOGY

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

HUMAN DEVELOPMENT AND FAMILY SCIENCES: HDF

LOWER-DIVISION COURSES

- 304 (TCCN: TECA 1303). Family Relationships.** Same as Women's and Gender Studies 301 (Topic 4: *Family Relationships*). The process of family interaction over the life cycle. Application of research findings to the understanding of relationships. Three lecture hours a week for one semester.
- 304H. Family Relationships: Honors.** The process of family interaction over the life cycle. Application of research findings to the understanding of relationships. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Consent of the department.
- 312. Family Resource Management.** Management concepts and theory in resource allocation used to meet family and life demands. Three lecture hours a week for one semester. Human Development and Family Sciences 312 and 321 may not both be counted. Prerequisite: Credit or registration for Human Development and Family Sciences 304.
- 313 (TCCN: TECA 1354). Child Development.** Same as Women's and Gender Studies 301 (Topic 5: *Child Development*). Motor, language, cognitive, social, and emotional development in the family context. Three lecture hours a week for one semester. Human Development and Family Sciences 313 and 313H may not both be counted. Prerequisite: Psychology 301 with grade of at least C-, and credit or registration for Human Development and Family Sciences 113L.
- 313H. Child Development: Honors.** Motor, language, social, and emotional development of children in the family context, with an emphasis on research findings and evaluations. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Only one of the following may be counted: Human Development and Family Sciences 313, 313H, Women's and Gender Studies 301 (Topic 5: *Child Development*). Prerequisite: Psychology 301 with a grade of at least B-, credit or registration for Human Development and Family Sciences 113L, and consent of the department.
- 113L. Child Development Laboratory.** Students observe children at the University Child and Family Laboratory and relate their observations to the issues discussed in Human Development and Family Sciences 313 and 313H. One and one-half laboratory hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C- and credit or registration for Human Development and Family Sciences 313 or 313H.
- 315L. Research Methods in Human Development and Family Sciences.** Survey of research methods, including observational and experimental techniques. Three lecture hours a week for one semester, with an additional fifteen hours of laboratory observation to be arranged. Human Development and Family Sciences 315L and 333L may not both be counted. Prerequisite: Credit or registration for Human Development and Family Sciences 304, 313, and 113L.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Human Development and Family Sciences.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 322. Personal and Family Finance.** Overview from the individual and family perspectives of financial planning tools, cash management, consumer credit, basic tax preparation, and insurance selection. Includes application of knowledge to hypothetical situations and case studies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Human Development and Family Sciences.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 335. Adult Development.** Adulthood and the development, changes, and maturation that occurs, including the impact of relationships in adulthood. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Human Development and Family Sciences 313 and 113L.
- 337. Personal Relationships.** Studies intimate relationships, including dating, cohabitation, marriage, and gay and lesbian relationships, as well as situational factors that may influence basic relationship processes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Human Development and Family Sciences 304 and 315L with a grade of at least C- in each.
- 338. Developmentally Appropriate Practices with Young Children.** Developmentally appropriate practices, the importance of play, arranging environments, material selection, and a basic understanding about centers and activities for young children. Three lecture hours a week for one semester, with an additional three to six hours of fieldwork sometime during the semester. Human Development and Family Sciences 338 and 348 (Topic 1: *Art and Science*) may not both be counted. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313 and 113L, or Psychology 304.
- 339. Working with Children and Families.** The history, background, and various theoretical approaches of early childhood education; methods of assessments, planning for individuals and groups, and working with families and parents in various settings. Three lecture hours a week for one semester, with an additional ten hours of fieldwork to be arranged. Human Development and Family Sciences 339 and 348 (Topic 2: *Music and Literature*) may not both be counted. Prerequisite: Upper-division standing and Human Development and Family Sciences 304, 313, and 113L.
- 340. Ethical, Philosophical, and Professional Development Issues.** Restricted to human development and family sciences majors. Explores ethical and philosophical issues; personal values and choices; professional development and leadership; and career goals, opportunities, and challenges as they relate to human development and family sciences. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Human Development and Family Sciences 312 with a grade of at least C-.
- 343. Human Development in Minority and Immigrant Families.** Examines the theories of human development and cultural psychology as they apply to the developmental issues of minority and immigrant children and families. Three lecture hours a week for one semester. Human Development and Family Sciences 343 and 378K (Topic: *Child Development in Minority and Immigrant Families*) may not both be counted. Prerequisite: Upper-division standing and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.
- 345. Peer Relationships.** Children's peer relationships from toddlerhood to adolescence. Three lecture hours a week for one semester. Human Development and Family Sciences 345 and 378K (Topic: *Peer Relationships*) may not both be counted. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.
- 347. Socioeconomic Problems of Families.** An analysis of socioeconomic factors affecting the economic well-being of families and individuals. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and six semester hours of coursework in anthropology, economics, education, human development and family sciences, psychology, social work, or sociology.
- 351. Infant Development and Attachment Relationships.** The development of emerging social language and cognitive capacities during infancy and toddlerhood and the development and consequences in infant-caregiver attachment security. Three lecture hours a week for one semester. Human Development and Family Sciences 351 and 378K (Topic 7: *Social Development and Attachment Relationships*) may not both be counted. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.
- 352. Field Experience: Community.** Practicum in applied settings concerning human development and family sciences. One lecture hour and ten to twelve hours of fieldwork a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; Human Development and Family Sciences 312, 315L, and 340; nine additional semester hours of upper-division coursework in human development and family sciences; six semester hours of coursework from the list of approved supporting courses available from the School of Human Ecology; and consent of instructor. Admission by application only, filed with the human development and family sciences division, School of Human Ecology, by May 1 for enrollment in the following spring semester or by December 1 for enrollment in the following fall semester.

- 652F. Field Experience II: Community.** Designed for students in their last semester. Practicum in settings concerning human development and family sciences. One lecture hour and at least twenty laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; Human Development and Family Sciences 312, 315L, and 340; twelve additional semester hours of upper-division coursework in human development and family sciences; six semester hours of coursework from the list of approved supporting courses available from the School of Human Ecology; and consent of instructor. Admission by application only, filed with the human development and family sciences division, School of Human Ecology, by May 1 for enrollment in the following spring semester or by December 1 for enrollment in the following fall semester.
- 352L. Field Experience: Early Childhood.** Study of the skills necessary for planning, guiding, and interacting with young children. Students work directly with young children in a classroom setting. One lecture hour and ten to twelve hours of fieldwork a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; Human Development and Family Sciences 312, 315L, and 366; nine additional semester hours of upper-division coursework in human development and family sciences; six semester hours of coursework from the list of approved supporting courses available from the School of Human Ecology; and consent of instructor. Admission by application only, filed with the division of human development and family sciences, School of Human Ecology, by May 1 for enrollment in the following spring semester or by December 1 for enrollment in the following fall semester.
- 652P. Field Experience II: Practice Teaching.** Designed for students in their last semester. Study of skills necessary for planning, guiding, and interacting with young children. Students will work directly with children and families in an applied classroom setting. One lecture hour and at least twenty laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; Human Development and Family Sciences 312, 315L, 338, and 366; six additional semester hours of upper-division coursework in human development and family sciences; nine semester hours of coursework from the list of approved supporting courses available from the School of Human Ecology; and consent of instructor. Admission by application only, filed with the division of human development and family sciences, School of Human Ecology, by May 1 for enrollment in the following spring semester or by December 1 for enrollment in the following fall semester.
- 354. Advanced Personal Financial Planning.** Overview from the individual and family perspectives of financial planning and decision-making with regard to home ownership, tax planning, investment alternatives, retirement planning, and estate transfer. Includes application of knowledge to hypothetical situations and case studies. Three lecture hours a week for one semester. Prerequisite: Human Development and Family Sciences 322 with a grade of at least C-.
- 355. Problems Course: Research Practicum.** Intensive study of selected problems of a transdisciplinary nature. One lecture hour and nine research hours a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; Human Development and Family Sciences 312 and 315L; credit or registration for Educational Psychology 371, Human Development and Family Sciences 340, Mathematics 316, Statistics and Scientific Computation 303, 304, 305, or 306; and consent of instructor. Admission by application only, filed with the human development and family sciences division, School of Human Ecology, by May 1 for enrollment in the following spring semester or by December 1 for enrollment in the following fall semester. For nonmajors, the application process may be waived by consent of instructor. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- Topic 1: Research in Human Development and Family Sciences.**
- 355H. Problems Course: Honors.** Intensive study of selected research problems. One lecture hour and nine research hours a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade-point average of at least 3.00; Human Development and Family Sciences 315L with a grade of at least B-; Mathematics 316, Statistics and Scientific Computation 303, 304, 305, or 306 with a grade of at least B-; and consent of the department.
- 356. The Development and Deterioration of Relationships.** Studies the formation and development of marital relationships and the changes in these relationships. Explores courtship, the early years of marriage, the impact of parenthood on relationships, divorce, and remarriage. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and the following courses with a grade of at least C- in each: Human Development and Family Sciences 304 or 304H, and 315L and 337.
- 358. Parent-Child Relationships.** The determinants of parenting attitudes and behavior and the effects on children of variations in sensitivity, discipline, and other aspects of parenting. Three lecture hours a week for one semester. Human Development and Family Sciences 358 and 378K (Topic 2: *Parent-Child Relationships*) may not both be counted. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.

- 360. Methods of Family Life Education.** An examination, integrating theory and applied knowledge, of the best practices for working with families. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Human Development and Family Sciences 304 and 315L with a grade of at least C- in each.
- 362. Children and Public Policy.** The positive and negative effects of policy on children and the policy landscape in several major domains of child and family life in the United States and in other countries. Three lecture hours a week for one semester. Human Development and Family Sciences 362 and 378K (Topic 4: *Children and Public Policy*) may not both be counted. Prerequisite: Six semester hours of upper-division coursework in human development and family sciences, anthropology, education, psychology, sociology, or social work.
- 366. Guidance in Adult-Child Relationships.** Same as Women's and Gender Studies 345 (Topic 4: *Guidance in Adult-Child Relationships*). Theory and implementation of positive child and adult interactions, communication, and guidance strategies. Two lecture hours a week for one semester, and four laboratory hours a week to be arranged as a four-hour block between 8:30 AM and 4:45 PM, Monday through Thursday. Prerequisite: Human Development and Family Sciences 313 and 113L, and three semester hours of upper-division coursework in human development and family sciences, education, psychology, or sociology.
- 371. Adolescent Development in Context.** The biological, cognitive, and social changes that occur during the second decade of life, including the developmental issues faced by adolescents. Three lecture hours a week for one semester. Human Development and Family Sciences 371 and 378K (Topic 1: *Adolescence into Young Adulthood*) may not both be counted. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.
- 372K. Families in Transition.** Analysis of interaction, transitions, and crises over the family life span. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and the following courses with a grade of at least C- in each: Human Development and Family Sciences 304 or 304H, and 315L and 337.
- 375. Economic Issues of the Family.** Economic issues experienced by families through the various stages of the life span. Three lecture hours a week for one semester. Prerequisite: Human Development and Family Sciences 304, and 312 or 322.
- 378K. Advanced Child and Family Development.** Concepts, theories, and issues in human development and family sciences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in human development and family sciences (or child development), anthropology, education, psychology, sociology, or social work, and consent of instructor.
Topic 5: Media and the Family.
Topic 6: Introduction to Early Childhood Intervention.
Topic 8: Advanced Early Childhood Intervention. Additional prerequisite: Human Development and Family Sciences 378K (Topic 6).
- 378L. Theories of Child and Family Development.** Study and analysis of major theories in human and family development. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each; and three additional semester hours of upper-division coursework in human development and family sciences with a grade of at least C- in each course.
- 379H. Honors Tutorial Course.** Supervised individual research on a special topic in human development and family sciences; oral presentation and preparation of a scholarly paper covering the research. May be based on laboratory, library, or field research. May be repeated once for credit. Prerequisite: Upper-division standing, a University grade point average of at least 3.00, admission to the human development and family sciences honors program, and consent of the honors adviser. Name of honors adviser and application procedure are available in the division office.

HUMAN ECOLOGY: H E

LOWER-DIVISION COURSE

- 115H. Freshman Honors Seminar.** Research presentations by students, faculty, and invited scientists on current issues in human ecology, human development and family sciences, and nutrition. One lecture hour a week for one semester. Prerequisite: Admission to the honors degree option in human development and family sciences or nutrition; three semester hours of honors-designated coursework in chemistry, biology, or mathematics with a grade of at least B-; and Human Development and Family Sciences 313 and 113L, or Nutrition 312 and 112L (or 311 and 111L), with a grade of at least B- in each course.

UPPER-DIVISION COURSES

- 225H. Sophomore Honors Seminar.** Students plan, conduct, write, and present research on a current topic in human ecology. Two lecture hours a week for one semester. Prerequisite: Six semester hours of honors-designated coursework in chemistry, biology, or mathematics; concurrent enrollment in a course chosen from a list maintained in the departmental office; and consent of instructor and the departmental honors adviser.
- 355. Problems Course.** Intensive study of selected problems of a transdisciplinary nature. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.

Topic 1: Research in Family Economics.

- 361. Consumers and the Markets.** Internal and external factors that influence consumer choice-making behavior in the United States economy; analysis of consumer information resources and protective legislation at the federal and state levels. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and three semester hours of coursework in economics.

NUTRITION: NTR

LOWER-DIVISION COURSES

- 306. Fundamentals of Nutrition.** Essential food components and their functions in life processes. Three lecture hours a week for one semester. Nutrition 306 and 311 may not both be counted. May not be counted toward a degree in nutrition.
- 307. Introductory Food Science.** Application of the principles of food chemistry to processing and preparation techniques. Three lecture hours a week for one semester. Prerequisite: Nutrition 312 (or 311) with a grade of at least C-, and credit or registration for Nutrition 107L.
- 107L. Introductory Food Science Laboratory.** Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Nutrition 307.
- 312. Introduction to Nutritional Sciences.** Designed for science majors. Biochemical, physiological, and cellular functions of energy macronutrients, vitamins and minerals, and the scientific basis for current dietary and nutrient recommendations. Three lecture hours a week for one semester. Nutrition 311 and 312 may not both be counted. Prerequisite: Chemistry 301 and Mathematics 408K with a grade of at least C-; and credit or registration for Biology 311C and Chemistry 302.
- 112L. Introduction to Nutritional Science Laboratory.** Collection and evaluation of dietary intake data, nutrient composition of food, and survey of dietetic practice. Three laboratory hours a week for one semester. Nutrition 111L and 112L may not both be counted. Prerequisite: Credit or registration for Nutrition 312 (or credit for Nutrition 311).
- 315. Nutrition through the Life Cycle.** Adapting nutrition recommendations to physiological changes throughout the life span. Three lecture hours a week for one semester. Nutrition 315 and 328C may not both be counted. Prerequisite: Nutrition 306 (or 311) or 312 with a grade of at least C-.
- 316. Culture and Food.** Influence of culture on foodways around the world. Three lecture hours a week for one semester. Prerequisite: Nutrition 306 (or 311) or 312 with a grade of at least C-.
- 218. Assessment of Nutritional Status.** Assessment of nutritional status using anthropometric, biochemical, clinical, and dietary intake data, and development and implementation of effective care for individuals. Two lecture hours a week for one semester. Nutrition 218, 318 and 170L may not both be counted. Prerequisite: Nutrition 312 and 112L (or 311 and 111L) with a grade of at least C- in each, and credit or registration for Nutrition 118L.
- 118L. Assessment of Nutritional Status Laboratory.** Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Nutrition 218.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Nutrition.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 321. International Nutrition: The Developing World.** Nutrition-related issues in the developing world, including nutrient deficiency and disease, concerns in vulnerable populations (pregnancy, infancy, childhood, and old age), and food aid. Three lecture hours a week for one semester. Nutrition 321 and 360 (Topic 2: *International Nutrition*) may not both be counted. Prerequisite: Nutrition 306 (or 311) or 312 with a grade of at least C-.
- 324. Advanced Food Science.** Application of the principles of food chemistry to the development of food products. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Nutrition 307, 107L, 326, and Chemistry 310M with a grade of at least C- in each, and credit or registration for Nutrition 124L.
- 124L. Advanced Food Science Laboratory.** Individual research project on food product development and evaluation. Three laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Credit or registration for Nutrition 324.
- 326. Cellular and Molecular Nutrition.** Integration of nutrition, genetics, cell biology, and molecular biology. Focuses on the cellular and molecular basis of nutrition-related diseases and nutrient-gene interactions. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 311C and Nutrition 312 (or 311) with a grade of at least C- in each, and credit or registration for Chemistry 310M.
- 126L. Nutritional Sciences Laboratory.** Basic laboratory techniques in nutritional sciences. Three laboratory hours a week for one semester. Nutrition 126L and 142L may not both be counted. Prerequisite: Credit or registration for Nutrition 326.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Nutrition.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

- 330. Nutrition Education and Counseling.** Application of counseling and learning theories to the care of individuals and groups in community and clinical settings. Three lecture hours and one additional class hour a week for one semester. Prerequisite: Nutrition 315 and 326 with a grade of at least C- in each.
- 331. International Nutrition: Social and Environmental Policies.** Explores the nutritional concerns of different countries, environmental aspects of food supply, and social policies needed to balance supply with demand in a sustainable manner. Three lecture hours a week for one semester. Nutrition 331 and 360 (Topic: *International Nutrition: Social and Environmental Policies*) may not both be counted. Prerequisite: Upper-division standing, and Nutrition 306 (or 311) or 312 with a grade of at least C-.
- 332. Community Nutrition.** National and international issues in public health and nutrition programs. Three lecture hours a week for one semester. Prerequisite: Nutrition 312 (or 311), 315, and 326 with a grade of at least C- in each.
- 334. Foodservice Systems Management.** Procurement, production, and service delivery in foodservice systems. Three lecture hours a week for one semester. Prerequisite: Nutrition 307, 107L, and 326 with a grade of at least C- in each, and credit or registration for Nutrition 234L.
- 234L. Laboratory in Foodservice Systems.** Six laboratory hours a week for one semester. Prerequisite: Credit or registration for Nutrition 334.
- 338W. Issues in Nutrition and Health.** Identifying, reading, analyzing, writing, and presenting scientific research on selected topics in nutrition and human health. Two lecture hours and two discussion hours a week for one semester. Prerequisite: Biology 365S, Chemistry 369, or 339K and 339L, and Nutrition 326, with a grade of at least C- in each; and Biology 318N, Educational Psychology 371, or Mathematics 316.
- 342. Advanced Nutrition I.** Biochemical and molecular biological aspects of carbohydrate, fat, and amino acid metabolism. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 365S, Chemistry 369, or 339K and 339L, and Nutrition 326 with a grade of at least C- in each.
- 344. Advanced Nutrition II.** Energy, minerals, vitamins, and selected special topics. Three lecture hours a week for one semester. Offered in the spring semester only. Nutrition 344 and 365 (Topic 1: *Vitamins and Minerals*) may not both be counted. Prerequisite: Nutrition 342 with a grade of at least C-, and credit or registration for Nutrition 144M.
- 144M. Advanced Nutrition II Laboratory.** Advanced laboratory techniques in nutrition assessment and research. Three laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Concurrent enrollment in Nutrition 344 or consent of instructor.
- 245C. Clinical Practice in Medical Nutrition Therapy I.** Application of principles of medical nutrition therapy to the care of clients in the practice setting. Nine hours of supervised practice a week for one semester. Prerequisite: Nutrition 370 with a grade of at least C-, credit or registration for Nutrition 371, and admission to the Coordinated Program in Dietetics.
- 345M. Clinical Practice in Medical Nutrition Therapy II.** Application of principles of medical nutrition therapy to the care of patients in health care facilities. Forty hours of supervised practice a week for four weeks. Prerequisite: Nutrition 245C and 371 with a grade of at least C- in each. Students must register for Nutrition 372C in the same semester.
- 152, 252, 352. Field Experience in Nutrition.** For each semester hour of credit earned, three field placement hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Approval of application for field experience. Applications are available in the department office.
- 353. Field Experience in International Nutrition.** Supervised study abroad experience designed to help students understand nutrition science issues, applications, related health care practices in a global environment, and other cultures. Students work in schools, hospitals, or similar settings to gain professional experience with food science and dietetics. Five lecture hours and ten field hours a week for five weeks. Prerequisite: Nutrition 306 (or 311) or 312 with a grade of at least C-, and approval of an application to study abroad. Applications are available from the Study Abroad Office.
- 155, 255, 355, 455. Undergraduate Research in Nutrition.** Supervised individual undergraduate research in nutrition. For each semester hour of credit earned, at least three laboratory hours a week for one semester. May be repeated for credit, but no more than four semester hours may be counted toward a degree in nutrition. Any additional hours must be taken on the pass/fail basis. Prerequisite: Consent of instructor.
- 355M. Advanced Food Systems Management.** Financial control, quality assurance, personnel administration, foodservice equipment, layout and design in foodservice operations. Analysis and evaluation of an organized foodservice operation. Three lecture hours and four hours of supervised practice a week for one semester. Prerequisite: Accounting 310F or 311, and Nutrition 334 and 234L, with a grade of at least C- in each.
- 360. Selected Topics in Applied Nutrition.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 162. Standards, Ethics, and Credentialing for Dietetic Practice.** Identification of standards and discussion of current issues in ethics and credentialing for dietetics practice. One lecture hour a week for one semester. Prerequisite: Credit or registration for Nutrition 218 and 118L (or credit for Nutrition 318).
- 365. Selected Topics in Nutritional Sciences.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Vitamins and Minerals.** Biomedical, cellular and molecular, and clinical aspects of vitamins, minerals, and water. Nutrition 344 and 365 (Topic 1) may not both be counted. Prerequisite: Biology 365S and Nutrition 342 with a grade of at least C- in each.

- Topic 2: Nutrition and Genes.** Interactions between nutrients and gene expression, including heredity, gene regulation, metabolic disease, developmental abnormalities, and molecular techniques. Prerequisite: Biology 365S and Nutrition 342 with a grade of at least C- in each.
- Topic 3: Epidemiological and Statistical Methods in Nutrition.** Basic principles and concepts of epidemiology and statistics in nutritional sciences. Prerequisite: Nutrition 342 with a grade of at least C-.
- 366L. Research Methods in Nutritional Sciences.** Focuses on state-of-the-art research in nutrition, including biochemistry and molecular biological techniques for nutrient-gene interactions, enzyme and coenzyme functions, and nutrient analysis of biologic materials. Includes data analysis and statistical methods. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Nutrition 126L with a grade of at least C-.
- 167. Undergraduate Seminar in Nutritional Sciences.** One lecture hour a week for one semester. Prerequisite: Upper-division standing.
- 370. Medical Nutrition Therapy I.** The role of nutrition in prevention and treatment of chronic disease such as diabetes and heart disease. Three lecture hours a week for one semester. Nutrition 668A and 370 may not both be counted. Prerequisite: Biology 365S, Chemistry 369, Nutrition 326, and either Biology 325 with a grade of at least C-, or Nutrition 218 and 118L with a grade of at least C- in each (or 318 with a grade of at least C-).
- 371. Medical Nutrition Therapy II.** Nutritional care of critically ill patients, including techniques of nutrition support. Three lecture hours a week for one semester. Nutrition 668B and 371 may not both be counted. Prerequisite: Biology 365S, Chemistry 369, Nutrition 326, and either Biology 325 with a grade of at least C-, or Nutrition 218 and 118L with a grade of at least C- in each (or 318 with a grade of at least C-).
- 372C. Practicum in Clinical Dietetics.** Supervised practice in health care facilities. Forty hours of supervised practice a week for four weeks. Prerequisite: Admission to the Coordinated Program in Dietetics. Students must register for Nutrition 345M in the same semester.
- 372F. Practicum in Food Services Systems Management.** Supervised practice in food service facilities. Forty hours of supervised practice a week for four weeks. Prerequisite: Nutrition 245C and 355M with a grade of at least C- in each, and admission to the Coordinated Program in Dietetics. Students must register for Nutrition 373S in the same semester.
- 373S. Practicum in Dietetic Administration.** Supervised practice in the administration of food and nutrition programs. Forty hours of supervised practice a week for three weeks. Nutrition 355L and 373S may not both be counted. Prerequisite: Admission to the Coordinated Program in Dietetics. Students must register for Nutrition 372F in the same semester.
- 374C. Practicum in Community Dietetics.** Supervised practice in one or more community-based nutrition programs. Forty hours of supervised practice a week for five weeks. Nutrition 352C and 274C may not both be counted. Prerequisite: Nutrition 345M, 372C, 372F, and 373S with a grade of at least C- in each; and admission to the Coordinated Program in Dietetics.
- 374P. Advanced Practicum in Dietetics.** Culminating experience in the practice of administrative, clinical, or community dietetics. Forty hours of supervised practice a week for five weeks. Prerequisite: Nutrition 345M, 372C, 372F, and 373S with a grade of at least C- in each; and admission to the Coordinated Program in Dietetics.
- 379H. Honors Tutorial Course.** Supervised individual research on a special topic in nutrition; oral presentation and preparation of a scholarly paper covering the research. May be based on laboratory, library, or field research. May be repeated once for credit. Prerequisite: Consent of the student's research supervisor and the departmental honors adviser.

TEXTILES AND APPAREL: TXA

LOWER-DIVISION COURSES

- 205. Textiles.** Chemical and physical properties of fibers and yarns, fabric construction, and finishes. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 105L.
- 105L. Textiles Laboratory.** Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 205.
- 212K. Apparel Industry.** Introduction to the integrated apparel design industry from the creative and merchandising perspective. Two lecture hours a week for one semester. Prerequisite: Admission to the textiles and apparel program; Textiles and Apparel 316L or 316Q; Textiles and Apparel 319 with a grade of at least C-; and credit with a grade of at least C- or registration for Textiles and Apparel 212L.
- 212L. Apparel Product Development and Design Laboratory.** Six laboratory hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 212K.
- 315K. Field Experience I.** Application of merchandising strategic planning in a professional environment with faculty and site director supervision. At least 154 hours of supervised fieldwork for one semester. Prerequisite: Admission to the Retail Merchandising Internship Program.
- 316L. Apparel I.** Industrial techniques of pattern design and garment construction. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each, and credit with a grade of at least C- or registration for Textiles and Apparel 319.
- 316Q. Sewn Products Analysis.** Evaluation of soft goods, including materials, quality of work, and costs. Three lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each.

- 319. Visual Merchandising and Display Techniques.** Techniques of merchandise presentation, including principles and practice in display planning, execution, and coordination. Three lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Textiles and Apparel.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Textiles and Apparel.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 352D. Field Experience in Apparel Design.** Application of apparel design techniques and principles in a professional environment. At least 154 hours of fieldwork for one semester. Prerequisite: Admission to the Apparel Design Internship Program, and Textiles and Apparel 164K (Topic 1: *Flat Pattern*) and 264L (Topic 1: *Flat Pattern*) with a grade of at least C- in each.

UPPER-DIVISION COURSES

- 325K. Culture, Gender, and Appearance.** Social, economic, aesthetic, and political aspects of historic costume and of the evolution of modern dress. Three lecture hours a week for one semester. Prerequisite: Textiles and Apparel 319 with a grade of at least C-, or Art History 301.
- 325L. Culture, Gender, and Appearance I.** Social, economic, aesthetic, and political aspects of costume evolution from ancient times through the Renaissance. Three lecture hours a week for one semester. Textiles and Apparel 325K and 325L may not both be counted. Prerequisite: Textiles and Apparel 319 with a grade of at least C-, or Art History 301.
- 325M. Culture, Gender, and Appearance II.** Social, economic, aesthetic, and political aspects of costume evolution from the Baroque period through modern times. Three lecture hours a week for one semester. Textiles and Apparel 325K and 325M may not both be counted. Prerequisite: Textiles and Apparel 319 with a grade of at least C-, or Art History 301.
- 126. Apparel II.** Advanced apparel construction techniques using industry standards and portfolio development. One lecture hour a week for one semester. Prerequisite: Textiles and Apparel 316L with a grade of at least C- and credit or registration for Textiles and Apparel 226L.
- 226L. Apparel II Laboratory.** Advanced apparel construction techniques using industry standards and portfolio development. Six laboratory hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 126.
- 327. Clothing and Human Behavior.** The social, psychological, and nonverbal significance of clothing and the influence of clothing on behavior. Three lecture hours a week for one semester. Prerequisite: Six semester hours of upper-division coursework in psychology, sociology, or the School of Human Ecology.
- 328. Research Methods in Textiles and Apparel.** Basic research methodology and academic writing. Three lecture hours a week for one semester. Prerequisite: Marketing 320F and Textiles and Apparel 205 and 105L with a grade of at least C- in each.
- 352M. Field Experience in Retail Merchandising.** Application of merchandising techniques and principles in a professional environment. At least 154 hours of supervised fieldwork for one semester. Prerequisite: Admission to the Retail Merchandising Internship Program.
- 155, 355. Problems Course.** Intensive study of selected problems of an interdisciplinary nature. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 355C. Computer-Aided Design for Apparel.** Computer technology used to create textile prints, weaves, illustrations, flat patterns, promotional pieces, and pattern markers. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each; and credit with a grade of at least C- or registration for Textiles and Apparel 164K (Topic 1: *Flat Pattern*) and 264L (Topic 1: *Flat Pattern*).
- 355D. Textiles Artifact Management and Conservation.** Principles and techniques in the identification, documentation, conservation, and exhibition of textile-based artifacts. Six laboratory hours a week for one semester. Prerequisite: Textiles and Apparel 325M.
- 355K. Textile and Apparel Economics.** Economic and regulatory aspects of the textile and apparel industries. Three lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each, and Economics 304K and 304L with a grade of at least C- in each.
- 355N. History of Textiles.** Role of textiles in the social, economic, aesthetic, and technological development of society; including production and design of textiles throughout history. Three lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L and three semester hours of coursework in art history, with a grade of at least C- in each course.

- 355P. Problems in Retail Merchandising.** Intensive study of selected problems related to field experience; development of analytical and problem-solving skills for retailing. At least 154 hours of supervised fieldwork for one semester. Prerequisite: Admission to the Retail Merchandising Internship Program.
- 359H. Honors Reading Course.** Supervised individual reading on special subjects. Prerequisite: Upper-division standing, a University grade point average of at least 3.00, and consent of the undergraduate adviser.
- 260L. Advanced Textiles.** Composition, structure, and properties of textile products; contributions of textile research. Two lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L; Chemistry 301, 302, and 204; six semester hours of upper-division coursework in textiles and apparel with a grade of at least C- in each course; and credit with a grade of at least C- or registration for Textiles and Apparel 260M.
- 260M. Advanced Textiles Laboratory.** Analysis and evaluation of textile performance. Six laboratory hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 260L.
- 361. Consumers and the Markets.** Internal and external factors that influence consumer choice-making behavior in the United States economy. Includes data management and analysis skills associated with the buying, distributing, and merchandising of consumer goods. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and three semester hours of coursework in economics.
- 164K. Advanced Problems in Clothing.** Creative application of flat pattern or draping processes. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Textiles and Apparel 212K, 212L, 316L, 126, and 226L, with a grade of at least C- in each; and credit with a grade of at least C- or registration for the same topic of Textiles and Apparel 264L.
- Topic 1: Flat Pattern.**
- Topic 2: Draping.**
- Topic 3: Advanced Apparel Design.**
- 264L. Advanced Problems in Apparel Laboratory.** Six laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Credit with a grade of at least C- or registration for the same topic of Textiles and Apparel 164K.
- Topic 1: Flat Pattern.**
- Topic 2: Draping.**
- Topic 3: Advanced Apparel Design.**
- 376. Principles of Retail Merchandising.** Retail strategic planning and implementation for soft goods and apparel. Three lecture hours a week for one semester. Prerequisite: Marketing 320F and six semester hours of upper-division coursework in textiles and apparel, business, studio art, or journalism.

- 379H. Honors Tutorial Course.** Supervised individual research on a special topic in textiles and apparel; oral presentation and preparation of a scholarly paper covering the research. May be based on laboratory, library, or field research. May be repeated once for credit. Prerequisite: Upper-division standing, admission to the Textiles and Apparel Honors Program, Textiles and Apparel 359H with a grade of at least B-, and consent of the honors adviser.

DEPARTMENT OF MARINE SCIENCE

MARINE SCIENCE: MNS

LOWER-DIVISION COURSES

- 307. Introduction to Oceanography.** Same as Geological Sciences 307. Introduction to the sciences of oceanography: geological, physical, and biological. Two lecture hours and two laboratory hours a week for one semester. May not be counted toward the Bachelor of Arts degree with a major in geological sciences, the Bachelor of Science in Geological Sciences (Option I), the Bachelor of Science in Geological Sciences (Option II), or the Bachelor of Science in Geological Sciences (Option III).
- 309. Topics in Marine Science.** Designed for nonscience majors. Selected topics in marine science, including marine biology, marine chemistry, and physical oceanography. Two lecture hours and one and one-half laboratory hours a week for one semester. May be repeated for credit when the topics vary. May not be counted toward a degree in marine science. Prerequisite: Marine Science 307.

UPPER-DIVISION COURSES

- 320. Marine Ecology.** Study of ecological processes at different levels of integration in marine ecosystems. Three lecture hours a week for one semester. Prerequisite: Biology 311D, and Chemistry 302 or 302H.
- 120L. Laboratory Studies in Marine Ecology.** A laboratory course with two weekend field trips to the Marine Science Institute at Port Aransas to perform ecological studies in the Texas coastal zone. Two weekend field trips, with pre- and post-field trip laboratory hours required. Prerequisite: Credit or registration for Marine Science 320.
- 440. Limnology and Oceanography.** Same as Biology 456L. An introduction to the study of the interactions between aquatic organisms and their environments. Two lecture hours and six laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 302 or 302H.
- 344K. Marine Mining and Minerals.** Same as Geological Sciences 344K. Overview of seafloor mineral deposits, their exploration and mining. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Geological Sciences degree. Prerequisite: Geological Sciences 401 or 303, 416K, and 416M.

148, 348. Training Cruise(s). May be repeated for credit when the topics vary.

Topic 1: Research in Biological Oceanography. Same as Biology 148, 348. One or more cruises of one to several days each to collect physical, chemical, oceanographic, and biological data relevant to biological processes in the sea. Preparatory instruction and postcruise sample processing and analysis. Prerequisite: Biology 325 and Chemistry 302 with a grade of at least C- in each, and consent of instructor.

Topic 2: Marine Geology and Geophysics Field Course. Marine Science 348 (Topic 2) is same as Geological Sciences 348K. Hands-on, team-based instruction in the collection and processing of marine geological and geophysical data along the Gulf of Mexico coast. Includes classroom, laboratory, and field components in Austin and at sea. Offered between the spring semester and the summer session; limited class meetings may begin in April. Geological Sciences 397F and Marine Science 348 (Topic 2) may not both be counted. Fulfills the field experience requirement for some geological sciences degree programs. Students should contact the Department of Geological Sciences before registering. Prerequisite: For geological sciences majors, upper-division standing, Geological Sciences 420K or 320L with a grade of at least C-, and consent of instructor; Geological Sciences 416M and 465K are recommended; for others, upper-division standing, Marine Science 307 and 354F with a grade of at least C- in each, and consent of instructor.

352. Principles of Marine Science. Lectures, laboratory, and fieldwork. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary.

Topic 9: Endocrinology. Endocrinology, with special reference to lower vertebrates and evolution of control systems. Marine Science 352 (Topic 9) and 382 (Topic 9: *Endocrinology*) may not both be counted. May count as zoology. Prerequisite: Previous courses in physiology and consent of instructor.

Topic 12: Adaptive Physiology of Marine Organisms. Selected topics in the comparative physiology of marine organisms and their environmental adaptations. Prerequisite: Previous course in cell physiology or consent of instructor.

Topic 13: Microclimatology. Physical and thermal characteristics of the atmospheric surface layer, with particular reference to coastal environments.

Topic 16: Ocean Engineering. Description of ocean waves and tides, methods of wave forecasting, classroom and field exercises. Prerequisite: Consent of instructor.

Topic 18: Marine Atmospheric Chemistry. Atmospheric particle chemistry; sea-surface films, atmospheric organic matter; air-sea chemical fractionation; carbon, nitrogen, sulfur cycles. Prerequisite: Consent of instructor.

Topic 20: General Marine Phycology. Survey of benthic algae and phytoplankton of the Texas coast; systematics, morphology, life history and culturing techniques.

Topic 21: Ecology of Marine Fungi. Biology of the fungi with emphasis on ecological, morphological, and developmental aspects and culturing techniques.

Topic 22: Oceanography. Consideration of current understanding of the chemistry and biology of the oceans.

352C. Estuarine Ecology. General ecological principles of estuarine environments in Texas, including physiography, hydrography, and plant and animal community structure and productivity. Requires several field trips in addition to lecture hours, including one weekend trip. Offered on the letter-grade basis only. Marine Science 352 (Topic 8: *Estuarine Ecology*) and 352C may not both be counted. Prerequisite: Upper-division standing and six semester hours of coursework in biology, chemistry, geological sciences, or physics.

352D. Marine Botany. Exploration of the marine algae and seagrasses of the south Texas coast, with emphasis on their taxonomy, physiology, and ecology; field trips to representative coastal habitats. Requires several field trips in addition to lecture hours, including one weekend trip. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; one of the following courses: Biology 322, 324, 325 or 325H, 328, Marine Science 352C; and three additional semester hours of coursework in biology.

152L, 252L. Principles of Marine Science: Laboratory Studies. A laboratory course with one-day field trips (which may include weekends) to local estuarine and coastal habitats. Includes pre- and post-field trip laboratory hours. For each semester hour of credit earned, three or four field/laboratory sessions, scheduled throughout the semester. May be repeated for credit when the topics vary. May be counted toward the Bachelor of Science in Biology (Option III: Marine and Freshwater Biology) and toward other undergraduate degrees in biology. Prerequisite: Credit or registration for Marine Science 352.

152S, 252S. Principles of Marine Science: Undergraduate Seminar. Guest lectures by local and visiting research scientists on a variety of topics in marine and environmental science. Each seminar is followed by a separate one-hour discussion to give students an opportunity to meet directly with the scientist. For each semester hour of credit earned, one lecture/discussion a week for one semester. May be repeated for credit when the topics vary. May be counted toward the Bachelor of Science in Biology (Option III: Marine and Freshwater Biology) and toward other undergraduate degrees in biology.

- 152T, 252T. Principles of Marine Science: Special Topics.** Advanced research topics in marine science relevant to critical habitats, organisms, or processes. A field oriented course with weekend field trips on the Texas coast, including pre- and post-field trip laboratory hours. For each semester hour of credit earned, two weekend field trips, scheduled throughout the semester. May be repeated for credit when the topics vary. May be counted toward the Bachelor of Science in Biology (Option III: Marine and Freshwater Biology) and toward other undergraduate degrees in biology. Prerequisite: Upper-division standing and six semester hours of coursework in biology, chemistry, geological sciences, and/or physics.
- 353. Topics in Marine Science.** Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.
- Topic 2: Fish Adaptations to Coastal Ecosystems.** Quantitative ecological comparisons of zoogeographical abundance and distribution with population, metabolic, and growth parameters. Additional prerequisite: Fifteen semester hours of coursework in biology and/or zoology.
- Topic 4: Current Research.** Research instruction/participation in marine science. Laboratory and field activity with emphasis on faculty contact.
- Topic 5: Seafloor Mining.** Study of seafloor mineral resources, including problems and policies related to exploration, mining, environmental concerns, assessment, and industrial development.
- Topic 6: Marine Ecology.** Independent study in marine ecology, literature research, and comprehensive writing. Report required. Additional prerequisite: Upper-division standing in a natural science, engineering, or education.
- Topic 7: Marine Sedimentology.** Selected topics and problems concerning the depositional processes, controls, and distribution of marine sediments.
- Topic 8: Marine Chemistry.** Study of the processes controlling the chemistry of natural waters, the oceans as a chemical system, and the impact of human activities on these systems.
- Topic 14: Marine Isotope Geochemistry.** The use of isotopes (stable, radiogenic, uranium series, and anthropogenic) in the study of marine science.
- Topic 15: Interdisciplinary Classroom Field Methods.** Uses the interdisciplinary nature of marine science to focus on inquiry-based instruction, constructivist-oriented teaching strategies, and field explorations.
- Topic 17: Marine Fish Physiology.** Physiology of major organ systems of marine fishes, with emphasis on adaptations to marine environments. Includes osmoregulation, nutrition, circulation, excretion, reproduction, sensory physiology, and endocrine control. Additional prerequisite: Biology 311D, and Chemistry 302 or 302H.
- 354. Marine Invertebrates.** Study of invertebrate taxonomy, structure, behavior, and ecology, with emphasis on field sampling and laboratory studies of invertebrate habitats of the Texas coast. Three lecture hours a week for one semester. Prerequisite: Six semester hours of biology or consent of instructor.
- 354C. Biology of Fishes.** Anatomy, physiology, behavior, life history, taxonomy, and distribution of fishes, with emphasis on field sampling and laboratory studies of the coastal biota. Requires several field trips in addition to lecture hours, including one weekend trip. Prerequisite: Upper-division standing, six semester hours of coursework in biological sciences, or consent of instructor.
- 354E. Aquatic Microbiology.** Ecology, physiology, distribution, and growth of heterotrophic and autotrophic bacteria and fungi in waters and sediments. Three lecture hours a week for one semester. Marine Science 354E and 384E may not both be counted. Prerequisite: Biology 311D, Chemistry 302 or 302H, and consent of instructor.
- 354F. Marine Geology.** Survey of the origin, structure, stratigraphy, and sedimentology of marine basins and continental margins. Three lecture hours a week for one semester. Marine Science 354F and 384F may not both be counted. Prerequisite: Upper-division standing; and six semester hours of coursework in chemistry, marine science, or geological sciences, or consent of instructor.
- 354J. Marine Chemistry.** Introduction to marine and environmental chemistry, including the distribution of elements in seawater, the geochemical and oceanographic processes controlling and affected by these distributions, and the effects of human activities on marine chemical processes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Chemistry 301 and 302; or consent of instructor.
- 354Q. Marine Environmental Science.** Application of the principles of marine science to the study of environmental issues: toxicology, biogeochemical cycles, and biological and ecological impacts of xenobiotic materials in the coastal zone. Three lecture hours and eight laboratory hours a week for one semester. Prerequisite: Biology 311D, and Chemistry 302 or 302H.
- 354T. Biological Oceanography.** Introduction to the organisms in the sea, their adaptations to the environment, and the factors that control their distribution and abundance. The course emphasizes laboratory and field work with organisms found in the coastal waters of Texas. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Biology 311D.
- 354U. Biology of Sharks, Skates, and Rays.** Ecology, anatomy, and physiology of elasmobranch fishes. Three lecture hours a week for one semester. Marine Science 353 (Topic 16: *Biology of Sharks, Skates, and Rays*) and 354U may not both be counted. Prerequisite: Upper-division standing; and Biology 354L, 361T, or Marine Science 354C and three additional upper-division biology or marine science hours or consent of instructor.

- 355C. Physiology of Fishes.** Physiology of major organ systems of both marine and freshwater fishes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Biology 311D, and Chemistry 302 or 302H, or consent of instructor.
- 367K. Human Exploration and Exploitation of the Sea.** Same as Geology 367K. Review of the history of ocean exploration including major oceanographic expeditions. Discussion of current topics in ocean exploration and exploitation of marine resources, the impact of resource exploitation on biological systems, and the development of marine policy. An oral presentation is required. Three lecture hours a week for one semester. Geological Sciences 367K and Marine Science 367K may not both be counted. Prerequisite: Upper-division standing and Marine Science 307 with a grade of at least B-.
- 170, 270, 370. Special Studies in Marine Science.** Supervised individual instruction and research in marine science field and laboratory techniques. The equivalent of one, two, or three class hours a week for one semester, at the Marine Science Institute at Port Aransas. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in science, a University grade point average of at least 3.00, and written consent of instructor.

DEPARTMENT OF MATHEMATICS

The Department of Mathematics offers a wide variety of courses to serve the needs of mathematics majors planning different careers and to serve the mathematical needs of students in other fields. For help planning a program of study, students should consult an adviser in the Mathematics, Physics, and Astronomy Advising Center, Robert Lee Moore Hall 4.101.

A concentration in actuarial studies is available to students majoring in mathematics or another area. Typical programs include three hours of actuarial foundations, twenty-eight hours of mathematics, and selected coursework in the Red McCombs School of Business. Detailed information is available from the director of actuarial studies in the Department of Mathematics.

Most entry-level courses in mathematics have as a prerequisite an appropriate score on the ALEKS placement exam; therefore, many students planning to take a course in the department must first have taken the test. Students should see the current *Course Schedule* or consult the Mathematics, Physics, and Astronomy Advising Center for the minimum score required.

Important advice on which entry-level mathematics course to take, based on the student's score on the ALEKS test, is available from DIIA—Student Testing Services and the Advising Center.

In courses that have a minimum test score or course grade as a prerequisite, students will be dropped from

the course if University records do not show that they have met the prerequisite. Students for whom the ALEKS exam is required must be prepared to present proof of their score after classes have begun.

Students who plan to use transfer credit to meet a prerequisite must submit a complete transcript to the Office of Admissions, so that the credit can be added to University records. In addition to sending a transcript, students are encouraged to bring a grade report to the Advising Center.

Students who wish to enroll in conference courses in the Department of Mathematics must submit consent of instructor forms to the department before registering. Forms are available in the department office and the Advising Center.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

ACTUARIAL FOUNDATIONS: ACF

LOWER-DIVISION COURSES

- 110, 210, 310, 410. Conference Course.** Supervised study of selected topics, by individual arrangement with department and instructor. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Written consent of instructor.
- 110T. Conference Course: Texas Department of Insurance Internship.** Supervised internship at the Texas Department of Insurance. May be repeated for credit. Admission by application only. Students must apply to the director of the concentration in actuarial studies the semester before they take the course.
- 112M. Actuarial Laboratory on Probability and Statistics.** Problems and supplementary instruction in probability and statistics, especially as required for the Society of Actuaries and Casualty Actuarial Society Exam 110. Three laboratory hours a week for one semester. Prerequisite: Mathematics 362K, credit or registration for Mathematics 378K, and consent of the director of the concentration in actuarial studies.

UPPER-DIVISION COURSES

- 329. Theory of Interest.** Measurement of interest, present and accumulated value, amortization, sinking funds, bonds, duration, and immunization. Covers the interest-theory portion of an exam of the Society of Actuaries and the Casualty Actuarial Society. Three lecture hours a week for one semester. Actuarial Foundations 329 and Mathematics 389F may not both be counted. Prerequisite: Mathematics 408D or 408L with a grade of at least C-.

129D. Introductory Actuarial Financial Mathematics. Introductory analysis of financial derivatives. Covers the financial derivatives portion of the syllabus for the professional actuarial exam on financial mathematics. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Credit with a grade of at least C- or registration for Actuarial Foundations 329.

MATHEMATICS: M

LOWER-DIVISION COURSES

- 301 (TCCN: MATH 1314). College Algebra.** Topics include a brief review of elementary algebra; linear, quadratic, exponential, and logarithmic functions; polynomials; systems of linear equations; applications. Three lecture hours a week for one semester. Usually offered only in the summer session. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Credit for Mathematics 301 may not be earned after a student has received credit for any calculus course with a grade of C- or better. Prerequisite: A passing score on the mathematics section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).
- 302 (TCCN: MATH 1332). Introduction to Mathematics.** Intended primarily for general liberal arts students seeking knowledge of the nature of mathematics as well as training in mathematical thinking and problem solving. Topics include number theory and probability; additional topics are chosen by the instructor. Three lecture hours a week for one semester. Mathematics 302 and 303F may not both be counted. A student may not earn credit for Mathematics 302 after having received credit for any calculus course. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Prerequisite: Three units of high school mathematics at the level of Algebra I or higher, and a passing score on the mathematics section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).
- 303D (TCCN: MATH 1324). Applicable Mathematics.** An entry-level course for the nontechnical student, dealing with some of the techniques that allow mathematics to be applied to a variety of problems. Topics include linear and quadratic equations, systems of linear equations, matrices, probability, statistics, exponential and logarithmic functions, and mathematics of finance. Three lecture hours a week for one semester. Mathematics 303D and 303F may not both be counted. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. A student may not earn credit for Mathematics 303D after having received credit for Mathematics 305G or any calculus course. Prerequisite: An appropriate score on the ALEKS placement examination.
- 303F. Mathematics of Investment.** Simple and compound interest, equivalent rates, equivalent values, annuities, amortization, sinking funds, bonds, depreciation. Three lecture hours a week for one semester. Mathematics 302 and 303F may not both be counted; Mathematics 303D and 303F may not both be counted. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Prerequisite: Three units of high school mathematics at the level of Algebra I or higher.
- 403K (TCCN: MATH 1425). Calculus I for Business and Economics.** Differential and integral calculus of algebraic, logarithmic, and exponential functions with applications. Three lecture hours and two discussion sessions a week for one semester. Only one of the following may be counted: Mathematics 403K, 408C, 408K (or 308K). May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Prerequisite: A satisfactory score on the SAT Mathematics Level 1 test, Mathematics 301 with a grade of at least B-, or Mathematics 305G with a grade of at least C-.
- 403L. Calculus II for Business and Economics.** Differential and integral calculus of functions of several variables with applications, infinite series, improper integrals; introductions to probability, differential equations, matrices, systems of linear equations, and linear programming. Three lecture hours and two discussion sessions a week for one semester. Mathematics 403L and 408L (or 308L) may not both be counted. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Prerequisite: Mathematics 403K, 408C, or 308L with a grade of at least C-.
- 305E. Analytic Geometry.** Combines development of methods (including adequate treatment of theory) and acquisition of skills with applications. Three lecture hours a week for one semester. Mathematics 305E and 305K may not both be counted. Mathematics 305E and 305G may not both be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in Mathematics or towards the Bachelor of Science in Mathematics degree. Prerequisite: Mathematics 301.
- 305G (TCCN: MATH 2312). Preparation for Calculus.** Study of advanced functions and their graphs and applications, including exponential, logarithmic, and trigonometric functions. Introduction to rates, slopes, and derivatives. Three lecture hours a week for one semester. Mathematics 305G (or 505G) and any college-level trigonometry course may not both be counted. Mathematic 301, 305G (or 505G), and equivalent courses may not be counted toward the total number of hours required for the Bachelor of Arts, Plan I, degree with a major in mathematics or the Bachelor of Science in Mathematics degree. Credit for Mathematics 305G may not be earned after a student has received credit for any calculus course with a grade of C- or better. Prerequisite: An appropriate score on the ALEKS placement examination.

- 408C (TCCN: MATH 2417). Differential and Integral Calculus.** Introduction to the theory and applications of differential and integral calculus of functions of one variable; topics include limits, continuity, differentiation, the mean value theorem and its applications, integration, the fundamental theorem of calculus, and transcendental functions. Three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403K, 408C, 408K (or 308K). Prerequisite: An appropriate score on the ALEKS placement examination.
- 408D (TCCN: MATH 2419). Sequences, Series, and Multivariable Calculus.** Certain sections of this course are designated as advanced placement or honors sections; they are restricted to students who have scored well on the AP/BC exam, are in the Engineering Honors Program, or have the consent of the mathematics adviser. Such sections and their restrictions are identified in the *Course Schedule*. Introduction to the theory and applications of sequences and infinite series, including those involving functions of one variable, and to the theory and applications of differential and integral calculus of functions of several variables; topics include parametric equations, sequences, infinite series, power series, vectors, vector calculus, functions of several variables, partial derivatives, gradients, and multiple integrals. Three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403L, 408D, 408M (or 308M). Prerequisite: Mathematics 408C or 408L with a grade of at least C.
- 408K. Differential Calculus.** Introduction to the theory and applications of differential calculus of functions of one variable; topics include limits, continuity, differentiation, and the mean value theorem and its applications. Three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403K, 408C, 408K (or 308K). Prerequisite: An appropriate score on the ALEKS placement examination.
- 308L, 408L. Integral Calculus.** Introduction to the theory and applications of integral calculus of functions of one variable; topics include integration, the fundamental theorem of calculus, transcendental functions, sequences, and infinite series. For Mathematics 308L, three lecture hours a week for one semester; for 408L, three lecture hours and two discussion hours a week for one semester. Mathematics 403L and 408L (or 308L) may not both be counted. Prerequisite: Mathematics 408C or 408K with a grade of at least C.
- 308M, 408M. Multivariable Calculus.** Each fall a section of this course is designated in the *Course Schedule* as an engineering honors section, for students who wish to investigate more thoroughly the foundations of calculus. Enrollment in this section is restricted to students in the Engineering Honors Program. Introduction to the theory and applications of differential and integral calculus of functions of several variables. Includes parametric equations, polar coordinates, vectors, vector calculus, functions of several variables, partial derivatives, gradients, and multiple integrals. For Mathematics 308M, three lecture hours a week for one semester; for 408M, three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403L, 408D, 408M (or 308M). Prerequisite: Mathematics 408L with a grade of at least C.
- 408N (TCCN: MATH 2413). Differential Calculus for Science.** Restricted to students in the College of Natural Sciences. Introduction to the theory of differential calculus of functions of one variable, and its application to the natural sciences. Subjects may include limits and differentiation, with applications to rates of change, extremes, graphing, and exponential growth and decay. Three lecture hours and two discussion hours a week for one semester. Prerequisite: An appropriate score on the ALEKS placement examination.
- 408R. Differential and Integral Calculus for the Sciences.** A calculus course for students in the life sciences. Emphasizes representations and analysis of data. Subjects include functions, rates, and derivatives and their applications to problems in biology; differential equations; Riemann integrals; the Euler method; and fundamental theorems of calculus. Three lecture hours and two discussion hours a week for one semester. May not be counted by students with credit for Mathematics 408C, 408K, or 408N. Prerequisite: An appropriate score on the ALEKS placement examination.
- 408S. Integral Calculus for Science.** Restricted to students in the College of Natural Sciences. Introduction to the theory of integral calculus of functions of one variable, and its applications to the natural sciences. Subjects may include integration and its application to area and volume, and transcendental functions, sequences, and series and their application to numerical methods. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Mathematics 408C, 408K, or 408N with a grade of at least C.
- 110, 210, 310, 410. Conference Course.** Supervised study in mathematics, with hours to be arranged. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Some sections may not be counted toward any mathematics or science degree requirement; these are identified in the *Course Schedule*. Prerequisite: Written consent of instructor. Forms are available in the department office or in the Mathematics, Physics, and Astronomy Advising Center.
- 210E. Emerging Scholars Seminar.** Restricted to students in the Emerging Scholars Program. Supplemental problem-solving laboratory for precalculus, calculus, or advanced calculus courses for students in the Emerging Scholars Program. Three or four laboratory hours a week for one semester. May be repeated for credit. Offered on the pass/fail basis only.
- 310P. Modern Mathematics: Plan II.** Restricted to Plan II students. Significant developments in modern mathematics. Topics may include fractals, the fourth dimension, statistics and society, and techniques for thinking about quantitative problems. Three lecture hours a week for one semester.
- 110T, 210T, 310T, 410T. Topics in Mathematics.** One, two, three, or four lecture hours a week for one semester. May be repeated for credit when the topics vary.

- 315C. Foundations, Functions, and Regression Models.** In-depth study of topics from secondary school mathematics. Emphasizes the development of the concept of function, exploring function patterns in data sets, and the connections between the main topics of mathematics associated with a secondary school curriculum. Use of appropriate technology is explored. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mathematics 408C and enrollment in a teaching preparation program, or consent of instructor.
- 316. Elementary Statistical Methods.** Graphical presentation, frequency functions, distribution functions, averages, standard deviation, variance, curve-fitting, and related topics. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: An appropriate score on the ALEKS placement examination.
- 316K (TCCN: MATH 1350). Foundations of Arithmetic.** An analysis, from an advanced perspective, of the concepts and algorithms of arithmetic, including sets; numbers; numeration systems; definitions, properties, and algorithms of arithmetic operations; and percents, ratios, and proportions. Problem solving is stressed. Three lecture hours a week for one semester. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Credit for Mathematics 316K may not be earned after the student has received credit for any calculus course with a grade of C- or better, unless the student is registered in the College of Education. Prerequisite: Mathematics 302, 303D, 305G (or 505G), or 316 with a grade of at least C-.
- 316L (TCCN: MATH 1351). Foundations of Geometry, Statistics, and Probability.** An analysis, from an advanced perspective, of the basic concepts and methods of geometry, statistics, and probability, including representation and analysis of data; discrete probability, random events, and conditional probability; measurement; and geometry as approached through similarity and congruence, through coordinates, and through transformations. Problem solving is stressed. Three lecture hours a week for one semester. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Credit for Mathematics 316L may not be earned after the student has received credit for any calculus course with a grade of C- or better, unless the student is registered in the College of Education. Prerequisite: Mathematics 316K with a grade of at least C-.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Mathematics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Mathematics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 325K. Discrete Mathematics.** Provides a transition from the problem-solving approach of Mathematics 408C and 408D to the rigorous approach of advanced courses. Topics include logic, set theory, relations and functions, combinatorics, and graph theory and graph algorithms. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408L with a grade of at least C-, or consent of instructor.
- 326K. Foundations of Number Systems.** Restricted to students in a teacher preparation program or who have consent of instructor. Study of number-related topics in middle-grade and secondary school mathematics. Topics include place value; meanings of arithmetic operations; analysis of computation methods; historical development of number concepts and notation; and rational, irrational, algebraic, transcendental, and complex numbers. Emphasis is on communicating mathematics, developing pedagogical understanding of concepts and notation, and using both informal reasoning and proof. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408L with a grade of at least C-.
- 427K (TCCN:MATH 2420). Advanced Calculus for Applications I.** Ordinary and partial differential equations and Fourier series. Five class hours a week for one semester. Prerequisite: Mathematics 408D or 408L with a grade of at least C-.
- 427L. Advanced Calculus for Applications II.** Matrices, elements of vector analysis and calculus of functions of several variables, including gradient, divergence, and curl of a vector field, multiple integrals and chain rules, length and area, line and surface integrals, Green's theorems in the plane and space, and, if time permits, complex analysis. Five class hours a week for one semester. Prerequisite: Mathematics 408D with a grade of at least C-.
- 328K. Introduction to Number Theory.** Provides a transition from the problem-solving approach of Mathematics 408C and 408D to the rigorous approach of advanced courses. Properties of the integers, divisibility, linear and quadratic forms, prime numbers, congruences and residues, quadratic reciprocity, number theoretic functions. Three lecture hours a week for one semester. Prerequisite: Mathematics 341 with a grade of at least C-.

- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Mathematics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Mathematics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 339W. Cooperative Mathematics.** This course covers the work period of mathematics students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Application through the College of Natural Sciences Career Services Office; Mathematics 408D or 408L; a grade of at least C- in two of the following courses: Mathematics 325K, 427K, 341, 362K, or 378K; and consent of the undergraduate adviser.
- 333L. Structure of Modern Geometry.** Axiom systems, transformational geometry, introduction to non-Euclidean geometries, and other topics in geometry; use of these ideas in teaching geometry. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408L with a grade of at least C-, or upper-division standing and consent of instructor.
- 339J. Probability Models with Actuarial Applications.** Introductory actuarial models for life insurance, property insurance, and annuities. With Mathematics 349P, covers the syllabus for the professional actuarial exam on model construction. Three lecture hours a week for one semester. Prerequisite: Mathematics 358K or 378K with a grade of at least C-.
- 139S. Seminar on Actuarial Practice.** Presentations by working actuaries on current issues in actuarial practice. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Actuarial Foundations 329; Mathematics 339J or 339U with a grade of at least C-; and credit with a grade of at least C- or registration for one of the following: Mathematics 339J, 339U, 339V, 349P (or 449P).
- 339U. Actuarial Contingent Payments I.** Intermediate actuarial models for life insurance, property insurance, and annuities. Three lecture hours a week for one semester. Prerequisite: Mathematics 362K with a grade of at least C-; credit with a grade of at least C- or registration for Actuarial Foundations 329; and credit with a grade of at least C- or registration for Mathematics 340L or 341.
- 339V. Actuarial Contingent Payments II.** Advanced actuarial models for life insurance, property insurance, and annuities. Three lecture hours a week for one semester. Prerequisite: Actuarial Foundations 329 and Mathematics 339U with a grade of at least C- in each.
- 339W. Financial Mathematics for Actuarial Applications.** Options and other financial derivatives, pricing models, stock price models, and interest-rate models for actuarial applications. Three lecture hours a week for one semester. Prerequisite: Actuarial Foundations 329 with a grade of at least C-; Actuarial Foundations 129D, or Finance 377 (Topic 2: *Financial Risk Management*) with a grade of at least C-; and Mathematics 362K with a grade of at least C-.
- 340L. Matrices and Matrix Calculations.** Techniques of matrix calculations and applications of linear algebra. Three lecture hours a week for one semester. Mathematics 340L and 341 may not both be counted. Prerequisite: One semester of calculus with a grade of at least C- or consent of instructor.
- 341. Linear Algebra and Matrix Theory.** Vector spaces, linear transformations, matrices, linear equations, determinants. Some emphasis on rigor and proofs. Mathematics 340L and 341 may not both be counted. Mathematics majors are expected to take Mathematics 341 immediately after 408D. Prerequisite: Mathematics 408D with a grade of at least C-.
- 343K. Introduction to Algebraic Structures.** Elementary properties of groups and rings, including symmetric groups, properties of the integers, polynomial rings, elementary field theory. Three lecture hours a week for one semester. Students who have received a grade of C- or better in Mathematics 373K may not take Mathematics 343K. Prerequisite: Consent of the undergraduate adviser, or two of the following courses with a grade of at least C- in each: Mathematics 325K or Philosophy 313K, Mathematics 328K, Mathematics 341.
- 343L. Applied Number Theory.** Basic properties of integers, including properties of prime numbers, congruences, and primitive roots. Introduction to finite fields and their vector spaces with applications to encryption systems and coding theory. Three lecture hours a week for one semester. Prerequisite: Mathematics 328K or 343K with a grade of at least C-.
- 343M. Error-Correcting Codes.** Introduction to applications of algebra and number theory to error-correcting codes, including finite fields, error-correcting codes, vector spaces over finite fields, Hamming norm, coding, and decoding. Three lecture hours a week for one semester. Prerequisite: Mathematics 328K or 341 with a grade of at least C-.
- 344K. Intermediate Symbolic Logic.** Same as Philosophy 344K. A second-semester course in symbolic logic: formal syntax and semantics, basic metatheory (soundness, completeness, compactness, and Löwenheim-Skolem theorems), and further topics in logic. Three lecture hours a week for one semester. Prerequisite: Philosophy 313, 313K, or 313Q.

- 346. Applied Linear Algebra.** Emphasis on diagonalization of linear operators and applications to dynamical systems and ordinary differential equations. Other subjects include inner products and orthogonality, normal mode expansions, vibrating strings and the wave equation, and Fourier series. Three lecture hours a week for one semester. Prerequisite: Mathematics 341 or 340L with a grade of at least C-.
- 348. Scientific Computation in Numerical Analysis.** Introduction to mathematical properties of numerical methods and their applications in computational science and engineering. Introduction to object-oriented programming in an advanced language. Study and use of numerical methods for solutions of linear systems of equations; nonlinear least-squares data fitting; numerical integration; and solutions of multidimensional nonlinear equations and systems of initial value ordinary differential equations. Three lecture hours a week for one semester. Prerequisite: Computer Science 303E or 307, and Mathematics 341 or 340L with a grade of at least C-.
- 349P. Actuarial Statistical Estimates.** Statistical estimation procedures for random variables and related quantities in actuarial models. With Mathematics 339J, covers the syllabus for the professional actuarial exam on model construction. Three lecture hours a week for one semester. Prerequisite: Mathematics 339J, and 341 or 340L, with a grade of at least C- in each.
- 349R. Applied Regression and Time Series.** Introduction to simple and multiple linear regression and to elementary time-series models, including auto-regressive and moving-average models. Emphasizes fitting models to data, evaluating models, and interpreting results. Three lecture hours a week for one semester. Prerequisite: Consent of the director of the concentration in actuarial studies; students are expected to have a basic knowledge of statistics.
- 349T. Time Series and Survival-Model Estimation.** Introduction to the probabilistic and statistical properties of time series; parameter estimation and hypothesis testing for survival models. Covers 30 percent of the syllabus for exam 4 of the Society of Actuaries and the Casualty Actuarial Society. Three lecture hours a week for one semester. Prerequisite: Mathematics 339U, 341 or 340L, and 358K or 378K.
- 358K. Applied Statistics.** Exploratory data analysis, correlation and regression, data collection, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Mathematics 358K and Statistics and Scientific Computation 321 may not both be counted. Prerequisite: Mathematics 362K with a grade of at least C-.
- 360M. Mathematics as Problem Solving.** Discussion of heuristics, strategies, and methods of evaluating problem solving, and extensive practice in both group and individual problem solving. Communicating mathematics, reasoning, and connections among topics in mathematics are emphasized. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408L with a grade of at least C- and written consent of instructor.
- 361. Theory of Functions of a Complex Variable.** Elementary theory and applications of analytic functions, series, contour integration, and conformal mappings. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K or 427L with a grade of at least C- or consent of instructor.
- 361K. Introduction to Real Analysis.** A rigorous treatment of the real number system, of real sequences, and of limits, continuity, derivatives, and integrals of real-valued functions of one real variable. Three lecture hours a week for one semester. Students who have received a grade of C- or better in Mathematics 365C may not take Mathematics 361K. Prerequisite: Consent of the undergraduate adviser, or two of the following courses with a grade of at least C- in each: Mathematics 325K or Philosophy 313K, Mathematics 328K, Mathematics 341.
- 362K. Probability I.** An introductory course in the mathematical theory of probability, fundamental to further work in probability and statistics, includes basic probability properties, conditional probability and independence, various discrete and continuous random variables, expectation and variance, central limit theorem, and joint probability distributions. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408L with a grade of at least C-.
- 362M. Introduction to Stochastic Processes.** Introduction to Markov chains, birth and death processes, and other topics. Three lecture hours a week for one semester. Prerequisite: Mathematics 362K with a grade of at least C-.
- 364K. Vector and Tensor Analysis I.** Invariance, vector algebra and calculus, integral theorems, general coordinates, introductory differential geometry and tensor analysis, applications. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K or 427L with a grade of at least C-.
- 364L. Vector and Tensor Analysis II.** Continuation of Mathematics 364K, with emphasis on tensor and extensor analysis. Riemannian geometry and invariance. Three lecture hours a week for one semester. Prerequisite: Mathematics 364K with a grade of at least C-.
- 365C. Real Analysis I.** A rigorous treatment of the real number system, Euclidean spaces, metric spaces, continuity of functions in metric spaces, differentiation and Riemann integration of real-valued functions of one real variable, and uniform convergence of sequences and series of functions. Three lecture hours a week for one semester. Students who have received a grade of C- or better in Mathematics 365C may not take Mathematics 361K. Prerequisite: Consent of the undergraduate adviser, or two of the following courses with a grade of at least C- in each: Mathematics 325K or Philosophy 313K, Mathematics 328K, Mathematics 341. Students who receive a grade of C- in one of the prerequisite courses are advised to take Mathematics 361K before attempting 365C. Students planning to take Mathematics 365C and 373K concurrently should consult a mathematics adviser.
- 365D. Real Analysis II.** Recommended for students planning to undertake graduate work in mathematics. A rigorous treatment of selected topics in real analysis, such as Lebesgue integration, or multivariate integration and differential forms. Three lecture hours a week for one semester. Prerequisite: Mathematics 365C with a grade of at least C-.

- 365G. Curves and Surfaces.** Calculus applied to curves and surfaces in three dimensions: curvature and torsion of space curves, Gauss map and curvature of surfaces, Gauss theorem, geodesics, and the Gauss-Bonnet theorem. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 365C.
- 367K. Topology I.** An introduction to topology, including sets, functions, cardinal numbers, and the topology of metric spaces. Three lecture hours a week for one semester. Prerequisite: Mathematics 361K or 365C or consent of instructor.
- 367L. Topology II.** Various topics in topology, primarily of a geometric nature. Three lecture hours a week for one semester. Prerequisite: Mathematics 367K with a grade of at least C- or consent of instructor.
- 368K. Numerical Methods for Applications.** Continuation of Mathematics 348. Topics include splines, orthogonal polynomials and smoothing of data, iterative solution of systems of linear equations, approximation of eigenvalues, two-point-boundary value problems, numerical approximation of partial differential equations, signal processing, optimization, and Monte Carlo methods. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 367, Mathematics 368K, Physics 329. Prerequisite: Mathematics 348 with a grade of at least C-.
- 372. Fourier Series and Boundary Value Problems.** Discussion of differential equations of mathematical physics and representation of solutions by Green's functions and eigenfunction expansions. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-.
- 372K. Partial Differential Equations and Applications.** Partial differential equations as basic models of flows, diffusion, dispersion, and vibrations. Topics include first- and second-order partial differential equations and classification (particularly the wave, diffusion, and potential equations), and their origins in applications and properties of solutions. Includes the study of characteristics, maximum principles, Green's functions, eigenvalue problems, and Fourier expansion methods. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-.
- 373K. Algebraic Structures I.** A study of groups, rings, and fields, including structure theory of finite groups, isomorphism theorems, polynomial rings, and principal ideal domains. Three lecture hours a week for one semester. Students who have received a grade of C- or better in Mathematics 373K may not take Mathematics 343K. Prerequisite: Consent of the undergraduate adviser, or two of the following courses with a grade of at least C- in each: Mathematics 325K or Philosophy 313K, Mathematics 328K, Mathematics 341. Students who receive a grade of C- in one of the prerequisite courses are advised to take Mathematics 343K before attempting 373K. Students planning to take Mathematics 365C and 373K concurrently should consult a mathematics adviser.
- 373L. Algebraic Structures II.** Recommended for students planning to undertake graduate work in mathematics. Topics from vector spaces and modules, including direct sum decompositions, dual spaces, canonical forms, and multilinear algebra. Three lecture hours a week for one semester. Prerequisite: Mathematics 373K with a grade of at least C-.
- 374. Fourier and Laplace Transforms.** Operational properties and application of Laplace transforms; some properties of Fourier transforms. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-.
- 374G. Linear Regression Analysis.** Fitting of linear models to data by the method of least squares, choosing best subsets of predictors, and related materials. Three lecture hours a week for one semester. Prerequisite: Mathematics 358K or 378K with grade of at least C-, Mathematics 341 or 340L, and consent of instructor.
- 374K. Fourier and Laplace Transforms.** Continuation of Mathematics 374. Introduction to other integral transforms, such as Hankel, Laguerre, Mellin, Z. Three lecture hours a week for one semester. Prerequisite: Mathematics 374 with a grade of at least C-.
- 374M. Mathematical Modeling in Science and Engineering.** Tools for studying differential equations and optimization problems that arise in the engineering and physical sciences. Includes dimensional analysis and scaling, regular and singular perturbation methods, optimization and calculus of variations, and stability. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, and 340L or 341, with a grade of at least C- in each; and some basic programming skills.
- 175, 275, 375, 475. Conference Course.** Supervised study in mathematics, with hours to be arranged. May be repeated for credit. Prerequisite: Upper-division standing.
- 375C. Conference Course (Computer-Assisted).** Supervised study in mathematics on material requiring use of computing resources, with hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 175T, 275T, 375T, 475T. Topics in Mathematics.** One, two, three, or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- 376C. Methods of Applied Mathematics.** Variational methods and related concepts from classical and modern applied mathematics. Models of conduction and vibration that lead to systems of linear equations and ordinary differential equations, eigenvalue problems, initial and boundary value problems for partial differential equations. Topics may include a selection from diagonalization of matrices, eigenfunctions and minimization, asymptotics of eigenvalues, separation of variables, generalized solutions, and approximation methods. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Mathematics 427K, and Mathematics 341 or 340L, with a grade of at least C- in each.

- 378K. Introduction to Mathematical Statistics.** Same as Statistics and Scientific Computation 378. Sampling distributions of statistics, estimation of parameters (confidence intervals, method of moments, maximum likelihood, comparison of estimators using mean square error and efficiency, sufficient statistics), hypothesis tests (p-values, power, likelihood ratio tests), and other topics. Three lecture hours a week for one semester. Prerequisite: Mathematics 362K with a grade of at least C.
- 379H. Honors Tutorial Course.** Directed reading, research, and/or projects, under the supervision of a faculty member, leading to an honors thesis. Prerequisite: Admission to the Mathematics Honors Program; Mathematics 365C, 367K, 373K, or 374G with a grade of at least A-, and another of these courses with a grade of at least B-; and consent of the honors adviser.

DEPARTMENT OF PHYSICS

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

PHYSICAL SCIENCE: P S

LOWER-DIVISION COURSES

- 303. Introductory Physical Science I: Mechanics and Heat.** Designed for students with minimum prior preparation in mathematics and physics. Especially appropriate for prospective elementary school teachers. Inquiry laboratory approach to basic concepts of measurement, forces, motion, energy, temperature, and heat. Four hours of integrated laboratory and lecture a week for one semester.
- 304. Introductory Physical Science II: Electricity, Light, and Optics.** Inquiry laboratory approach to electricity, magnetism, waves, light, and optical instruments. Four hours of integrated laboratory and lecture a week for one semester. Prerequisite: Physical Science 303.

UPPER-DIVISION COURSES

- 350. Physical Science for Elementary and Middle School Teachers.** Designed for kindergarten through sixth grade teachers with minimal preparation in mathematics (college algebra) and no preparation in physics. An inquiry laboratory in the basic concepts of light, electricity, and magnetism. Three hours of integrated laboratory and lecture a day for three weeks.

- 367M. Physical Science: Methods of Astronomy.** Same as Astronomy 367M. An introductory, self-paced course in the methods of astronomy that emphasizes learning astronomical principles through observations. Six laboratory hours a week for one semester. May not be counted toward the Bachelor of Arts, Plan I, degree with a major in astronomy. Prerequisite: Upper-division standing and nine semester hours of coursework in mathematics and/or science, including one of the following: Physical Science 303, 304, Astronomy 301, 302, 303. Equivalent preparation in mathematics, physics, chemistry, or earth sciences may be substituted with written approval of the instructor.
- 375. Individual Study in Physical Science.** Intended primarily for preservice and in-service teachers. Guided inquiry reading or laboratory research in physical science. Meets three times a week for one semester, for one hour each meeting. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and written consent of instructor.

PHYSICS: PHY

LOWER-DIVISION COURSES

- 301. Mechanics.** Designed for students who intend to major in science or mathematics. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. Prerequisite: High school physics, Physics 306, or consent of the undergraduate adviser; Mathematics 408C, or 408K and concurrent enrollment in 408L; and credit or registration for Physics 101L.
- 101L. Laboratory for Physics 301.** Three laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 101L, 102M, 103M, 117M. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 301.
- 302K (TCCN: PHYS 1301). General Physics—Technical Course: Mechanics, Heat, and Sound.** Noncalculus technical course in physics. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. Prerequisite: High school trigonometry or Mathematics 305G; and credit or registration for Physics 102M.
- 302L (TCCN: PHYS 1302). General Physics—Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics.** Noncalculus technical course in physics. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. Prerequisite: Physics 302K and 102M and credit or registration for Physics 102N.

- 102M (TCCN: PHYS 1101). Laboratory for Physics 302K.** Two laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 101L, 102M, 103M, 117M. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 302K.
- 102N (TCCN: PHYS 1102). Laboratory for Physics 302L.** Two laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 102N, 103N, 116L, 117N. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 302L.
- 303K. Engineering Physics I.** A general survey of physics; primarily laws of motion, heat, and wave phenomena. Three lecture hours and one discussion hour a week for one semester. In most sections, examinations are given on Wednesday nights; see the *Course Schedule* for more information. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. Prerequisite: A high school physics course, Physics 306, or consent of the undergraduate adviser; Mathematics 408C, or 408K and concurrent enrollment in 408L; and credit or registration for Physics 103M.
- 303L. Engineering Physics II.** Electricity and magnetism, optics, and atomic phenomena. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. Prerequisite: Physics 303K and 103M; Mathematics 408D, or 408L and concurrent enrollment in 408M; and credit or registration in Physics 103N.
- 103M. Laboratory for Physics 303K.** Two laboratory hours a week for one semester. Only one of the following may be counted: Physics 101L, 102M, 103M, 117M. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 303K.
- 103N. Laboratory for Physics 303L.** Two laboratory hours and one discussion hour a week for one semester. Only one of the following may be counted: Physics 102N, 103N, 116L, 117N. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 303L.
- 104. Introductory Physics Seminar.** Suggested for beginning physics majors. Discussion of the development of important ideas in physics, with emphasis on their relevance to contemporary research. One lecture hour a week for one semester. Offered on the pass/fail basis only.
- 306. Elementary Physics Methods.** Designed for students who have not had high school physics, have weak problem-solving skills, and need preparation for Physics 301 or 303K. Three lecture hours a week for one semester. May not be counted toward any degree. Prerequisite: High school trigonometry or Mathematics 305G.
- 108. Introduction to Research.** Introductory laboratory experience; use of tools and test equipment; beginning apprenticeship in active physics research. One class hour a week for one semester. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Consent of instructor and approval of an undergraduate adviser.
- 308F. Introduction to Research.** Introductory laboratory experience; use of tools and test equipment; beginning apprenticeship in active physics research. One lecture hour and eight laboratory hours a week for one semester. Prerequisite: Consent of instructor and the undergraduate adviser.
- 309K (TCCN: PHYS 1305). Elementary Physics for Nontechnical Students.** Designed for students who do not intend to do further work in natural sciences, engineering, mathematics, or medicine. Mechanics, heat, and sound. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K.
- 309L (TCCN: PHYS 1307). Elementary Physics for Nontechnical Students.** Designed for students who do not intend to do further work in natural sciences, engineering, mathematics, or medicine. Electricity and magnetism, light, atomic and nuclear physics. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. Prerequisite: Physics 309K.
- 110C. Conference Course.** Supervised study of selected topics in physics, by individual arrangement with department and instructor. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Written consent of instructor.
- 315. Wave Motion and Optics.** Study of general properties of waves; examples include sound, electromagnetic, and mechanical waves; special emphasis on light and optics. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, Physics 316 and 116L, and credit or registration for Physics 115L.
- 115L. Laboratory for Physics 315.** Three laboratory hours a week for one semester. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 315.
- 316. Electricity and Magnetism.** Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. Prerequisite: Physics 301 and 101L; Mathematics 408D, or 408L and concurrent enrollment in 408M; and credit or registration for Physics 116L.
- 116L. Laboratory for Physics 316.** Three laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 102N, 103N, 116L, 117N. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 316.

- 317K. General Physics I.** An introductory course designed and recommended primarily for premedical students and others in the biomedical sciences whose professional or preprofessional training includes an introductory course in calculus. Mechanics, heat, and sound, with biomedical applications. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. May not be counted toward the physics requirement for the degree of Bachelor of Science in Physics. Satisfies most medical and dental school requirements for physics. Prerequisite: A high school physics course, Physics 306, or consent of the undergraduate adviser; Mathematics 408C, or 408K and concurrent enrollment in 408L; and credit or registration for Physics 117M.
- 317L. General Physics II.** Designed and recommended primarily for premedical students and others in the biomedical sciences whose professional or preprofessional training includes an introductory course in calculus. Electricity and magnetism, light, atomic and molecular physics, nuclear physics, and their biomedical applications. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. May not be counted toward the physics requirement for the degree of Bachelor of Science in Physics. Satisfies most medical and dental school requirements for physics. Prerequisite: Physics 317K and 117M and credit or registration for Physics 117N.
- 117M. Laboratory for Physics 317K.** Three laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 101L, 102M, 103M, 117M. Prerequisite: Credit or registration for Physics 317K.
- 117N. Laboratory for Physics 317L.** Three laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 102N, 103N, 116L, 117N. Prerequisite: Credit or registration for Physics 317L.
- 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Physics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Physics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329. Introduction to Computational Physics.** Computational methods for problem solving and research in physics; numerical analysis and computer simulation methods for physics applications using different types of computers. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 367, Mathematics 368K, Physics 329. Prerequisite: Physics 315 and 115L, a programming course at the level of Computer Science 303E or consent of instructor, and credit or registration for Mathematics 341 or 340L.
- 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Physics.** This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Physics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.
- 329W. Cooperative Physics.** This course covers the work period of physics students in the Cooperative Education Program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Application to become a member of the Cooperative Physics Program, Physics 316, and consent of the undergraduate adviser.
- 333. Modern Optics.** Review of geometrical optics, polarization, interference, and optical instruments. Topics include Fourier optics, light propagation in fibers, quantum optics, and coherence. Three lecture hours a week for one semester. Prerequisite: Physics 315, 115L, and Mathematics 427K.
- 133L. Laboratory for Physics 333.** Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Physics 333.
- 336K. Classical Dynamics.** Elementary linear vector algebra, Newtonian mechanics, Lagrangian mechanics, central force motion, dynamics of rigid bodies, and theory of small oscillations. Three lecture hours a week for one semester. Prerequisite: Physics 315 and 115L, and Mathematics 427L or 364K.
- 336L. Fluid Dynamics.** Fundamental concepts of fluid mechanics developed and applied to laminar and turbulent flows. Topics include the Navier-Stokes equations, pipe and channel flow, drag, boundary layers, convection, and rotating fluids. Three lecture hours a week for one semester. Prerequisite: Physics 336K.
- 338K. Electronic Techniques.** Elementary circuit theory, amplifiers, feedback, pulse and digital techniques, signal processing, and microprocessors as applied to physics instrumentation. One and one-half lecture hours and three laboratory hours a week for one semester. Prerequisite: Physics 316 and 116L and Mathematics 427K.

UPPER-DIVISION COURSES

- 321. Modern Physics: Plan II.** Restricted to Plan II students. Conceptual foundations of modern physics. Examines quantum mechanics, quantum field theory, relativity, and general relativity, including large-scale structure and cosmology; and the development of analytic problem-solving skills, including estimation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

- 341. Selected Topics in Physics.** Three lecture hours a week for one semester. An additional one-hour problem session is required for some sections; these are identified in the *Course Schedule*. May be repeated for credit when the topics vary. May not be counted toward the Bachelor of Science in Physics degree without prior approval of the department. Prerequisite: Upper-division standing, three semester hours of coursework in a natural science, and three semester hours of coursework in mathematics.
- Topic 1: Energy Production..**
Topic 2: Great Men, Moments, and Ideas.
Topic 3: Musical Acoustics.
Topic 4: The Nature of Things.
Topic 5: Pseudoscience.
Topic 6: Writing.
- 352K. Classical Electrodynamics.** Electrostatic fields, magnetic fields, derivation of Green's theorems and functions and of Maxwell's equations. Three lecture hours a week for one semester. Prerequisite: Physics 315 and 115L, and Mathematics 427L or 364K.
- 353L. Modern Physics Laboratory.** Laboratory experiments investigating the breakdown of classical physics for microscopic phenomena. Includes absorption and emission spectra, the photoelectric effect, blackbody radiation, the Compton effect, X-ray diffraction, and other experiments in modern physics. Four and one-half laboratory hours a week for one semester. Prerequisite: Physics 315 and 115L.
- 355. Modern Physics and Thermodynamics.** Introduction to modern physics and thermodynamics: photons (spectra, photoelectric effect, blackbody radiation, Compton effect), atoms (Rutherford, Bohr), matter waves (Planck, deBroglie, probability interpretation, Schrödinger), nuclei, particles, special relativity, the laws of thermodynamics, and statistical physics. Three lecture hours a week for one semester. Physics 319 and 355 may not both be counted. Prerequisite: Physics 115L and 315, or consent of instructor.
- 362K. Quantum Physics II: Atoms and Molecules.** The two-electron atom; spin and statistics; coupling schemes for many-electron atoms; atoms and the radiation field; perturbation methods for decay and collisions; thermal, electrical, and magnetic properties of solids; and free-electron metal and band theory. May include subjects such as superconductivity, Josephson tunneling, and others. Three lecture hours a week for one semester. Prerequisite: Physics 373.
- 362L. Quantum Physics III: Particles and Nuclei.** Nuclei and nucleons, their gross properties; the hadrons; symmetries and conservation laws; nuclear stability; electromagnetic, weak, and hadronic interactions; nuclear reactions at low, medium, and high energies; nucleon structure; tools of experimental nuclear physics; models of theoretical nuclear physics; nuclear technology. Three lecture hours a week for one semester. Prerequisite: Physics 373; Physics 362K is recommended.
- 369. Thermodynamics and Statistical Mechanics.** Basic concepts of thermal physics; entropy, enthalpy, free energy, phase transitions, equilibrium distribution functions, applications. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Physics 373.
- 370C. Individual Study in Physics.** Supervised reading or research in physics. Hours to be arranged. May be repeated for credit when the topics vary. Some sections are offered on the pass/fail basis only; these are identified in the *Course Schedule*. Prerequisite: Physics 336K, credit or registration for Physics 352K, and consent of the undergraduate adviser.
- 670T. Senior Thesis.** Individual research with faculty supervision. First half involves preparation of proposal; second involves completion of written thesis. Six hours of work a week for one semester, or three hours of work a week for two semesters. Only three semester hours may be counted toward the Bachelor of Science in Physics degree. Prerequisite: Upper-division standing and nine semester hours of upper-division coursework in physics.
- 373. Quantum Physics I: Foundations.** Postulates of quantum mechanics, the bound states of the finite square well, the harmonic oscillator, operator-eigenvalue formalism and selected examples, the hydrogen atom, angular momentum, rigid rotor, and spin. May include simple scattering theory. Three lecture hours a week for one semester. Prerequisite: Physics 336K, and 353L and 355 (or 453); or consent of instructor.
- 474. Advanced Laboratory I.** Modern experimental techniques, theory of error, and analysis of experiments; both modern and classical experiments in atomic and nuclear physics, electricity and magnetism, optics and heat. Three lecture hours and eight laboratory hours a week for one semester, with additional laboratory hours to be arranged. With consent of instructor, may be repeated for credit. Prerequisite: Physics 338K and 352K, and 353L and 355 (or 453); or consent of the undergraduate adviser.
- 375P. Introductory Plasma Physics.** Orbit theory and drifts, introduction to plasma stability and waves, applications to plasma confinement and heating. Three lecture hours a week for one semester. Prerequisite: Physics 352K and 369.
- 375R. Introduction to Relativity.** Overview of the special and general theories of relativity, with emphasis on recent developments in gravitation. Three lecture hours a week for one semester. Prerequisite: Physics 352K.
- 375S. Introductory Solid-State Physics.** Crystal structure, classification of solids, cohesion, thermal and electrical properties of solids, magnetic properties of solids, imperfections. Three lecture hours a week for one semester. Prerequisite: Physics 369 and 373.
- 379H. Honors Tutorial Course.** Research project, resulting in a thesis, for outstanding students electing to take the honors program in physics. Prerequisite: A University grade point average of at least 3.00, a grade point average in physics of at least 3.50, twelve semester hours of upper-division coursework in physics, and consent of the student's research supervisor and the departmental honors adviser.

DIVISION OF STATISTICS AND SCIENTIFIC COMPUTATION

STATISTICS AND SCIENTIFIC COMPUTATION: SSC

LOWER-DIVISION COURSES

- 302. Data Analysis for the Health Sciences.** Basic probability and data analysis for the sciences. Subjects include randomness, sampling, distributions, probability models, inference, regression, and nonlinear curve fitting. Three lecture hours and one discussion hour a week for one semester. May not be counted by students with credit for Educational Psychology 371, Mathematics 316, Statistics and Scientific Computation 303, 304, 305, or 306. Prerequisite: An appropriate score on the ALEKS placement examination.
- 303. Statistics in Experimental Research.** An introduction to the fundamental concepts and methods of statistics, with emphasis on applications in experimental science. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: An appropriate score on the ALEKS placement examination.
- 304. Statistics in Health Care.** An introduction to the fundamental concepts and methods of statistics, with emphasis on applications in the health sciences. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: An appropriate score on the ALEKS placement examination.
- 305. Statistics in Policy Design.** An introduction to the fundamental concepts and methods of statistics, with emphasis on applications in policy evaluation and design. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: An appropriate score on the ALEKS placement examination.
- 306. Statistics in Market Analysis.** An introduction to the fundamental concepts and methods of statistics, with emphasis on applications in the analysis of personal and group behaviors. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: An appropriate score on the ALEKS placement examination.
- 110T, 210T, 310T, 410T. Topics in Statistics and Computation.** For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary.
- 318. Introduction to Statistical and Scientific Computation.** An introduction to quantitative analysis using fundamental concepts in statistics and scientific computation. Includes probability, distributions, sampling, interpolation, iteration, recursion, and visualization. Three lecture hours and one laboratory hour a week for one semester.
- 318M. Biostatistics.** Introduction to methods of statistical analysis of biological data. Includes data analysis, basics of experimental design, statistical inference, interval estimation, and hypothesis testing. Three lecture hours and one discussion hour a week for one semester. Biology 318M and Statistics and Scientific Computation 318M may not both be counted. Prerequisite: Four semester hours of coursework in biology and either Mathematics 408D or 408L.

UPPER-DIVISION COURSES

- 321. Introduction to Probability and Statistics.** The basic theory of probability and statistics, with practical applications. Includes fundamentals of probability, distribution theory, sampling models, data analysis, experimental design, statistical inference, interval estimation, and hypothesis testing. Three lecture hours and one discussion hour a week for one semester. Mathematics 358K and Statistics and Scientific Computation 321 may not both be counted. Prerequisite: Mathematics 408D or 408L with a grade of at least C.
- 222. Introduction to Scientific Programming.** Introduction to programming using both the C and Fortran (95/2003) languages, with applications to basic scientific problems. Covers common data types and structures, control structures, algorithms, performance measurement, and interoperability. Two lecture hours a week for one semester. Statistics and Scientific Computation 222 and 292 may not both be counted. Prerequisite: Credit or registration for Mathematics 408C or 408K.
- 325H. Honors Statistics.** An introduction to the fundamental theories, concepts, and methods of statistics. Emphasizes probability models, exploratory data analysis, sampling distributions, confidence intervals, hypothesis testing, correlation and regression, and the use of statistical software. Three lecture hours a week for one semester. Prerequisite: Admission to the Dean's Scholars Honors Program in the College of Natural Sciences, or consent of instructor.
- 329C. Practical Linear Algebra I.** Matrix representations and properties of matrices; linear equations, eigenvalue problems and their physical interpretation; and linear least squares and elementary numerical analysis. Emphasis on physical interpretation, practical numerical algorithms, and proofs of fundamental principles. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mathematics 408C or 408K.

- 329D. Practical Linear Algebra II.** Iterative solutions to linear equations and eigenvalue problems; properties of symmetric and nonsymmetric matrices, exploitation of sparsity and diagonal dominance; introduction to multivariate nonlinear equations; numerical analysis; and selected applications and topics in the physical sciences. Three lecture hours a week for one semester. Prerequisite: Mathematics 340L, 341, or Statistics and Scientific Computation 329C.
- 335. Scientific and Technical Computing.** A comprehensive introduction to computing techniques and methods applicable to many scientific disciplines and technical applications. Covers computer hardware and operating systems, systems software and tools, code development, numerical methods and math libraries, and basic visualization and data analysis tools. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M, and prior programming experience.
- 339. Applied Computational Science.** Concentrated study in a specific area or areas of application, with an emphasis on modeling and visualization. Areas may include computational biology, computational chemistry, computational applied mathematics, computational economics, computational physics, or computational geology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- 150K. Data Analysis Applications.** Introduction to the use of statistical or mathematical applications for data analysis. Two lecture hours a week for eight weeks. May be repeated for credit when the topics vary. Offered on the pass/fail basis only. Offered on the pass/fail basis only. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: SPSS Software.** Prerequisite: Upper-division standing.
- Topic 2: SAS Software.** Prerequisite: Upper-division standing.
- Topic 3: Stata Software.** Prerequisite: Upper-division standing.
- Topic 4: The R Software Environment.** Prerequisite: Upper-division standing.
- 352. Statistical Methods.** Study of simple and multiple regression, fundamentals of experimental design, and analysis of variance methods. May include logistic regression, Poisson regression, resampling methods, introduction to Bayesian methods, and probability models. Includes substantial use of statistical software. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, or 306.
- 358. Special Topics in Statistics.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- 374C. Parallel Computing for Scientists and Engineers.** Study of parallel computing principles, architectures, and technologies; and parallel application development, performance, and scalability. Designed to help prepare students to formulate and develop parallel algorithms to implement effective applications for parallel computing systems. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M; Mathematics 340L; and prior programming experience using C or Fortran on Linux or Unix systems.
- 374D. Distributed and Grid Computing for Scientists and Engineers.** Distributed and grid computing principles and technologies. Covers common modes of grid computing for scientific applications, development of grid-enabled applications, and future trends in grid computing. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M; Mathematics 340L; and prior programming experience using C or Fortran on Linux or Unix systems.
- 374E. Visualization and Data Analysis.** Scientific visualization principles, practices, and technologies, including remote and collaborative visualization. Introduces statistical analysis, data mining, and feature detection. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M; Mathematics 340L; and prior programming experience using C or Fortran on Linux or Unix systems.
- 375. Special Topics in Scientific Computation.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- 378. Introduction to Mathematical Statistics.** Same as Mathematics 378K. Sampling distributions of statistics, estimation of parameters (confidence intervals, method of moments, maximum likelihood, comparison of estimators using mean square error and efficiency, sufficient statistics), hypothesis tests (p -values, power, likelihood ratio tests), and other subjects. Three lecture hours a week for one semester. Prerequisite: Mathematics 362K with a grade of at least C.
- 379E, 479R. Undergraduate Research.** Students work on an individual research project under the supervision of one or more faculty members. For 379R, the equivalent of three lecture hours a week for one semester; for 479R, the equivalent of four lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

UTEACH-NATURAL SCIENCES**UTEACH-NATURAL SCIENCES: UTS**

LOWER-DIVISION COURSES

- 101. Secondary Teacher Education Preparation: STEP 1.** Introduction to mathematics, computer science, and science teaching as a career. Discussions include standards-based lesson design and various teaching and behavior management strategies. Fieldwork consists of planning and teaching four inquiry-based lessons to students in grades three to six in local elementary schools. One and one-half class hours a week for one semester; at least ten hours of fieldwork a semester are also required. Chemistry 107 (Topic: *STEP 1—UTeach*) and UTeach-Natural Sciences 101 may not both be counted. Prerequisite: Admission to the UTeach-Natural Sciences program.
- 110. Secondary Teacher Education Preparation: STEP 2.** Topics may include routes to teacher certification in mathematics, computer science, and science teaching; various teaching methods that are designed to meet instructional goals; and learner outcomes. Students develop and teach three inquiry-based lessons in their field in a middle school, and participate in peer coaching. One and one-half class hours a week for one semester; at least twenty hours of fieldwork a semester are also required. Biology 101C (Topic: *STEP 2*) and UTeach-Natural Sciences 110 may not both be counted. Prerequisite: UTeach-Natural Sciences 101 or consent of the UTeach adviser in the College of Natural Sciences.

UPPER-DIVISION COURSES

- 350. Knowing and Learning in Math and Science.** Same as Curriculum and Instruction 365C. Restricted to students in the UTeach-Natural Sciences program. Psychological foundations of learning; problem solving in mathematics and science education utilizing technology; principles of expertise and novice understanding of subject matter; implications of high-stakes testing; and foundations of formative and summative assessment. Three lecture hours a week for one semester; additional hours may be required. Curriculum and Instruction 371 (Topic 21: *Knowing and Learning in Math and Science*) and UTeach-Natural Sciences 350 may not both be counted. Prerequisite: Credit with a grade of at least C- or registration for UTeach-Natural Sciences 101.
- 355. Classroom Interactions.** Same as Curriculum and Instruction 365D. Restricted to students in the UTeach-Natural Sciences program. Principles of delivering effective instruction in various formats (lecture, lab activity, collaborative settings); examination of gender, class, race, and culture in mathematics and science education; overview of policy related to mathematics and science education. Three lecture hours a week for one semester; additional hours may be required. Curriculum and Instruction 371 (Topic 20: *Classroom Interactions*) and UTeach-Natural Sciences 355 may not both be counted. Prerequisite: A University grade point average of at least 2.50, Curriculum and Instruction 365C or UTeach-Natural Sciences 350 with a grade of at least C-, and UTeach-Natural Sciences 110 with a grade of at least C.
- 360. Project-Based Instruction.** Same as Curriculum and Instruction 365E. Restricted to students in the UTeach-Natural Sciences program who have earned a passing score on the preliminary portfolio. Foundations of project-based, case-based, and problem-based learning environments; principles of project-based curriculum development in mathematics and science education; classroom management and organization of project-based learning classrooms. Three lecture hours a week for one semester with additional fieldwork hours to be arranged. Curriculum and Instruction 371 (Topic 22: *Project-Based Instruction*) and UTeach-Natural Sciences 360 may not both be counted. Prerequisite: A University grade point average of at least 2.50, and Curriculum and Instruction 365D or UTeach-Natural Sciences 355 with a grade of at least C.
- 170. Student Teaching Seminar.** Restricted to students in the UTeach-Natural Sciences program who have earned a passing score on the preliminary portfolio. Discussions include student teaching experiences, contemporary critical issues in education, and preparation for the state certification exam. One class hour a week for one semester. Chemistry 107 (Topic: *Special Topics Seminar*) and UTeach-Natural Sciences 170 may not both be counted. Prerequisite: A University grade point average of at least 2.50, and credit or registration for Curriculum and Instruction 650S (or credit for 667S).
- 675. Student Teaching for Secondary and Middle Grades.** Closely supervised field coursework in a cooperating school. Experience includes carrying out the duties of a secondary or middle grades teacher. Twenty hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: A University grade point average of at least 2.50, approval of the preliminary portfolio by the College of Natural Sciences UTeach Program, consent of the UTeach adviser in the College of Natural Sciences, and concurrent enrollment in UTeach-Natural Sciences 170.

13. School of Nursing

Alexa M. Stuijbergen, PhD, RN, *Interim Dean*
 Sharon A. Brown, PhD, RN, *Associate Dean*
 Gayle J. Acton, PhD, RN, *Assistant Dean*
 Linda J. Carpenter, PhD, RN, *Assistant Dean*
 Margaret K. Hill, MA, MDiv, *Assistant Dean*
 Gayle M. Timmerman, PhD, RN, *Assistant Dean*
<http://www.utexas.edu/nursing/>

GENERAL INFORMATION

HISTORY

The University of Texas School of Nursing, established in Galveston in 1890 as the John Sealy Hospital Training School for Nurses, is one of the oldest schools of nursing in the Southwest. In 1896 it was transferred to the University of Texas and became the School of Nursing, a division of the Medical Branch, with the diploma granted by the University. In addition to the diploma course, a curriculum leading to the degree of Bachelor of Science in Nursing was established in 1923 in cooperation with the College of Arts and Sciences of the Main University in Austin. In 1932 the School of Nursing was renamed the John Sealy College of Nursing. The degree program was transferred to the college in 1943.

With the financial support of the Texas Graduate Nursing Association, graduate courses in nursing were first offered in 1930 in the Department of Physical and Health Education at the Main University. In 1940 a complete curriculum was established leading to the degree of Bachelor of Science in Nursing Education. In 1945 the curriculum was transferred to the Medical Branch administration, bringing the John Sealy College of Nursing and the new Department of Nursing Education together to form the School of Nursing with its own dean. In September, 1949, a curriculum leading to the degree of Bachelor of Science in Nursing was established for graduates of diploma programs.

Funding from the W. K. Kellogg Foundation provided for a program leading to the Master of Science in Nursing with a major in nursing administration, first offered in 1952. Participating in the program of the Southern Regional Education Board for graduate education in nursing, the School of Nursing offered additional specialization in 1955. At that time the name of the school was changed to the University of Texas Medical Branch School of Nursing.

The last class of students enrolled in the diploma program was admitted to the School of Nursing in 1957; since that time the school has offered a single program leading to the Bachelor of Science in Nursing.

In the fall of 1960, the University of Texas at Austin became an extension campus of the School of Nursing, which was still located in Galveston, and nursing courses were offered on the Austin campus for the first time. The School of Nursing was reorganized in 1967 as The University of Texas Nursing School (System-wide) and administrative offices were moved to Austin. The school was renamed The University of Texas System School of Nursing in 1972. Junior- and senior-level nursing courses were offered in Austin, El Paso, Fort Worth, Galveston, Houston, and San Antonio; in Austin, El Paso, or Fort Worth, a student could enroll for four years, taking liberal arts courses prior to being admitted to the nursing curriculum. A program leading to the Doctor of Philosophy degree in nursing was initiated in 1974.

On March 26, 1976, the Board of Regents of The University of Texas System voted to reorganize the

schools of nursing in the system and to place each school under the administration of the president of the health science center or academic institution nearest it. On September 1, 1976, the School of Nursing at Austin became a part of the University of Texas at Austin.

FACILITIES

The 110,008-square-foot, five-story Nursing School building houses administrative, faculty, staff, and research offices, as well as large and small classrooms and seminar and conference rooms. Also located in the building are the Cain Center for Nursing Research, the Center for Health Promotion and Disease Prevention Research in Underserved Populations, and the School of Nursing Learning Center, with an audiovisual library and a staff who provide technical assistance for clinical simulation, instructional design, and production.

Learning experiences in the health field are numerous and varied. The School of Nursing has ongoing clinical placement agreements with more than two hundred agencies. These include the Austin State Hospital, University Medical Center at Brackenridge, St. David's Medical Center, Seton Medical Center Austin, and Seton Shoal Creek Hospital. Other community settings used for student field experiences include nursing homes, neighborhood health centers, day-care centers, state and local health departments, physicians' offices, and clinics.

Nursing faculty members conduct research on a wide variety of topics. Since 2002, the School of Nursing has been ranked among the top institutions in research funding received from the National Institutes of Health.

FINANCIAL ASSISTANCE AVAILABLE THROUGH THE SCHOOL OF NURSING

Application forms for the following scholarships are available from the University Office of Student Financial Services and from the School of Nursing, 1700 Red River Street, Austin TX 78701-1499. The School of Nursing Scholarship Committee selects the recipients for nursing scholarships.

ENDOWED SCHOLARSHIPS

The **Rita Willner Atlas Endowed Presidential Scholarship** provides support for undergraduate and graduate students. At the donor's request, recipients of the awards are designated Rita Willner Atlas Scholars or Rita Willner Atlas Fellows.

The **Betty J. Bomar Endowed Presidential Scholarship in Nursing** provides scholarship support to an outstanding student pursuing a degree in nursing and a career in providing quality health care. Financial need is a priority in selecting the recipient.

The **Boudreaux Endowed Scholarship in Nursing** provides support for undergraduate students with financial need.

The **Dr. Louis Edward and Virginia Steele Brenz Scholarship** provides support to graduate and undergraduate students.

The **Edith Blanche Jennings Burns, RN, Endowed Scholarship in Nursing** provides support to a full-time or part-time undergraduate or graduate student. The recipient must show excellent promise for a career in nursing and must have a grade point average of at least 2.50 if he or she has been a college or university student. Preference is given first to graduates of Moran High School, Shackelford County, Texas, and then to South Carolina residents, with preference to residents of Lancaster County. If such a recipient cannot be found, a resident of Travis County, Texas, who also graduated from a Travis County high school, is preferred. Financial need is considered.

The **Carol Diane Cave Memorial Endowed Presidential Scholarship in Nursing** is awarded annually to an undergraduate student pursuing a career in nursing. The student must be a Texas resident in the professional nursing sequence and must maintain a grade point average of at least 3.30.

The **Hilda B. Cavell Memorial Endowed Scholarship in Nursing** provides support for undergraduate and graduate nursing students who commit to the service of public health and who demonstrate financial need.

The **Joe and Tana Christie Endowed Presidential Scholarship in Nursing** is awarded annually to an outstanding upper-division or graduate student pursuing a degree in nursing and a career in providing quality health care outside a hospital setting for people with AIDS or other terminal illnesses. The recipient must have a grade point average of at least 3.50.

The **Steven and Alexandra Cocavessis Endowed Scholarship in Nursing** provides support for undergraduate students in the School of Nursing. Preference is given to students who exhibit financial need and demonstrate academic merit, as determined by the school.

The **Fred J. and Jann Curry Endowed Scholarship** provides awards to deserving nursing students.

The **Mitzi I. Nuhn Dreher Endowed Presidential Scholarship** provides an award to a full-time undergraduate or graduate student. Preference is given to students who participate in a broad range of extracurricular activities or professional nursing organizations.

The **Endowment for Excellence** provides scholarship support to graduate nursing students, with preference given to those planning to pursue a career in cardiovascular study and research.

The **School of Nursing Faculty-Staff Endowed Presidential Scholarship** is awarded to a full-time undergraduate or graduate student. Preference is given to residents of Texas. The award is made to a nursing student who has shown academic achievement by maintaining a 3.00 or better grade point average, who has shown interest in the community through a record of community involvement, and who has shown a special dedication to nursing by participating in nursing organizations.

The **Eugene R. Fant Endowed Scholarship Fund** provides scholarships to nursing and pre-nursing students with financial need.

The **Girling Health Care Undergraduate Scholarship in Nursing** is awarded to undergraduate students in the RN-BSN program with an interest in home health nursing.

The **Kathryn Gurley Scholarship Endowment** provides scholarships for students at all levels. There is no grade point average requirement.

The **Alda R. Hilliard, RN, Memorial Endowed Presidential Scholarship in Nursing** is awarded to an undergraduate or graduate student pursuing a degree in nursing and a career in providing quality health care.

The **Jens Jacobsen Memorial Endowed Scholarship in Nursing** provides support for nursing students. Financial need and merit are strong considerations in the selection of recipients; preference is given to students from disadvantaged backgrounds.

The **Lee Hage and Joseph D. Jamail Endowed Scholarship in Nursing** provides support to students of average academic merit who show promise of success in their chosen field and who demonstrate evidence of financial need.

The **Mary Gibbs Jones Endowed Presidential Scholarship in Nursing** provides awards to full-time nursing students. Financial need is emphasized in the selection of recipients.

The **Kristi Kana Endowed Presidential Scholarship in Nursing** is awarded to a full-time undergraduate or graduate nursing student in good academic standing with demonstrated financial need. Preference is given to students involved in community activities for the good of others.

The **Dorothy C. Luther Scholarship in Nursing** provides support to deserving graduate students in the School of Nursing.

The **Lillie S. Matthews Endowed Scholarship** provides scholarships for students in the School of Nursing.

The **Lucy May Maxey Scholarship Fund in Nursing** provides scholarships to nursing students with an interest in the treatment of cancer.

The **Nancy Francis and William Arnold McMinn Endowed Presidential Scholarship** is awarded to an undergraduate or graduate student pursuing a degree in nursing and a career in providing quality health care. The student must be a Texas resident in the professional nursing sequence and must maintain a grade point average of at least 3.30.

The **Rose M. Morris Memorial Endowed Scholarship in Nursing** provides scholarships to undergraduate, graduate, or doctoral students in the School of Nursing.

The **Florence Nightingale Memorial Scholarship** provides scholarships to deserving undergraduate students in the School of Nursing.

The **Carol Miller Norwood Endowed Presidential Scholarship** is awarded to a full-time undergraduate or graduate student pursuing a degree in nursing. The recipient must demonstrate financial need, participation in extracurricular activities, and academic motivation.

The **Endowed Fellowship in Nursing Systems** awards fellowships to deserving graduate students enrolled in the nursing systems concentration.

The **PCA Health Plans Endowed Presidential Scholarship** provides awards to incoming freshmen on the basis of academic merit. Preference is given to students who are graduates of the Austin Independent School District and then to students from the counties served by PCA Health Plans. Extracurricular activities and interests are also considered.

The **S. Allison Starr Pendergras Endowed Memorial Scholarship in Nursing** is awarded to an undergraduate and a graduate student with a grade point average of at least 2.50. Financial need is a priority in selecting the recipients.

The **Ella Kate and Wallace Ralston Nursing Students Scholarship Fund** provides assistance for a number of students each year.

The **Louis W. Rase and Sophie Braun Rase Nursing Scholarship Fund** provides an award annually to a nursing student who demonstrates outstanding scholarship. The recipient is chosen on the basis of grade point average and must rank in the top 10 percent of his or her class.

The **Alice R. Redland Endowed Presidential Scholarship in Nursing** is awarded to a full-time undergraduate or graduate student planning to pursue a career in gerontological nursing.

The **Cynthia Lubocki Riley Memorial Scholarship in Nursing** provides scholarships to deserving undergraduate students who demonstrate the greatest financial need. The distribution of awards shall be at the recommendation of the dean of the School of Nursing.

The **Dolores and Arthur Sands Endowed Presidential Scholarship in Nursing** provides scholarship support for promising graduate students pursuing a degree in nursing and a career in providing quality health care. Financial need is a priority in the selection of the recipient.

The **M. Elizabeth Sands, MD, and Arthur T. Sands, MD, PhD, Endowed Scholarship in Nursing** provides an award to a graduate or undergraduate nursing student planning to pursue a career in oncology.

The **Santa Rosa Children's Hospital Scholarship Fund in Memory of Taylor Andrew Marceau** provides an award to a nursing student who has demonstrated financial need, exemplary moral character, and good academic standing. Preference is given to students who intend to practice in the field of pediatric nursing. At the donor's request, recipients are designated Santa Rosa Scholars.

The **Susanne Spencer Skaggs Endowed Scholarship in Nursing** provides support to graduate and undergraduate nursing students.

The **Leila Tannous Memorial Endowed Scholarship** recognizes and supports outstanding graduate or undergraduate students pursuing a degree in nursing and a career in providing quality health care.

The **Texas Graduate Nurses Association Scholarship** provides awards to registered nurses, either undergraduates in public health nursing or graduate students.

The **Travis County Medical Auxiliary and Society Endowed Presidential Scholarship in Nursing** is awarded to a full-time junior or senior with a grade point average of at least 3.30 and with excellent promise for a career in nursing. Preference is given to Travis County high school graduates.

The **Margaretta Turpin Endowed Scholarship in Nursing** provides scholarship assistance to outstanding undergraduate students pursuing a degree in nursing and a career providing quality health care. Special consideration is given to students pursuing the study of geriatric care.

The **Jennifer Tyson Endowed Presidential Scholarship in Nursing** provides support to outstanding future nurses who are committed to promoting the health and well-being of children and adults. Financial need is a priority in the selection of the recipient.

The **Carlo and Angeline Visco Endowed Scholarship** is awarded to a promising student pursuing a degree in nursing and a career in providing quality health care. The recipient must be a full-time student with a grade point average of at least 3.00.

The **Dusky Chionsini Waters Endowed Scholarship in Nursing** provides support for junior- and senior-level nursing students who do not already hold a professional licensure in nursing. Preference is given to students from educationally and financially disadvantaged backgrounds, as determined by the School of Nursing's scholarship award committee.

The **Marlene H. Weitzel, PhD, RN, Endowed Student Scholarship in Nursing** recognizes and supports promising students pursuing a degree in nursing and a career in providing quality health care. Financial need is a priority in the selection of the recipient.

The **Norma White, RN, Endowed Scholarship** provides support to a full-time undergraduate or graduate student who has a grade point average of at least 2.50. Financial need is a priority in selecting the recipient.

The **Lola B. Wright Foundation Centennial Scholarship** enables the School of Nursing to assist several students each year with individual financial aid.

The **Carolyn J. and John H. Young Endowed Presidential Fellowship in Nursing** provides support to an outstanding graduate student identified by the School of Nursing as having outstanding potential to contribute to the field of nursing.

NONENDOWED SCHOLARSHIPS

The **Mabel Wandelt Scholarship** is awarded to an undergraduate RN student.

The **John Murray Hardship Fund** is reserved for students experiencing a financial hardship.

Other scholarships are frequently available through the generosity of groups such as the University of Texas at Austin School of Nursing Alumni Association and several nursing student organizations. Information is available in the Student Affairs Office each semester.

OTHER FINANCIAL AID PROGRAMS

ROTC NURSING SCHOLARSHIPS

To be eligible for an ROTC scholarship, an applicant must be a United States citizen and must be less than twenty-five years old on June 30 of the calendar year during which commissioning is scheduled.

Air Force ROTC Nursing Scholarships. These scholarships provide for payment of tuition and fees and for textbooks and a monthly allowance during the school year. For additional information, contact The University of Texas at Austin, Department of Air Force Science, 1 University Station C3600, Austin TX 78712.

Army ROTC Nursing Scholarships. These scholarships provide for payment of tuition and fees, a flat rate for textbooks, and a monthly allowance during the school year. Students must attend the Nursing Advanced Camp during the summer between the junior and senior years and work individually with a licensed BSN preceptor. Students may apply to the dean for independent study credit; applications are considered on a case-by-case basis. For additional information, contact The University of Texas at Austin, Department of Military Science, 1 University Station C3606, Austin TX 78712.

Navy ROTC Nursing Scholarships. These scholarships provide for payment of tuition and fees and for textbooks and a monthly allowance during the school year. For additional information, contact The University of Texas at Austin, Department of Naval Science, 1 University Station C3604, Austin TX 78712.

VOCATIONAL REHABILITATION

The Texas Department of Assistive and Rehabilitative Services (DARS) offers assistance in payment of tuition to students who have certain disabling conditions, provided their vocational objectives are approved by a DARS counselor. Services are also available to help students with disabilities find or keep employment. More information is available at <http://www.dars.state.tx.us/drs/vr.shtml>.

STUDENT ORGANIZATIONS

Undergraduate students, including prenursing students, are eligible for membership in the University of Texas Nursing Students Association. Through the association, nursing students are represented on campus committees and in campus activities involving all students. The local association is affiliated with the Texas Nursing Students' Association and the National Student Nurse Association.

Qualified students in the School of Nursing are also eligible for membership in Epsilon Theta Chapter of Sigma Theta Tau International Honor Society of Nursing.

ADMISSION AND REGISTRATION

ADMISSION TO THE UNIVERSITY

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

PREPROFESSIONAL SEQUENCE

Students who wish to major in nursing begin their studies by taking prerequisite course requirements as prenursing majors. Prenursing majors must also be advised by the School of Nursing every semester. During their final semester of preprofessional sequence coursework, they may apply for admission to the professional sequence in nursing.

ADMISSION TO THE PROFESSIONAL SEQUENCE IN NURSING

Admission to the School of Nursing upper-division professional sequence is competitive. Students may apply for admission when they are enrolled in the last semester of required prerequisite coursework. The student must have a grade of at least C- in each prerequisite course and a grade point average of at least 2.50. Students admitted to the professional sequence usually exceed this minimum requirement significantly, with higher grade point averages in all University courses, in prerequisite courses, and in the science and pharmacology courses in the preprofessional sequence.

The application includes the application form and personal statement, three letters of reference, a transcript from every other college or university the student has attended, and a high school transcript. Admission decisions are based on (1) the strength of the student's academic background, with special consideration given to his or her grade point average in the required natural science courses and in courses taken at the University; (2) the number of hours the student has taken at the University; (3) the number of repeated courses; and (4) the student's achievements and accomplishments, with emphasis on volunteer work and activities in health care.

STUDENTS FROM OTHER INSTITUTIONS

All students who wish to transfer to the University from another institution must apply to the University Office of Admissions as described in *General Information*.

PREPROFESSIONAL SEQUENCE

A transfer student who plans to enter the preprofessional sequence in nursing should consult an academic adviser in the School of Nursing as early as possible for advising and transcript review. Students are encouraged to consult an adviser before applying for admission to the University.

PROFESSIONAL SEQUENCE

A student who wishes to transfer into the sequence from another nursing school must make an appointment with the School of Nursing Office of Student Affairs for academic advising and transcript review.

Students are encouraged to consult an adviser in the School of Nursing before applying for admission to the University. In addition to meeting the regular University admission requirements, the student must apply for admission to the School of Nursing. He or she must submit an official transcript from each institution attended, letters of recommendation from faculty members at the previous nursing school, and course information for all completed nursing courses.

Transfer students must meet the same requirements as University students seeking admission to the professional sequence; however, they are considered for admission to the School of Nursing only if they are admitted to the University.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

ACADEMIC ADVISING

All prenursing and nursing students must come to the School of Nursing before registration each semester for academic advising. Prenursing students are assigned to academic advisers on staff in the Office of Student Affairs. Appointments are recommended. Nursing students in the professional sequence are provided group academic advising and one-on-one career advising by nursing faculty members.

ACADEMIC POLICIES AND PROCEDURES

STUDENT RESPONSIBILITY

1. It is the student's responsibility to be informed of general and special notices posted in the School of Nursing building and on the listserv.
2. The student must make arrangements for the completion of all work, including makeup examinations and requirements for removal of conditional and incomplete grades.

3. Because the curriculum is demanding, students are urged to limit work hours while in the program. A student's combined employment and semester-hour load (including clinical laboratory hours) should not exceed forty hours a week in either a long-session semester or a summer term. During the final month of the last semester of the program, students are enrolled in a full-time preceptorship and are unable to have outside employment.
4. Students may be employed in area hospitals and clinics as nursing assistants, performing functions for which they have been trained by the employing institution and for which the institution has a clearly discernible policy, either in writing or by precedent, defining the scope of these functions. It is illegal for unlicensed students to practice as professional nurses.

Students should be aware that (1) the School of Nursing assumes no responsibility for their activities as employees of an agency; (2) they are personally responsible and liable for any activity they participate in while employed; (3) professional liability insurance purchased by students is valid only in their student role, not in their employment role; (4) individuals who practice illegally may jeopardize their future careers, since those who are convicted of violating the Nurse Practice Act may not be eligible to write state board examinations and subsequently to be licensed.

Students employed in an agency are personally and professionally responsible for engaging only in those activities that fall within their job descriptions as nonlicensed workers (such as aides). They have a responsibility to refuse to participate in activities that they have not been legally licensed to perform, such as giving medications and assuming total responsibility for a nursing unit.

5. Students should be familiar with the Student Standards of Conduct given in subchapter 11-800, Appendix C, "Institutional Rules on Student Services and Activities," *General Information*, as well as the University's Honor Code and the School of Nursing's Code of Honor. Upon admission to the professional sequence, students are expected to read and sign a pledge to abide by the Code of Honor.

SCHOOL OF NURSING CODE OF HONOR

The profession of nursing has a legacy of public respect and trust. We provide specialized care for the health needs of individuals and the community with integrity, honesty, compassion, and state-of-the-art knowledge and skills. Learning and practicing responsible and ethical professional behavior is a vital part of professional education.

As a student in the University of Texas at Austin's School of Nursing, I pledge myself to be honest in all of my student activities including, but not limited to, all of my scholastic work and interactions with patients, members of the community, faculty, and peers. Furthermore, I will not use any substance prior to or during my interaction with patients that could alter my judgment or ability to render safe care: this includes but is not limited to any use of alcohol, illegal drugs, and prescription or over-the-counter drugs that may impair my mental and/or physical abilities required to perform safe patient care. I will disclose to my instructor any violations of the above standards of conduct.

STANDARDS OF NURSING PERFORMANCE AND PROGRESS

A student must earn a grade of at least *C* in each nursing course for the course to be counted toward degree requirements. Concurrent or sequential enrollment is required as stated in each course description.

If the student is not on scholastic probation at the University, permission may be granted to repeat a required nursing course in which he or she failed to earn a grade of *C* or better. To receive credit, the student must repeat the course at the University of Texas at Austin School of Nursing. The semester in which a course is repeated is at the discretion of the dean and is dependent on the space available.

A student may repeat a nursing course only once. If the student does not earn a grade of at least *C* upon repeating the course, he or she cannot continue in the School of Nursing. If, while repeating the course, the student drops the course or withdraws from the University at a time when the student's performance in the course is considered to be inferior to that required for a grade of *C*, he or she may not reenroll in the course or continue in the School of Nursing.

No more than two nursing courses may be repeated.

A student may not repeat for credit a course in which a grade of *C* or better was awarded.

As a prerequisite to medication administration in clinical nursing courses, students are required to pass a medications and calculations test with a grade of at least 90. Calculators may not be used in any medication examination.

Patient safety is a critical element in every clinical course. Clinical errors related to patient care may interfere with a student's progression in the course and in the program.

COMPLIANCE REQUIREMENTS FOR CLINICAL COURSES

Students must provide documentation confirming completion of compliance requirements prior to participating in clinical nursing courses. More information is available at the School of Nursing compliance policy Web site, http://www.utexas.edu/nursing/html/current/compliance_students.html.

MEDICAL CLEARANCE REQUIREMENTS

Clinical experiences for nursing students are provided in hospitals and other health care agencies with which the School of Nursing is affiliated. A number of these facilities require that nursing students assigned to them have evidence of immunity to certain diseases. Students must provide the School of Nursing with evidence of compliance with immunization requirements before they begin upper-division coursework.

CRIMINAL BACKGROUND CHECKS

Students are required to submit to criminal background checks before enrolling in the upper-division sequence. Information about the process is available on the School of Nursing Web site. Students with concerns about eligibility are urged to seek official determination from the Texas Board of Nursing at <http://www.bon.state.tx.us/>.

EMPLOYMENT BACKGROUND CHECK

Agencies in which nursing students are placed for clinical work may require an employment background check. Directions to complete this requirement are on the School of Nursing Web site.

DRUG SCREEN

Clinical agencies may require a drug screen to be completed prior to participating in patient care. Students will be notified during advising of this additional compliance requirement.

CPR AND FIRST AID REQUIREMENTS

Current certification in cardiopulmonary resuscitation and first aid are required for participation in clinical nursing courses. The CPR course must include training in infant, child, adult, one-person, two-person, and obstructed airway resuscitation. The basic first aid certification must be acquired from the American Heart Association (Heartsaver First Aid) or from a local emergency medical services agency (National Safety Council First Aid). Students must provide the School of Nursing with evidence of current certification before they begin upper-division coursework. Students who are registered nurses are not required to provide evidence of first aid certification before beginning upper-division coursework.

PROFESSIONAL LIABILITY INSURANCE

Professional liability insurance is required of all students enrolled in the professional sequence in the School of Nursing. Each student must pay the insurance premium at the Office of Student Affairs before he or she begins upper-division coursework. All student policies expire on the date of graduation.

TRAINING MODULES

All students must complete online orientation, facilities training, and training on the Health Insurance Portability and Accountability Act (HIPAA) before participating in clinical nursing coursework. Training modules are available at http://www.utexas.edu/nursing/html/current/compliance_students.html.

HEALTH AND HOSPITALIZATION INSURANCE

Students are strongly encouraged to purchase health insurance. The cost of personal health care, including care required as the result of clinical practicum experiences, is not covered by either the University, the School of Nursing, or clinical agencies. Information about low-cost group health insurance is available through University Health Services.

UNIFORMS AND OTHER EXPENSES

Students must purchase uniforms, shoes, name badges, identification patch, and other supplies before taking the first clinical nursing course. Specific requirements and information about suggested equipment are distributed before the beginning of the first semester of the professional sequence.

TRANSPORTATION

Upper-division clinical courses require students to go to various clinical facilities and community sites at varied hours. Students must have their own transportation.

HONORS

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

NURSING HONORS PROGRAM

The Nursing Honors Program is designed to enhance the educational experience of high-achieving undergraduate nursing majors by focusing on the development of scholarship. Students must apply to this competitive honors program, which begins in the sophomore year. Admission to the program requires approval of the Honors Program Committee. Acceptance into the honors program confers automatic acceptance into the nursing professional sequence, if the student maintains competitive overall and science grade point averages.

Students in the program must complete Nursing 311H, 117H, 264H, and 377H. These courses provide students with enhanced mentorship experiences. Students must also complete an honors project with a focus on

research, ethics, or leadership. The statement “Special Honors in Nursing” appears on the transcript of each student who completes the honors program.

SIGMA THETA TAU INTERNATIONAL

Epsilon Theta Chapter of Sigma Theta Tau International Honor Society of Nursing, was chartered at the University on May 16, 1980; before that time, membership in Sigma Theta Tau on the Austin campus was conferred through Alpha Delta Chapter, chartered at The University of Texas Medical Branch in Galveston in 1963. Epsilon Theta Chapter presents scholarly programs each semester; program meetings are open to anyone interested in the program topic. An annual meeting, at which new members are inducted, is held in May.

Membership in Sigma Theta Tau is an honor conferred by active chapters on students who demonstrate academic excellence and on nursing leaders who advance the scientific base of the profession. The society recognizes superior achievement in many areas, facilitates the development of leadership qualities, fosters high professional standards, encourages creative work, and strengthens commitment to the ideals of nursing.

Each year qualified students in the undergraduate and graduate programs may apply for consideration for membership. Invitations to membership are extended to students who are in the top 35 percent of their graduating class. Undergraduates must have a grade point average of at least 3.00; graduate students must have a grade point average of at least 3.50. Qualified community nursing leaders may also be invited to membership. Applications for membership in Epsilon Theta Chapter are available from the Office of Student Affairs in the School of Nursing.

At the induction ceremony each spring, Epsilon Theta Chapter announces its awards, grants, and scholarship recipients. A scholarship is awarded to an upper-division nursing student who has demonstrated leadership potential and outstanding scholastic achievement. The chapter also awards start-up grants annually to Epsilon Theta Chapter members and/or students to fund research projects.

Sigma Theta Tau International, with active chapters on more than four hundred campuses in the United States and in several other countries, offers opportunities for involvement at the chapter, regional, national, and international levels. Programs are offered each year in different parts of the United States under joint sponsorship of chapters and Sigma Theta Tau International. International research congresses are held in co-

operation with scholarly nursing organizations in other countries; these programs focus on scholarly topics of relevance to the advancement of nursing knowledge and to the improvement of public health. Research grants are awarded annually by Sigma Theta Tau International as well as by Epsilon Theta and other chapters.

CREDIT BY EXAMINATION

The faculty believes that each educational experience should build on previous achievements to encourage fulfillment of each student's potential. Therefore, all students and registered nurses are urged to seek advice on arranging a logical sequence of work. The faculty subscribes to the principle that a candidate's competence should be validated and that credit should be awarded on the basis of satisfactory achievement on examinations as well as in the classroom. Twenty-four of the last thirty semester hours of credit presented for the degree must be earned in residence, rather than by examination, correspondence, or transfer.

An examination for credit may not be taken in a course in which the student is enrolled, which the student has completed, or which the student has dropped with either a passing or a failing grade.

University policies regarding credit by examination are given in *General Information*.

GRADUATION

SPECIAL REQUIREMENTS OF THE SCHOOL OF NURSING

All students must fulfill the general requirements for graduation given in chapter 1. Students in the School of Nursing must also fulfill the following requirements:

1. All University students must have a grade point average of at least 2.00 to graduate. In the School of Nursing, students must also have a grade point average of at least 2.00 in the coursework used to fulfill the upper-division requirement.
2. A candidate must complete the prescribed curriculum and must meet all other requirements of the School of Nursing.
3. A student must supply the School of Nursing with transcripts of courses taken outside the school as the courses are completed.

DEGREE AUDIT

A degree audit is prepared in the dean's office when the student begins the junior year of nursing courses. The student is then notified of the courses he or she must take and the requirements he or she must fulfill to receive the degree. The degree audit is normally done according to the catalog in effect when the student was admitted to the School of Nursing, but the student may choose to have it done according to any catalog under which he or she is eligible to graduate. Rules on graduation under a particular catalog are given on pages 13–14.

In advising and in registering students, the dean and advisers try to prevent errors. Avoidance of errors is the main purpose of the degree audit, but it remains the responsibility of the student to fulfill all catalog requirements.

GRADUATION APPLICATION FORM

In the long-session semester or summer session in which the degree is to be awarded, the candidate must be registered at the University and must file a Graduation Application Form in the School of Nursing Office of Student Affairs. The form must be filed by the deadline to apply for an undergraduate degree, which is given in the official academic calendar.

LICENSURE AS A PROFESSIONAL NURSE

Each student seeking licensure as a professional nurse must pass the National Council Licensure Examination (NCLEX). The Texas Board of Nursing, which determines eligibility to take the NCLEX, has identified certain circumstances that may render a candidate ineligible for state licensure as a registered nurse. A student's answers to the following questions may determine eligibility.

1. Have you been convicted, adjudged guilty by a court, plead guilty, no contest or nolo contendere to any crime in any state, territory, or country, whether or not a sentence was imposed, including any pending criminal charges or unresolved arrests (excluding minor traffic violations)? This includes expunged offenses and deferred adjudications with or without prejudice of guilt. Please note that DUIs, DWIs, and PIs must be reported and are not considered minor traffic violations. (One-time minor in possession (MIP) or minor in consumption (MIC) violations do not need to be disclosed. However, if you have two or more MIPs

or MICs, you must answer “yes” to this question.)

2. Do you have any criminal charges pending, including unresolved arrests?
3. Has any licensing authority refused to issue you a license or ever revoked, annulled, cancelled, accepted surrender of, suspended, placed on probation, or refused to renew a professional license, certificate, or multistate privilege held by you now or previously, or ever fined, censured, reprimanded, or otherwise disciplined you?
4. Within the past five years have you been addicted to and/or treated for use of alcohol or any other drug?
5. Within the past five years have you been diagnosed with, treated, or hospitalized for schizophrenia and/or psychotic disorders, bipolar disorder, paranoid personality disorder, antisocial personality disorder, or borderline personality disorder?

Criminal background checks, including fingerprinting, are a required part of the application process for licensure in Texas. Students who have concerns about this requirement are encouraged to seek confirmation of their eligibility for licensure prior to considering a career in nursing. Consult the Texas Board of Nursing Web site at <http://www.bon.state.tx.us/> or call (512) 305-7400 for further information.

DEGREES

PROGRAMS IN THE SCHOOL OF NURSING

The School of Nursing offers an undergraduate program leading to the degree of Bachelor of Science in Nursing and graduate programs leading to the Master of Science in Nursing degree and the Doctor of Philosophy degree with a major in nursing. The undergraduate program is designed for students who wish to enter the profession of nursing. Students who have earned an associate’s degree or a diploma in nursing and wish to obtain the baccalaureate degree may apply to the accelerated track, the RN-BSN program. The master’s and doctoral degree programs are designed to prepare professionals for advanced nursing practice and research in nursing.

The baccalaureate program is accredited by the Commission on Collegiate Nursing Education (CCNE) and the Texas Board of Nursing.

PURPOSE OF THE SCHOOL OF NURSING

The purpose of the School of Nursing is to achieve excellence in undergraduate and graduate education, research, public service, and to advance the missions of the University of Texas at Austin through

1. Preparing students at the baccalaureate level to assume roles in professional nursing practice.
2. Preparing students at the graduate level to assume roles in advanced nursing practice, public health, administration, education, and research.
3. Promoting excellence in nursing scholarship.
4. Advancing the health of the public through developing and disseminating new knowledge about health, health care, and health care delivery through scholarly inquiry.
5. Providing consultation, health care programs, and health care services in response to emerging and urgent public health needs.

OBJECTIVES OF THE BACHELOR’S DEGREE PROGRAM

The graduate of the baccalaureate program in nursing is expected to

1. Use critical thinking to integrate knowledge from nursing, biological and behavioral sciences, and the humanities in planning, implementing, and evaluating nursing care.
2. Use critical thinking and clinical judgment within a problem-solving process to meet the health care needs of individuals, families, aggregates, and communities in a variety of settings.
3. Accept responsibility and accountability for one’s own actions as a health care professional.
4. Participate in the delivery of health care through case management, interdisciplinary collaboration, delegation, coordination, and consultation.
5. Participate in nursing and interdisciplinary efforts to improve the delivery of high-quality health care to diverse individuals, families, aggregates, and communities.
6. Demonstrate core professional values to complement continued personal and professional growth.
7. Practice nursing according to professional and ethical standards.
8. Critically appraise and apply research findings to demonstrate evidence-based nursing practice.
9. Examine health policy and its effects on individuals, families, aggregates, communities, and health agencies.

10. Integrate the appropriate use of information and health care technology in nursing practice, administration, education, and research.

APPLICABILITY OF CERTAIN COURSES

ROTC COURSES

The dean has the authority to substitute an equivalent air force science, military science, or naval science course or courses for a course or courses prescribed by the School of Nursing and to make adjustments to compensate for any differences in semester hour value. The total number of semester hours required for the degree remains unchanged.

CORRESPONDENCE AND EXTENSION COURSES

Credit earned by correspondence or extension from the University or elsewhere will be counted toward a Bachelor of Science in Nursing degree if approved by either the assistant dean for student affairs or the assistant dean for undergraduate programs. A student planning to meet preprofessional course requirements with correspondence or extension courses should consult the Office of Student Affairs to ensure enrollment in appropriate courses. Credit for professional sequence courses may not be earned by correspondence or extension.

BACHELOR OF SCIENCE IN NURSING

This program consists of 128 to 129 semester hours of coursework: sixty-seven to sixty-eight hours of prerequisite courses (the preprofessional sequence) taken at the University of Texas at Austin or another accredited college or university, followed by sixty-one hours of upper-division nursing courses (the professional sequence) taken at the University of Texas at Austin School of Nursing. Upon completion of the program, students are awarded the Bachelor of Science in Nursing degree and have fulfilled the prescribed course of study and clinical practice required to take the National Council Licensure Examination (NCLEX) for licensure as a registered nurse.

FOREIGN LANGUAGE REQUIREMENT

Students may fulfill the foreign language component of the University's basic education requirements by completing two years of a single foreign language in high school, by earning an appropriate score on one of the placement examinations administered by the University, or by completing two semesters of college coursework in a single foreign language in addition to the degree requirements given below. If the foreign language requirement will be fulfilled by transfer credit, credit by examination, or extension or correspondence courses, it must be fulfilled before the first semester of the student's senior year. Nursing 354 may not be counted toward the foreign language requirement. For students who take college coursework to complete the foreign language requirement, Spanish is recommended.

FLAG REQUIREMENTS

In the process of fulfilling the requirements of the preprofessional sequence (including the core curriculum) and the professional sequence, students must earn credit for one flag in ethics and leadership, one flag in global cultures, one flag in independent inquiry, one flag in quantitative reasoning, and two flags in writing. At least one of the courses that carries a writing flag must be upper-division. Courses used to fulfill the writing flag requirement may be used simultaneously to fulfill other requirements.

Students are also required to earn one flag in cultural diversity in the United States and are advised to earn credit for this flag as part of the coursework used to satisfy the first-year signature course, American history, or visual and performing arts requirements of the core curriculum. Courses with flags are identified in the *Course Schedule*.

PREPROFESSIONAL SEQUENCE

Students must complete the sixty-seven or sixty-eight semester hours of coursework (preprofessional sequence) listed below. Completion usually requires two and one-half academic years (or four semesters and one summer session). All courses must be completed before the student enrolls in upper-division courses in nursing.

All students must complete the University's core curriculum, described in chapter 2. In some cases, a course that is required for the Bachelor of Science in Nursing may also be used to fulfill a requirement of the core curriculum; these courses are identified below.

COURSES	SEM HRS
Core Curriculum	
▶ Elements of the core curriculum not satisfied by other requirements of the Bachelor of Science in Nursing (See chapter 2 for more information.)	24
Natural Sciences	
▶ Physiology and functional anatomy: Biology 446L, 365S, 165U	8
▶ Biology: Biology 311C, 326M (These courses combined may be used to fulfill the science and technology, part I, requirement of the core curriculum.)	6
▶ Chemistry: Chemistry 301 (may also be used to fulfill the science and technology, part II, requirement of the core curriculum)	3
▶ Introductory statistics: Statistics and Scientific Computation 302 (may also be used to fulfill the mathematics requirement of the core curriculum; this course also carries a quantitative reasoning flag)	3
▶ Nutrition 306	3
Liberal Arts	
▶ Introductory psychology: Psychology 301 (may also be used to fulfill the social and behavioral sciences requirement of the core curriculum)	3
Nursing	
▶ Nursing 309, <i>Global Health</i> (carries a global cultures flag)	3
▶ Nursing 310, <i>Communication in Health Care Settings</i>	3
▶ Nursing 311, <i>Ethics of Health Care</i> (carries both a writing flag and an ethics and leadership flag)	3
▶ Nursing 264, <i>Nursing Research</i>	2
Other Courses	
▶ Growth and development: Human Development and Family Sciences 313 and 113L, or Psychology 304	3 or 4
▶ Introductory pharmacology: Pharmacy 338	3
TOTAL 67 OR 68	

PROFESSIONAL SEQUENCE

The final sixty-one semester hours of coursework in nursing are completed after the student has achieved upper-division standing and has been admitted into the School of Nursing professional sequence. These hours consist of the courses listed below and Nursing 347, *Specialized Topics in Nursing*, which many students choose to take in the summer. In order to meet prerequisites, students must take most of the courses in the professional sequence in the indicated semester. Courses that may be taken at any point in the professional sequence are Nursing 323, *Genetics in*

Health Care, Nursing 347, *Specialized Topics in Nursing*, and Nursing 354, *Spanish for Health Care Professionals*.

COURSES	SEM HRS
FIRST SEMESTER	
N 224, <i>Health Assessment Skills</i>	2
N 325, <i>Adult Health Nursing I</i>	3
N 325P, <i>Adult Health Nursing I (Practicum)</i> (carries an independent inquiry flag)	3
N 226, <i>Mental Health Aspects of Health Care</i>	2
N 227, <i>Conceptual Bases of Aging</i>	2
N 127P, <i>Clinical Nursing Skills I (Practicum)</i>	1
N 354, <i>Spanish for Health Care Professionals</i>	3
TOTAL 16	
SECOND SEMESTER	
N 455, <i>Adult Health Nursing II</i>	4
N 355P, <i>Adult Health Nursing II (Practicum)</i> (carries an independent inquiry flag)	3
N 356, <i>Mental Health Nursing across the Life Span</i>	3
N 356P, <i>Problems in Mental Health Nursing (Practicum)</i>	3
N 157P, <i>Clinical Nursing Skills II (Practicum)</i>	1
TOTAL 14	
THIRD SEMESTER	
N 323, <i>Genetics in Health Care</i>	3
N 265, <i>Nursing Care of Childbearing Families</i>	2
N 365P, <i>Nursing Care of Childbearing Families (Practicum)</i>	3
N 266, <i>Nursing Care of Children and Their Families</i>	2
N 366P, <i>Nursing Care of Children and Their Families (Practicum)</i>	3
N 377, <i>Leadership and Management of Nursing Care</i>	3
TOTAL 16	
FOURTH SEMESTER	
N 275, <i>Public Health Nursing</i>	2
N 375P, <i>Public Health Nursing (Practicum)</i> (carries a writing flag)	3
N 377P, <i>Clinical Care Management (Practicum)</i>	3
N 278, <i>Synthesis of Nursing Knowledge</i>	2
N 279P, <i>Capstone Preceptorship</i>	2
TOTAL 12	

BSN FOR REGISTERED NURSES

The Accelerated Track, designed for registered nurses with associate's degrees or diplomas in nursing, builds on individuals' backgrounds while offering preparation in areas such as public health nursing, genetics, decision making, leadership, and management. The BSN degree provides the basis for graduate preparation at the MSN and PhD levels.

Students should call the RN-BSN/MSN adviser at (512) 232-4780 for an appointment before registering for prerequisite courses for help in planning a program of study.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

NURSING: N

LOWER-DIVISION COURSES

- 001. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various School of Nursing disciplines. One lecture hour a week for one semester.
- 107, 207, 307. Topics in Nursing.** One, two, or three lecture hours a week for one semester, with one discussion hour a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Women's Reproductive Health for Nonscience Majors.** Nursing 307 (Topic 1) is same as Sociology 308 (Topic 2: *Women's Reproductive Health for Nonscience Majors*) and Women's and Gender Studies 301 (Topic 7: *Women's Reproductive Health for Nonscience Majors*). Overview of contemporary women's reproductive health issues, with emphasis on historical, physiological, psychosocial, and cultural influences that affect the reproductive health of women during adolescence, the childbearing years, and midlife. Nursing 307 (Topic 1) and Pharmacy 318W may not both be counted. Prerequisite: One year of high school biology, or Biology 301L or 309D or the equivalent. Topic 1 is offered as Nursing 307 only.
- 309. Global Health.** Overview of global health, with emphasis on the determinants of health, health indicators, human rights, globalization, current socioeconomic factors, health care systems, and public health systems. Three lecture hours a week for one semester.
- 310. Communication in Health Care Settings.** Introduction to theories and models of communication in relation to health care; basic factors affecting interpersonal communication in health care settings. Three lecture hours a week for one semester. Required for nursing majors.

- 311. Ethics of Health Care.** Ethical issues of health care and related legal concerns. Contradictions, inconsistencies, and competing views that lead to dilemmas in health care. Three lecture hours a week for one semester. Nursing 311 and 311H may not both be counted. Prerequisite: Rhetoric and Writing 306.
- 311H. Ethics of Health Care: Honors.** Ethical issues in health care and related legal concerns. Contradictions, inconsistencies, and competing views that lead to dilemmas in health care, with emphasis on resolving ethical dilemmas through ethical reasoning, ethical obligations in health professional–patient relationships, and just allocation of scarce health care resources. Three lecture hours a week for one semester. Nursing 311 and 311H may not both be counted. Prerequisite: Admission to the School of Nursing Honors Program or consent of instructor.
- 117H. Introduction to Nursing Scholarship: Honors Seminar.** Introduction to the nature of nursing scholarship, along with related research and clinical and educational career opportunities. Topics include leadership, research, and ethics as they relate to nursing. One lecture hour a week for one semester. Prerequisite: Admission to the School of Nursing Honors Program.

UPPER-DIVISION COURSES

- 323. Genetics in Health Care.** The integration of genetic information into nursing practice, including ethical, legal, psychological, and social issues. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 224. Health Assessment Skills.** Discussion, application, and documentation of health assessment skills needed to provide data for health promotion and nursing interventions. One and one-half lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing.
- 325. Adult Health Nursing I.** For nursing majors admitted to the professional sequence. Discussion of the concepts and theories necessary to promote and restore the health of adults with biological problems; related physiological and psychological responses. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.
- 325P. Adult Health Nursing I (Practicum).** For nursing majors admitted to the professional sequence. Application of the concepts and theories necessary to promote and restore health of adults with biological problems; related physiological and psychological responses. Nine laboratory hours a week for one semester. Prerequisite: Upper-division standing and credit or registration for Nursing 325.
- 226. Mental Health Aspects of Health Care.** An introductory course in mental health nursing. Views human beings from a holistic perspective that includes the biological, environmental, cultural, and interpersonal factors that foster mental health. Focuses on relevant nursing theories and evidence-based practice as the foundation for therapeutic communication, assessment, and basic intervention skills to promote mental health in patients and families in health care settings. Two lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

- 227. Conceptual Bases of Aging.** An examination of the theories of aging, the developmental tasks of families, and the physical, psychological, social, economic, ethical, legal, and spiritual needs of aging persons. Responsibilities and needs of caregivers. Two lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 127P. Clinical Nursing Skills I (Practicum).** Laboratory instruction and practice in clinical nursing skills. Two laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Concurrent enrollment in Nursing 325P (or 425P).
- 137, 237, 337. Independent Study.** Study in a specific area; topic and mode of study are agreed upon by student(s) and instructor. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: A University grade point average of at least 2.80 and consent of instructor.
- 147, 247, 347. Specialized Topics in Nursing.** The equivalent of one, two, or three lecture hours a week for one semester; some topics require up to thirty-nine hours of fieldwork a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Enrollment in the upper-division sequence. Some topics also require consent of instructor; these are identified in the *Course Schedule*.
- Topic 1: Informatics in Health Care and Nursing.**
 - Topic 2: Acute Care Pediatrics.**
 - Topic 3: Cardiovascular Nursing.**
 - Topic 4: Childbearing Nursing Elective.**
 - Topic 5: Critical Care Nursing.**
 - Topic 6: High-Risk Maternity.**
 - Topic 7: Pediatrics.**
 - Topic 8: Perioperative Nursing.**
 - Topic 9: Special Topics in Pediatrics.**
 - Topic 10: Child Wellness Center (Practicum).**
 - Topic 11: Children with Chronic Illness in the Community.**
 - Topic 12: Clinical Nursing Preceptorship.**
 - Topic 13: Community-Oriented Ambulatory Nursing.**
 - Topic 14: Genetics in Clinical Nursing (Practicum).**
 - Topic 15: Home Health Nursing.**
 - Topic 16: Pediatrics in the Community.**
 - Topic 17: Well Children in the Community.**
- 354. Spanish for Health Care Professionals.** Basic Spanish language skills and phrases related to nursing activities. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.
- 455. Adult Health Nursing II.** Advanced concepts and theories to promote and restore health of adults with biological problems and related physiological and psychological responses. Four lecture hours a week for one semester. Prerequisite: Nursing 325 and 325P (or 425P).
- 355P. Adult Health Nursing II (Practicum).** Application of advanced concepts and theories to promote and restore health of adults with biological problems and their related physiological and psychological responses. Nine laboratory hours a week for one semester. Prerequisite: Credit or registration for Nursing 455.
- 356. Mental Health Nursing across the Life Span.** Biological, environmental, cultural, and interpersonal factors predisposing individuals across the life span to mental health problems. The course is organized around the nursing process, as well as multidisciplinary therapeutic modalities, that assist the individual and family to adapt, recover, and grow through these problems. Current relevant research, and the sociocultural, legal, and ethical implications of providing nursing care to the mentally ill. Three lecture hours a week for one semester. Prerequisite: Nursing 224, 325, and 226.
- 356P. Problems in Mental Health Nursing (Practicum).** Application of strategies for the care of individuals, groups, and families experiencing mental health problems. Nine laboratory hours a week for one semester. Prerequisite: Credit or registration for Nursing 356.
- 157P. Clinical Nursing Skills II (Practicum).** Laboratory instruction and practice in clinical nursing skills. Two laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Concurrent enrollment in Nursing 355P or 356P (or Nursing 455P or 456P).
- 264. Nursing Research.** Basic components of the research process; interpreting descriptive and inferential statistics in research. Critical examination of research studies in nursing. Two lecture hours a week for one semester. Nursing 264 and 264H may not both be counted. Prerequisite: An introductory statistics course.
- 264H. Nursing Research: Honors.** Examination of the research process and methods, along with interpretation of descriptive and inferential statistics in research. Critical examination of research studies in nursing and research skills through participation in a research project. One and one-half lecture hours and one laboratory hour a week for one semester. Nursing 264 and 264H may not both be counted. Prerequisite: Admission to the School of Nursing Honors Program; and one of the following: Biology 318M, Educational Psychology 371, Mathematics 316, Psychology 317, or consent of instructor.
- 265. Nursing Care of Childbearing Families.** Concepts, theories, and processes essential to understanding the health concerns and problems of women and their families during the childbearing years. Two lecture hours a week for one semester. Prerequisite: Nursing 455, 355P (or 455P), 356, 356P (or 456P), 157P, and concurrent enrollment in Nursing 365P and 377.
- 365P. Nursing Care of Childbearing Families (Practicum).** The application of concepts, theories, and processes pertinent to care of women and their families during the childbearing years. Nine laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Nursing 265 and 377.
- 266. Nursing Care of Children and Their Families.** Two lecture hours a week for one semester. Prerequisite: Nursing 455, 355P (or 455P), 356, 356P (or 456P), 157P, and concurrent enrollment in Nursing 366P and 377.

- 366P. Nursing Care of Children and Their Families (Practicum).** Application of concepts, theories, and developmental processes essential to the health concerns and problems of children, adolescents, and their families. Nine laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Nursing 266 and 377.
- 275. Public Health Nursing.** Public health nursing models and the nursing process as they are used to plan for the health of aggregates and communities. Description and analysis of formal and informal community systems and health care delivery systems. Major emphasis on the concepts of community building and collaboration. Two lecture hours a week for one semester. Nursing 160 and 275 may not both be counted; Nursing 170, 270 and 275 may not both be counted. Prerequisite: Nursing 455, 355P, 356, and 356P; or consent of instructor.
- 375P. Public Health Nursing Practicum.** Provides opportunities for students to apply public health nursing concepts, theories, and processes to the care of aggregates and the total community. Assigned clinical experiences are designed to develop student skills in the practice of public health nursing. Emphasis is on interdisciplinary health care with at-risk aggregates in the community, and high-risk families and aggregates in the community. Nine laboratory hours a week for one semester. Nursing 260P and 375P may not both be counted; Nursing 170P, 270P, 370P and 375P, 475P may not both be counted. Prerequisite: Concurrent enrollment in Nursing 275.
- 377. Leadership and Management of Nursing Care.** Selected concepts and theories of management in the context of the delivery of dynamic nursing care. Use of management concepts in working with a health care team to provide high-quality patient care. Historical development of the health care system, current issues, contemporary trends, standards of professional practice, management and leadership roles, political and cultural influences on health care, and professional career development. Three lecture hours a week for one semester. Nursing 377 and 377H may not both be counted. Prerequisite: Concurrent enrollment in Nursing 265, 365P, 266, and 366P; or consent of instructor.
- 377H. Leadership and Management of Nursing Care: Honors.** Examination of selected concepts and theories of management and leadership in the context of the delivery of dynamic nursing care. The use of management concepts in working with a health care team to provide high-quality patient care. Current economic, social, and political factors that influence health care. Three lecture hours a week for one semester. Nursing 377 and 377H may not both be counted. Prerequisite: Admission to the School of Nursing Honors Program or consent of instructor.
- 377P. Clinical Care Management (Practicum).** Application of selected concepts and theories of management in the planning and delivery of health care. Nine laboratory hours a week for one semester. Prerequisite: Nursing 265, 365P (or 465P), 266, 366P (or 466P), and 377 (or 277).
- 278. Synthesis of Nursing Knowledge.** Designed to prepare students for Nursing 279P and for nursing practice in the workplace. Provides opportunities for synthesis of theoretical, evidence-based, and clinical knowledge, with emphasis on the application of the synthesized knowledge to the individual's nursing practice. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Nursing 377P, or consent of instructor.
- 279P. Capstone Preceptorship.** Designed to provide students with clinical experiences similar to those they are likely to confront as newly employed registered nurses. Focus on the role transformation of students and clinical competence in communication, collaboration, negotiation, delegation, coordination, and evaluation of interdisciplinary work. Thirty to forty hours a week for three to four weeks for a total of 120 clinical hours. Additional preparation time to assure clinical competence may be required. Offered on the pass/fail basis only. Prerequisite: Nursing 375P (or 270P), 377 (or 277), 377P (or 477P), and 278.

14. College of Pharmacy

M. Lynn Crismon, PharmD, *Dean*
 Patrick J. Davis, PhD, *Senior Associate Dean*
 Carlton K. Erickson, PhD, *Associate Dean*
 William McIntyre, PharmD, *Associate Dean*
 Diane B. Ginsburg, MS, *Assistant Dean*
 Jennifer L. Ridings-Myhra, BSPhr, *Assistant Dean*
 Richard E. Wilcox, PhD, *Assistant Dean*
<http://www.utexas.edu/pharmacy/>

GENERAL INFORMATION

HISTORY

For more than a century, the University's College of Pharmacy has provided education and training for men and women as pharmacy practitioners, scientists, professional leaders, and responsible citizens. Eleven students constituted the first class when a school of pharmacy was created in the fall of 1893 at the University of Texas Medical Branch at Galveston. In 1927, the program was reorganized as the College of Pharmacy and moved to the Austin campus. The college shared quarters with other University programs until 1952, when the first pharmacy building was opened. Instruction now takes place in facilities designed for the pharmacy program and located near the center of the Austin campus, and on the campuses of the University of Texas Health Science Center at San Antonio, the University of Texas at El Paso, and the University of Texas - Pan American in Edinburg.

The first undergraduate program consisted of two sessions, each seven months in length. The current PharmD degree program requires six years in preprofessional subjects, biomedical and pharmaceutical sciences, and professional experience courses. Graduate study became available in 1948 with the institution of a Master of Science in Pharmacy degree program. Today programs are also available that lead to the Doctor of Philosophy in the pharmaceutical, administrative, and

clinical sciences. More than eight thousand students have graduated from the programs offered by the college; many have achieved state, national, and international prominence in pharmacy or in related health fields.

Academic leadership for pharmaceutical education at the University has been provided by eleven prominent educators, beginning with James Kennedy of San Antonio, who was appointed as a pharmacy professor and director of the Galveston program in 1893. He was succeeded by R. R. D. Cline, who for almost thirty years guided pharmaceutical education in Texas. When the school was moved to Austin in 1927, W. F. Gidley was named the first dean of the college. In 1947, Henry M. Burlage succeeded Professor Gidley as dean. He was succeeded in 1962 by Lee F. Worrell, who served until 1966. Carl C. Albers was acting dean until Joseph B. Sprowls was appointed dean in 1967. William J. Sheffield became acting dean upon the death of Professor Sprowls in 1971. He was succeeded in 1973 by James T. Doluisio, who served the college for twenty-five years. Steven Leslie served as dean from 1998 until 2007, when M. Lynn Crismon assumed the leadership of the college.

University pharmacy students receive instruction in the basic biomedical sciences, the pharmaceutical sciences, pharmacy administration, and pharmacy practice in state-of-the-art academic and health care facilities. Pharmacy interns expand their professional practice knowledge and skills at clinical education sites in the Austin/Temple/Waco area, El Paso, and the

Lower Rio Grande Valley, and at the University of Texas Health Science Center at San Antonio, the University of Texas Southwestern Medical Center at Dallas, the Texas Medical Center in Houston, and the University of Texas Medical Branch at Galveston.

ACCREDITATION

The College of Pharmacy has been a member of the American Association of Colleges of Pharmacy since 1927. The Doctor of Pharmacy degree program is accredited by the Accreditation Council for Pharmacy Education (ACPE); ACPE does not accredit master's and PhD degrees in pharmacy.

AIMS AND CURRICULA

The University offers the six-year program leading to the Doctor of Pharmacy (PharmD) as the sole entry-level practice degree. This program offers a course of study in the pharmaceutical and clinical sciences designed to provide the state and the nation with pharmacists who are scientifically trained and clinically competent to deliver a full spectrum of pharmaceutical services in all areas of practice. In meeting its teaching obligation, the college provides a curriculum and faculty that offer students an educational experience beyond training solely for the practice of pharmacy.

The profession of pharmacy is evolving rapidly from a role primarily in distribution of medication toward a patient-oriented, pharmaceutical care model. Pharmaceutical care is a process through which a pharmacist interacts with the patient and other health care professionals in the design, implementation, and monitoring of a patient-specific therapeutic plan that will produce the desired therapeutic outcomes. To ensure that graduates have the necessary tools to practice in this complex, patient-oriented environment, the pharmacy curriculum has evolved from traditional discipline-specific coursework to a discipline-integrated approach of disease state management and a case-based, team approach to the design of the patient-specific therapeutic plan.

The professional curriculum is designed to prepare pharmacy graduates to provide patient-oriented pharmaceutical care in a contemporary setting, whether a community pharmacy, an ambulatory clinic, a hospital, or a long-term care facility, as well as to work in the pharmaceutical industry. In addition, the curriculum aims to inculcate an understanding of the basic sciences sufficient to prepare the student for graduate study in the pharmaceutical sciences. These objectives

are pursued through a balanced program of study in pharmaceuticals, medicinal chemistry, pharmacology, therapeutics, pharmacy administration, social and behavioral sciences, and the humanities, as well as a structured clinical and professional practice experiential program. The holder of a professional degree from the University of Texas at Austin has received an education and training as sophisticated as any available in the health professions.

The College of Pharmacy has conducted a joint PharmD degree program with the University of Texas Health Science Center at San Antonio since 1974. Students who complete their internship courses at the Health Science Center are considered part of this program and receive a degree awarded jointly by the two institutions.

The college has cooperative programs with the University of Texas at El Paso and the University of Texas - Pan American, and educational affiliations with several other academic health institutions, including Scott & White Hospital in Temple, the University of Texas M. D. Anderson Cancer Center in Houston, the University of Texas Medical Branch at Galveston, and the University of Texas Southwestern Medical Center at Dallas; and with other University of Texas System academic components. The college also has cooperative practice arrangements with medical centers and other health care facilities throughout the state as part of the experiential program.

The college seeks to encourage the belief that education is ongoing and lifelong and that all levels of professional education must form a continuum with professional practice and patient care. To meet this objective, the college provides postgraduate educational programs and develops innovative programs of training through continuing education for the roles pharmacists may be called on to fill as a result of changes in the patterns of delivery of pharmaceutical services.

In addition to the PharmD degree, the University offers the Master of Science in Pharmacy and the Doctor of Philosophy with a major in pharmacy. Both graduate programs offer qualified students the opportunity to complete specialty practice residencies. These programs are described in the *Graduate Catalog*.

LEGAL REQUIREMENTS FOR PROFESSIONAL PRACTICE

Upon matriculation to the first professional year in the College of Pharmacy, each student must apply to become a student intern trainee with the Texas State Board of Pharmacy (<http://www.tsbp.state.tx.us/>). Each

student must be registered as a student intern trainee, and subsequently as a student pharmacist-intern, in order to acquire, through pharmacy courses, the internship hours necessary for licensure upon graduation as a pharmacist in Texas. Only after completion of the first professional year (at least thirty semester hours) may the student register as a student pharmacist-intern with the Texas State Board of Pharmacy and earn internship hours.

Students should be aware that the process of registration as an intern includes a criminal history and fingerprint check. The existence of a criminal record may preclude the student from registration as an intern and from subsequent licensure as a pharmacist in Texas. However, the Texas State Board of Pharmacy may grant limited internship status under certain conditions to those with prior convictions. It is possible that health care facilities in which students are placed for internship may mandate an additional background check and/or drug screen. Students assigned to these facilities must comply with all such requirements. If a student cannot be placed in internship facilities because of prior convictions that appear on any background check, or because of a positive drug screen, his or her graduation may not be possible or may be significantly delayed.

After completing the first professional year (at least thirty semester hours), students registered as student pharmacist-interns may earn internship hours toward licensure not only through professional sequence pharmacy courses but also outside the academic program through employment in certain practice settings. Internship hours gained outside the College of Pharmacy curriculum, however, may not replace any portion of the experiential program required for graduation.

Graduates of the College of Pharmacy are eligible to apply to the Texas State Board of Pharmacy for licensure as pharmacists. Licensure exams may be taken shortly after graduation. Postgraduate internship experience is not currently required for Texas licensure but may be required for licensure in other states.

Additional information about requirements for pharmacy licensure in Texas is available from the Texas State Board of Pharmacy, William P. Hobby Building, 333 Guadalupe Street. The mailing address is P O Box 21, Austin TX 78701-3942. The URL is <http://www.tsbp.state.tx.us/>, and the telephone number is (512) 305-8000.

Intern registration and pharmacist licensure requirements are subject to change by the Texas State Board of Pharmacy. Students and graduates must meet current requirements, even if they differ from those described above.

FACILITIES

THE PHARMACY BUILDING

In addition to well-equipped classrooms, laboratories, and offices, the Pharmacy Building provides a learning resource computer center and laboratory, a television production laboratory and classrooms, and pharmaceutical technology laboratories with facilities for product development, pilot manufacturing, sterile production and quality control, and stability testing. The University Health Services Pharmacy also serves as a teaching laboratory for second-year pharmacy students while providing comprehensive pharmaceutical services to the student community.

PHARMACY FACILITIES IN SAN ANTONIO

The University of Texas Health Science Center at San Antonio has provided facilities for the education and training of pharmacy students, residents, and fellows since 1972. The McDermott Clinical Sciences Building on the Health Science Center campus, which houses the pharmacotherapy division of the college and the Pharmacotherapy Education and Research Center, provides a state-of-the-art distance education classroom, a student computer laboratory, research laboratories, and offices for faculty and staff members. The Division of Pharmacotherapy maintains a broad range of affiliation agreements with institutions in San Antonio that provide extensive training opportunities in a variety of practice settings. Research opportunities exist in the areas of infectious disease, oncology, anticoagulation, stroke prevention, and psychiatry.

PHARMACY FACILITIES IN EL PASO

The Cooperative Pharmacy Program with UT El Paso provides classrooms and conference rooms equipped for high-quality interactive telecommunications and satellite reception, as well as a complex of offices for faculty and staff members. Facilities can also accommodate intravenous admixture, patient assessment, and drug information. These accommodations supplement the physical facilities, student computer laboratories, libraries, and other services available on the University of Texas at El Paso campus.

PHARMACY FACILITIES IN EDINBURG

The Cooperative Pharmacy Program with UT Pan American is located within the Edinburg Regional Academic Health Center (ERAHC), an educational and biomedical research facility. The building provides research laboratories, computer and library facilities, staff and faculty offices, and conference rooms. The classrooms are equipped for both on-site and distance education and can accommodate instruction for intravenous admixture and patient assessment courses. The library, computer facilities, and health services on the UT Pan American campus are also available to students in the cooperative program.

OFFICE OF PHARMACY CONTINUING EDUCATION

As part of a state university, the College of Pharmacy recognizes obligations to the profession of pharmacy on a state, national, and international level. The college began providing continuing education to pharmacists in 1953 in cooperation with the University's Division of Extension. Today, the college is an ACPE-approved provider of continuing pharmaceutical education. A primary goal of the Office of Pharmacy Continuing Education is to advance the pharmacist's knowledge and provide the skills necessary to adapt to a changing practice. Toward this end, the office offers a variety of programs, including home-study courses, seminars, multiday conferences, and certificate programs addressing the most current practice issues. Programs are conducted both on- and off-campus and by correspondence and distance learning. Annually, the office provides about 350 contact hours of continuing education programming to more than sixty-five hundred pharmacists across the United States.

LEARNING RESOURCE CENTER

The college's Learning Resource Center (LRC) offers a variety of instructional resources to students and faculty members. The LRC provides state-of-the-art digital video teleconferencing transmission of courses among the Austin campus, the Health Science Center at San Antonio, UT El Paso, UT Pan American, and other sites in The University of Texas System, so that faculty members can teach students at two or more locations simultaneously. Many courses are recorded and made available by videostreaming. The LRC also operates the Delgado Library, a multipurpose, nontra-

ditional facility with computer support, individual and small-group study spaces, and seminar rooms.

The staff of the LRC provides faculty members and students with computer hardware and software consulting as well as advice on the use of media in the classroom. Facilities and equipment are available for video and data projection. The college's Web site (<http://www.utexas.edu/pharmacy/>) provides additional information and curriculum support for students and faculty members.

In the Student Computer Laboratory, students have access to desktop computers with removable media and CD drives, professional business software, and Internet client software. The electronic classrooms feature desktop computers with projection equipment and a full suite of software. The large distance-learning classroom supports notebook computer ports. Wireless high-speed Internet is available throughout the Pharmacy Building.

The goal of the Learning Resource Center is to provide the highest quality learning technology infrastructure and support services to students and faculty members.

LIBRARIES

The Life Science Library supports the teaching and research missions of the College of Pharmacy by providing access to an extensive array of print and electronic information resources. The library maintains extensive holdings in pharmacology, pharmaceuticals, pharmacy administration, and medicinal chemistry, with supporting materials in medicine and nutrition. Biochemistry and medicinal chemistry material is complemented by the collections of the Mallet Chemistry Library. Medical material is supplemented by additional material in nursing, pediatrics, and psychiatry at the Perry-Castañeda Library.

The online Clinical Information Center (Clin-IC), sponsored by the Life Science Library, provides electronic access to the complete resources of a drug information center. The center gives users access to significant electronic resources such as MICRO-MEDEX, Access Pharmacy, AHFS Drug Information, Clinical Pharmacology Online, Facts & Comparisons, Lexi-Comp ONLINE, and the Cochrane Library of evidence-based reviews, in addition to databases such as Medline, International Pharmaceutical Abstracts, Web of Science, and SciFinder Scholar. These electronic resources are available for remote access through the University Libraries Web site, which offers a full range of databases, access to electronic journals, and links to other digital information sources. Access to print

information resources for students on rotation and at College of Pharmacy Cooperative Program campuses is provided through the University's D-Doc distance learning library service.

All units of the University Libraries offer reference service, circulation and reserve services, and interlibrary loan. Instruction in the use of information resources is provided in required pharmacy classes and by individual consultation.

HONORS AND AWARDS

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

COLLEGE OF PHARMACY RECOGNITION AWARDS

The Highest GPA Award is given to the graduate(s) with the highest grade point average in required PharmD courses.

The Second Highest GPA Award is given to the graduate(s) with the second highest grade point average in required PharmD courses.

The College of Pharmacy Award for Outstanding Research is given to a graduate who has demonstrated outstanding ability in areas of pharmacy research.

The College of Pharmacy Award for Excellence in Patient Care is presented to a graduate who has demonstrated excellence in patient care while pursuing the PharmD degree.

The College of Pharmacy Award for Dedicated Service is presented to a graduate who has shown a commitment to service above and beyond the norm.

The College of Pharmacy Award for Exemplary Leadership is presented to a graduate who has excelled in leadership while pursuing the PharmD degree.

The College of Pharmacy Alumni Association Mortar and Pestle Award for Leadership, Service, and Patient Care recognizes an exceptional graduate who has demonstrated outstanding leadership, service, and patient care in the college, the University, and the community while pursuing the PharmD degree. The award is a hand-carved mortar and pestle.

College of Pharmacy Class Officers are elected by their classmates and serve as permanent officers of their class.

Students' scholarly accomplishments are also recognized through election to Rho Chi, the national pharmaceutical honor society, and through admission to the Pharmacy Honors Program. Students' leadership accomplishments are recognized through election to Phi Lambda Sigma, the national pharmacy leadership society.

FINANCIAL ASSISTANCE AVAILABLE THROUGH THE COLLEGE OF PHARMACY

Students who have completed the first year of the professional curriculum may apply for scholarships and loans offered through the College of Pharmacy. Eligibility and application information is available at <http://www.utexas.edu/pharmacy/students/finaid/scholarship.html> and in the Office of Student Affairs, Pharmacy Building 5.112.

ENDOWED PRESIDENTIAL SCHOLARSHIPS

To be eligible to receive an Endowed Presidential Scholarship, students must meet the college's eligibility requirements and must have maintained a 3.50 grade point average in required pharmacy courses. Students must also show evidence of active involvement in college, University, and other extracurricular activities. The minimum Endowed Presidential Scholarship is \$2,500.

OTHER ENDOWED SCHOLARSHIPS

To be eligible to receive an endowed scholarship, students must meet the college's eligibility requirements. For some awards, students must meet additional criteria. The minimum endowed scholarship is \$1,500.

OTHER SCHOLARSHIPS

Pharmaceutical Foundation scholarships are funded by various pharmacy associations, individuals, employers, and organizations. These scholarships are awarded, as

they become available, through The University of Texas Pharmaceutical Foundation and at the direction of the Undergraduate Financial Aid Committee.

LOAN FUNDS

The Klinck Family Loan Funds. These loan funds were established by the Klinck family of McAllen, Texas, to benefit students in need of financial assistance. Emergency loans for a maximum of \$500 are available; they are normally repayable within thirty days. Long-term loans of up to \$1,000 are also available to pharmacy students who demonstrate financial need. The interest rate for these loans is six percent, and interest must be paid while the student is still in school. Repayment begins three months after the student's graduation from pharmacy school. Monthly payments of at least \$100 are required, and the maximum payment period is eighteen months. Students may apply for more than one loan, but except in unusual circumstances the loans will total no more than \$2,000. Additional information is available in the Office of Student Affairs, Pharmacy Building 5.112.

Other loan funds. Other loan funds may be available to pharmacy students. Information about these loans is available from the Office of Student Affairs, Pharmacy Building 5.112.

STUDENT ORGANIZATIONS

American Pharmaceutical Association Academy of Students of Pharmacy. In December, 1951, the Longhorn Pharmaceutical Association was organized as an association jointly representing the student branches of the American Pharmaceutical Association and the Texas Pharmaceutical Association. Renamed in 1998, the association sponsors service projects and social events and serves to develop professionalism in pharmacy students.

Asian Pharmacy Students Association. The mission of the Asian Pharmacy Students Association, established at the University in 1999, is to promote unity among pharmacy students who have common interests, values, and backgrounds, in order to help them achieve educational, professional, and personal excellence.

Christian Pharmacists Fellowship International (CPFI). This group seeks to identify and enroll all Christian pharmacists, wherever they practice, and to

assist them in creating opportunities for fellowship. CPFI is the first international organization of evangelical Christian pharmacists established with a focus on integrating the spiritual and vocational dimensions of the pharmacist's role.

Kappa Epsilon. Kappa Epsilon is a national professional fraternity established to promote careers for women in pharmacy, but membership is open to women and men. Xi chapter, established in 1943, sponsors service and professional projects, including a city-wide Poison Prevention program in elementary schools each February, as well as social events and other extracurricular activities.

Mexican American Association of Pharmacy Students. The primary goals of the Mexican American Association of Pharmacy Students are to assist in the recruitment and retention of qualified students in the College of Pharmacy, to provide health care education to the community, and to maintain open communication channels between students and the college. Membership is open to prepharmacy and professional students.

Pharmacy Council. The Pharmacy Council is composed of officers of the recognized student organizations in the College of Pharmacy and elected student representatives from each of the professional pharmacy classes. The president and financial director of the council are also members of the Senate of College Councils, and a member of the council serves as the college's representative to Student Government. Acting as liaison between the student body and the Office of the Dean, the Pharmacy Council works to ensure the equitable consideration of student concerns and problems. The council sponsors orientation programs for new pharmacy students, college and University-wide programs, and events that promote student-faculty interaction.

Pharmacy Graduate Students' Association. This association conducts activities that promote the general welfare of pharmacy graduate students. Its chief purposes are to encourage and facilitate graduate student communication and interaction; to gather and disseminate information important to pharmacy graduate students; to represent pharmacy graduate students to the University community; and to promote pharmaceutical education at the undergraduate level.

Phi Delta Chi. Lambda chapter of Phi Delta Chi, established at the University in 1905, was reactivated in 1956. Phi Delta Chi is a professional pharmaceutical fraternity of national standing. Membership is open to qualified professional students who are interested in promoting leadership, scholarship, and professional ethics in the field of pharmacy.

Phi Lambda Sigma. Psi chapter of Phi Lambda Sigma, the national pharmacy leadership society, was established at the University in 1989. Students selected for membership must be of high moral and ethical character, must have demonstrated dedication, service, and leadership in the advancement of pharmacy, must have completed at least ninety semester hours of scholastic work, and must be in good academic standing as defined by the College of Pharmacy.

Rho Chi. Nu chapter of Rho Chi, the national pharmaceutical honor society, was established at the University in 1930. Charters for chapters of this organization are granted only to groups in colleges that are members in good standing of the American Association of Colleges of Pharmacy. Eligibility for membership in the society is based on scholarship, character, personality, and leadership. Students selected for membership must have a pharmacy grade point average of at least 3.20, must be in the top 20 percent of their class, and must have completed the first professional year of the pharmacy curriculum. All candidates must be approved by the dean of the College of Pharmacy.

UT Chapter, International Society of Pharmacoeconomics and Outcomes Research (UT-ISPOR). This group's mission is to provide an environment in which students can share knowledge in pharmacoeconomics and health outcomes research. It brings together students of pharmacoeconomics and outcomes research and members of the pharmaceutical industry, health-related organizations, and academia; acts as a resource for students interested in pharmacoeconomics and outcomes research; and provides an opportunity for students to become familiar with the work of ISPOR and to be represented in its affairs.

UT Chapter, National Community Pharmacists Association. NCPA is a national professional organization representing the interests of independent community pharmacists. The student chapter sponsors projects and events designed to foster the entrepreneurial spirit among future practitioners. The national association has a loan program available to student members, as well as several competitive scholarships and research grants.

UT Chapter, National Pharmaceutical Association. The purpose of the SNPhA is to plan, organize, coordinate, and execute programs geared toward the improvement of the health, educational, and social environment of the minority community.

University of Texas Student Society of Health-System Pharmacists. The student chapter of the Texas Society of Health-System Pharmacists is an organization for students interested in institutional or health-system pharmacy practice. An affiliate of the American and Texas Societies of Health-System Pharmacists, the organization considers a wide range of topics of interest to health professionals and encourages the broadest possible educational introduction to institutional pharmacy and pharmaceutical care. This introduction includes presentation of programs and seminars, tours of pharmacy practice sites, and distribution of literature. The chapter publicizes job openings in hospital pharmacies across the state.

Longhorn Prepharmacy Association. LPPA comprises all prepharmacy students at UT Austin. The group's chief objectives are to function as a small community of students within a large institution; to provide current information on the preprofessional and professional curricula; and to provide information about the pharmacy profession.

PLACEMENT SERVICES

The College of Pharmacy, under the supervision of the assistant dean for experiential and professional affairs, conducts a Placement Conference for graduating seniors. The conference gives seniors an opportunity to interview for professional practice positions with major employers of pharmacists in Texas and throughout the nation. A career workshop to prepare students for interviews is held prior to the Placement Conference as a part of Senior Conference. A college-wide Career Day each spring, featuring displays by major employers, allows students in all years of the curriculum to interact with numerous pharmacist employers.

The college also sponsors a summer internship interview day for first-professional-year students. The event is designed to help students find summer internship experiences that meet the early practice experience requirement. Participating employers represent primarily community and hospital pharmacy practice.

A limited number of competitive summer internships both in and outside of Texas are available

by application only. Information is available in the Office of Student Affairs, Pharmacy Building 5.112; from individual faculty members; and on the college's Web site at <http://www.utexas.edu/pharmacy/general/experiential/student/summer.html>.

As a complement to the assistance available from the college, the Sanger Learning and Career Center provides comprehensive career services to all students. The center offers professional assistance to students in choosing or changing their majors or careers, seeking an internship, and planning for a job search or graduate study.

The University makes no promise to secure employment for each graduate.

GRADUATE DEGREES

Graduate programs leading to the Master of Science in Pharmacy and the Doctor of Philosophy are offered through the Graduate School and described in the *Graduate Catalog*. The graduate student may specialize in medicinal chemistry, pharmacology and toxicology, pharmaceuticals, pharmacotherapy, or pharmacy administration. Faculty members in each area work closely with students and engage in research in such fields as drug synthesis, pharmacokinetics, drug mechanisms and toxicity, and clinical research.

ADMISSION AND REGISTRATION

ADMISSION TO THE UNIVERSITY

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

ADMISSION TO THE PROFESSIONAL CURRICULUM

No student may begin the professional curriculum until he or she (1) has been admitted to the University by the director of admissions according to the normal undergraduate procedures and (2) has been admitted to the professional curriculum in pharmacy by the dean, following recommendation by the Admissions Committee of the College of Pharmacy, according to the procedures on this and the following page. All students must meet the admission requirements given in the catalog in effect at the time of applica-

tion. Admission to the University in no way implies or guarantees admission to the professional curriculum. If the number of eligible applicants to the professional curriculum exceeds the number that available facilities can accommodate, final selection is made by the college Admissions Committee and the dean.

Students should note that the two admission processes are separate and independent and that deadlines for submission of all application materials for admission to the University may differ from those for submission of all application materials for admission to the professional curriculum.

Students who are enrolled in a pharmacy program at another institution and wish to transfer to the University should follow the normal application process. Upon admission to the University and the professional curriculum, the student may request advanced standing in the pharmacy curriculum. Placement is contingent on availability of space and on transcript evaluation to determine University equivalencies for the student's course work.

As a condition of admission to the college, each student must sign a statement that he or she agrees to accept assignment to any one of the college's internship regions throughout the state. Cooperative arrangements for pharmacy education exist with academic units and health care institutions in the following internship regions: Austin/Temple/Waco, Dallas/Fort Worth, El Paso, Galveston/Houston, the Rio Grande Valley, and San Antonio. Internship regions may be added or deleted at any time based on the availability of resources. Elective regions, which provide limited internship experiences for a specified period of time (less than four months), may also be available.

Students assigned to San Antonio and Cooperative Pharmacy Program students from UT El Paso and UT Pan American in Edinburg must spend the last two years of the professional program in those regions. Students assigned to the other regions spend only the final year of the program (the fourth professional internship year) in their assigned region.

Students are assigned to internship regions through a computer-generated random lottery number system that takes students' ranked preferences into account. Since most students relocate to internship regions outside the Austin area, region assignment occurs during the latter part of the second professional year to allow students adequate time to make personal and financial arrangements. There are no exceptions to the region assignment process. If a student fails to agree to accept assignment to any region, he or she will not be admitted to the college.

The Cooperative Pharmacy Program is available to highly qualified high school seniors entering the University of Texas at El Paso or the University of Texas - Pan American. The program offers these students a competitive advantage for admission to the University of Texas at Austin College of Pharmacy once they complete the requirements of the program at the Cooperative Pharmacy Program campus. Additional information is available from UT El Paso at (915) 747-8535 or <http://academics.utep.edu/pharmacy/>, and from UT Pan American at (956) 318-5255 or http://portal.utpa.edu/utpa_main/daa_home/hshs_home/pharmacy_home/.

ADMISSION TO THE FIRST PROFESSIONAL YEAR

Admission to the professional curriculum is competitive.

BASIC ADMISSION CRITERIA

- Scholarship, as indicated by grade point average and Pharmacy College Admission Test (PCAT) scores. In evaluating the applicant's academic record, the Admissions Committee pays particular attention to the courses required for admission. Ideally, the applicant will have a grade point average of at least 2.80 in prerequisite coursework. Typically, more than 90 percent of successful applicants have grade point averages greater than 3.00, and more than 50 percent of successful applicants have grade point averages greater than 3.60. The applicant will also have a PCAT composite score in at least the 70th percentile, a score in at least the 70th percentile in each area, and writing scores of at least 3.00. Typically, more than 75 percent of successful applicants have a composite score in the 70th percentile or better, and more than 50 percent of successful applicants have a composite score in the 85th percentile or better.
- Essays on the subjects "Why Pharmacy?" and "Why UT?"
- Letters of recommendation from people who know the applicant well professionally, especially employers.
- A résumé that provides details about the applicant's professional, organizational, volunteer, and service experience.

ADDITIONAL PERSONAL FACTORS

- Pharmacy and other related work experience
- Organizational, service, and volunteer activities that demonstrate community involvement and leadership potential
- Teaching, tutoring, and mentoring experience
- Research experience
- Honors and awards
- Interview. Applicants are screened for interviews based on academic record, direct work experience in the profession, special life circumstances, and any other compelling factors. If the applicant is invited for an interview, then other factors are considered; these include but are not limited to the following:
 - Knowledge of and motivation for pharmacy as a career
 - Lifelong learning strategies
 - Critical thinking skills
- Special life circumstances; these include but are not limited to the following: single parent, socioeconomic status of family, first generation attending college, overcoming adversity, resident of an underserved area of the state or an area of Texas with a health professions shortage, race and ethnicity, and cultural background.

Because the University is a public institution, strong preference is given to applicants who are legal residents of Texas and to applicants from states without colleges of pharmacy. Applicants are strongly encouraged to examine the admission statistics published by the college on its admissions Web site, http://www.utexas.edu/pharmacy/admissions/ad_stats.html.

Application deadlines. The deadline to apply for admission to the University is given at the ApplyTexas Web site, <http://www.applytexas.org/>; the deadline to submit the supplemental PharmD application is published by the College of Pharmacy at <http://www.utexas.edu/pharmacy/admissions/pharmd.html>. Students are admitted for the fall semester only.

ADMISSION REQUIREMENTS

- The applicant should have completed at least sixty-six semester hours in total, and must have completed the following forty-five hours in prerequisite courses prior to enrolling in the professional pharmacy curriculum:

- a. Nine hours of biology, including cellular and molecular biology, structure and function of organisms, and genetics
 - b. Eight hours of general chemistry with laboratory
 - c. Three hours of freshman-level rhetoric and writing
 - d. Three hours of sophomore-level survey of American, British, or world literature
 - e. Three hours of calculus (including both differential and integral calculus)
 - f. Three hours of statistics
 - g. Eight hours of organic chemistry with laboratory
 - h. Four hours of microbiology with laboratory
 - i. Four hours of physics with laboratory
- The remaining twenty-one hours should be the core curriculum coursework listed on page 649.
2. The applicant must remove all deficiencies in high school units by the means prescribed in *General Information* before seeking admission to the professional curriculum.

ADMISSION PROCEDURES

1. Application for admission to the professional curriculum should be made by submitting online application materials.
2. All University application materials must be submitted by the deadline given at the Apply-Texas Web site, <http://www.applytexas.org/>. All PharmD supplemental application materials must be submitted by the deadline published by the College of Pharmacy at <http://www.utexas.edu/pharmacy/admissions/pharmd.html>. Students are admitted for the fall semester only.
3. The following must be submitted to the University's Office of Admissions:
 - a. The completed online application for admission to the professional curriculum.
 - b. The nonrefundable PharmD supplemental application processing fee.
 - c. The completed "Why Pharmacy?" and "Why UT?" essays and a résumé.
 - d. Two letters of recommendation from people who know the applicant well professionally, such as work or service supervisors.
 - e. A high school transcript, if the applicant's foreign language requirement was completed in high school. Official transcripts must be sent to the University's Office of Admissions.
- f. Pharmacy College Admission Test (PCAT) scores. Scores more than three years old are not accepted. The PCAT scores must include writing sample scores.
- g. Scores on the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test), if and only if the student is required by state law to take this test.
4. Applicants must submit score reports for any credit earned by examination. These reports should be sent directly to DIIA—Student Testing Services at the University.
5. The applicant may be asked to appear for a personal interview.
6. The applicant is considered on the basis of overall academic performance, with emphasis on grades in the required PharmD prerequisite courses. In accordance with University policy, courses in which the applicant earned a grade of *D+*, *D*, *D-*, or *F* at another institution are not transferable; they may not be used to fulfill any degree requirements. However, courses in which the student earned a grade of *D+*, *D*, or *D-* are considered when the student's admissibility to the professional curriculum is determined.
7. Applicants who have been offered admission to the University and to the PharmD program will be asked to pay a nonrefundable enrollment deposit. If the student does enroll in the program that fall, the deposit will be applied to the semester's tuition bill.
8. An applicant who has been admitted to the University and to the professional curriculum but fails to enroll in either, and who wishes to enter the professional curriculum in a subsequent fall semester, must reapply both to the University and to the College of Pharmacy and must meet all requirements in force at the time of reapplication.
9. An applicant who has been admitted to and enrolls in the professional curriculum but subsequently withdraws, and who wishes to reenter in a subsequent fall semester, must apply for readmission to the professional curriculum and must meet all requirements in force at the time of reapplication. A student who has been out of the University for a semester or more must also apply for readmission to the University.

TECHNICAL STANDARDS

“Technical standards” are the observational, communication, sensory/motor, and intellectual skills, the behavioral and social attributes, and the ethical values required for the completion of the professional curriculum and for the practice of pharmacy. These standards are described on the college’s Web site at <http://www.utexas.edu/pharmacy/>. Each applicant should review the technical standards. Any applicant who believes he or she may have difficulty meeting them should contact the college’s director of admission to discuss possible accommodations.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar’s Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

PROFESSIONAL LIABILITY INSURANCE

Professional liability insurance is required of all students each year of the professional pharmacy curriculum. Coverage in the amount of two million dollars for each claim and four million dollars in the aggregate per year is provided through the insurance policy. The approximate annual premium is \$17.00, payable by the student. The policy covers the period September 1 through August 31.

MEDICAL CLEARANCE REQUIREMENTS

In addition to the University’s immunization requirements, students must show proof of immunity to tetanus, diphtheria, hepatitis B, and varicella and must complete a PPD (Mantoux) skin test before entering the first professional year. In compliance with the Texas Administrative Code, section 97.64, the following are required:

- ▶ Tetanus/diphtheria: One dose of vaccine within the past ten years.
- ▶ Hepatitis B: At least two doses of the three-dose

series. The third dose must be received before the student completes the first professional semester. Students may also show serologic confirmation of immunity to the hepatitis B virus via appropriate documentation.

- ▶ Varicella: One dose, for students who received this vaccine prior to thirteen years of age, or two doses, for students who were not vaccinated before their thirteenth birthday. A history of varicella illness (chicken pox), validated by serologic confirmation of immunity, is acceptable in lieu of vaccination.

Although not required by the state code, the following is required by the College of Pharmacy:

- ▶ PPD: A skin test for tuberculosis (PPD) is required within the three months preceding enrollment in the professional sequence, and prior to each subsequent year of the professional sequence.

Immunization requirements are subject to change. Every effort is made to notify students promptly of any changes. An current list of vaccination requirements can be found online at <http://www.utexas.edu/pharmacy/general/experiential/student/immunization.html>.

REGISTRATION AS A STUDENT PHARMACIST-INTERN

Upon matriculation to the first professional year, each student must register as a student intern-trainee with the Texas State Board of Pharmacy. This is accomplished through completion of the Application for Student Pharmacist-Intern Registration. Each student must be registered first as an intern-trainee and subsequently as a student pharmacist-intern in order to complete the academic requirements for the degree.

Additional information regarding intern registration and pharmacist licensure is given in the section “Legal Requirements for Professional Practice” on pages 634–635. This regulation is subject to change by the Texas State Board of Pharmacy. Every attempt is made to inform students of changes as they occur.

STUDENT HEALTH INSURANCE

Students must procure health insurance to cover treatment for injuries or illness. This is especially important for the experiential components of the curriculum, spanning all four professional years, when students have frequent contact with patients in a number of different health care facilities.

The Student Health Insurance Plan, operated under the auspices of University Health Services, offers optional low-cost insurance for students who are not covered by other programs. Information about this plan is available through University Health Services.

ACADEMIC POLICIES AND PROCEDURES

ACADEMIC STANDARDS IN THE COLLEGE

University regulations on scholastic probation and dismissal are given in *General Information*. In addition, the following academic standards are in effect in the College of Pharmacy.

ACADEMIC PROGRESS

1. The student must repeat a required pharmacy course in which he or she earns a grade of *F*. The student who earns a grade of *D+*, *D*, or *D-* in a required pharmacy course becomes subject to the policies on academic probation and dismissal described below.
2. The student must earn a grade of at least *C-* in each elective pharmacy course. If the student fails to earn a grade of at least *C-* in an elective pharmacy course, he or she may repeat the course or may take another elective course in its place, but only courses in which the student has earned a grade of at least *C-* may be counted toward the professional elective requirement.
3. The student must earn an average of at least two grade points (2.00) a semester hour on all courses undertaken at the University, whether passed or failed. The student must also earn an average of at least two grade points (2.00) a semester hour on all required pharmacy courses undertaken, whether passed or failed.
4. The student may not repeat for credit a course in which he or she has earned a grade of *C-* or better, except under circumstances approved by the dean.
5. With the exception of laboratory problems courses, all pharmacy electives must be taken on the letter-grade basis. The student must also take the professional electives on the letter-grade basis.

ACADEMIC PROBATION AND DISMISSAL

A student is placed on academic probation in the College of Pharmacy if he or she receives a grade of *D+*, *D*, *D-*, or *F* in any required pharmacy course. If the grade received is an *F*, the student must repeat the course and may not progress to courses for which it is a prerequisite until he or she has earned a grade of at least *C-* in the failed course. If the initial grade received is a *D+*, *D*, or *D-*, the student may progress to courses for which the course is a prerequisite. The student may choose to repeat a course in which he or she received a *D+*, *D*, or *D-*, if the course does not conflict with other courses the student would normally take in the same semester; however, this choice affects the student's release from academic probation as described in the following section.

If the student receives more than two incompletes in required pharmacy courses, regardless of the grades ultimately awarded, he or she is subject to review by the Academic Performance Committee; the committee may choose to place the student on academic probation.

A student is subject to dismissal from the college if he or she receives more than one *D+*, *D*, *D-*, or *F* in required pharmacy courses in one semester. The student is also subject to dismissal if he or she receives a second *D+*, *D*, *D-*, or *F* while on academic probation or conditional academic probation.

Students on academic probation are expected to focus on academic improvement and thus are not allowed to hold student offices or to receive college stipends for travel to professional meetings or other college-sponsored events.

RELEASE FROM ACADEMIC PROBATION

After receiving a grade of *F*. The student must repeat the course and earn a grade of at least *C-*. If the failed course is a prerequisite for another course, the student must repeat the course and earn a grade of at least *C-* before taking the course for which the failed course is a prerequisite. In the semester or summer session in which he or she repeats the course, the student must complete a full academic load, including at least five hours in required pharmacy courses and/or other courses recommended by the academic adviser. A full academic load is defined for this purpose as twelve hours in a long-session semester and six hours in the summer. The new grade replaces the grade of *F* when the student's pharmacy grade point average is calculated. If the new grade is *C-* or better, the student

is released from academic probation if and only if he or she has earned no further grades of *D+*, *D*, *D-*, or *F* while on academic probation or conditional academic probation. If the student does not earn a grade of at least *C-* upon repeating the course, he or she is subject to academic dismissal.

After receiving a grade of *D+*, *D*, or *D-*. The student chooses whether or not to repeat the course, if the course does not conflict with other courses the student would normally take in the same semester. He or she may progress to courses for which the course in question is a prerequisite. If the student chooses to repeat the course, he or she must earn a grade of at least *C-*. If the new grade is a *C-* or better, the student is released from academic probation only if he or she has earned no further grades of *D+*, *D*, *D-*, or *F* while on academic probation or conditional academic probation. If the student does not earn a grade of at least *C-* upon repeating the course, he or she is subject to academic dismissal. The new grade replaces the grade of *D+*, *D*, or *D-* when the student's pharmacy grade point average is calculated.

If the student chooses not to repeat the course, he or she remains on academic probation (or conditional academic probation, described below) through completion of the internship courses in the final semester. To take the internship courses, the student must have a grade point average of at least 2.00 in required pharmacy courses. If the student earns the symbol *CR* in each internship course, he or she is released from probation and graduates in good academic standing with the college.

CONDITIONAL ACADEMIC PROBATION

If a student on academic probation receives no grade lower than *C-* in required pharmacy courses during the following semester or summer session in which he or she takes a full academic load, the student may be placed on conditional academic probation. This status allows the student to hold student office and to receive college stipends for travel to professional meetings or other college-sponsored events. The student remains on conditional academic probation until graduation and is subject to dismissal if he or she receives a second grade of *D+*, *D*, *D-*, or *F*.

CALCULATION OF GRADE POINT AVERAGES

1. The student's University grade point average includes all courses taken at the University for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded. If the student has repeated a course, including those courses for which he or she earned a grade of *D+*, *D*, *D-*, or *F*, all grades earned are included in the University grade point average.
2. The student's College of Pharmacy grade point average includes all required professional courses taken at the University for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded. When a student repeats a required pharmacy course, the second grade in the repeated course replaces the previous grade when the student's College of Pharmacy grade point average is calculated.

THE ACADEMIC PERFORMANCE COMMITTEE

The College of Pharmacy Academic Performance Committee monitors the academic progress of students in the professional program. The committee makes recommendations to the dean regarding students' academic progress and academic probation and dismissal. The committee also makes recommendations to assist students who may be in academic difficulty. Any student in academic difficulty may be asked to appear before the committee for guidance. The committee hears all student appeals regarding academic progress and academic probation and dismissal. The committee aids the Admissions Committee in the evaluation of students who wish to return to the college after having been dismissed.

COURSE LOAD AND SEQUENCE OF WORK

1. To progress to the final-year internship courses, the student must have successfully completed all basic education requirements and all required and elective pharmacy courses except those in the internship year.
2. Because internship courses are offered on the pass/fail basis only, students should have attained both the University and the College of Pharmacy grade point average of at least 2.00 required for graduation before they begin the internship semester(s).
3. If a conflict arises between University requirements and a student's employment, the student

- must resolve the conflict in favor of the University requirements.
4. A student who is not on academic probation must take at least twelve semester hours during any long-session semester.
 5. A student on academic probation must take at least twelve semester hours during any long-session semester or at least six semester hours during the summer session in order to clear academic probation.
 6. Students may not take courses for degree credit at another institution without prior approval from the dean of the College of Pharmacy.
 7. All students seeking to reenter the College of Pharmacy after having been placed on academic dismissal must make formal application through the Admissions Committee. The application is processed through the Admissions Committee with recommendations from the Academic Performance Committee and the approval of the dean.

EARLY PRACTICE EXPERIENCE

All students must participate in an early practice experience, which consists of at least two hundred hours in either a community pharmacy or a hospital pharmacy practice setting. Since the student must be registered with the Texas State Board of Pharmacy as a student pharmacist-intern before gaining these hours, and since that registration requires that students have completed the first year of the professional sequence, students may not begin accruing these hours until after the first professional year. The early practice experience must be completed before the student begins the fourth professional year.

Additional information is provided to students during the first professional year.

STANDARDS OF ETHICAL CONDUCT

Pharmacy practitioners enjoy a special trust and authority based on the profession's commitment to a code of ethical behavior in its management of client affairs. The inculcation of a sense of responsible professional behavior is a critical component of professional education, and high standards of ethical conduct are expected of pharmacy students.

Toward that end, the faculty and students of the College of Pharmacy have pledged their support to the Policy Statement on Ethical Conduct and Scholastic Integrity and the Code of Ethics that implements this

Policy Statement. Upon entering the College of Pharmacy, and each academic year thereafter, students are asked to recite and sign the following pledge:

“As a student of the University of Texas College of Pharmacy, I have reviewed and hereby pledge my full support to the Honor Code. I pledge to be honest myself, and in order that the spirit and integrity of the Honor Code may endure, I pledge that I will make known to the appropriate authorities cases of dishonesty which I observe in the College of Pharmacy.”

In addition, the following oath, which students will be asked to sign, is included at the end of all class examinations: “I have neither participated in nor witnessed any acts of academic dishonesty pertaining to this assignment.” At the discretion of the instructor, the oath may also be included for other assignments such as quizzes, written reports, or papers.

The entire text of the Policy Statement on Ethical Conduct and Scholastic Integrity and the Honor Code are available at <http://www.utexas.edu/pharmacy/students/handbook98/3code.html>.

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including failure of the course involved and dismissal from the college and/or the University. Since dishonesty harms the individual, fellow students, and the integrity of the University and the College of Pharmacy, policies on scholastic dishonesty are strictly enforced.

ATTENDANCE IN CLASSES AND LABORATORIES

Students in the College of Pharmacy are expected to attend all meetings of the courses for which they are registered. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors have special attendance requirements that should be made known to the students during the first week of classes and stated in the syllabus. With the approval of the dean, a student may be dropped from a course with a grade of *F* for repeated unexcused absences.

ACADEMIC ADVISING

Academic and career advising are ongoing activities of the Office of Student Affairs, Pharmacy Building 5.112. Because advising is not restricted to the time just before registration, all students are strongly encouraged to seek advice whenever they need it about degree requirements, the availability of course offerings each

semester, and taking courses in proper sequence.

Advising for University prepharmacy students is provided by assigned academic advisers in their colleges and by Health Professions Advising in the College of Natural Sciences. University students interested in the profession of pharmacy should contact that office early in their college careers. Prepharmacy students from outside the University should seek advice from the Office of Student Affairs of the College of Pharmacy.

CAREER COUNSELING IN THE COLLEGE OF PHARMACY

The college provides career counseling to students in the professional sequence of courses. Throughout the year, career counselors are available in the Office of Student Affairs to assist students in examining the career options available to them upon graduation.

In addition, a systematic exploration of professional career options is conducted as part of the professional development convocation series of courses. Guest lecturers include successful pharmacists representing a variety of pharmacy practice models, other health care and regulatory settings, and careers in professional organizations, education, research, and the pharmaceutical industry.

HONORS

University-wide honors are described in *General Information*. In addition, the College of Pharmacy encourages academic excellence through Rho Chi, the national pharmaceutical honor society, described on page 639, and through the Pharmacy Honors Program.

PHARMACY HONORS PROGRAM

Criteria for admission. Students who plan to seek special honors in pharmacy should apply to the chair of the Honors Program Committee after they have completed the fall semester of the first professional year; they must apply before they begin the second professional year. Students interested in the Pharmacy Honors Program are strongly encouraged to enroll in Pharmacy 051R, *Research Opportunities in the Pharmaceutical Sciences*, in the spring semester of their first professional year. The criteria for admission to the program are (1) admission to the professional curriculum; (2) a grade point average of at least 3.00 in all required professional coursework completed at the time of application to the program; and (3) approval of

the Honors Program Committee.

Requirements for graduation. Requirements for the completion of the honors program are (1) a grade point average of at least 3.00 in all required professional courses; (2) a grade point average of at least 3.00 in all professional courses, including required professional elective coursework; (3) completion of Pharmacy 167H at least twice; (4) completion of at least one honors elective; (5) completion of Pharmacy 278H and 479H; and (6) completion of the regular curriculum for the degree.

The statement “Research Honors in Pharmacy” appears on the transcript of each graduate certified to have completed the honors program.

GRADUATION

All students must fulfill the general requirements for graduation given in chapter 1. In addition, students seeking the Doctor of Pharmacy must complete in residence the courses prescribed for the third and fourth professional years.

DEGREES

The University offers the PharmD as the sole entry-level pharmacy practice degree. As described in “Aims and Curricula,” page 634, this program emphasizes an integrated and problem-based approach to disease management as the core of the didactic and laboratory program of study.

The capstone of the PharmD program is a series of seven six-week rotations known as the advanced pharmacy practice experiences (APPE). Each APPE course requires between forty and fifty on-site, practitioner-faculty-supervised hours of internship experience a week for six weeks.

The college expects but cannot guarantee that experiential sites will include Austin/Temple/Waco, Dallas/Fort Worth (the University of Texas Southwestern Medical Center and other area health care facilities), El Paso (the University of Texas at El Paso and area health care facilities), Galveston/Houston (the University of Texas Medical Branch at Galveston, the University of Texas M. D. Anderson Cancer Center, and other area health care facilities), the Rio Grande Valley (the University of Texas - Pan American and health care facilities primar-

ily in Harlingen and McAllen), and San Antonio (the University of Texas Health Science Center and other area health care facilities). Students in the UT El Paso and UT Pan American cooperative programs and students assigned to San Antonio spend two years in these regions, while students assigned to other regions spend only the final year in the APPE region.

College of Pharmacy students who complete their experiential courses at the University of Texas Health Science Center at San Antonio are considered part of a joint PharmD degree program and receive a degree awarded jointly by the two institutions. The joint nature of this program is reflected on the student's diploma. Students who complete the UT El Paso or UT Pan American cooperative program receive a diploma reflecting the cooperative nature of their programs of study.

In completing the Doctor of Pharmacy degree, students also fulfill the internship requirements of the Texas State Board of Pharmacy. The final year of APPE courses and several other practice-based experiential courses, beginning in the second professional year, make up the experiential program. The professional experience courses are currently approved by the Texas State Board of Pharmacy to meet its standards for completion of the professional internship licensure requirement. The board reassesses all programs annually.

THE MINOR

While a minor is not required as part of the PharmD degree program, the student may choose to complete additional coursework in a field outside of the College of Pharmacy. The minor consists of at least twelve semester hours of coursework in a single field of study or in closely related fields, including at least nine hours of upper-division work. The upper-division coursework must be completed in residence; coursework the student takes on a cooperative program campus in the third professional year may be counted. A course to be counted toward the minor may not be taken on the pass/fail basis, unless it is offered only on that basis. A course may not be counted both toward the minor and toward the 213 hours of work required for the PharmD degree.

Students are encouraged to use health-care-related courses to make up the minor; lists of such courses in a variety of fields are available in the Student Affairs Office. While the College of Pharmacy allows students to minor in any field in which the University offers a

major, prerequisites and other enrollment restrictions may prevent the student from minoring in some fields. Before planning to take specific courses, the student should consult a pharmacy adviser and the department that offers the courses.

Written verification that a student completed the minor is available from the dean's office.

APPLICABILITY OF CERTAIN COURSES

PHYSICAL ACTIVITY COURSES

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They may not be counted toward a degree in the College of Pharmacy. However, they are counted among courses for which the student is enrolled, and the grades are included in the University grade point average.

ROTC COURSES

Courses in air force science, military science, and naval science may be substituted for a total of nine semester hours of nonpharmacy electives and for Government 312L by students who complete the sixteen to twenty semester hours of required air force science, military science, or naval science coursework and accept a commission in one of the services. These courses may not be counted toward the professional elective requirement.

CORRESPONDENCE AND EXTENSION COURSES

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree unless it is specifically approved in advance by the dean. No more than 30 percent of the semester hours required for any degree may be completed by correspondence, and no pharmacy courses taken by correspondence or extension may be counted toward a pharmacy degree.

PRESCRIBED WORK

Students who enter the Doctor of Pharmacy degree program must complete a minimum of 213 semester hours of coursework in the areas described below—the core curriculum, additional basic education requirements, professional electives, and preprofessional and professional coursework.

CORE CURRICULUM

Each student must complete the University's core curriculum, described in chapter 2. Because of the intensity and structure of the professional pharmacy curriculum, and because admission to the professional curriculum is highly competitive, the College of Pharmacy strongly recommends that students complete as many of the core courses as possible before they enter the college.

The following core requirements are met by the preprofessional and professional coursework described below: English composition, mathematics, science and technology (parts I and II), and humanities. Students must complete additional coursework to meet the core requirements listed below; the courses in each core area are listed in chapter 2.

COURSES	SEM HRS
First-year signature course For students who enter the professional curriculum in fall 2010 or fall 2011, an approved course in the College of Natural Sciences will meet this requirement; students who enter the professional curriculum in fall 2012 must meet this requirement as directed by the School of Undergraduate Studies.	3
American and Texas government	6
American history	6
Social and behavioral sciences	3
Visual and performing arts	3
TOTAL 21	

Transfer students who complete the core curriculum at another public Texas institution of higher education and are then admitted to the PharmD program are considered "core complete" by the University. Core curriculum requirements are waived for students admitted to the PharmD program who have previously earned a bachelor's degree.

ADDITIONAL BASIC EDUCATION REQUIREMENTS

All students must also earn the following skills and experiences flags: writing, quantitative reasoning, cultural diversity in the United States, ethics and leadership, and independent inquiry. More information about skills and experiences flags is given in chapter 2; courses that carry these flags are identified in the *Course Schedule*.

Students who enter the professional curriculum in fall 2012 or later must also earn a global cultures flag as directed by the School of Undergraduate Studies. The

global cultures flag is not required of students who enter the professional curriculum in fall 2010 or fall 2011.

Flag requirements are waived for students admitted to the professional curriculum who have already earned a bachelor's degree.

All students must complete the foreign language requirement described in chapter 2 before they enter the professional curriculum.

PROFESSIONAL ELECTIVES

The student must complete at least two professional elective courses, for a total of at least six semester hours. The student must take the courses used to fulfill the professional electives requirement after admission to the professional curriculum.

PREPROFESSIONAL AND PROFESSIONAL COURSEWORK

The following courses are required. The course sequence given here shows the usual order in which courses are taken to fulfill prerequisite requirements and illustrates the feasibility of completing requirements for the degree within six calendar years. Students who depart significantly from this sequence may need more time to complete their coursework, because most courses are taught only once a year and because in a given semester the scheduled meeting time of a preprofessional or professional course may conflict with the times of core courses or professional electives.

COURSES	SEM HRS
FIRST PREPROFESSIONAL YEAR	
FALL	
BIO 311C, <i>Introductory Biology I</i>	3
CH 301, <i>Principles of Chemistry I</i>	3
M 408C, <i>Differential and Integral Calculus</i>	4
RHE 306, <i>Rhetoric and Writing</i>	3
UGS 302 or 303, <i>First-Year Signature Course</i> ¹	3
TOTAL, PREPROFESSIONAL COURSES	16
SPRING	
BIO 311D, <i>Introductory Biology II</i>	3
CH 302, <i>Principles of Chemistry II</i>	3
CH 204, <i>Introduction to Chemical Practice</i>	2
M 316, <i>Elementary Statistical Methods</i>	3
Social and behavioral sciences core course	3
American history	3
TOTAL, PREPROFESSIONAL COURSES	17

1. Undergraduate Studies 302 or 303 is required of students who enter the professional curriculum in fall 2012. For students who enter the professional curriculum in 2010 or fall 2011, an approved course in the College of Natural Sciences fulfills the first-year signature course requirement.

COURSES	SEM HRS
SECOND PREPROFESSIONAL YEAR	
FALL	
BIO 325, <i>Genetics</i>	3
CH 301M, <i>Organic Chemistry I</i>	3
E 316K, <i>Masterworks of Literature</i>	3
PHY 302K, <i>General Physics—Technical Course: Mechanics, Heat, and Sound</i>	3
PHY 102M, <i>Laboratory for Physics 302K</i>	1
American and Texas government	3
TOTAL, PREPROFESSIONAL COURSES	16

SPRING	
CH 210C, <i>Organic Chemistry Laboratory</i>	2
CH 310N, <i>Organic Chemistry II</i>	3
BIO 326M, <i>Introductory Medical Microbiology and Immunology</i>	3
BIO 126L, <i>General Microbiology Laboratory</i>	1
American and Texas government	3
American history	3
Visual and performing arts core course	3
TOTAL, PREPROFESSIONAL COURSES	18

FIRST PROFESSIONAL YEAR

FALL	
PHR 341C, <i>Pharmaceutical Biochemistry I</i>	3
PHR 342C, <i>Physical and Chemical Principles of Drugs</i>	3
PHR 242DA, <i>Introduction to Pharmacy Practice</i>	1
PHR 142P, <i>Physical and Chemical Principles of Drugs Laboratory</i>	1
PHR 343C, <i>Function and Anatomy of Human Systems I</i>	3
PHR 143M, <i>Medical Chemistry Principles</i>	1
PHR 143P, <i>Basic Pharmaceutical Sciences Laboratory</i>	1
PHR 252C, <i>Biopharmaceutics</i>	2
PHR 142H, <i>Professional Development Convocation I</i>	1
TOTAL, PROFESSIONAL COURSES	16

COURSES	SEM HRS
SPRING	
PHR 242DB, <i>Introduction to Pharmacy Practice</i>	1
PHR 244C, <i>Pharmacy Administration</i>	2
PHR 144P, <i>Pharmacy Administration Laboratory</i>	1
PHR 251C, <i>Pharmaceutical Biochemistry II</i>	2
PHR 253C, <i>Function and Anatomy of Human Systems II</i>	2
PHR 253D, <i>Principles of General Pathology</i>	2
PHR 153M, <i>Pharmacology Principles</i>	1
PHR 356C, <i>Pharmaceutics</i>	3
PHR 156P, <i>Pharmaceutics Laboratory</i>	1
PHR 152H, <i>Professional Development Convocation II</i>	1
TOTAL, PROFESSIONAL COURSES	16

SECOND PROFESSIONAL YEAR

FALL	
PHR 262D, <i>Nonprescription Pharmacotherapeutics I</i>	2
PHR 163C, <i>Drug Information and Evidence-Based Practice</i>	1
PHR 163P, <i>Drug Information and Evidence-Based Practice Laboratory</i>	1
PHR 364D, <i>Pharmacy and the Health Care System</i>	3
PHR 665E, <i>Pharmacotherapeutics I</i>	6
PHR 266P, <i>Pharmacy Professional Communications</i>	2
PHR 392S, <i>Patient Assessment Skills Laboratory</i>	3
PHR 161H, <i>Professional Development Convocation III</i>	1
TOTAL, PROFESSIONAL COURSES	19

SPRING	
PHR 171P, <i>Integrated Basic and Applied Pharmacokinetics Laboratory</i>	1
PHR 371S, <i>Integrated Basic and Applied Pharmacokinetics</i>	3
PHR 172E, <i>Nonprescription Pharmacotherapeutics II</i>	1
PHR 172P, <i>Nonprescription Pharmacotherapeutics II Laboratory</i>	1
PHR 675E, <i>Pharmacotherapeutics II</i>	6
PHR 175P, <i>Pharmacotherapeutics II Laboratory</i>	1
PHR 176E, <i>Interprofessional Ethics</i>	1
PHR 176P, <i>Experiential Pharmacy Practice and Patient Counseling</i>	1
PHR 177G, <i>Introduction to Clinical Skills</i>	1
PHR 177P, <i>Introduction to Clinical Skills Laboratory</i>	1
PHR 172H, <i>Professional Development Convocation IV</i>	1
TOTAL, PROFESSIONAL COURSES	18

SUMMER	
PHR 377H, <i>Institutional Clinical Skills</i>	3
TOTAL, PROFESSIONAL COURSES	3

COURSES SEM HRS

THIRD PROFESSIONAL YEAR**FALL**

PHR 183F, <i>Basic Intravenous Admixtures</i>	1
PHR 183G, <i>Basic Intravenous Admixtures Laboratory</i>	1
PHR 185P, <i>Pharmacotherapeutics III Laboratory</i>	1
PHR 287H, <i>Clinical Skills: Community Care</i>	2
PHR 695F, <i>Pharmacotherapeutics III</i>	6
PHR 395G, <i>Pharmacotherapeutics IV</i>	3
PHR 182H, <i>Professional Development Convocation V</i>	1
Professional elective(s)	2

TOTAL, PROFESSIONAL COURSES 17**SPRING**

PHR 284E, <i>Pharmacy Law</i>	2
PHR 394F, <i>Pharmacoeconomics</i>	3
PHR 295R, <i>Advanced Evidence-Based Practice</i>	2
PHR 396D, <i>Pharmacotherapeutics of Special Populations</i>	3
PHR 194P, <i>Advanced Pharmacotherapy Laboratory</i>	1
PHR 192H, <i>Professional Development Convocation VI</i>	1
Professional elective(s)	4

TOTAL, PROFESSIONAL COURSES 16

COURSES SEM HRS

FOURTH PROFESSIONAL YEAR²**SUMMER**

PHR 693C, <i>Acute Care Pharmacy Practice I</i>	6
TOTAL, PROFESSIONAL COURSES	6

FALL

PHR 693E, <i>Elective in Pharmacy Practice I</i>	6
PHR 693N, <i>Advanced Health-System Pharmacy Practice</i>	6
PHR 693P, <i>Advanced Community Pharmacy Practice</i>	6
TOTAL, PROFESSIONAL COURSES	18

SPRING

PHR 693S, <i>Selective in Pharmacy Practice I</i>	6
PHR 694C, <i>Acute Care Pharmacy Practice II</i>	6
PHR 694E, <i>Elective in Pharmacy Practice II</i>	6
TOTAL, PROFESSIONAL COURSES	18

2. The order in which students take the fourth-year internships is at the discretion of the College of Pharmacy.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

PHARMACY: PHR

PREPROFESSIONAL COURSE

310K. Drugs in Our Society. Survey of drug development, distribution, and safety, including therapeutic categories of drugs, their actions and abuse potential, and the sociological aspects of drug use. Three lecture hours a week for one semester. Pharmacy 310K and 350K may not both be counted. Not open to students in the professional pharmacy curriculum and may not be counted toward the professional elective requirement in pharmacy.

PROFESSIONAL COURSES

320M. Pharmaceutical Marketing. Concepts of marketing as they apply to the pharmaceutical industry, pharmaceutical products, and the health care environment. Three lecture hours a week for one semester. Prerequisite: Pharmacy 244C and 144P.

321K. Introduction to Pharmaceutical Chemistry. Current concepts and principles fundamental to the study of the structure of matter and of its relationship to pharmaceutically significant properties. Three lecture hours a week for one semester. May not be counted toward the professional elective requirement. Prerequisite: Chemistry 310M or the equivalent.

322H. Research Design and Methodology. Concepts and procedures involved in designing and carrying out a research project. Three lecture hours a week for one semester. Prerequisite: Admission to the Pharmacy Honors Program or consent of instructor.

322P. New Concepts, Topics, and Issues in Pharmacy Practice. New concerns, topics, and issues in pharmacy practice. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 364D.

326C. Community Pharmacy Management. Advanced concepts in community pharmacy management for the student who plans to become a pharmacy owner or manager. Topics include operational, personnel, and financial management; marketing; layout and design; and the delivery of pharmaceutical care in a community pharmacy setting. Three lecture hours a week for one semester. Prerequisite: Pharmacy 244C.

326M. Applied Pharmacy Management. Organizational structure of the hospital pharmacy; principles of financial systems

and personnel management. Three lecture hours a week for one semester. Prerequisite: Pharmacy 244C and 144P.

329C. Pharmacy Association Management. An introduction to the principles involved in managing pharmacy associations. Students gain practical experience in a community pharmacy. Nine hours of fieldwork a week for one semester. Pharmacy 329C and 389C may not both be counted. Prerequisite: Pharmacy 244C and 144P and consent of instructor.

629D. Pharmacy Association Management Residency. Experience working in a pharmacy association, including active involvement in some managerial aspect of the association. Eighteen hours of fieldwork a week for one semester. Pharmacy 629D and 689D may not both be counted. Prerequisite: Pharmacy 364D and consent of instructor.

338. Introduction to Pharmacology. Survey of basic concepts and principles in pharmacology. Three lecture hours a week for one semester. Required for all preprofessional students in the School of Nursing and athletic training students in the Department of Kinesiology and Health Education. May not be counted toward the professional elective requirement in pharmacy. Prerequisite: Credit or registration for Biology 365S, 446L (or 416K), or Kinesiology 324K.

139H. Pharmacy Administration for Honors Students. Each student conducts an in-depth examination of a selected issue in pharmacy administration. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program and Pharmacy 244C and 144P.

340D. Structure-Activity Relationships and Mechanisms of Action. Study of structure-activity relationships as the basis for investigation of mechanisms of drug-receptor interactions. Model compounds are selected from enkephalins, morphine-like analgesics, cholinergics, and adrenergics. Three lecture hours a week for one semester. Pharmacy 340D and 380D may not both be counted. Prerequisite: Admission to the Pharmacy Honors Program, Pharmacy 675E and 175P with a grade of at least B- in each, or consent of instructor.

341C. Pharmaceutical Biochemistry I. Basic principles of intermediary metabolism, with emphasis on defects in pathways that result in disease and on identification of molecular targets for therapeutic control. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.

342C. Physical and Chemical Principles of Drugs. Fundamental, introductory principles of pharmaceuticals, including thermodynamics, kinetics, and other basic chemical principles related to drugs. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum, and credit or registration for Pharmacy 142P.

242D. Introduction to Pharmacy Practice. Introduction to the profession of pharmacy, including the principle of service. Includes fieldwork in a local eldercare facility. Two lecture hours a week for two semesters; and twelve additional hours of fieldwork to be arranged over two semesters. Offered on the letter-grade basis only. Pharmacy 242D and

- 249 may not both be counted. Prerequisite: For 242DA, admission to the professional pharmacy curriculum; for 242DB, Pharmacy 242DA.
- 142H. Professional Development Convocation I.** Professional development issues and assessments for PharmD students in the first professional year. Includes students' professional and program-specific responsibilities, such as program evaluations, portfolios, and administrative requirements; practice opportunities in pharmacy; and expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.
- 142P. Physical and Chemical Principles of Drugs Laboratory.** Problem-based learning exercises to reinforce the material presented in Pharmacy 342C. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum, and credit or registration for Pharmacy 342C.
- 343C. Function and Anatomy of Human Systems I.** Basic principles of human physiology and anatomy in relation to drug action. Includes cellular and subcellular physiology, membrane transport, electrophysiology, synaptic transmission, and autonomic, neurological, and cardiovascular physiology and anatomy. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.
- 143M. Medicinal Chemistry Principles.** Introduction to medicinal chemistry principles. Topics include drug metabolism and the transition from organic to medicinal chemistry. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum, and credit or registration for Pharmacy 143P.
- 143P. Basic Pharmaceutical Sciences Laboratory.** Laboratory exercises to support the basic pharmaceutical sciences courses. One hour of prelaboratory lecture and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum, and credit or registration for Pharmacy 143M.
- 244C. Pharmacy Administration.** Concepts and principles of management, and social and behavioral aspects of pharmacy practice. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.
- 144P. Pharmacy Administration Laboratory.** Issues in pharmacy practice. Students discuss case studies, participate in group presentations, and work in small groups to enhance their communication and teamwork skills. Three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum and credit or registration for Pharmacy 244C.
- 345L. Clinical Pharmacokinetics.** Application of pharmacokinetic principles to the determination of proper dosing regimens. Three lecture hours a week for one semester.
- 149H. Pharmaceutics for Honors Students.** Expanded study of the way principles covered in the pharmaceutical curriculum affect drug design, formulation, dosing, and pharmacokinetics/pharmacodynamics. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program and Pharmacy 252C (or 352C), 356C, and 156P.
- 350K. Drugs in Our Society.** Survey of drug development, drug actions and abuse potential, and sociological aspects of drug use. Three lecture hours a week for one semester. Pharmacy 310K and 350K may not both be counted. Not open to students in the professional pharmacy curriculum and may not be counted toward the professional elective requirement in pharmacy. Prerequisite: Upper-division standing.
- 251C. Pharmaceutical Biochemistry II.** The biosynthesis and function of macromolecules (nucleic acids, lipids, proteins, and carbohydrates); sites of drug action, immunology, and applications of biotechnology and molecular biology to the pharmaceutical sciences. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 341C.
- 051R. Research Opportunities in the Pharmaceutical Sciences.** An introduction to research in all divisions of the College of Pharmacy. Includes ethical issues in research, career paths in research, and topics such as choosing a research mentor or project. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the professional pharmacy curriculum.
- 252C. Biopharmaceutics.** Complements the basic pharmaceutics principles covered in Pharmacy 342C. Subjects include core concepts in biopharmaceutics of drugs. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.
- 152H. Professional Development Convocation II.** Professional development issues and assessments for PharmD students in the first professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 142H.
- 253C. Function and Anatomy of Human Systems II.** Continuation of Pharmacy 343C, with emphasis on blood pressure regulation, renal function, digestion, respiration, endocrinology, and reproduction. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 343C.
- 253D. Principles of General Pathology.** An overview of most aspects of general pathology, including abnormal cell function, disturbances of flow, nutritional pathology, hematology, genetics, inflammation and repair, immunology, and infectious diseases. Taught via television and on-site lectures, supplemented by specimen demonstrations in cooperation with faculty members of the University of Texas

- Health Science Center at San Antonio. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 343C and credit or registration for Pharmacy 253C.
- 153M. Pharmacology Principles.** Introduction to pharmacology principles. Topics include pharmacology at the cellular and subcellular/receptor levels. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.
- 356C. Pharmaceutics.** General introduction to dosage forms; the technology and pharmaceutical rationale fundamental to their development. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 342C, 142P, and 252C, and credit or registration for Pharmacy 156P.
- 156P. Pharmaceutics Laboratory.** Laboratory course supporting the subjects discussed in Pharmacy 356C. One hour of prelaboratory lecture and three laboratory hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 356C.
- 356R. Advanced Pharmaceutical Compounding.** Continuation of related subjects in pharmaceutical dosage forms covered in Pharmacy 356C and 156P, with emphasis on the compounding of drugs into stable delivery systems for oral and topical applications. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Pharmacy 356C and 156P.
- 358. Geriatric Pharmacy Practice.** Social, demographic, ethical, and therapeutic issues concerning pharmaceutical products and care of the elderly. Three lecture hours a week for one semester. Prerequisite: Pharmacy 665E.
- 160J, 260J, 360J. Basic Study in Pharmaceutical Research for Nonmajors.** Original investigation in any area of the pharmaceutical sciences. For each semester hour of credit earned, three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor and the dean.
- 160K, 260K, 360K. Basic Study in Pharmaceutical Research.** Basic exploration in any area of the pharmaceutical sciences. For each semester hour of credit earned, three laboratory hours a week for one semester. May be repeated for credit. No more than three semester hours may be counted toward the professional pharmacy elective requirement. Prerequisite: Admission to the PharmD program and consent of instructor and the dean.
- 261C. Introduction to Complementary and Alternative Medicine.** Representative practices in four domains of complementary and alternative medicine (CAM): mind-body medicine, biologically based practices, manipulative and body-based practices, and energy medicine. Emphasizes whole medical systems built on complete systems of theory and practice (such as homeopathy, traditional Chinese medicine, and ayurvedic medicine) that cut across several domains. Students may enroll concurrently in Pharmacy 161D for an experiential component to the study of fundamental CAM concepts. Two lecture hours a week for a semester. Offered on the letter-grade basis only. May not be counted toward the professional elective requirement.
- Prerequisite: Upper-division standing in a health-related major or consent of instructor.
- 161D. Complementary and Alternative Medicine Enrichment.** Experiential course designed to familiarize students with the fundamental concepts in complementary and alternative medicine that are presented in Pharmacy 261C. One lecture hour a week for a semester. Offered on the letter-grade basis only. May not be counted toward the professional elective requirement. Prerequisite: Upper-division standing in a health-related major, concurrent enrollment in Pharmacy 261C, and consent of instructor.
- 161H. Professional Development Convocation III.** Professional development issues and assessments for PharmD students in the second professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 152H.
- 161J, 261J, 361J. Basic Studies in the Pharmaceutical Sciences.** Basic exploration in any area of the pharmaceutical and clinical sciences. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.
- 262D. Nonprescription Pharmacotherapeutics I.** Study of nonprescription drugs, with emphasis on the pharmacist's consultant role in product selection. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 665E.
- 362L. Clinical Toxicology.** A course in toxicology that focuses on common poisons and their management; designed for pharmacy students planning to enter general practice. Three lecture hours a week for one semester. Pharmacy 362L and 362M may not both be counted. Prerequisite: Pharmacy 252C (or 352C).
- 163C. Drug Information and Evidence-Based Practice.** Knowledge and skills needed to retrieve and interpret drug information. Interpretation of biomedical literature and an introduction to concepts of evidence-based practice. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the first professional year in the College of Pharmacy, and credit or registration for Pharmacy 665E and 163P.
- 263K. Veterinary Pharmacy.** Treatment of selected disease states of domestic and exotic animals; veterinary appliances and products, including proprietary pharmaceuticals and biologicals, with their therapeutic indications and uses. Two lecture hours a week for one semester. Prerequisite: Admission to the professional pharmacy curriculum.
- 163P. Drug Information and Evidence-Based Practice Laboratory.** Practical application of the concepts presented in Pharmacy 163C. Includes assignments, projects, and oral presentations. Three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite:

- Completion of the first professional year in the College of Pharmacy, and credit or registration for Pharmacy 665E and 163C.
- 364D. Pharmacy and the Health Care System.** The health care system in the United States; principles of managed care; application of pricing policies; and an overview of pharmacy services. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 244C and 144P.
- 665E. Pharmacotherapeutics I.** An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the etiology and treatment of adrenergic-based diseases; cholinergic-based diseases; inflammatory diseases; hypertension; acute and chronic renal disease; and cardiovascular disease, including hyperlipidemia, circulatory problems, thromboembolic disease, myocardial ischemia, myocardial infarction, congestive heart failure, and arrhythmias. Six lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the first professional year in the College of Pharmacy.
- 165P. Pharmacotherapeutics I Laboratory.** Problem-based laboratory course that integrates the pathophysiology, medicinal chemistry, pharmacology, and therapeutic aspects of various diseases in order to prepare students to make sound therapeutic decisions. Subjects introduced in Pharmacy 665E. Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 665E.
- 166H. Pharmacotherapeutic Case Studies for Honors Students.** Students participate in ongoing pharmacy practice, clinical, pharmacy association, and research activities. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program, and Pharmacy 665E or consent of instructor.
- 266P. Pharmacy Professional Communications.** Professional communication skills in interacting with patients and other health care professionals. One lecture hour and three laboratory hours a week for one semester, with additional hours to be arranged. Offered on the letter-grade basis only. Prerequisite: Pharmacy 242D (or 249).
- 167H. Exploratory Research in Pharmacy.** The student participates in ongoing in-depth research activities in pharmaceuticals, medicinal chemistry, toxicology, pharmacology, pharmacy administration, pharmacy practice, or pharmacotherapy. At least seven research hours a week for one semester. May be repeated for credit. Prerequisite: Pharmacy 051R and admission to the Pharmacy Honors Program, or consent of the dean.
- 168H. Medicinal Chemistry for Honors Students.** Expanded study of principles covered in the medicinal chemistry curriculum that concern synthetic, semisynthetic, and naturally occurring therapeutic agents. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program, and credit or registration for Pharmacy 665E or consent of instructor.
- 270C. Communication Skills for Health Professionals.** Designed for pharmacy, premedical, pre dental, and nursing students. Oral communication skills used by health professionals. Emphasis on developing personal and professional confidence through improving oral communication skills. Small and large group presentations. Two lecture hours a week for one semester.
- 270D. Nutritional Aspects of Clinical Pharmacy.** Explores the interrelationships of nutrition, disease, and drug therapy, including aspects of both normal and clinical nutrition, nutritional deficiencies, and the metabolic consequences or diseases associated with malnutrition. Patient case studies examine both the effects of drug therapy on nutrition and the effects of nutrition on drug therapy. Disease states covered include cardiovascular disease, diabetes, hepatic and renal failure, and anemia. Two lecture hours a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy.
- 271C. Drug Interactions.** Mechanisms, types, examples, and significance of drug interactions in pharmacy practice. Two lecture hours a week for one semester. Prerequisite: Pharmacy 665E, and credit or registration for Pharmacy 266P (or credit for 366P) or consent of instructor.
- 171P. Integrated Basic and Applied Pharmacokinetics Laboratory.** Problem-based and case-based application of pharmacokinetic principles to specific drugs and patient situations. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 371S.
- 371S. Integrated Basic and Applied Pharmacokinetics.** Introduction to pharmacokinetic principles; and the application of principles to specific drugs and patient situations. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 665E, and credit or registration for Pharmacy 171P, 675E, and 175P.
- 172E. Nonprescription Pharmacotherapeutics II.** Study of non-prescription drugs, with emphasis on the pharmacist's consultant role in product selection. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 172P and 675E.
- 172H. Professional Development Convocation IV.** Professional development issues and assessments for PharmD students in the second professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 161H.
- 372K. Hospital Pharmacy.** Basic principles, standards, and procedures involved in providing professional pharmaceutical services in hospitals. Three lecture hours a week for one semester. Prerequisite: Admission to the professional pharmacy curriculum.
- 172P. Nonprescription Pharmacotherapeutics II Laboratory.** Laboratory practice related to the pharmacist's consultant role in over-the-counter product selection; includes fieldwork in a community pharmacy. One lecture hour and three

- laboratory or fieldwork hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 172E and 675E.
- 173H. Pharmacology and Toxicology for Honors Students.** Expanded study of principles covered in the pharmacology curriculum that concern mechanisms of action and toxicity of pharmacologic agents on body systems. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program, and credit or registration for Pharmacy 665E or consent of instructor.
- 675E. Pharmacotherapeutics II.** An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the pathogenesis and treatment of bacterial, viral, and fungal infections; immunizations against bacterial and viral diseases; and allergies, asthma, and chronic obstructive pulmonary disease. Six lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the first professional year in the College of Pharmacy, and credit or registration for 175P.
- 175P. Pharmacotherapeutics II Laboratory.** Problem-based laboratory that integrates the pathophysiology, medicinal chemistry, pharmacology, and therapeutic aspects of various diseases in order to prepare students to make sound therapeutic decisions. Subjects introduced in Pharmacy 665E and 675E. Three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the first professional year in the College of Pharmacy, and credit or registration for Pharmacy 675E.
- 176E. Interprofessional Ethics.** Explores ethical issues in pharmacy practice and health care, with a focus on the perspectives of professionals in the fields of nursing, law, social work, and medicine. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 244C and 144P.
- 176P. Experiential Pharmacy Practice and Patient Counseling.** Medication use and dispensing in a practice environment. Counseling skills and techniques for a better understanding of disease states and positive medication outcomes. Three laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Credit or registration for Pharmacy 665E and 266P (or credit for 366P).
- 177G. Introduction to Clinical Skills.** Designed to develop the practical skills necessary in a pharmacy setting, with a focus on patient histories, how to read and interpret patient charts, and adult immunizations; includes training and certification in CPR from American Red Cross facilitators. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 665E and 266P (or 366P), and credit or registration for Pharmacy 675E and 175P.
- 377H. Institutional Clinical Skills.** Hands-on experience in an institutional practice care facility; examines pharmacy services, hospital management, staff interaction, and the flow of information from laboratory to bedside. Forty hours a week for two weeks. Offered on the pass/fail basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy.
- 177K, 277K, 377K. Advanced Study in Pharmaceutical Research.** For each semester hour of credit earned, three laboratory hours a week for one semester. May be repeated for credit. No more than three semester hours may be counted toward the professional pharmacy elective requirement. Prerequisite: Second-professional-year standing and consent of instructor and the dean.
- 177P. Introduction to Clinical Skills Laboratory.** Practical application of pharmacy clinical skills; subjects introduced in Pharmacy 177G. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 177G.
- 278H. Pharmacy Honors Proposal and Tutorial Course.** Honors seminar; development of laboratory research proposal for approval by the Honors Program Committee. One lecture hour and three hours of independent research a week for one semester. Prerequisite: Admission to the Pharmacy Honors Program.
- 479H. Pharmacy Honors Thesis and Tutorial Course.** Honors seminar; laboratory research project conducted under the supervision of one or more faculty members. One lecture hour and nine laboratory hours a week for one semester. Prerequisite: Pharmacy 278H.
- 280H. Landmark Studies in Cardiovascular Disease.** Evidence-based clinical studies in support of drug therapy recommendations in the treatment of cardiovascular diseases. Two lecture hours a week for one semester. Prerequisite: Second-professional-year standing in pharmacy.
- 280U. Case Studies in Emerging Infections.** Case studies in the analysis and therapeutic control of recurring, cycling, and newly emerging infectious diseases. Two lecture hours a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy.
- 280W. Psychiatric Pharmacy Practice and Drug Treatment of Mental Disorders.** Advanced study in the pathophysiology of selected psychiatric disease states and the clinical presentation, phenomenology, diagnosis, and treatment of these disease states. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 695F or consent of instructor.
- 381E. Advanced Hospital Pharmacy.** An in-depth analysis of the operation and administration of the institutional pharmacy and its relationship to the total functioning of the hospital. Three lecture hours a week for one semester. Prerequisite: Graduate standing.
- 281H. Interprofessional Health Care for HIV Patient Management.** Interprofessional teamwork, health literacy, treatment guidelines, patient safety, and medication reconciliation in the care of patients with the human immunodeficiency virus. Conducted at an HIV clinic in Texas. Students complete six hours of required Web-based instruction before beginning the clinical component. Thirty-four hours of fieldwork in one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy.
- 281U. Case Studies in Diabetes Management.** Designed to provide students with the skills and knowledge to serve

- as primary care providers in the area of diabetes management. Use of a case approach to discuss the management of patients with diabetes mellitus. Specific treatment modalities and management issues for the child, adolescent, adult, and elderly diabetic patient. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 395G and consent of instructor.
- 182H. Professional Development Convocation V.** Professional development issues and assessments for PharmD students in the third professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 172H.
- 282Q. Pediatric Pharmacotherapy.** Pathophysiology and pharmacotherapy of selected pediatric diseases. Designed to expose students to pediatric pharmacy as a potential area of focus, and to prepare them for a potential residency or practice in providing pharmaceutical care in a pediatric setting. Two lecture hours a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy.
- 382U. Medicinal Herbs and Phytomedicine.** The emerging role of medicinal natural products in pharmacy; the role of the pharmacist in the therapeutic use of herbs as controlled products and for self-medication. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, and 395G.
- 183F. Basic Intravenous Admixtures.** Basic principles of injectable and other sterile dosage forms; methods of preparation and evaluation that meet current pharmacy practice standards. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 356C, 156P, and credit or registration for Pharmacy 183G.
- 183G. Basic Intravenous Admixtures Laboratory.** Basic laboratory principles in the preparation and evaluation of injectable and other sterile dosage forms. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 356C, 156P, and credit or registration for Pharmacy 183F.
- 283H. Advanced Pharmacotherapeutics.** Advanced study of organ systems; pharmacotherapy and clinical pharmacokinetics. Two lecture hours a week for one semester. May be counted as a pharmacy honors elective. Prerequisite: Admission to the PharmD program.
- 283U. Multidisciplinary Pain Management.** Problem-based instruction to help health professions students acquire knowledge and skills in the care of patients with acute and chronic pain. Taught by faculty members in medicine, pharmacy, and nursing. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Consent of instructor.
- 384D. Antimicrobics: Mechanism of Action and Clinical Use.** Mechanisms of antimicrobial activity and the development of bacterial resistance, and their relationship to clinical therapy. Three lecture hours a week for one semester. Pharmacy 384D and 484H may not both be counted. Prerequisite: Pharmacy 675E and 175P.
- 284E. Pharmacy Law.** State and federal pharmacy laws. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy.
- 484H. Antimicrobics: Mechanism of Action and Clinical Use for Honors Students.** Bacteriostatic and bacteriocidal mechanisms of antimicrobial agents, bacterial mechanisms of resistance, and the critical evaluation of drug therapy in various clinical settings. Designed to give students additional insight into the development of antimicrobial agents and the interactions of these agents with each other, the pathogen, and the patient. Three lecture hours a week for one semester, with at least fifteen additional hours to be arranged. Pharmacy 384D and 484H may not both be counted. Prerequisite: Admission to the Pharmacy Honors Program and Pharmacy 675E and 175P.
- 385E. Pharmacotherapeutics IIIA.** An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the etiology and treatment of sleep disorders; epilepsy; depression; psychosis; Alzheimer's disease; bipolar disease; dementia; attention deficit disorder, narcolepsy, and appetite suppression; movement disorder; anxiety disorders; and eating disorders. Three lecture hours a week for one semester. Prerequisite: Pharmacy 341C, 251C, 252C (or 352C), 253C, 356C, and 156P; and concurrent enrollment in Pharmacy 285F and 185P.
- 285F. Pharmacotherapeutics IIIB.** An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the etiology and treatment of drug abuse and addiction; preoperative surgical procedures and anesthesia, and pain management medications such as opiates and nonsteroidal anti-inflammatory drugs. Two lecture hours a week for one semester. Prerequisite: Pharmacy 341C, 251C, 252C (or 352C), 253C, 356C, and 156P; and concurrent enrollment in Pharmacy 385E and 185P.
- 185P. Pharmacotherapeutics III Laboratory.** Problem-based laboratory that integrates the pathology, medicinal chemistry, pharmacology, and therapeutic aspects of various diseases in order to prepare students to make sound therapeutic decisions. Subjects introduced in Pharmacy 665E, 675E, 695F, and 395G. Three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy and credit or registration for Pharmacy 695F and 395G.
- 285Q. Fluid and Electrolyte Therapy.** Clinical management of disorders of fluid, electrolytes, and acid-base balance in patients with normal and abnormal homeostatic mechanisms; includes basic concepts of parenteral nutrition support. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, and 395G.
- 285V. Mexican Drugs and Products.** Analysis of Mexican pharmacy practice, drugs, and products; implications for the pharmacist in the United States. Two lecture hours a week

- for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, and 395G.
- 286C. Treatment of Cardiovascular Disease.** Further development of topics covered in Pharmacy 665E; discussion of such additional topics as assessment of cardiac function and nonmedical management of cardiovascular diseases. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, and 395G.
- 386D. Nonprescription Pharmacotherapy.** Study of nonprescription drugs, with emphasis on the pharmacist's consultant role in product selection. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 675E (or 375E, 275F, and 375G) and 175P.
- 386G. Spanish for the Pharmacy Professional.** Intermediate communication skills in Spanish. Three lecture hours a week for one semester. Prerequisite: Completion of the second professional year in the College of Pharmacy, and one year of college-level Spanish or consent of instructor.
- 187D. Case Studies in Cardiovascular Disease.** Review of case studies of patients with cardiovascular diseases, with emphasis on development of appropriate treatment and monitoring plans. One lecture hour a week for one semester. Prerequisite: Completion of the second professional year in the College of Pharmacy.
- 287H. Clinical Skills: Community Care.** Clinical work in a community-based pharmacy practice setting. Students receive medication therapy management training, participate in the development of patient care plans, and write an essay about the clinical experience. Five hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy.
- 187J, 287J, 387J. Advanced Problems in Pharmacy Education.** Laboratory course examining professional education issues and techniques for students exploring an academic career. At least three, six, or nine laboratory hours a week for one semester. Prerequisite: Completion of all first-year professional coursework and consent of the dean.
- 289. Community Service-Learning Project.** Students participate in community service-learning projects with a focus on border health and related issues. Projects will be developed in consultation with the student's faculty mentor and the selected community site (including organized community service entities), and require critical reflection on health education-related concepts. Includes an academic service-learning component. For the first semester, ten hours of orientation, and one hour of fieldwork a week; for the second semester, at least two hours of fieldwork a week. Prerequisite: For 289A, third-professional-year standing in pharmacy; for 289B, Pharmacy 289A.
- 390T. Pharmacy International Exchange.** Work in an exchange program with international colleges and schools of pharmacy as partners. Examination of similarities and differences between pharmacy education, professional practice, and/or research in the hosting country and in the United States. Forty hours of fieldwork a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy and consent of instructor.
- 292G. Introduction to Botanicals and Nutraceuticals.** An introduction to the framework of biologically based complementary and alternative medicine practices. Examines the most commonly used botanicals and nutritional supplements; includes popular uses, clinical indications, pharmacological effects, mechanisms of action, side effects, contraindications, and common dosage guidelines. Emphasis on how to access and interpret continuously emerging evidence in this field and how to use this information to guide and monitor patients within the context of a pharmacy practice. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, 395G.
- 192H. Professional Development Convocation VI.** Professional development issues and assessments for PharmD students in the third professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for a semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 182H.
- 392S. Patient Assessment Skills Laboratory.** Introduction to patient assessment techniques and to the skills needed to provide pharmaceutical care. Two lecture hours and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the PharmD program, and completion of the pharmacotherapeutics sequence or consent of instructor and the dean.
- 693C. Acute Care Pharmacy Practice I.** Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in the context of acute patient care. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 693E. Elective in Pharmacy Practice I.** Experience in pharmacy practice, research, or administration. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 693N. Advanced Health-System Pharmacy Practice.** Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in the context of institutional patient care. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 693P. Advanced Community Pharmacy Practice.** Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in the context of community-based patient care. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic

- and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 693S. Selective in Pharmacy Practice I.** Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in a selected pharmacy practice environment. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 694C. Acute Care Pharmacy Practice II.** Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in the context of acute patient care. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 694E. Elective in Pharmacy Practice II.** Experience in pharmacy practice, research, or administration. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 394F. Pharmacoeconomics.** Terms, concepts, procedures, methods, problems, and strengths associated with pharmacoeconomics. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Pharmacy 393T and 394F may not both be counted. Prerequisite: Completion of the second professional year in the College of Pharmacy or consent of instructor.
- 194P. Advanced Pharmacotherapeutics Laboratory.** Using classroom simulations, provides students with opportunities to practice their skills in interacting with patients and other healthcare professionals and communicating information regarding contemporary therapeutic regimens. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 185P, 695F, and 395G.
- 394R. Drug Literature Evaluation and Biostatistics.** Application of statistical principles and evaluation of drug literature, with an emphasis on clinical trials. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the PharmD program, and completion of the pharmacotherapeutics sequence or consent of instructor and the dean.
- 694S. Selective in Pharmacy Practice II.** Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in selected pharmacy practice environments. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 695E. Elective in Pharmacy Practice III.** Experience in pharmacy practice, research, or administration. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.
- 695F. Pharmacotherapeutics III.** An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the etiology and treatment of neurological, psychiatric, and developmental disorders. Also includes therapeutics of pain management, anesthesia, chemical dependence, and oncology. Six lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy and credit or registration for Pharmacy 185P and 395G.
- 395G. Pharmacotherapeutics IV.** An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the etiology and treatment of hormonal disorders and gastrointestinal disorders. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of second professional year in the College of Pharmacy and credit or registration for Pharmacy 185P and 695F.
- 295R. Advanced Evidence-Based Practice.** Research methodology and biostatistical concepts as they relate to the interpretation and critical evaluation of biomedical literature. Designed to build upon the material covered in Pharmacy 163C. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 665E, 675E, 175P, 185P, 695F, and 395G; or consent of instructor.
- 396D. Pharmacotherapeutics of Special Populations.** Topics include geriatrics, pediatrics, pharmacogenomics, transplant patients, and indigent care. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 185P, 695F, and 395G.
- 396F. Pharmacogenomics.** Designed to provide the student with a sound knowledge and comprehension of contemporary therapeutic regimens. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Concurrent enrollment in Pharmacy 296P; admission to the PharmD program and completion of the pharmacotherapy sequence; or consent of instructor.
- 296P. Advanced Pharmacotherapy Laboratory.** Designed to provide the student with an opportunity to communicate knowledge and comprehension of contemporary therapeutic regimens. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Concurrent enrollment in Pharmacy 396F; admission to the PharmD program and completion of the pharmacotherapy sequence; or consent of instructor.

15. Lyndon B. Johnson School of Public Affairs

Robert Hutchings, PhD, *Dean*
Robert H. Wilson, PhD, *Associate Dean*
<http://www.utexas.edu/lbj/>

The Lyndon B. Johnson School of Public Affairs offers the Master of Global Policy Studies, the Master of Public Affairs, and the Doctor of Philosophy with a major in public policy. Information is given in the graduate catalog about these programs and about the requirements for admission to graduate study.

In addition to the graduate courses described in the graduate catalog, the faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

PUBLIC AFFAIRS: P A

LOWER-DIVISION COURSES

- 310C. Public Policy.** Skill topics, including economics, quantitative methods, public financial management, policy development, and public administration. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Public Affairs 310C and 330C may not both be counted unless the topics vary.
- 310S. Public Policy Seminar.** Seminar with topics related to domestic or international public policy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Public Affairs 310S and 330S may not both be counted unless the topics vary.

UPPER-DIVISION COURSES

- 325. Topics in Policy.** Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 330C. Public Policy.** Skill topics, including economics, quantitative methods, public financial management, policy development, and public administration. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Public Affairs 310C and 330C may not both be counted unless the topics vary.
- 330S. Public Policy Seminar.** Seminar with topics related to domestic or international public policy. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Public Affairs 310S and 330S may not both be counted unless the topics vary.

16. School of Social Work

Barbara W. White, PhD, *Dean*
 David W. Springer, PhD, *Associate Dean, Academic Affairs*
 Lori K. Holleran Steiker, PhD, *Assistant Dean, Undergraduate Programs*
<http://www.utexas.edu/ssw/>

GENERAL INFORMATION

ACCREDITATION

The Bachelor of Social Work degree program is accredited by the Council on Social Work Education.

HISTORY

The School of Social Work was established as a graduate program in 1949 and began classes in the fall of 1950 with twenty-four students enrolled in the MSSW program. Undergraduate courses in social work were first offered in 1958. These were incorporated into a full Bachelor of Social Work (BSW) program in the fall of 1974.

The first BSW degree was awarded in December, 1977. Since that time, the program has been strengthened by curriculum modifications reflecting changes in the profession and in society that have implications for beginning social work practice. Since the program was established, more than eleven hundred students have received BSW degrees.

The School of Social Work also offers programs leading to the Master of Science in Social Work and the Doctor of Philosophy. These are described in the *Graduate Catalog*.

PURPOSE

The School of Social Work provides professional education and leadership in social work practice, research, and service to promote social and economic justice, enhance social welfare, and build strong community-University partnerships.

The mission of the Bachelor of Social Work program

is to prepare students as beginning-level generalist professional social work practitioners who are committed to the provision of services that further the well-being of people and who promote social and economic justice. Building on a broad liberal arts framework, the BSW curriculum is designed to develop generalist practitioners who have an understanding of social work knowledge and values and are able to select different methods and resources to meet identified client needs, while recognizing and engaging the strengths of the client in the process. The curriculum offers students the opportunity to learn to promote, restore, maintain, and enhance the social functioning of multiple levels of systems in the environment, including individuals, families, small groups, organizations, and communities; to recognize worker and client limitations; and to know when to refer clients to other resources.

The BSW student is given the opportunity to learn to work collaboratively in a variety of settings using an ecosystems/developmental perspective; to recognize the relationships between client needs and public issues; to work toward the development of social policies, resources, and programs that meet basic human needs and empower at-risk groups; and to be sensitive to the diversities among individuals, including ethnicity, gender, age, sexual orientation, religion, and ability. The program is intended to prepare reflective, self-evaluating practitioners who have a strong identification with the social work profession and work to alleviate poverty, oppression, and discrimination.

Graduates of the program are expected to be able to enhance the problem-solving, coping, and developmental capacities of individuals, especially those from at-risk populations. They also are expected to contribute to the effective and humane operation of the systems within the environment that provide individuals with

resources, services, and opportunities; to link individuals in need with the appropriate systems; and to contribute to the development and improvement of social policies that have an impact on people and their social environments, especially by empowering at-risk groups and by promoting social and economic justice.

The BSW program is integrated with and builds upon a liberal arts base that includes knowledge in language arts, the humanities, and the social, behavioral, and natural sciences. The curriculum includes content in social work values, diversity and at-risk populations, social and economic justice, human behavior and the social environment, research, social welfare policy and services, and social work intervention.

PROGRAM OBJECTIVES

Students graduating from the BSW program are expected to demonstrate the following characteristics:

1. A professional identity that incorporates the values and ethics of the social work profession and the professional development of self.
2. The ability to work with diverse populations with an understanding of and respect for the positive value of diversity, including ethnicity, gender, sexual orientation, age, ability, and religion, and to use communication skills differentially with diverse groups.
3. An understanding of the forms and mechanisms of oppression and discrimination.
4. The ability to apply strategies and skills that advance social and economic justice and to address the oppression of at-risk populations.
5. An understanding of the biological, psychological, social, and cultural contexts of changing client systems, including individuals, families, groups, organizations, communities, and the broader society, and their effects on development and behavior.
6. Beginning-level competencies in research and evaluation, including the ability to evaluate research studies and apply their findings to practice, and, under supervision, evaluate their own practice interventions and those of other relevant systems.
7. An understanding of how social policy develops and differentially affects various client systems, workers, and agencies.
8. An understanding of the role the social work profession has played in promoting social change, historically and currently.
9. The attainment of knowledge and skills that demonstrate the ability to practice effectively with individuals, families, groups, organizations, and communities, in a manner that empowers client systems and uses their strengths in order to maximize their health and well-being.
10. An ability to apply critical thinking skills within the context of professional social work roles and practice.
11. An awareness of their responsibility to continue their professional growth and development, including the use of supervision appropriate to generalist practice.

FACILITIES

The School of Social Work Building (1925 San Jacinto Boulevard) provides space for social work classes, including classrooms equipped for distance learning and an instructional technology classroom; offices for the faculty and staff; an advising center and student services area; and a student lounge. The building also houses the school's Learning Resource Center (LRC), which has an extensive collection of social work-related books, journals, and other publications partially funded by the Josleen Lockhart Memorial Book Fund. The LRC includes a large computer laboratory for student use and provides space, equipment, and technical assistance for studying, meetings of small groups of students, viewing audiovisual materials, videotaping, and completing other skills-based learning assignments. The School of Social Work Building also houses the Center for Social Work Research, the DiNitto Center for Career Services, Con Mi Madre, and the Center for Students in Recovery.

FINANCIAL ASSISTANCE AVAILABLE THROUGH THE SCHOOL OF SOCIAL WORK

Although many University scholarships are awarded through the Office of Student Financial Services, a limited number are awarded by the School of Social Work to undergraduate social work students. Awards are made for reasons ranging from academic promise to financial need. All social work majors who meet the eligibility requirements for the scholarships listed below are encouraged to apply. Additional information is available from the Academic Affairs Office.

The **George K. Herbert Endowed Scholarship** was created in 1989 through gifts from colleagues, faculty members, and alumni, the Wolens Foundation, the

Social Work Advisory Council, and other friends in recognition of Dr. Herbert's dedication to high standards of professional service and contributions to social work education. Dr. Herbert served on the faculty and as dean of the School of Social Work. Students are nominated for the award on the basis of academic excellence and potential contribution to professional social work. The endowment provides scholarships to undergraduate or graduate students in the School of Social Work, selected at the discretion of the dean, based on merit or need, on the recommendation of the School of Social Work Scholarship Committee.

The **Ami Lunsford Memorial Scholarship in Victim Services** was initiated by the Social Work Student Council in memory of Ami Lunsford, a May 1996 graduate of the School of Social Work. The scholarship was endowed in 1997 through gifts from family and friends. It is awarded on the basis of academic achievement and professional potential to social work students with a special interest in victim services.

The **Victor and Myra Ravel Scholarship in Children's Rights** was endowed in 1989 by Mr. and Mrs. Victor Ravel of Austin and the University Regents' Endowed Student Fellowship and Scholarship Program. The endowment is administered through the Austin Community Foundation; the income is used for scholarships to social work students interested in children's rights or child advocacy. Students are nominated on the basis of academic excellence and potential contribution to professional social work in the area of child advocacy.

The **Sylvia Shapiro Scholarship** was established in 1985 by Sidney S. Smith of Austin, in memory of his cousin, Sylvia Shapiro. Students are nominated on the basis of academic excellence, need, and potential contribution to professional social work with emphasis on work with the frail elderly.

The **King S. Stephens II Memorial Endowed Scholarship** was established in 1995 through the generosity of faculty members, family members, and friends in loving memory of this respected faculty member, whose fierce intellect and commitment to social justice challenged our ideas and inspired our sense of responsibility. Students are nominated on the basis of academic excellence and commitment to social justice.

The **August N. "Gus" Swain Endowed Scholarship** was established in 1993 in honor of Gus Swain, the first African American student to receive an MSSW degree from the School of Social Work. Students are selected on the basis of academic excellence, financial need, and potential contribution to the social work profession.

The **Louis A. Zurcher Memorial Scholarship** was

established by gifts in memory of Dr. Louis A. Zurcher, collected since his death in 1987. The scholarship is awarded to provide support to social work students.

Other scholarships. Additional scholarships funded by contributions to the School of Social Work are awarded to undergraduate social work majors each year. Students are nominated on the basis of academic excellence, financial need, and potential contribution to professional social work.

CAREER SERVICES

Career development services are provided to students preparing to enter the professional job market. Students should inquire in the DiNitto Center for Career Services, School of Social Work Building 2.214. The office maintains a listserv of employment opportunities and provides information about social work careers, graduate programs, online resources, and other opportunities for professional development, volunteer placement, and social work licensure. Workshops and other programs are offered on the fields of social work practice, résumé preparation, and job search and interview skills.

Professional social workers may seek employment in a number of areas. The Texas Department of Aging and Disability Services has established quality control standards that mandate the hiring of holders of BSW degrees in designated positions. The Texas Department of Family and Protective Services hires social workers for its child protective services programs, and the Texas Health and Human Services Commission hires BSW graduates for its client support services programs. Large nursing home facilities are also required to have a social work staff. Substance abuse treatment programs, psychiatric hospitals, health care programs, school social work and dropout prevention programs, criminal justice programs, and programs for the elderly also employ social workers. More than a third of the program's graduates go on to graduate schools throughout the country.

As a complement to the assistance available from the school, the Sanger Learning and Career Center, located in Jester Center, provides comprehensive career services to all students. The center offers professional assistance to students in choosing or changing their majors or careers, seeking an internship, and planning for the job search or for graduate study.

The University makes no promise to secure employment for each graduate.

COLLEGE COUNCIL OF SOCIAL WORK

The Social Work Council is an organization open to all students pursuing a social work degree or interested in the social work profession. The purposes of the council are to help students acquire a better understanding of the profession of social work, to provide a mechanism for student input on issues related to the social work curriculum and the school, and to organize and support social work–related programs and projects that will benefit students, the school, the University, and the community.

Council activities are often conducted in collaboration with the Office of Academic Affairs. They include orientations to the BSW and MSSW programs, a career night, forums with guest speakers from community agencies and the University, community service projects, special interest groups that meet to discuss social work–related topics, and social gatherings. Members of the council represent student concerns as voting members of the school’s curriculum committees, the Senate of College Councils, and the Student Government.

PROFESSIONAL LIABILITY INSURANCE

Students must purchase professional liability insurance while they are enrolled in the field practicum. The cost is about fifteen dollars a semester. Payment is made to the Field Office of the School of Social Work.

ADMISSION AND REGISTRATION

REQUIREMENTS FOR ADMISSION TO THE UNIVERSITY

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

REQUIREMENTS FOR ADMISSION TO THE SCHOOL OF SOCIAL WORK

The School of Social Work maintains two classifications of undergraduate students: pre–social work majors and social work majors. Pre–social work majors are usually freshmen and sophomores. After completing the requirements below, a student may apply for admission to the professional curriculum as a social work major. Students who are admitted into the major complete at

least three semesters of social work coursework and any other remaining degree requirements. Students who fulfill all degree requirements receive a Bachelor of Social Work degree.

The professional practice of social work requires people who are above average in academic ability and performance, sufficiently emotionally mature to assume a helping role with people under stress, and committed to the ethical standards and performance demands of social work practice. Students are encouraged to use the advising services in the School of Social Work early in their college careers in anticipation of meeting requirements for admission to the major. A student who is interested in seeking a social work degree must discuss his or her intentions with a social work adviser before applying for admission to the program.

ADMISSION TO THE SCHOOL OF SOCIAL WORK AS A PRE–SOCIAL WORK MAJOR

Any student newly admitted to the University may enter the School of Social Work as a pre–social work major. A student who is enrolled in another college or school of the University may transfer to the School of Social Work as a pre–social work major in accordance with the University’s rules on transfer from one division to another. These rules are given in *General Information*; they include a requirement that students with forty-five semester hours of credit or more have a grade point average of at least 2.00.

ADMISSION TO THE MAJOR IN SOCIAL WORK

No student may enter the professional curriculum (the required upper-division social work courses) unless he or she has been admitted to the University as described in *General Information* and has been admitted to the major in social work by the assistant dean for undergraduate programs, following recommendation by the BSW Program Committee, according to the procedures below. All students are considered according to the policies given in the editions of *General Information* and the undergraduate catalog that are in effect at the time of the application.

The School of Social Work considers students for admission to the major twice a year, during the fall and spring semesters. A student who enters the University as a freshman in a fall semester will usually apply for admission to the professional curriculum in the spring semester of the sophomore year or the fall semester of the junior year. Admission applications are distributed

during mandatory information sessions held by the Office of Academic Affairs. The application allows the student to outline his or her background and motivation to enter the social work profession as well as any special experiences that enhance his or her application.

The School of Social Work limits admission to the major to the number of students to whom a professional education of high quality can be provided. Because of enrollment restrictions dictated by the availability of faculty members and facilities, some applicants may be denied admission even though they meet the following minimum requirements.

1. The applicant must have completed at least forty-five semester hours of coursework, including at least thirty hours chosen from the following requirements:
 - a. All requirements of the University's core curriculum, described in chapter 2.
 - b. Sociology 302.
 - c. Psychology 301.
 - d. One three-semester-hour course in human biology: Biology 301M, 309D, or 309F.
 - e. Second-semester-level proficiency, or the equivalent, in a single foreign language.
 - f. A three-semester-hour course in economics.
2. The applicant must have completed the following courses with a grade of at least C in each course: Social Work 310, 312, 313, 318, and either Human Development and Family Sciences 313 or Psychology 304. He or she must also have a grade point average of at least 2.50 in courses that are part of the social work major requirements.
3. The applicant must have a University grade point average of at least 2.00.
4. Application for admission must be made on forms available from the Office of Academic Affairs in the School of Social Work.
5. The following must be submitted to the BSW Program by the application deadline:
 - a. The completed application for admission to the professional curriculum.
 - b. A personal statement as explained on the application.
 - c. At least two recommendation forms completed by appropriate individuals who can attest to the applicant's academic and professional readiness to enter the program.
 - d. Documentation of successful completion of at least forty-five hours of supervised volunteer experience involving direct contact with cli-

ents in a human services organization.

- e. Official transcripts from all colleges attended, if the coursework has not been transferred to the student's University record.
 - f. Score reports for any credit earned by examination, if the scores are not on the student's University record.
6. The applicant may be asked to appear for a personal interview.

The applicant is considered on the basis of academic performance and his or her commitment to and suitability for generalist social work practice. The committee also assesses the applicant's emotional and professional readiness to work with clients on the basis of such factors as his or her work in courses already taken, previous meetings with social work advisers, personal statement, and the interview, if any, that is part of the application process. As a general guide, the committee also uses the *Student Standards for Social Work Education*, which delineates expectations for social work students in four areas: basic abilities to acquire professional skills, mental and emotional abilities, professional performance skills, and scholastic performance. The *Standards* can be found in the appendix of the *BSW Handbook*.

A student who is unable to attend in the semester for which he or she is admitted must reapply for admission in order to enroll at a later time. A student who has been admitted to and enrolls in the professional curriculum, withdraws, and then wishes to return must apply for readmission on the basis of the curriculum in effect at the time of the return. A student who has been out of the University for a semester or more must also submit an application for readmission to the University.

TRANSFER CREDIT

As part of the application for admission to the University, students must submit transcripts from all other colleges and universities they have attended to the University's Office of Admissions. Students seeking readmission must submit transcripts from all schools they have attended since leaving the University. The Office of Admissions evaluates all transcripts and grants the student transfer credit when possible for coursework completed at the other schools.

Although the University's Office of Admissions may grant the student a certain number of semester hours of transfer credit for work completed in another social work program, the assistant dean for undergraduate programs in the School of Social Work determines

whether this coursework may be counted toward fulfillment of the Bachelor of Social Work degree requirements. Students who wish to use transfer credit to meet degree requirements should submit a course syllabus, assignments, and the titles and names of authors of textbooks to the assistant dean for undergraduate programs for evaluation.

Students may also seek transfer credit for coursework they complete at another institution after enrolling at the University. In this case also the student should submit a transcript from the other institution to the University's Office of Admissions and a syllabus, course assignments, and information about textbooks to the School of Social Work's assistant dean for undergraduate programs.

REGISTRATION

General Information gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is also sold at campus-area bookstores.

ACADEMIC POLICIES AND PROCEDURES

ACADEMIC ADVISING

The Office of Academic Affairs in the School of Social Work seeks to assist the student in exploring social work as a career choice, in planning an academic program suited to the student's interests and talents, in seeking help with academic or personal problems, and in postgraduation planning, whether for employment or for further study. The Office of Academic Affairs also provides administrative support and student services, including maintenance of academic records, provision of official degree audits, and graduation certification for social work majors. Faculty and staff members are also available to assist students with questions about scholarship programs, degree requirements, rules and regulations, and other available campus services. Students who declare an interest in completing the social work program are required to meet with a social work

adviser at least once each semester for academic advising. To arrange an appointment with an adviser, students should contact the Office of Academic Affairs.

During the student's first and second academic years, the student and the adviser discuss the student's career choice, the selection of a major, degree requirements, and requirements for admission to the major and to upper-division courses in social work; during the third year, the work required for the major and the student's preparation for entry into the field practicum; and during the fourth year, the field practicum and the student's postgraduation plans.

CAREER CHOICE INFORMATION

Students interested in social work as a career are encouraged to discuss this interest at any time with a social work adviser. Advisers are available in the school's Office of Academic Affairs to help students explore social work practice and settings and the development of interest in social work through academic and volunteer experiences. Students may also seek the assistance of the DiNitto Center for Career Services, described on page 663.

Members of the social work faculty are also available to assist the student in choosing a career, as are the staff and resources of the University's Sanger Learning and Career Center and Volunteer and Service Learning Center. Since the social work program requires admission to the major and completion of 125 semester hours, students are encouraged to discuss their interest in social work as a career early in their studies.

HONORS

SOCIAL WORK HONORS PROGRAM

The Social Work Honors Program is available to outstanding students who have distinguished themselves by superior performance during their time at the University.

Majors who plan to seek special honors in social work should apply to the Honors Program Subcommittee of the BSW Program Committee for admission to the honors program at least one full year before they expect to graduate. A University grade point average of at least 3.50 is required for admission, as is a grade point average of at least 3.50 in all of the coursework required for the major that the student has completed. The requirements for graduation with special honors, which are in addition to the requirements for the major,

are (1) a six-hour, two-semester honors tutorial course with a grade of at least *B-* in each half; (2) oral presentation of the honors thesis in a research colloquium open to the School of Social Work community and the public; (3) a University grade point average of at least 3.50 and a grade point average of at least 3.50 in the courses required for the major and for honors; and (4) completion in residence at the University of at least sixty hours of coursework counted toward the degree.

UNIVERSITY HONORS

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

GRADUATION WITH UNIVERSITY HONORS

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

REVIEW AND GRIEVANCE PROCEDURES

The School of Social Work document *Student Standards for Social Work Education* delineates standards for professional education that apply to students enrolled in the School of Social Work. Because of the nature of professional social work practice, the School of Social Work has different expectations of students than do nonprofessional programs. All social work students are expected to abide by the *Standards* and by the National Association of Social Workers (NASW) Code of Ethics. When a student's performance does not meet expectations according to these established guidelines, a review may be called to bring the problem to the student's attention and to develop a plan to address the problem. Usually, the issue is resolved and the student is continued in the program with additional support provided to the student and/or conditions established for the student's continuance in the program. In some instances, depending on the nature of the problem, the student may be referred to the University's Office of the Dean of Students, counseled to change majors, or dismissed from the program.

Students enrolled in the social work program have the right to appeal decisions made by the social work program, including scholastic dismissal. Students are assured freedom from reprisals for filing appeals. Students who wish to appeal a decision made during a school review process should consult the *Standards* for information on grievance procedures. Students who wish to appeal other decisions made by the social work program may do so, first to the assistant dean for undergraduate programs and then to an appeal panel convened by the dean of the School of Social Work. The panel will consist of three faculty members who have no direct knowledge of or experience with the student. Students must appeal in writing to the appropriate person or committee within ten calendar days of receiving the letter of notification on the decision being appealed. Advisers are available in the Office of Academic Affairs to assist students with the appeal process.

GRADUATION

SPECIAL REQUIREMENTS OF THE SCHOOL

All students must fulfill the general requirements for graduation given in chapter 1. Students in the School of Social Work must also fulfill the following requirements.

1. All University students must have a grade point average of at least 2.00 to graduate. In the School of Social Work, students must also have a grade point average of at least 2.50 in required social work courses.
2. To receive an undergraduate degree from the University, every student must fulfill the following requirements on coursework taken in residence:
 - a. All University students must complete in residence at least sixty semester hours of coursework counted toward the degree. For the Bachelor of Social Work degree, these sixty hours must include at least twenty-four hours in the major and must include the required field practicum courses.
 - b. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. The School of Social Work further requires that twenty-four of the forty-six hours of upper-division coursework for the Bachelor of Social Work be completed in residence.

3. An Air Force, Army, or Naval Reserve Officer Training Corps student who elects the basic and/or advanced program in air force science, military science, or naval science will not be approved for graduation until the government contract is completed, unless the student is released from the ROTC.

APPLYING FOR A DEGREE

The Office of Academic Affairs provides each student with a computer-generated degree audit during each long-session semester. The degree audit notifies the student of the courses he or she must take and the requirements he or she must fulfill to receive the degree. The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the exact requirements for the degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill those requirements. The student should seek an official ruling in the Office of Academic Affairs before registering if in doubt about any requirement.

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must apply for the degree in the Office of Academic Affairs. This should be done at the time of registration for the last semester, if possible, but in no event later than the deadline given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

ADVANCED STANDING IN MASTER'S DEGREE PROGRAMS

A number of graduate schools of social work grant advanced standing to students who have completed all the requirements of an accredited undergraduate social work program. Many programs allow up to one year of credit toward the master's degree in social work. Information about programs offering advanced standing is available in the Office of Academic Affairs.

DEGREES

APPLICABILITY OF CERTAIN COURSES

No more than thirty-six semester hours in any one field of study other than social work may be counted toward the Bachelor of Social Work degree. No more than fifty-four semester hours of social work may be counted toward the degree.

PHYSICAL ACTIVITY COURSES

Physical activity courses (PED) are offered by the Department of Kinesiology and Health Education. Six semester hours of this coursework may be counted toward the Bachelor of Social Work degree. All physical activity courses are counted among courses for which the student is enrolled, and the grades are included in the grade point average.

ROTC COURSES

No more than six semester hours of credit for air force science, military science, or naval science courses may be counted toward the Bachelor of Social Work. Such credit may be used only as lower-division electives in degree programs that have room for such electives and only by students who have completed the third and fourth years of the ROTC program.

CORRESPONDENCE AND EXTENSION COURSES

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree in the School of Social Work unless specifically approved in advance by the dean. No more than 30 percent of the semester hours required for the Bachelor of Social Work may be taken by correspondence. More information is available from the assistant dean for undergraduate programs.

COURSES TAKEN ON THE PASS/FAIL BASIS

Undergraduate students who have received at least thirty semester hours of college credit may take no more than five one-semester courses in elective subjects outside their major area on the pass/fail basis. Students must state their intention to register on this basis by the deadline given in the official academic cal-

endar; they may not change the basis of registration in a course more than once; and they may not take more than two courses a semester on this basis.

OTHER COURSES

Music 101G may not be counted toward any degree in the School of Social Work. Other introductory courses, such as Music 201J, 201M, and 201N, may be counted toward degrees in the school.

No more than six semester hours of Bible courses may be counted toward the Bachelor of Social Work degree.

THE MINOR

Plans for a minor in psychology, sociology, or another approved area may be developed with advising assistance from the Office of Academic Affairs. A minor requires completion of at least twelve semester hours, six of which must be upper-division.

BACHELOR OF SOCIAL WORK

The requirements for the Bachelor of Social Work degree are designed to give the student an opportunity for integrated, nonrepetitive learning. A total of 125 semester hours is required. These may include credit by examination and a maximum of five one-semester elective courses taken on the pass/fail basis. All students must complete the requirements for the major and must complete at least sixty semester hours in residence at the University. These sixty hours must include at least twenty-four semester hours in social work. A completed degree program must include at least forty-six semester hours of upper-division coursework, of which twenty-four semester hours must have been taken in residence. No more than fifty-four semester hours in social work may be counted toward the degree.

Each student must complete a sequence of prescribed work; major requirements, which include the field practicum; and special requirements, which include electives.

PRESCRIBED WORK

The prescribed work provides the liberal arts base for the social work curriculum. Interdepartmental courses and credit by examination may be used to meet these requirements. Unless otherwise indicated, a course taken to meet the requirements of one area may not

also be used to fulfill the requirements of another area; however, a single course may be used, unless otherwise indicated, to fulfill both an area requirement and a major requirement. No course used to fulfill area or major requirements, other than the field practicum, may be taken on the pass/fail basis.

CORE CURRICULUM

All students must complete the University's core curriculum, described in chapter 2. A single course may not be counted toward more than one core area, but in some cases a course that is required for the Bachelor of Social Work may also be counted toward the core curriculum; these courses are identified below.

SKILLS AND EXPERIENCES FLAGS

In the process of fulfilling the core curriculum and other degree requirements, all students pursuing the Bachelor of Social Work must complete courses that carry flags in the following areas:

1. Writing: Three courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag; one of these courses must be upper-division. Social Work 323K and 327 count toward this requirement; students must complete the third writing course outside the School of Social Work. Courses used to fulfill the writing requirement may be used to fulfill other requirements.
2. Cultural diversity in the United States: One flagged course. Social Work 310 and 325 carry the cultural diversity flag.
3. Ethics and leadership: One flagged course. Social Work 332 and 333 carry the ethics and leadership flag.

FOREIGN LANGUAGE

In addition to the core curriculum requirements above, undergraduates must earn credit for the second college-level course, or the equivalent, in a foreign language. American Sign Language may be used to fulfill this requirement.

MAJOR REQUIREMENTS

The Bachelor of Social Work program offers basic courses designed to provide students with concentrated and in-depth educational experience combining social work knowledge and practice skills. No course used to

fulfill major requirements, except Social Work 640 and 641, may be taken on the pass/fail basis. Students are advised to complete the core curriculum, the skills and experiences flags, the foreign language requirement, and all lower-division major requirements before taking upper-division courses. In developing their degree plans, students must also pay careful attention to the sequencing of social work courses to ensure that prerequisite requirements are met.

Academic credit cannot be granted for life experience or previous work experience, and such experience cannot be substituted for any of the courses in the professional foundation areas or the field practicum. Students who believe they have the qualifications to receive credit by examination for a social work course other than the practice sequence coursework (Social Work 312, 332, 333, and 334) and the field practicum may submit a written request to the assistant dean for undergraduate programs. The assistant dean will review the request and determine whether or not the student should be permitted to take the examination.

1. The following courses are required:
 - a. Social welfare policy: Social Work 310, 323K.
 - b. Research: Social Work 313, 318.
 - c. Human behavior: Social Work 325, 327.
 - d. Practice: Social Work 312, 332, 333, 334.
 - e. Field practicum: Social Work 640, 641, 444.
2. Students must complete a three-semester-hour introductory course in psychology. Psychology 301 fulfills this requirement and may also be counted toward the social and behavioral science requirement of the core curriculum.
3. Students must complete a three-semester-hour introductory course in sociology. Sociology 302 fulfills this requirement and may also be counted toward the social and behavioral science requirement of the core curriculum.
4. Students must complete either Human Development and Family Sciences 313 or Psychology 304.
5. Students must complete a three-semester-hour course in human/environmental biology: Biology 301M, 309D, 309F, or the equivalent. Biology 301M may be used with another biology course to fulfill the science and technology, part I requirement of the core curriculum; or Biology 309D or 309F may be used to fulfill the science and technology, part II requirement.
6. Students must complete three semester hours in economics. Certain economics courses may also be used to fulfill the social and behavioral sciences requirement of the core curriculum.

7. Students must complete at least nine semester hours of upper-division coursework in the social and behavioral sciences (anthropology, economics, educational psychology, government, history, psychology, and sociology) in addition to other major requirements. Six of these nine hours may be upper-division social work electives.

FIELD SEQUENCE REQUIREMENTS

The social work program requires that students complete 45 clock hours of supervised volunteer experience related to social work to be admitted to the major, to upper-division courses in social work, and to the field practicum. These volunteer hours may be used to meet course requirements in Social Work 310 and 312. Students must also complete 480 clock hours of fieldwork as part of the course requirements in Social Work 640 and 641. Students have the opportunity in the field practicum to develop the professional skills needed for entry-level social work positions as generalist practitioners. Adequate laboratory time through the field practicum is built into this professional program to provide students with an opportunity to test their developing skills in a real-life environment. At the same time, faculty members evaluate the student's professional development within the context of the educational objectives established for the experience. The goals are for the student to learn real-life practice, to develop skills, to relate concepts to skill development, to remain motivated to continue to learn, and to evaluate personal performance.

To enroll in the field practicum, students must meet the following requirements: (1) admission to the major in social work; (2) a University grade point average of at least 2.00; (3) completion of the core curriculum, the skills and experiences flags, and the foreign language requirement; and (4) both a grade point average of at least 2.50 for the following group of courses and a grade of at least C in each course in the group: Social Work 310, 312, 313, 318, 323K, 325, 327, 332, 333, and 334.

Following the student's admission to the field practicum, his or her work is reviewed periodically by the student, the field faculty, and the agency supervisor. Should the student have trouble meeting the professional or academic requirements of the program, the review process will bring the difficulty to the student's attention and assist the student in seeking appropriate resolution. The student may make use of counseling and advising services at any time. If difficulties cannot be resolved, the field director may conduct an administrative review, which may result in a decision

to terminate the student's field placement. The student is notified of this decision in writing.

All social work students enrolling in the field practicum are required to show evidence of professional liability insurance coverage paid for the duration of the course. The effective date of the policy must be on or before the first regular class period of the field practicum course for which the student is enrolling. Failure to provide evidence of insurance may result in the student being dropped from the field practicum.

SPECIAL REQUIREMENTS

ELECTIVE REQUIREMENTS AND LIMITATIONS

In addition to the area and major requirements given above, the student must take elective coursework to complete the 125 semester hours required for the Bachelor of Social Work. No more than five one-semester courses taken on the pass/fail basis, thirty-six hours in any one field of study other than social work, and fifty-four hours in social work may be counted toward the 125-hour requirement.

MINIMUM SCHOLASTIC REQUIREMENTS

1. The student must fulfill the University-wide graduation requirements given in chapter 1 and the requirements of the School of Social Work given earlier in this chapter.
2. To apply for admission to the social work major, a student must have earned a grade of at least C in each of the following courses: Social Work 310, 312, 313, 318, and Psychology 304 or Human Development and Family Sciences 313. The student must also have a University grade point average of at least 2.00 and a grade point average of at least 2.50 in all the courses he or she has completed that are part of the social work major requirements. Additional requirements are given in the section "Admission to the Major in Social Work" on pages 664–665.
3. Following the student's admission to the major, the student's coursework is reviewed periodically by the student and the academic adviser. Students must maintain a University grade point average of at least 2.00; they must also earn a grade of at least C in each course listed as a social work major requirement and must maintain a grade point average of at least 2.50 in these courses. If the student has trouble meeting the professional or academic requirements of the

major, the review process delineated in *Student Standards for Social Work Education* will bring the difficulty to the student's attention and assist the student in making appropriate resolution. The student may make use of counseling and advising services at any time.

4. If the student's grade point average in social work courses falls below 2.50, the student is placed on academic probation in social work. If the grade point average remains below 2.50 for two consecutive semesters, including the summer session, the student is subject to academic dismissal from the School of Social Work.
5. All students who seek to reenter the School of Social Work after having been placed on enforced withdrawal or academic dismissal must have the approval of the assistant dean for undergraduate programs.
6. Any student who has a grade of C or higher in a course may not repeat the course and use the second grade to improve his or her grade point average without special permission of the assistant dean for undergraduate programs. If a student repeats a course, all grades received for the course are included in the grade point average.

ORDER AND CHOICE OF WORK

A pre-social work major may fulfill the requirements for application to the major in four or five long-session semesters, depending on the number of hours completed each semester. After admission to the major, students complete a three-semester professional sequence and additional requirements needed for the BSW degree.

SUGGESTED SCHEDULE FOR PRE-SOCIAL WORK MAJORS

First Year

Thirty semester hours:

RHE 306, *Rhetoric and Writing*

S W 310, *Introduction to Social Work and Social Welfare*

PSY 301, *Introduction to Psychology*

BIO 301M, *Ecology, Evolution, and Society*

UGS 302 or 303, *First-Year Signature Course*

A three-hour course to be counted toward the core curriculum mathematics requirement

SOC 302, *Introduction to the Study of Society*

A three-hour course to be counted toward the American history requirement of the core curriculum

A three-hour course to be counted toward the visual and performing arts requirement of the core curriculum

Government 310L, *American Government*

Second Year

Thirty-one semester hours:

E 316K, *Masterworks of Literature*

GOV 312L, *Issues and Policies in American Government*

S W 318, *Social Work Statistics*

S W 312, *Generalist Social Work Practice: Knowledge, Values, and Skills*

S W 313, *Social Work Research Methods*

PSY 304, *Introduction to Child Psychology*, or HDF 313, *Child Development*

A three-hour course to be counted toward the American history requirement of the core curriculum

Foreign language 506 and 507, or an equivalent sequence; or American Sign Language 506 and 507

SUGGESTED SCHEDULE FOR SOCIAL WORK MAJORS*Third Year*

Thirty-six semester hours:

Six hours of coursework that, with BIO 301M, fulfill both parts of the core curriculum science and technology requirement

A three-hour non-social work course that carries a writing flag

A three-hour economics course

Six hours of upper-division social and behavioral science coursework

Nine hours of elective coursework

S W 325, *Foundations of Social Justice*

S W 327, *Human Behavior and Social Environment*

S W 334, *Social Work Practice in Organizations and Communities*

SUGGESTED SCHEDULE FOR SOCIAL WORK MAJORS*Fourth Year*

Thirty-one semester hours:

Social Work 323K, *Social Welfare Programs, Policies, and Issues*

Social Work 332, *Social Work Practice with Individuals and Families*

Social Work 333, *Social Work Practice with Groups*

Social Work 640, *Social Work Practicum I*

Social Work 641, *Social Work Practicum II*

Social Work 444, *Integrative Seminar*

Three hours of upper-division coursework in social and behavioral science

A three-hour upper-division elective if needed to provide the required forty-six hours of upper-division credit

The student must also complete all other remaining required coursework before the field practicum, including electives needed to provide the total of 125 semester hours required for the degree. No other courses may be taken concurrently with the field practicum courses.

COURSES

The faculty has approval to offer the following courses in the academic years 2010–2011 and 2011–2012; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A.

SOCIAL WORK: S W

LOWER-DIVISION COURSES

- 001. First-Year Interest Group Seminar.** Restricted to students in the First-Year Interest Group Program. Basic issues in various School of Social Work disciplines. One lecture hour a week for one semester.
- 301C. Freshman Seminar.** Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.
- 301D. Connecting Research Experience.** Restricted to freshmen and sophomores. Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Admission to the Connexus Bridging Disciplines Program.
- 102D, 202D, 302D. Connecting Internship Experience.** Supervised internship experience related to interdisciplinary themes of a Bridging Disciplines Program. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 102D, three hours of fieldwork a week for one semester; for 202D, six hours of fieldwork a week

for one semester; for 302D, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines Programs research coordinator, may be repeated once for credit. Prerequisite: Admission to the Bridging Disciplines Programs.

- 310 (TCCN: SOCW 2361). Introduction to Social Work and Social Welfare.** Introduction to the profession of social work and its roles in the social welfare system, with emphasis on social problems, society's historical response, and contemporary proposed solutions. Three lecture hours a week for one semester, and forty-five clock hours of volunteer experience.
- 311. Selected Topics in Social Welfare.** Analysis of selected policy and program implications in the human services. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.
- 312. Generalist Social Work Practice: Knowledge, Values, and Skills.** Introduction to generalist social work practice, with emphasis on the knowledge, values, and skills used in intervention. Three lecture hours a week for one semester, and forty-five clock hours of volunteer experience. Prerequisite: Social Work 310.
- 313. Social Work Research Methods.** Introduction to the logic, design, and use of research, with emphasis on research designs appropriate to social work. Three lecture hours a week for one semester. Prerequisite: Social Work 318.
- 318. Social Work Statistics.** Introduction to statistics commonly used in social work research, including the critical analysis of the findings and inferential processes of existing research studies. Three lecture hours a week for one semester. Prerequisite: Completion of the Area C mathematics requirement for the Bachelor of Social Work.
- 118C, 218C, 318C. Forum Seminar Series.** Restricted to freshmen and sophomores. Lectures and discussion on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

UPPER-DIVISION COURSES

- 320C. Connecting Research Experience.** Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Upper-division standing and admission to the Connexus Bridging Disciplines Program.
- 323K. Social Welfare Programs, Policies, and Issues.** Study of structure and function of service delivery systems, policy analysis, and effects and influences of policy on practice and planning decisions. Three lecture hours a week for one semester. Prerequisite: Government 310L, 312L, History

- 315K, 315L, three semester hours of coursework in economics, and admission to the major in social work.
- 325. Foundations of Social Justice.** History and demographics of culturally diverse groups in the United States, including family and community diversity. Emphasis on principles of knowledge acquisition about cultural diversity and ethnic-sensitive social work practice. Three lecture hours a week for one semester. Social Work 325 and 360K (Topic: *Cultural Diversity in a Changing Society*) may not both be counted. Prerequisite: Admission to the major in social work.
- 327. Human Behavior and Social Environment.** Survey of selected theories of human behavior, including a systems/ecological perspective, ego psychology, and social learning theory, with emphasis on the life cycle from adolescence through adulthood. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Admission to the major in social work.
- 128C, 228C, 328C. Advanced Connexus Forum Seminar Series.** Discussion of contemporary issues related to the topics of a Bridging Disciplines Program, with an emphasis on multidisciplinary perspectives, research, and critical discourse. For 128C, two lecture hours a week for eight weeks; for 228C, two lecture hours a week for one semester; for 328C, three lecture hours or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the *Course Schedule*.
- 332. Social Work Practice with Individuals and Families.** Theory and knowledge of effecting change in individuals and families, with emphasis on analytical and interactional processes and skills. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Social Work 325 and 327.
- 333. Social Work Practice with Groups.** Theory and knowledge of group dynamics and the development of effective group work skills, with an emphasis on analytical and interactional processes. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Social Work 325 and 327.
- 334. Social Work Practice in Organizations and Communities.** Theory and knowledge of effecting change in organizations and communities, with an emphasis on analytical and interactional processes and skills. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Social Work 325 and 327.
- 640. Social Work Practicum I.** Field practicum providing supervised experience in which students apply knowledge and develop skills of social work practice. Educational supervision by faculty and by social workers in community agencies. Sixteen laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the field sequence and concurrent enrollment in Social Work 641 and 444.
- 641. Social Work Practicum II.** Knowledge and skill in social work, building on objectives emphasized in Social Work 640. Educational supervision by faculty and by social workers in community agencies. Sixteen laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the field sequence and concurrent enrollment in Social Work 640 and 444.
- 444. Integrative Seminar.** Integration of theory and practice on the basis of field practicum experiences. Four lecture hours a week for one semester. Prerequisite: Completion of all requirements for the Bachelor of Social Work degree except Social Work 640 and 641, and concurrent enrollment in Social Work 640 and 641.
- 350. Special Topics in Generalist Social Work.** Conference course. May be repeated for credit. Prerequisite: Upper-division standing.
- 360K, 460K. Current Welfare Issues.** A tutorial and seminar course designed to enable each student to undertake intensive study of selected aspects of social welfare practice. Topics include child abuse and neglect, chemical dependency, African American family, gerontology, and social work and the law. Three or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the *Course Schedule*.
- Topic 1: Computer Applications in Direct Services.**
- Topic 2: African American Family.** Social Work 360K (Topic 2) is same as African and African American Studies 374 (Topic 1: *African American Family*) and Women's and Gender Studies 340 (Topic 3: *African American Family*).

17. The Faculty

SCHOOL OF ARCHITECTURE

PROFESSORS EMERITUS

- Drury Blakeley Alexander**, *Professor Emeritus*
BArch, Texas, 1950; BS Art, 1951; MA, Columbia, 1953; Architect
- M. Wayne Bell**, *Professor Emeritus*
BArch, Texas, 1960; Architect; FAIA
- Jon A. Bowman**, PE, *Professor Emeritus*
BS ArchE, Texas, 1949; MArch, 1962; Architect; Member, AIA
- Hal Box**, *Professor Emeritus*
BArch, Texas, 1950; Architect; FAIA
- C. Owen Cappleman**, *Associate Professor Emeritus*
BA, Florida State, 1960; MFA, Texas, 1966
- Peter O. Coltman**, *Associate Professor Emeritus*
BArch, Witwatersrand, 1952; Diploma in Town Planning, 1957; MSCRP, Texas, 1965; Chartered Member, RTPI, RIBA; Associate, AIA
- R. James Coote**, *Professor Emeritus*
BA, Haverford College, 1953; MArch, Harvard, 1959; Architect
- Daniel E. Leary**, *Associate Professor Emeritus*
BS ArchE, Texas, 1962; BArch, 1963; MArch, Pennsylvania, 1966; Architect; Member, AIA
- Gerlinde Leiding**, *Professor Emeritus*
Architektin, Werkkunstschule Krefeld, 1965; MArch, Yale, 1966
- Richard P. Swallow**, *Professor Emeritus*
BS Arch, Rhode Island School of Design, 1953; MArch, Massachusetts Institute of Technology, 1957; Architect; Member, AIA
- Roxanne Kuter Williamson**, *Professor Emeritus*
BA, Goucher College, 1951; MA, Texas (Austin), 1967

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Dean Johnson Almy III**, *Associate Professor*
BArch, Cornell, 1983; MArch, Texas (Austin), 1989
- Anthony Alofsin**, *Professor*
BA, Harvard, 1971; MArch, 1981; PhM, Columbia, 1983; PhD, 1987; Architect
- Kevin Alter**, *Professor*
BA, Bennington College, 1985; MArch, Harvard, 1990
- Simon D. Atkinson**, *Professor*
Diploma in Architecture, Leeds School of Architecture and Town Planning, 1965; Diploma in Planning, School of Architecture, Architectural Association (England), 1966; MA in Regional Studies, Sussex, 1969; Associate, RIBA; Member, RTPI; FRSA

- Michael L. Beaman**, *Assistant Professor*
B EnvironD, North Carolina State, 1998; BArch, 1999; MArch, Harvard, 2003
- Michael L. Benedikt**, *Professor*
BArch, Witwatersrand, 1971; M EnvironD, Yale, 1975; Architect (South Africa)
- Miroslava M. Beneš**, *Associate Professor*
BA, Princeton, 1974; MA, Yale, 1976; PhM, 1977; PhD, 1989
- J. Sinclair Black**, *Professor*
BArch, Texas, 1962; MArch, California (Berkeley), 1970; Architect; FAIA
- Danelle I. Briscoe**, *Assistant Professor*
BArch, Texas (Austin), 1995; MArch, Yale, 2002
- Kent S. Butler**, *Associate Professor*
BA, Wisconsin (Madison), 1973; MS, 1976; PhD, 1977; Member, APA
- Richard L. Cleary**, *Professor*
BA, Wisconsin (Madison), 1975; MA, 1977; MPhil, Columbia, 1979; PhD, 1986
- Ulrich C. Dangel**, *Assistant Professor*
MArch, Oregon, 1999; Diplom, Universität Stuttgart, 2000
- Elizabeth Danze**, *Associate Professor*
BArch, Texas (Austin), 1981; MArch, Yale, 1990
- Larry A Doll**, *Associate Professor*
MArch, Cornell, 1974
- Sarah Dooling**, *Assistant Professor*
BS, Maine (Orono), 1993; MSW, 2002; PhD, Washington (Seattle), 2008
- Matthew L. Fajkus**, *Assistant Professor*
BS, Texas (Arlington), 2000; MArch, Harvard, 2005
- Frances R. Gale**, *Senior Lecturer*
BA, State University of New York Empire State College (Saratoga Springs), 1977; MS, Columbia, 1982
- Michael L. Garrison**, *Professor*
BArch, Louisiana State, 1970; MArch, Rice, 1971; Architect
- Tamie M. Glass**, *Assistant Professor*
B EnvironD, Texas A&M, 1998; MArch, Oregon, 2001
- Francisco H. Gomes**, *Assistant Professor*
BS, Virginia, 1990; MArch, Harvard, 1995
- Louise Harpman**, *Associate Professor*
AB, Harvard, 1986; MS, Cambridge, 1988; MArch, Yale, 1993
- Hope H. Hasbrouck**, *Assistant Professor*
BA, Washington (St. Louis), 1987; MArch, Virginia, 1991; MLA, Harvard, 1996
- David D. Heymann**, *Distinguished Teaching Professor*
BArch, Cooper Union, 1984; MArch, Harvard, 1988
- Michael Holleran**, *Associate Professor*
AB, Brown, 1979; MCityP, Massachusetts Institute of Technology, 1985; PhD, 1991

- Terry D. Kahn**, *Distinguished Teaching Professor*
BBA, Texas, 1964; MBA, 1965; PhD, California (Berkeley), 1970; Member, APA
- Nancy P. Kwaliek**, *Professor*
BS, Kent State, 1963; MS, Oregon State, 1970; PhD, Purdue, 1978
- Werner X. Lang**, *Associate Professor*
Diplom, Technische Universität München, 1988; MArch, California (Los Angeles), 1990; PhD, Technische Universität München, 2000
- Fernando L. Lara**, *Assistant Professor*
BArch, Federal de Minas Gerais, 1993; MSc, 1996; PhD, Michigan, 2001
- Ming-Chun Lee**, *Assistant Professor*
BS, National Cheng Kung, 1991; MS, 1993; MArch, Washington (Seattle), 2001; PhD, 2008
- Christopher A. Long**, *Professor*
BA, Texas (San Antonio), 1978; MA, Texas (Austin), 1982; PhD, 1993
- Carl Matthews**, *Associate Professor*
BS, Oklahoma State, 1983; MS, Pratt Institute, 1993
- Talia M. McCray**, *Assistant Professor*
BS, North Carolina Agricultural and Technical State, 1990; BS, Bennett College, 1990; MS, Northwestern, 1992; PhD, Michigan (Ann Arbor), 2001
- Smilja Milovanovic-Bertram**, *Associate Professor*
BA, Rice, 1970; BArch, 1972; MArch, 1974
- Juan Miro**, *Associate Professor*
Arquitecto, Universidad Politécnica de Madrid, 1987; MArch, Yale, 1991
- Steven A. Moore**, *Professor*
BA, Syracuse, 1967; PhD, Texas A&M, 1996
- Elizabeth Mueller**, *Assistant Professor*
BSFS, Georgetown, 1981; MCityP, California (Berkeley), 1984; PhD, 1992
- Michael Oden**, *Associate Professor*
BA, Texas (Austin), 1976; PhD, New School for Social Research, 1992
- Robert G. Paterson**, *Associate Professor*
BA, Florida Atlantic, 1984; MPA, 1985; PhD, North Carolina (Chapel Hill), 1993
- Joyce Rosner**, *Senior Lecturer*
MArch, Houston, 1981
- Stephen L. Ross**, *Senior Lecturer*
BBA, Stephen F. Austin State, 1979; MS ArchSt, Texas (Austin), 1990
- Allan W. Shearer**, *Assistant Professor*
BA, Princeton, 1988; MLA, Harvard, 1994; MA, 2001; PhD, 2003
- Igor P. Siddiqui**, *Assistant Professor*
BArch, Tulane, 1998; MArch, Yale, 2003
- Bjorn I. Sletto**, *Assistant Professor*
BA, Minnesota (Minneapolis-St. Paul), 1990; MA, Kansas, 1999; PhD, Cornell, 2006
- Vincent L. Snyder**, *Associate Professor*
BS, Nebraska (Lincoln), 1980; MS, 1983; MArch, Princeton, 1988

This chapter lists faculty appointments for the spring semester 2009–2010; the directors and department chairs listed here also served in that semester.

Jason S. Sowell, *Assistant Professor*
BArch, Tennessee (Knoxville), 1996; MLA, Harvard, 2004

Lawrence W. Speck, *Distinguished Teaching Professor*
BSArt&D, BSMAN, Massachusetts Institute of Technology, 1971; MArch, 1972; Architect; Member, AIA

Frederick R. Steiner, *Professor*
BSD, Cincinnati, 1972; MCommP, 1975; MRP, Pennsylvania, 1977; MA, PhD, 1986

Danilo F. Udovicki-Selb, *Associate Professor*
MArch, Univerzitet u Beogradu, 1975; MA, Boston College, 1979; PhD, Massachusetts Institute of Technology, 1993

Wilfried Wang, *Professor*
BS, University College London, 1978; DipArch, 1980; MS 1981

Lois R. Weinthal, *Associate Professor*
BArch, BFA, Rhode Island School of Design, 1993; MArch, Cranbrook Academy of Art, 1998

Nichole Wiedemann, *Associate Professor*
BDesign, Florida, 1989; MArch, Princeton, 1992

Patricia Wilson, *Professor*
BA, Stanford, 1969; MRP, Cornell, 1971; PhD, 1975; Member, APA

Ming Zhang, *Associate Professor*
BE, Tsinghua, 1985; ME, 1988; MRP, State University of New York (Albany), 1995; MST, Massachusetts Institute of Technology, 1999; PhD, 2002

ADJUNCT PROFESSORS

Barbara Hoidn, *Adjunct Associate Professor*
MArchE, Universität Karlsruhe, 1988

Keenan E. Smith, *Adjunct Associate Professor*
BArch, Texas (Austin), 1980; MArch, Harvard, 1990

RED MCCOMBS SCHOOL OF BUSINESS

DEPARTMENT OF ACCOUNTING

Urton L. Anderson, *Chair*

PROFESSORS EMERITUS

Anna C. Fowler, *Professor Emeritus*
BS, Alabama, 1962; MBA, Texas (Austin), 1970; PhD, 1977; CPA, Georgia, 1964; CPA, Texas, 1993

Frank D. Graydon, *Professor Emeritus*
BBA, Texas Technological College, 1941; MBA, Northwestern, 1943; CPA, Texas, 1946

Charles Griffin, *Professor Emeritus*
BBA, Texas, 1942; MBA, 1948; PhD, 1953; CPA, Texas, 1950; CPA, Illinois, 1959

Kermit D. Larson, *Professor Emeritus*
BBA, Iowa, 1962; MBA, 1963; DBA, Colorado (Boulder), 1966; CPA, Texas, 1968

Jack C. Robertson, *Professor Emeritus*
BBA, Texas (Austin), 1965; MPA, 1967; PhD, North Carolina (Chapel Hill), 1970; CPA, Texas, 1967; CFE, Texas, 1989

Edward Summers, *Professor Emeritus*
BA, Rice, 1959; BSChE, 1960; MBA, Texas, 1962; PhD, 1965; CPA, Texas, 1965

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Urton L. Anderson, *Professor*
BA, St. Olaf College, 1974; MA, Minnesota (Minneapolis-St. Paul), 1977; PhD, 1985

Rowland K. Atiase, *Professor*
BSc, Ghana, 1973; MBA, California (Berkeley), 1975; MA(Econ), 1979; PhD, 1980

Shuping Chen, *Assistant Professor*
BA, Sichuan International Studies, 1987; MA, Zhongshan, 1990; PhD, Southern California, 2003

Michael B. Clement, *Associate Professor*
BBA, Baruch College, 1980; MBA, Chicago, 1988; PhD, Stanford, 1997; CPA, New Jersey and New York, 1980

Carlos Corona, *Assistant Professor*
BA, Universitat Ramon Llull, 1989; MBA, Chicago, 1994; MBA, Universitat de Barcelona, 1995; PhD, Stanford, 2006

James W. Deitrick, *Professor*
BS, Grove City College, 1967; MS, Kent State, 1969; DBA, Tennessee (Knoxville), 1977

Robert N. Freeman, *Professor*
BS, Tennessee (Knoxville), 1968; MAS, Illinois, 1969; PhD, Texas (Austin), 1977; CPA, Tennessee, 1971

Michael H. Granof, *Distinguished Teaching Professor*
AB, Hamilton College, 1963; MBA, Columbia, 1965; PhD, Michigan (Ann Arbor), 1972; CPA, New York, 1969; CPA, Texas, 1989

D. Eric Hirst, *Professor*
BA, MAcc, Waterloo, 1985; CA, Ontario, 1986; PhD, Minnesota (Minneapolis-St. Paul), 1992

Ross G. Jennings, *Distinguished Teaching Professor*
AB, California (Davis), 1974; MBA, California (Los Angeles), 1979; PhD, California (Berkeley), 1987

Steven J. Kachelmeier, *Professor*
BBA, New Mexico, 1980; PhD, Florida, 1988; CPA, New Mexico, 1981

William R. Kinney Jr., *Professor*
BS, Oklahoma State, 1963; MS, 1966; PhD, Michigan State, 1968; CPA, Oklahoma, 1964

Lisa L. Koonce, *Professor*
BSBA, Southern Illinois (Edwardsville), 1981; MAS, Illinois (Urbana-Champaign), 1982; PhD, 1990; CPA, Illinois, 1982; CMA, Illinois, 1984

Volker Laux, *Assistant Professor*
MBA, Johann Wolfgang Goethe-Universität Frankfurt, 1999; PhD, 2003

Stephen Limberg, *Professor*
BA, Occidental College, 1972; MBA, San Diego State, 1975; PhD, Arizona State, 1982; CPA, California, 1978

Robert G. May, *Professor*
BA, Michigan State, 1965; PhD, 1970

John M. McInnis, *Assistant Professor*
BBA, Texas (Austin), 2002; MPA, 2002; PhD, Iowa, 2008

Lillian F. Mills, *Professor*
BAcc, Florida, 1980; MA, 1981; PhD, Michigan (Ann Arbor), 1996

D. Paul Newman, *Professor*
BBA, Texas Tech, 1972; MBA, North Texas State, 1974; PhD, Texas (Austin), 1977; CPA, Texas, 1975

David E. Platt, *Senior Lecturer*
BS, Pennsylvania, 1981; MBA, Syracuse, 1989; PhD, Cornell, 1997

John R. Robinson, *Professor*
BS, Colorado State, 1975; MS, 1976; JD, Michigan (Ann Arbor), 1979; PhD, 1981; CPA, Colorado, 1976

Jaime J. Schmidt, *Assistant Professor*
BS, Kansas, 2000; MAcc, 2001; MS, 2005; PhD, Texas A&M, 2009

Jeri K. Seidman, *Assistant Professor*
BS, Case Western Reserve, 1997; MAcc, BS, 1998; PhD, Massachusetts Institute of Technology, 2008

Nicholas A. Seybert, *Assistant Professor*
BS, Maryland (College Park), 2003; PhD, Cornell, 2008

Michael G. Williamson, *Assistant Professor*
BS, Louisiana State (Baton Rouge), 1996; MS, Carnegie Mellon, 1998; MS, Indiana (Bloomington), 2003; PhD, 2005

Yanhua Yang, *Assistant Professor*
BA, Tsinghua, 1997; MAcc, 1999; PhD, Colorado (Boulder), 2006

Yong Yu, *Assistant Professor*
BA, Tsinghua, 1999; MA, Tulane, 2002; PhD, Pennsylvania State, 2006

DEPARTMENT OF FINANCE

Laura T. Starks, *Chair*

PROFESSORS EMERITUS

William W. Cooper, *Professor Emeritus*
BA, Chicago, 1938; DSc(hon), Ohio State, 1970; MA(hon), Harvard, 1976; DSc(hon), Carnegie-Mellon, 1982

Lawrence Lee Crum, *Professor Emeritus*
BBA, Texas, 1954; MBA, 1956; PhD, 1961

James Rudolph Kay, *Professor Emeritus*
BA, Birmingham-Southern College, 1938; PhD, Virginia, 1950

Ernest Winfield Walker, *Professor Emeritus*
BBA, MBA, Mississippi, 1948; DBA, Indiana, 1953

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Andres Almazan, *Associate Professor*
Licenciatura en Ciencias Empresariales, Universidad de Málaga, 1989; Master en Economia, Centro de Estudios Monetarios y Financieros, 1991; PhD, Massachusetts Institute of Technology, 1996

Aydogan Altı, *Associate Professor*
BA, Bogaziçi, 1996; PhD, Carnegie Mellon, 2002

Fernando A. Anjos, *Assistant Professor*
Licenciatura, Universidade Católica Portuguesa, 1998; MSc, Instituto Superior Técnico, 2004; PhD, Carnegie Mellon, 2008

Bernard S. Black, *Professor*
AB, Princeton, 1975; MA, California (Berkeley), 1977; JD, Stanford, 1982

Michael W. Brandl, *Senior Lecturer*
BA, Wisconsin (Madison), 1986; MA, 1989; PhD, Houston, 1996

Patrick L. Brockett, *Professor*
BA, California State (Long Beach), 1970; MA, PhD, California (Irvine), 1975

Keith C. Brown, *Distinguished Teaching Professor*
BA, San Diego State, 1977; MS, Purdue, 1978; PhD, 1981

Jonathan B. Cohn, *Assistant Professor*
BS, Alabama (Birmingham), 1997; MBA, Washington (St. Louis), 2002; PhD, Michigan (Ann Arbor), 2008

Philip Dean Corbae, *Professor*
BA, Colgate, 1982; PhD, Yale, 1990

Paul Damien, *Professor*
PhD, London, 1994

Alejandro H. Drexler, *Assistant Professor*
BA, Universidad de Chile, 1999; MA, 2001; PhD, Massachusetts Institute of Technology, 2009

Robert C. Duvic, *Distinguished Senior Lecturer*
BA, Tulane, 1969; MS, Florida Institute of Technology, 1975; MBA, Texas (Austin), 1983; PhD, 1990

Cesare Fracassi, *Assistant Professor*
Laurea, Politecnico di Milano, 1997; MBA, California (Los Angeles), 2004; PhD, 2009

George W. Gau, *Professor*
BS, Illinois (Urbana-Champaign), 1969; MS, 1971; PhD, 1975

Thomas W. Gilligan, *Professor*
BA, Oklahoma (Norman), 1979; PhD, Washington (St. Louis), 1984

John M. Griffin, *Professor*
BA, Baylor, 1992; MS, Texas A&M, 1993; PhD, Ohio State (Columbus), 1997

Ilan Guedj, *Assistant Professor*
BS, Technion-Machon Technologi Le'Israel, 2000; PhD, Massachusetts Institute of Technology, 2005

Beverly L. Hadaway, *Associate Professor*
BBA, North Texas State, 1969; MA, Alabama (Tuscaloosa), 1970; PhD, 1981

Greg F. Hallman, *Senior Lecturer*
BA, Virginia, 1985; MBA, Tulane, 1988; PhD, Texas (Austin), 1996

Bing Han, *Assistant Professor*
BS, Nankai, 1991; MS, Chicago, 1992; PhD, 1997; PhD, California (Los Angeles), 2002

Jay C. Hartzell, *Associate Professor*
BS, Trinity, 1991; PhD, Texas (Austin), 1998

Jennifer Huang, *Associate Professor*
BA, University of Science and Technology of China Hefei, 1992; MS, 1996; PhD, Massachusetts Institute of Technology, 2002

Regina W. Hughes, *Senior Lecturer*
BA, Tarleton State, 1975; MS, North Texas State, 1982

Jennifer L. Juergens, *Assistant Professor*
BS, Penn State, 1994; PhD, 2002

Kelly Leahy Kamm, *Senior Lecturer*
PhD, Texas (Austin), 1992

Shimon Kogan, *Assistant Professor*
BA, Universität Tel Aviv, 1993; MBA, California (Berkeley), 1999; PhD, 2005

Alok Kumar, *Assistant Professor*
BTech, Indian Institute of Technology (Kharagpur), 1991; ME, MS, Dartmouth, 1993; MA, Yale, 2000; PhD, Cornell, 2003

Sanford J. Leeds, *Senior Lecturer*
BS, Alabama (Tuscaloosa), 1986; JD, Virginia, 1989; MBA, Texas (Austin), 1995

James R. Lowery Jr., *Assistant Professor*
BA, Amherst, 2001; MS, Carnegie Mellon, 2006; PhD, 2009

Stephen P. Magee, *Professor*
BA, Texas Technological College, 1965; MA, 1966; PhD, Massachusetts Institute of Technology, 1969

Tobias Muhlofer, *Assistant Professor*
BA, Yale, 2001; MS, London, 2002; PhD, 2005

James A. Nolen Jr., *Distinguished Senior Lecturer*
BBA, Texas (Austin), 1974; MBA, 1976

Robert Parrino, *Professor*
BScE, Lehigh, 1978; MBA, College of William and Mary, 1980; MSBA, Rochester, 1991; PhD, 1992

Ramesh K. S. Rao, *Professor*
BTech, Indian Institute of Technology (Madras), 1974; MBA, Indiana (Bloomington), 1977; DBA, 1978

Ehud I. Ronn, *Professor*
BS, Technion—Machon Technology L'Israel, 1976; MS, 1978; PhD, Stanford, 1983

Jan Schneider, *Assistant Professor*
Diploma (Foreign), Freie Universität Berlin, 2000; PhD, British Columbia, 2006

Clemens Sialm, *Associate Professor*
LicOec, Universität St. Gallen-Hochschule für Wirtschafts-, Rechts- und Sozialwissenschaften, 1995; PhD, Stanford, 2001

Lewis J. Spellman, *Professor*
BBA, Michigan, 1961; MBA, 1962; MA, Stanford, 1969; PhD, 1971

Laura T. Starks, *Professor*
BA, Texas (Austin), 1972; MBA, Texas (San Antonio), 1975; PhD, Texas (Austin), 1981

Sheridan Titman, *Professor*
BS, Colorado (Boulder), 1975; MS, Carnegie Mellon, 1978; PhD, 1981

Stathis Tompaidis, *Associate Professor*
BS, Aristoteleion Panepistimion Thessalonikis, 1989; PhD, Texas (Austin), 1994

DEPARTMENT OF INFORMATION, RISK, AND OPERATIONS MANAGEMENT

Douglas J. Morrice, *Chair*

PROFESSORS EMERITUS

Mark B. Baker, *Associate Professor Emeritus*
BBA, Miami, 1968; JD, Southern Methodist, 1974

Cynthia M. Beath, *Professor Emeritus*
BA, Duke, 1966; MBA, California (Los Angeles), 1975; PhD, 1986

Charles T. Clark, *Professor Emeritus*
BBA, Texas, 1938; MBA, 1939; PhD, 1956

William W. Cooper, *Professor Emeritus*
BA, Chicago, 1938; DSc(hon), Ohio State, 1970; MA(hon), Harvard, 1976; DSc(hon), Carnegie-Mellon, 1982

James Albert Fitzsimmons, *Professor Emeritus*
BSE, Michigan, 1960; MBA, Western Michigan, 1965; PhD, California (Los Angeles), 1970

Gaylord A. Jentz, *Professor Emeritus*
BA, Wisconsin, 1953; JD, 1957; MBA, 1958

Eleanor W. Jordan, *Professor Emeritus*
BA, Texas (Austin), 1967; MA, 1976; PhD, 1978

Michael A. Kirk-Duggan, *Professor Emeritus*
BS, College of the Holy Cross, 1953; JD, Boston College, 1956; MPatentL, Georgetown, 1959

William Jackson Lord Jr., *Professor Emeritus*
BBA, Texas, 1950; MBA, 1953; PhD, Illinois, 1961

Bill Shaw, *Professor Emeritus*
BBA, Louisiana Tech, 1962; JD, Tulane, 1965; MBA, Louisiana Tech, 1968; LLM, Texas (Austin), 1972

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Ashish Agarwal, *Assistant Professor*
BTech, Indian Institute of Technology Bombay, 1996; MS, Massachusetts Institute of Technology, 1998; PhD, Carnegie Mellon, 2009

John R. Allison, *Professor*
JD, Baylor, 1972

Edward G. Anderson, *Associate Professor*
BA, Stanford, 1988; MBA, Michigan (Ann Arbor), 1993; PhD, Massachusetts Institute of Technology, 1997

Uttarayan Bagchi, *Professor*
BS, Indian Institute of Technology (Kharagpur), 1974; MS, 1976; MS, Washington State, 1978; PhD, Pennsylvania State, 1982

Anantaram Balakrishnan, *Professor*
BTech, Indian Institute of Technology (Madras), 1976; MBA, Indian Institute of Management (Ahmedabad), 1978; PhD, Massachusetts Institute of Technology, 1985

Anitesh Barua, *Distinguished Teaching Professor*
BE, Jadavpur, 1984; MS, Carnegie Mellon, 1987; PhD, 1990

Dean A. Bredeson, *Senior Lecturer*
BBA, Texas (Austin), 1993; JD, 1995

Patrick L. Brockett, *Professor*
BA, California State (Long Beach), 1970; MA, PhD, California (Irvine), 1975

Richard L. Byars, *Distinguished Senior Lecturer*
BA, Texas (Austin), 1968; MA, 1973

Frank B. Cross, *Professor*
BA, Kansas, 1977; JD, Harvard, 1980

Paul Damien, *Professor*
PhD, London, 1994

Andrew P. Dillon, *Professor*
BA, University College (Cork), 1984; MA, 1987; PhD, Lough-borough University of Technology, 1991

- Dain Donelson, Assistant Professor**
BS, Kettering, 1994; JD, Northwestern, 1997; MS, Boston College, 1999; PhD, Illinois (Urbana-Champaign), 2007
- James S. Dyer, Professor**
BA, Texas (Austin), 1965; PhD, 1969
- Qi Feng, Assistant Professor**
BE, Shanghai Jiaotong, 1999; PhD, Texas (Dallas), 2006
- Robert B. Freund, Senior Lecturer**
BSME, Texas (Austin), 1985; MS, Cornell, 1991; PhD, 1995
- Gail Gemberling, Senior Lecturer**
BS, MA, Southern Methodist, 1977; PhD, Texas (Austin), 1983
- Stephen M. Gilbert, Professor**
BS, Michigan (Ann Arbor), 1984; MS, Stanford, 1985; PhD, Massachusetts Institute of Technology, 1991
- Betsy S. Greenberg, Associate Professor**
BS, Brown, 1978; MS, California (Berkeley), 1981; PhD, 1986
- Bin Gu, Assistant Professor**
BS, Shanghai Jiaotong University, 1995; MA, Pennsylvania, 2001; PhD, 2002
- Genaro J. Gutiérrez, Associate Professor**
IIS, Instituto Tecnológico y de Estudios Superiores de Monterrey, 1978; MS, Stanford, 1983; PhD, 1988
- Dorothee Honhon, Assistant Professor**
BBA, MBA, Université de Liège, 2000; PhD, New York, 2006
- Sirkka L. Jarvenpaa, Professor**
BSBA, Bowling Green State, 1981; MBA, Minnesota (Minneapolis-St. Paul), 1982; PhD, 1986
- Ethan B. Kapstein, Professor**
AB, Brown, 1976; MA, Toronto, 1977; PhD, Tufts, 1986
- Prabhudev Konana, Distinguished Teaching Professor**
BTech, Mysore, 1983; MBA, Arizona, 1991; PhD, 1995
- Guoming Lai, Assistant Professor**
BS, Tsinghua, 2000; MS, 2003; MS, Carnegie Mellon, 2005; PhD, 2009
- Leon S. Lasdon, Professor**
BS, Syracuse, 1960; MS, Case Institute of Technology, 1962; PhD, 1964
- Robert E. McCulloch, Professor**
BS, Toronto, 1981; MS, Minnesota (Minneapolis-St. Paul), 1984; PhD, 1985
- Reuben R. McDaniel Jr., Professor**
BS, Drexel, 1964; MEd, Akron, 1968; EdD, Indiana, 1971
- Christopher H. Meakin, Senior Lecturer**
BBA, Texas A&M, 1983; MA, Rice, 1988; JD, Houston, 1987
- Rafael Mendoza-Arriaga, Assistant Professor**
BS, Instituto Tecnológico y de Estudios Superiores de Monterrey, 1999; MSc, Toronto, 2002; MSc, Northwestern, 2005; PhD, 2009
- Douglas J. Morrice, Professor**
BA, Carleton, 1985; MS, Cornell, 1988; PhD, 1990
- John R. Mote, Associate Professor**
BBA, Texas (Austin), 1975; PhD, 1979
- Paula C. Murray, Professor**
BA, Baylor, 1977; JD, Texas (Austin), 1980
- Kumar Muthuraman, Assistant Professor**
BTech, Central Electrochemical Research Institute, 1998; MS, Stanford, 2000; PhD, 2003
- Elota Patton, Senior Lecturer**
MFA, Texas (Austin), 1976; MEd, Texas State (San Marcos), 1993
- Robert A. Prentice, Distinguished Teaching Professor**
BA, Kansas, 1972; JD, Washburn University of Topeka, 1975
- Timothy W. Ruefli, Professor**
BA, Wesleyan, 1964; MS, Carnegie Institute of Technology, 1967; PhD, Carnegie Mellon, 1969
- Maytal Saar-Tsechansky, Assistant Professor**
BS, Universitat Ben Gurion Ba-Negev, 1994; MS, 1997; PhD, New York, 2002
- Thomas W. Sager, Professor**
BA, Iowa, 1968; MS, 1971; PhD, 1973
- James C. Scott, Assistant Professor**
BS, Texas (Austin), 2004; MS, Cambridge, 2005; PhD, Duke, 2009
- Sridhar Seshadri, Professor**
BTech, Indian Institute of Technology Madras, 1978; PhD, California (Berkeley), 1993
- Thomas S. Shively, Professor**
BA, Middlebury College, 1981; MBA, Chicago, 1984; PhD, 1986
- David B. Spence, Associate Professor**
BA, Gettysburg College, 1980; JD, North Carolina (Chapel Hill), 1984; PhD, Duke, 1997
- Huseyin Tanriverdi, Associate Professor**
BS, Orta Dogu Teknik Üniversitesi, 1989; MS, 1993; MS, London School of Economics and Political Science, 1995; PhD, Boston, 2001
- Stathis Tompaidis, Associate Professor**
BS, Aristoteleion Panepistimion Thessalonikis, 1989; PhD, Texas (Austin), 1994
- Canan Ulu, Assistant Professor**
BS, Orta Dogu Teknik Üniversitesi, 1998; MS, 2000; PhD, Duke, 2007
- Andrew B. Whinston, Professor**
BA, Michigan, 1957; MS, Carnegie Institute of Technology, 1960; PhD, 1962
- Thaleia Zariphopoulou, Professor**
Ptychion, Ethnikon Metsovia Polytechnion Athinon, 1984; MS, Brown, 1985; PhD, 1989

DEPARTMENT OF MANAGEMENT

Pamela R. Haunschild, Chair

PROFESSORS EMERITUS

- Victor L. Arnold, Professor Emeritus**
BS, Colorado State, 1965; MS, 1968; PhD, Wisconsin (Madison), 1971
- Floyd S. Brandt, Professor Emeritus**
BA, Texas Technological College, 1951; MBA, Michigan, 1952; DBA, Harvard, 1960
- Brian E. Graham-Moore, Professor Emeritus**
BA, Northwestern, 1961; MA, Washington (St. Louis), 1967; PhD, 1970

- Roy D. Harris, Professor Emeritus**
BSME, Texas, 1958; MSME, 1960; PhD, California (Los Angeles), 1965
- Isadore B. Helburn, Professor Emeritus**
BS, Wisconsin, 1960; MS, 1962; PhD, 1966
- Charles C. Holt, Professor Emeritus**
BS, MS, Massachusetts Institute of Technology, 1944; MA, Chicago, 1950; PhD, 1955
- George P. Huber, Professor Emeritus**
BSME, Missouri (Columbia), 1958; MSIE, 1961; PhD, Purdue, 1966

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Emily T. Amanatullah, Assistant Professor**
BA, BS, Duke, 2002; PhM, Columbia, 2004; PhD, 2007
- Edward G. Anderson, Associate Professor**
BA, Stanford, 1988; MBA, Michigan (Ann Arbor), 1993; PhD, Massachusetts Institute of Technology, 1997
- Caroline A. Bartel, Assistant Professor**
BA, State University of New York (Stony Brook), 1992; MA, Michigan (Ann Arbor), 1996; PhD, 1998
- Sekou Bermis, Assistant Professor**
BS, Rensselaer Polytechnic Institute, 1999; MS, Northwestern, 2005; PhD, 2009
- Ethan R. Burris, Assistant Professor**
BA, Washington (St. Louis), 1999; PhD, Cornell, 2005
- John Sibley Butler, Professor**
BA, Louisiana State (Baton Rouge), 1969; MA, Northwestern, 1972; PhD, 1974
- Craig R. Crossland, Assistant Professor**
BA, Queensland, 1995; MBA, University College (Dublin), 2001; PhD, Pennsylvania State, 2008
- John Daly, Distinguished Teaching Professor**
BA, Maryland (College Park), 1973; MA, West Virginia, 1974; PhD, Purdue, 1977
- Douglas R. Dierking, Senior Lecturer**
BS, Central Missouri State, 1978; MEd, Missouri (Columbia), 1979; PhD, Texas (Austin), 1997
- John N. Doggett, Senior Lecturer**
BA, Claremont Men's College, 1969; JD, Yale, 1972; MBA, Harvard, 1981
- Janet M. Dukerich, Professor**
BS, Ohio State (Columbus), 1979; MA, 1981; PhD, Minnesota (Minneapolis-St. Paul), 1985
- James S. Dyer, Professor**
BA, Texas (Austin), 1965; PhD, 1969
- Kathleen A. Edwards, Senior Lecturer**
BSPEd, Texas Christian, 1972; MEd, 1978; PhD, Texas (Austin), 1997
- James W. Fredrickson, Professor**
BBA, Wake Forest, 1969; MBA, 1973; PhD, Washington (Seattle), 1980
- Stephen M. Gilbert, Professor**
BS, Michigan (Ann Arbor), 1984; MS, Stanford, 1985; PhD, Massachusetts Institute of Technology, 1991
- Melissa E. Graebner, Assistant Professor**
BS, Stanford, 1993; MS, 1996; PhD, 2001

Genaro J. Gutiérrez, *Associate Professor*
IIS, Instituto Tecnológico y de Estudios Superiores de Monterrey, 1978; MS, Stanford, 1983; PhD, 1988

Pamela R. Haunschild, *Professor*
BA, Northern Illinois, 1984; MS, Carnegie Mellon, 1990; PhD, 1992

Andrew D. Henderson, *Associate Professor*
BA, Rice, 1982; MBA, Texas (Austin), 1992; PhD, 1996

David B. Jemison, *Professor*
BS, Ohio State, 1969; MBA, 1970; PhD, Washington (Seattle), 1978

Kyle Lewis, *Associate Professor*
BS, Duke, 1983; MSIA, Carnegie Mellon, 1990; PhD, Maryland (College Park), 1999

Jeffrey Loewenstein, *Assistant Professor*
BS, Michigan (Ann Arbor), 1995; MA, Northwestern, 1998; PhD, 2000

Luis D. Martins, *Associate Professor*
BS, Barkatullah, 1986; MS, 1988; MPhil, New York, 1995; PhD, 1997

Paul V. Martorana, *Assistant Professor*
BA, California (Berkeley), 1996; PhD, Northwestern, 2005

Christopher H. Meakin, *Senior Lecturer*
BBA, Texas A&M, 1983; MA, Rice, 1988; JD, Houston, 1987

Douglas J. Morrice, *Professor*
BA, Carleton, 1985; MS, Cornell, 1988; PhD, 1990

Gaylen Paulson, *Senior Lecturer*
BS, Minnesota (Minneapolis-St. Paul), 1992; MA, Northwestern, 1995; PhD, 1998

Francisco Polidoro Jr., *Assistant Professor*
BTech, Instituto Tecnológico de Aeronáutica, 1987; MA, Fundação Getulio Vargas, 1990; MBA, Henley Management College, 1997; PhD, Michigan (Ann Arbor), 2006

Violina P. Rindova, *Professor*
JD, Sofiski universitet 'Kliment Ohridski', 1990; MBA, Houston, 1992; PhD, New York, 1999

William B. Swann Jr., *Professor*
BA, Gettysburg College, 1974; PhD, Minnesota (Minneapolis-St. Paul), 1978

Jennifer Whitson, *Assistant Professor*
BA, California (Irvine), 2000; MS, Northwestern, 2004; PhD, 2007

DEPARTMENT OF MARKETING

Eli P. Cox III, *Chair*

PROFESSORS EMERITUS

Calvin Patton Blair, *Professor Emeritus*
BA, Texas, 1949; MA, 1953; PhD, 1957

Robert T. Green, *Professor Emeritus*
BA, Pennsylvania State, 1965; MBA, State University of New York (Buffalo), 1967; PhD, Pennsylvania State, 1971

Karl Eugene Henion II, *Professor Emeritus*
BME, Michigan, 1949; MBA, Harvard, 1955; PhD, Texas (Austin), 1967

David L. Huff, *Professor Emeritus*
BS, Oregon, 1955; MBA, Washington (Seattle), 1957; PhD, 1960

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Mark I. Alpert, *Professor*
BS, Massachusetts Institute of Technology, 1964; MBA, Southern California, 1965; MS, 1967; DBA, 1968

Susan M. Broniarczyk, *Professor*
BS, Illinois (Urbana-Champaign), 1987; PhD, Florida, 1992

Eli P. Cox III, *Professor*
BA, Michigan State, 1964; MBA, 1966; DBA, Indiana (Bloomington), 1973

William H. Cunningham, *Professor*
BA, Michigan State, 1966; MBA, 1967; PhD, 1970

Jade S. DeKinder, *Assistant Professor*
BA, Emory, 2002; PhD, 2007

Jason Duan, *Assistant Professor*
BS, Nanjing, 1999; MA, Duke, 2005; PhD, 2006

Linda V. Gerber, *Senior Lecturer*
BBA, Texas (Austin), 1973; PhD, 1983

Andrew D. Gershoff, *Associate Professor*
AA, Berkshire Community College, 1988; BA, Massachusetts (Amherst), 1989; MBA, Texas (Austin), 1995; PhD, 1999

Kate Gillespie, *Associate Professor*
BA, Harvard, 1974; MBA, Virginia, 1976; PhD, London, 1983

Linda L. Golden, *Professor*
BSBA, Florida, 1971; MA, 1972; PhD, 1975

Ty T. Henderson, *Assistant Professor*
BS, Iowa, 1997; BA, 1998; MBA, 2002; PhD, Wisconsin (Madison), 2006

Wayne D. Hoyer, *Professor*
BA, Purdue, 1976; MS, 1979; PhD, 1980

Julie R. Irwin, *Associate Professor*
BA, College of William and Mary, 1984; MA, Colorado (Boulder), 1988; PhD, 1992

Kapil Jain, *Senior Lecturer*
BTech, Indian Institute of Technology (New Delhi), 1978; MBA, Bombay, 1982; PhD, Columbia (New York City), 1990

Orlando Rene Kelm, *Associate Professor*
BA, Brigham Young (Salt Lake City), 1983; MA, 1985; PhD, California (Berkeley), 1989

Romana Khan, *Assistant Professor*
BA, Swarthmore College, 1994; MS, Iowa State, 1997; PhD, Northwestern, 2004

Kathleen S. Mackie, *Senior Lecturer*
MBA, American Graduate School of International Management, 1974; PhD, Texas (Austin), 1995

Vijay Mahajan, *Professor*
BS, Indian Institute of Technology (Kanpur), 1970; MSE, Texas (Austin), 1972; PhD, 1975

Arthur B. Markman, *Professor*
BS, Brown, 1988; MA, Illinois (Urbana-Champaign), 1990; PhD, 1992

Leigh M. McAlister, *Professor*
BS, Oklahoma, 1972; MS, Stanford, 1975; PhD, 1978

Herbert A. Miller, *Senior Lecturer*
BS, Hartford, 1968

Robert A. Peterson, *Professor*
BSB, Minnesota (Minneapolis-St. Paul), 1966; MS, 1968; PhD, 1970

Rajagopal Raghunathan, *Associate Professor*
BE, Birla Institute of Technology and Sciences, 1989; MBA, Indian Institute of Management (Calcutta), 1992; PhD, New York, 2000

Raghunath S. Rao, *Assistant Professor*
MBA, Indian Institute of Foreign Trade (New Delhi), 1998; MS, PhD, Minnesota (Minneapolis-St. Paul), 2007

Garrett P. Sonnier, *Assistant Professor*
BS, Louisiana State (Baton Rouge), 1995; ME, Duke, 1997; PhD, California (Los Angeles), 1996

Raji Srinivasan, *Associate Professor*
MS, Madras Christian College, 1981; MBA, Indian Institute of Management (Ahmedabad), 1983; PhD, Pennsylvania State (University Park), 2000

Frenkel Ter Hofstede, *Associate Professor*
MS, Rijksuniversiteit Groningen, 1994; PhD, Wageningen Universiteit, 1999

John K. Williams, *Senior Lecturer*
BBA, North Texas, 1977; MBA, Texas (Austin), 1994

Ying Zhang, *Assistant Professor*
BA, Nanjing, 2001; MS, Cambridge, 2002; MBA, PhD, Chicago, 2007

ADJUNCT PROFESSORS

Shelby H. Carter Jr., *Adjunct Professor*
BBA, Texas, 1953

Jaime A. Gomez, *Adjunct Professor*
BS, Instituto Tecnológico y de Estudios Superiores de Monterrey, 1977; MAS, Waterloo, 1981; PhD, Pennsylvania, 1990

COLLEGE OF COMMUNICATION

DEPARTMENT OF ADVERTISING

Isabella C. M. Cunningham, *Chair*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Ronald B. Anderson, *Associate Professor*
BA, Oklahoma, 1973; MS, San Diego State, 1979; PhD, Michigan State, 1987

Lucinda J. Atkinson, *Assistant Professor*
BA, McGill, 1997; MA, New York, 1998; PhD, Wisconsin (Madison), 2009

Neal M. Burns, *Professor*
BS, Illinois (Urbana-Champaign), 1953; MSc, McGill, 1957; PhD, 1958

Sejung Choi, *Associate Professor*
BA, Ewha Women's, 1994; MA, Michigan State, 1998; PhD, 2002

Vincent J. Cicchirillo, *Assistant Professor*
BA, West Virginia, 2003; MA, 2004; PhD, Ohio State (Columbus), 2009

Isabella C. M. Cunningham, Professor
Doutor de Jurisprudência, Pontifícia Universidade Católica de São Paulo, 1964; Mestrado de Administração de Empresas, Escola de Administração da Fundação Getúlio Vargas, 1967; MBA, Michigan State, 1968; PhD, 1972

Lisa Z. Dobias, Senior Lecturer
BSAdv, Texas (Austin), 1989

Minette Drumwright, Associate Professor
BA, Baylor, 1974; MBA, 1981; PhD, North Carolina (Chapel Hill), 1986

Matthew S. Eastin, Associate Professor
BA, Nebraska (Lincoln), 1994; MA, 1997; PhD, Michigan State, 2001

Terry Hemeyer, Senior Lecturer
BS, Ohio State, 1960; MA, Denver, 1969

Geraldine R. Henderson, Associate Professor
BSEE, Purdue, 1986; MBA, Northwestern, 1991; PhD, 1995

LeeAnn Kahlor, Assistant Professor
BA, Wisconsin (Madison), 1991; MA, Marquette, 1995; PhD, Wisconsin (Madison), 2003

Gene H. Kincaid, Senior Lecturer
BBA, Texas (Austin), 1972; MBA, 1974; MA, 1983

Wei-Na Lee, Professor
BA, Tamkang, 1980; MA, Wisconsin (Madison), 1982; MS, Illinois (Urbana-Champaign), 1984; PhD, 1988

Bradford R. Love, Assistant Professor
BS, Florida, 1998; PhD, Michigan State, 2007

Michael S. Mackert, Assistant Professor
BS, Michigan State, 2001; MA, 2003; PhD, 2006

John H. Murphy, Distinguished Teaching Professor
BBA, Texas Technological, 1968; MBA, 1969; PhD, Texas (Austin), 1974

Jef I. Richards, Professor
BS, Rochester Institute of Technology, 1977; JD, Indiana (Bloomington), 1981; PhD, Wisconsin (Madison), 1988

Patricia A. Stout, Professor
BA, Arizona, 1979; PhD, Illinois (Urbana-Champaign), 1984

Ye Sun, Assistant Professor
BA, Peking, 2001; MA, Wisconsin (Madison), 2005; PhD, 2008

Yongjun Sung, Assistant Professor
BA, Iowa State, 1999; MA, Georgia, 2003; PhD, 2006

Gary B. Wilcox, Professor
BBA, Texas (Austin), 1974; MA, 1977; PhD, Michigan State, 1982

Jerome D. Williams, Professor
BA, Pennsylvania, 1969; MS, Union College, 1975; PhD, Colorado (Boulder), 1986

ADJUNCT PROFESSORS

Jeff R. Hunt, Adjunct Assistant Professor
BJ, Texas (Austin), 1984

Stephen J. Pont, Adjunct Assistant Professor
BA, Texas (Austin), 1996; MPH, Vanderbilt, 2007; MD, Texas Southwestern (Dallas), 2002

DEPARTMENT OF COMMUNICATION SCIENCES AND DISORDERS

Craig A. Champlin, Chair

PROFESSORS EMERITUS

Rodger Dalston, Professor Emeritus
BA, Cornell, 1964; MA, Northwestern, 1966; PhD, 1972

Grace H. Hanson, Professor Emeritus
BA, Texas, 1949; MEd, 1951

Frederick N. Martin, Professor Emeritus
BA, Brooklyn College, 1957; MA, 1958; PhD, City University of New York, 1968

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Lisa M. Bedore, Associate Professor
BA, San Diego State, 1984; MA, 1987; PhD, Purdue, 1998

Mark E. Bernstein, Associate Professor
BA, Pennsylvania, 1970; MA, New York, 1972; EdD, Boston, 1980

Courtney T. Byrd, Assistant Professor
BS, Louisiana State (Shreveport), 1997; MS, Texas Christian, 1999; PhD, Vanderbilt, 2003

Craig A. Champlin, Professor
MA, Kansas (Lawrence), 1982; PhD, 1987

Barbara L. Davis, Professor
BA, Texas (Austin), 1968; MA, 1970; PhD, 1986

Dena H. Granof, Senior Lecturer
BS, Case Western Reserve, 1971; MS, Michigan (Ann Arbor), 1972; PhD, Texas (Austin), 1982

Joyce Harris, Associate Professor
BA, Texas (El Paso), 1973; MA, 1974; PhD, Texas (Austin), 1992

Su-Hyun Jin, Assistant Professor
BS, Ewha Women's, 1991; MA, PhD, Minnesota (Minneapolis-St. Paul), 2000

Chang Liu, Assistant Professor
BS, Peking, 1997; PhD, Indiana (Bloomington), 2002

Thomas P. Marquardt, Professor
BS, Wisconsin, 1968; MS, 1970; PhD, Washington (Seattle), 1973

Christine L. Matyear, Senior Lecturer
BA, Houston (Victoria), 1979; MA, 1985; PhD, Texas (Austin), 1997

Elizabeth D. Peña, Professor
BA, Redlands, 1982; MS, San Francisco State, 1984; PhD, Temple, 1993

Li Sheng, Assistant Professor
BA, Xiangtan, 1997; MA, Beijing Normal, 2000; PhD, Northwestern, 2007

Doug Sladen, Assistant Professor
BA, Western Washington, 1992; MA, 1994; PhD, Vanderbilt, 2006

Harvey M. Sussman, Distinguished Teaching Professor
BA, Queens College, City University of New York, 1965; MS, Wisconsin, 1967; PhD, 1970

ADJUNCT PROFESSORS

Ronald B. Gillam, Adjunct Professor
BS, Colorado State, 1977; MS, 1979; PhD, Indiana (Bloomington), 1989

Swathi Kiran, Adjunct Associate Professor
BS, All-India Institute of Medical Sciences, 1995; MA, Northwestern, 1998; PhD, 2001

DEPARTMENT OF COMMUNICATION STUDIES

Barry Brummett, Chair

PROFESSORS EMERITUS

Paul H. Gray, Professor Emeritus
BA, Marietta College, 1959; MA, Illinois, 1960; PhD, Louisiana State (Baton Rouge), 1966

Mark L. Knapp, Distinguished Teaching Professor Emeritus
BS, Kansas, 1962; MA, 1963; PhD, Pennsylvania State, 1966

Joe W. Neal, Professor Emeritus
BA, Texas, 1938; MA, 1941; PhD, 1957

Frederick D. Williams, Professor Emeritus
BA, Idaho, 1955; MA, Southern California, 1960; PhD, 1962

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Dawna I. Ballard, Associate Professor
BA, Howard, 1994; MA, California (Santa Barbara), 1997; PhD, 2002

Barry Brummett, Professor
BA, Macalester College, 1973; MA, Minnesota (Minneapolis-St. Paul), 1975; PhD, 1978

Craig A. Champlin, Professor
MA, Kansas (Lawrence), 1982; PhD, 1987

Richard A. Cherwitz, Professor
BA, Iowa, 1974; MA, 1976; PhD, 1978

Dana L. Cloud, Associate Professor
BA, Pennsylvania State, 1986; MA, Iowa, 1991; PhD, 1992

René M. Dailey, Assistant Professor
BA, Grinnell College, 1996; MA, Wyoming, 1998; PhD, California (Santa Barbara), 2005

John Daly, Distinguished Teaching Professor
BA, Maryland (College Park), 1973; MA, West Virginia, 1974; PhD, Purdue, 1977

Barbara L. Davis, Professor
BSSpe, Texas, 1968; MA, 1970; PhD, 1986

D. Diane Davis, Associate Professor
BA, Midwestern, 1986; MA, Indiana (Fort Wayne), 1989; PhD, Texas (Arlington), 1995

Erin Donovan-Kicken, Assistant Professor
BA, Hiram College, 2000; MA, Illinois (Urbana-Champaign), 2004; PhD, 2008

Joshua C. Gunn, Assistant Professor
BA, George Washington, 1996; MA, Minnesota (Minneapolis-St. Paul), 1998; PhD, 2002

Roderick P. Hart, Distinguished Teaching Professor
BA, Massachusetts, 1966; MA, Pennsylvania State, 1968; PhD, 1970

Sharon E. Jarvis, Associate Professor
BA, California (Davis), 1991; MA, Arizona, 1995; PhD, Texas (Austin), 2000

Mark G. Longaker, *Associate Professor*
BA, Southwestern Louisiana, 1996; MA, Pennsylvania State, 1999; PhD, 2003

Thomas P. Marquardt, *Professor*
BS, Wisconsin, 1968; MS, 1970; PhD, Washington (Seattle), 1973

Madeline Maxwell, *Professor*
BA, Bryn Mawr College, 1970; MEd, Arizona, 1972; PhD, 1980

Matthew McGlone, *Associate Professor*
BA, Louisiana State (Baton Rouge), 1988; MA, Princeton, 1991; PhD, 1994

Jorge F. Peña, *Assistant Professor*
BA, Universidad de Santiago de Chile, 2001; MS, Cornell, 2004; PhD, 2007

Joel D. Rollins, *Senior Lecturer*
BA, North Texas, 1984; MA, 1989; PhD, Texas (Austin), 1996

Keri K. Stephens, *Assistant Professor*
BS, Texas A&M, 1990; MA, Texas (Austin), 2000; PhD, 2005

Jürgen K. Streeck, *Associate Professor*
Magister Artium, Freie Universität Berlin, 1976; DPhil, 1981

Natalie J. Stroud, *Assistant Professor*
BA, California (Berkeley), 2001; PhD, Pennsylvania, 2006

Scott R. Stroud, *Assistant Professor*
BA, University of the Pacific, 1998; MA, 2000; MA, San Jose State, 2002; PhD, Temple, 2006

Jeffrey K. Tulis, *Associate Professor*
BA, Bates College, 1972; MA, Brown, 1974; PhD, Chicago, 1982

Anita L. Vangelisti, *Professor*
BA, Washington (Seattle), 1983; MA, 1985; PhD, Texas (Austin), 1989

Jeffrey Walker, *Professor*
BA, Portland State, 1972; MA, 1977; PhD, California (Berkeley), 1985

ADJUNCT PROFESSORS

Joel L. Swerdlow, *Adjunct Professor*
BA, Syracuse, 1968; MA, Cornell, 1971; PhD, 1974

Martha S. Watson, *Adjunct Professor*
BA, Rice, 1964; BA, Texas (Austin), 1966; PhD, 1969

SCHOOL OF JOURNALISM

Tracy S. Dahlby, *Chair*

PROFESSORS EMERITUS

Henry A. Anderson, *Associate Professor Emeritus*
BFA, Texas, 1953; MS, Trinity, 1964; PhD, Texas (Austin), 1975

J. B. Colson, *Professor Emeritus*
BFA, Ohio, 1954; MA, California (Los Angeles), 1961

Wayne A. Danielson, *Professor Emeritus*
BA, State University of Iowa, 1952; MA, Stanford, 1953; PhD, 1957

William Korbus, *Professor Emeritus*
BFA, Illinois (Urbana-Champaign), 1957; BFA, 1960; MS, 1974

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Rosental C. Alves, *Professor*
BA, Universidade Federal do Rio de Janeiro, 1976

Gene A. Burd, *Associate Professor*
BA, California (Los Angeles), 1953; MS, 1954; PhD, Northwestern, 1964

Hsiang Chyi, *Assistant Professor*
BA, National Taiwan, 1994; MA, Stanford, 1995; PhD, Texas (Austin), 1999

Renita Coleman, *Associate Professor*
BS, Florida, 1979; MA, Missouri (Columbia), 1997; PhD, 2001

Tracy S. Dahlby, *Professor*
BA, Washington (Seattle), 1972; AM, Harvard, 1974

Dennis Darling, *Professor*
BVA, Georgia State, 1970; MFA, School of the Art Institute of Chicago, 1972

Donna De Cesare, *Associate Professor*
BA, State University of New York (Buffalo), 1976; MPhil, Essex, 1979

Mercedes Lynn de Uriarte, *Associate Professor*
BA, California State (Fullerton), 1972; MA, Yale, 1974; PhM, 1978; PhD, Yale, 1996

David Garlock, *Senior Lecturer*
BS, Maryland (College Park), 1973

Homero Gil de Zuniga, *Assistant Professor*
BA, Universidad Complutense de Madrid, 1999; MA, Wisconsin (Madison), 2003; PhD, Universidad Europea de Madrid, 2006; PhD, Wisconsin (Madison), 2007

Dustin Harp, *Assistant Professor*
BA, Sonoma State, 1992; MA, Texas (Austin), 1997; PhD, Wisconsin (Madison), 2002

Bob Jensen, *Professor*
BS, Moorhead State, 1981; MA, American, 1985; PhD, Minnesota (Minneapolis-St. Paul), 1992

Dominic L. Lasorsa, *Associate Professor*
BA, St. Bonaventure, 1970; MA, Texas (Austin), 1981; PhD, Stanford, 1986

Maxwell E. McCombs, *Professor*
BA, Tulane, 1960; MA, Stanford, 1961; PhD, 1966

Paula M. Poindexter, *Associate Professor*
BSRTF, Texas (Austin), 1972; MA, Syracuse, 1977; PhD, 1980

Stephen D. Reese, *Professor*
BA, Tennessee (Knoxville), 1976; MA, Wisconsin (Madison), 1980; PhD, 1982

Maggie Rivas-Rodriguez, *Associate Professor*
BA, Texas (Austin), 1976; MS, Columbia, 1977; PhD, North Carolina (Chapel Hill), 1988

América Rodriguez, *Associate Professor*
BA, Swarthmore College, 1978; PhD, California (San Diego), 1993

George Sylvie, *Associate Professor*
BA, Louisiana State, 1976; MA, Missouri (Columbia), 1978; PhD, Texas (Austin), 1988

Russell G. Todd, *Professor*
BJ, Texas (Austin), 1972; MA, Stanford, 1979; PhD, 1982

Kristopher Wilson, *Senior Lecturer*
BS, Northern Arizona, 1980; MA, Ohio State (Columbus), 1986; PhD, Colorado (Boulder), 1993

DEPARTMENT OF RADIO-TELEVISION-FILM

Thomas G. Schatz, *Interim Chair*

PROFESSORS EMERITUS

Robert D. Brooks, *Professor Emeritus*
BA, Kansas, 1956; MA, 1963; PhD, Wisconsin, 1968

Robert E. Davis, *Professor Emeritus*
BA, Northern Iowa, 1953; MA, 1956; PhD, Iowa, 1965

Frederick D. Williams, *Professor Emeritus*
BA, Idaho, 1955; MA, Southern California, 1960; PhD, 1962

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Jennifer S. Brundidge, *Assistant Professor*
BA, Loyola Marymount, 1997; MA, San Diego State, 2002; PhD, California (Santa Cruz), 2008

Wenhong Chen, *Assistant Professor*
BA, University of International Business and Economics, 1995; MA, Toronto, 2001; PhD, 2007

Steven Dietz, *Professor*
BA, Northern Colorado, 1980

Caroline J. Frick, *Assistant Professor*
BA, Miami (Ohio), 1993; MA, East Anglia, 1995; PhD, Texas (Austin), 2005

Jennifer Fuller, *Assistant Professor*
BA, South Carolina (Columbia), 1994; MA, Wisconsin (Madison), 2000; PhD, 2004

Andrew S. Garrison, *Associate Professor*
BA, Antioch, 1974

Lalitha Gopalan, *Associate Professor*
BA, Madras Christian College, 1982; MA, Delhi Vishwavidyalaya, 1984; MA, Rochester, 1987; PhD, 1993

Don W. Howard, *Assistant Professor*
BA, Baylor, 1979; MA, Texas (Austin), 1988

Michael S. Kackman, *Assistant Professor*
BFA, Emerson College, 1994; MA, Wisconsin (Madison), 1995; PhD, 1999

Mary C. Kearney, *Associate Professor*
BA, San Diego, 1984; MA, Georgetown, 1992; PhD, Southern California, 1998

Stuart Kelban, *Assistant Professor*
BA, Harvard, 1986; MFA, Virginia, 1989

Shanti Kumar, *Associate Professor*
BS, Osmania, 1987; BA, 1988; MA, 1989; MS, Texas Christian, 1994; PhD, Indiana (Bloomington), 1998

Anne Lewis, *Senior Lecturer*
BFA, School of Visual Arts (New York), 2000

Richard Lewis, *Associate Professor*
MFA, Texas (Austin), 1994

- Madhavi Mallapragada**, *Assistant Professor*
BA, Madras, 1989; MA, Stella Maris College, 1991; PhM, Jawaharlal Nehru, 1995; MA, Wisconsin (Madison), 1999; PhD, 2003
- Bruce W. Pennycook**, *Professor*
BMusic, Toronto, 1973; MMusic, 1974; DMA, Stanford, 1978
- Edward A. Radtke**, *Assistant Professor*
BFA, New York, 1985
- Charles E. Ramírez Berg**, *Distinguished Teaching Professor*
MA, Texas (Austin), 1975; PhD, 1987
- Paul J. Raval**, *Assistant Professor*
BA, California (San Diego), 1998; BS, 1998; MFA, Texas (Austin), 2004
- América Rodríguez**, *Associate Professor*
BA, Swarthmore College, 1978; PhD, California (San Diego), 1993
- Thomas G. Schatz**, *Professor*
BA, Notre Dame, 1970; MA, Nebraska (Lincoln), 1971; MA, Iowa, 1974; PhD, 1976
- Nancy Schiesari**, *Professor*
BFA, Central School of Art (London), 1973; BA, Academie di Belle Arti (Urbino), 1975; MFA, Royal College of Art (London), 1978
- Andrew B. Shea**, *Associate Professor*
BA, Hampshire College, 1976; JD, Northeastern, 1982; MFA, California Institute of the Arts, 1985; MFA, Southern California, 1994
- Ellen Spiro**, *Associate Professor*
MA, State University of New York (Buffalo), 1988
- Janet Staiger**, *Professor*
BA, Nebraska (Omaha), 1968; MA, Purdue, 1969; PhD, Wisconsin (Madison), 1981
- Laura L. Stein**, *Associate Professor*
BA, California (Berkeley), 1987; MA, Teachers College, Columbia, 1990; PhD, Texas (Austin), 1997
- Paul J. Stekler**, *Professor*
BA, Williams College, 1974; PhD, Harvard, 1982
- Allucquere Rosanne Stone**, *Associate Professor*
BA, St. John's College (Maryland), 1965; PhD, California (Santa Cruz), 1993
- Joseph D. Straubhaar**, *Professor*
BA, Stanford, 1973; MA, Tufts, 1974; MA, 1975; PhD, 1981
- Sharon L. Strover**, *Professor*
BA, Wisconsin (Madison), 1972; MA, Stanford, 1978; PhD, 1982
- Kathleen Tyner**, *Assistant Professor*
BS, Ball State, 1973; MA, San Francisco State, 1986
- S. Craig Watkins**, *Associate Professor*
BA, Texas (Austin), 1988; PhD, Michigan (Ann Arbor), 1994
- Karin Wilkins**, *Professor*
BA, Bucknell, 1984; MA, Pennsylvania, 1987; PhD, 1991

COLLEGE OF EDUCATION

DEPARTMENT OF CURRICULUM AND INSTRUCTION

Norma V. Cantu, *Interim Chair*

PROFESSORS EMERITUS

- Mario A. Benítez**, *Distinguished Teaching Professor Emeritus*
PhB, Universidad Pontificia Comillas, 1951; MA, Texas Christian, 1959; DLitt, Universidad de la Habana, 1960; MEd, Texas Wesleyan College, 1962; PhD, Claremont Graduate School, 1966
- George M. Blanco**, *Associate Professor Emeritus*
BA, Texas Western College, 1958; MA, Middlebury College, 1964; PhD, Texas (Austin), 1971
- John G. Bordie**, *Professor Emeritus*
BA, Chicago, 1949; PhD, Texas, 1955
- Ralph W. Cain**, *Associate Professor Emeritus*
BSEd, Texas Christian, 1951; MEd, Texas, 1962; PhD, 1964
- L. Ray Carry**, *Professor Emeritus*
BA, North Texas State College, 1952; MS, 1960; MS, Stanford, 1964; PhD, 1968
- Heather Lilian Carter**, *Professor Emeritus*
PhB, Northwestern, 1961; PhD, Maryland (College Park), 1969
- Ozro Luke Davis Jr.**, *Professor Emeritus*
BA, North Texas State College, 1949; MEd, 1950; PhD, George Peabody College for Teachers, 1958
- Edmund James Farrell**, *Professor Emeritus*
BA, Stanford, 1950; MA, 1951; PhD, California (Berkeley), 1969
- Joe L. Frost**, *Professor Emeritus*
BSEd, Arkansas Polytechnic College, 1960; MEd, Arkansas, 1961; EdD, 1965
- Frank J. Guszak**, *Professor Emeritus*
BSEd, Texas, 1954; MEd, 1958; PhD, Wisconsin, 1966
- William Richard Harmer**, *Professor Emeritus*
BS, Minnesota (Minneapolis-St. Paul), 1950; MA, 1957; PhD, 1959
- Julie M. Jensen**, *Professor Emeritus*
BS, Minnesota (Minneapolis-St. Paul), 1965; MA, 1968; PhD, 1970
- Judith Wells Lindfors**, *Professor Emeritus*
BA, Oberlin College, 1959; MEd, Harvard, 1960; MA, California (Los Angeles), 1967; PhD, Texas (Austin), 1972
- John Martin Rich**, *Professor Emeritus*
BA, Alabama, 1954; MA, 1955; PhD, Ohio State, 1958

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Jennifer K. Adair**, *Assistant Professor*
BA, Brigham Young, 1999; MA, Arizona State (Tempe), 2004; PhD, 2009

- James P. Barufaldi**, *Distinguished Teaching Professor*
BS, Marietta College, 1962; MEd, Kent State, 1966; PhD, Maryland (College Park), 1972
- Leema G. Berland**, *Assistant Professor*
BA, Carleton College, 1999; PhD, Northwestern, 2008
- Randy Bomer**, *Associate Professor*
BA, Trinity, 1983; MA, Teachers College (Columbia), 1987; PhD, Columbia, 1996
- Anthony L. Brown**, *Assistant Professor*
BA, California State (Long Beach), 1993; MA, 1997; PhD, Wisconsin (Madison), 2006
- Christopher P. Brown**, *Assistant Professor*
BA, University of the South, 1993; MA, New Mexico State, 1997; PhD, Wisconsin (Madison), 2004
- Keffrelyn D. Brown**, *Assistant Professor*
BS, Houston, 1993; MEd, Harvard, 1999; PhD, Wisconsin (Madison), 2006
- Rebecca M. Callahan**, *Assistant Professor*
BA, San Diego, 1992; MA, California (Davis), 2001; PhD, 2003
- Norma V. Cantú**, *Professor*
BA, Texas-Pan American, 1973; JD, Harvard, 1977
- Guadalupe Carmona**, *Assistant Professor*
BS, Instituto Tecnológico Autónomo de México, 1995; MS, Instituto Politécnico Nacional, 2000; PhD, Purdue, 2004
- Lisa J. Cary**, *Assistant Professor*
BED, Edith Cowan, 1992; MEd, Regina, 1995; PhD, Ohio State, 1999
- Noah De Lissovoy**, *Assistant Professor*
BA, Harvard, 1991; PhD, California (Los Angeles), 2005
- Cesar Delgado**, *Assistant Professor*
BS, California (Los Angeles), 1984; Diploma, Universidad Iberoamericana, 2001; MA, Alabama, 2003; MA, Michigan (Ann Arbor), 2008; MS, 2008; PhD, 2009
- Susan B. Empson**, *Associate Professor*
BA, Queens College, 1983; MA, Columbia, 1988; PhD, Wisconsin (Madison), 1994
- Sherry L. Field**, *Professor*
BSEd, Texas Tech, 1973; MEd, Stephen F. Austin State, 1975; PhD, Texas (Austin), 1991
- Douglas E. Foley**, *Professor*
BA, Northern Iowa, 1961; MA, Stanford, 1966; PhD, 1970
- Kevin M. Foster**, *Assistant Professor*
BA, College of William and Mary, 1991; MA, Texas (Austin), 1994; PhD, 2001
- Maria E. Franquiz**, *Associate Professor*
BA, California (Santa Barbara), 1991; MA, 1993; PhD, 1995
- Louis Harrison**, *Associate Professor*
BS, New Orleans, 1979; MEd, 1987; PhD, Louisiana State (Baton Rouge), 1997
- James V. Hoffman**, *Professor*
BA, College of St. Benedict, 1966; MS, Wisconsin (Milwaukee), 1970; PhD, Missouri (Kansas City), 1977
- Deborah A. Horan**, *Assistant Professor*
BA, Colorado (Denver), 1986; MA, 1997; PhD, Boston College, 2007

Elaine K. Horwitz, Professor
BA, Maryland (College Park), 1972; MA, Illinois (Urbana-Champaign), 1975; PhD, 1980

Joan Hughes, Associate Professor
BA, Pomona College, 1992; PhD, Michigan State, 2000

Xiaofen Keating, Associate Professor
BE, Beijing Sport, 1984; MEd, 1987; PhD, Illinois (Urbana-Champaign), 2000

Min Liu, Professor
BA, East China Normal University Shanghai, 1982; MA, West Virginia, 1990; EdD, 1992

Anna Elizabeth Maloch, Associate Professor
BS, Ouachita Baptist, 1991; MEd, Vanderbilt, 1995; EdD, 1999

Jill A. Marshall, Associate Professor
BS, Stanford, 1980; PhD, Texas (Austin), 1984

H. Taylor Martin, Associate Professor
BA, Dartmouth College, 1992; MS, Vanderbilt, 2000; PhD, Stanford, 2003

Ramon A. Martinez, Assistant Professor
BA, California (San Diego), 1994; MEd, California (Los Angeles), 1997; PhD, 2009

Carmen Martinez-Roldán, Associate Professor
BA, Universidad de Puerto Rico, Recinto de Rio Pedras, 1979; MA, 1995; PhD, Arizona, 2000

Melissa R. Mosley, Assistant Professor
BA, Washington (St. Louis), 1999; MA, 2000; PhD, 2007

Kathryn M. Obenchain, Assistant Professor
BA, Hanover College, 1982; MS, Purdue (West Lafayette), 1994; PhD, 1997

Deborah K. Palmer, Assistant Professor
BA, Stanford, 1991; MA, California (Berkeley), 2000; PhD, 2004

Anthony J. Petrosino, Associate Professor
BS, Creighton, 1984; MA, Columbia, 1990; PhD, Vanderbilt, 1998

Detra Price-Dennis, Assistant Professor
BS, Ohio State (Columbus), 1996; MEd, 1997; PhD, 2009

Diana C. Pulido, Assistant Professor
BA, Arizona State (Tempe), 1988; MA, Washington (Seattle), 1995; PhD, Illinois (Urbana-Champaign), 2000

Stuart Reifel, Professor
BA, Stanford, 1972; MA, 1973; EdD, California (Los Angeles), 1981

Paul Resta, Professor
BS, Arizona State, 1957; MS, Washington State, 1960; PhD, Arizona State, 1968

Catherine Riegle-Crumb, Assistant Professor
BA, Texas A&M, 1993; MA, Chicago, 1996; PhD, 2000

Nancy L. Roser, Distinguished Teaching Professor
BA, Evansville, 1966; MS, Indiana, 1968; EdD, 1970

Cynthia Salinas, Associate Professor
BA, Texas (Austin), 1983; MA, Texas A&I, 1985; PhD, Texas (Austin), 1999

Allison Skerrett, Assistant Professor
BA, Massachusetts (Boston), 1998; MA, 2000; PhD, Boston College, 2007

Walter M. Stroup Jr., Associate Professor
BA, Colgate, 1983; MEd, Harvard, 1991; EdD, 1996

Luis Urrieta, Associate Professor
BA, California (Los Angeles), 1995; MA, 1999; PhD, North Carolina (Chapel Hill), 2003

Angela Valenzuela, Professor
BA, Angelo State, 1981; MA, Texas (Austin), 1983; MA, Stanford, 1985; PhD, 1990

George Veletsianos, Assistant Professor
BA, Macalester College, 2004; MA, Minnesota (Minneapolis-St. Paul), 2006; PhD, 2008

Jo Worthy, Professor
BS, Virginia, 1977; MEd, 1984; PhD, 1989

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

Edmund T. Emmer, Chair

PROFESSORS EMERITUS

Benjamin Fruchter, Professor Emeritus
BA, Brooklyn College, 1936; MA, Southern California, 1946; PhD, 1948

Lucia A. Gilbert, Professor Emeritus
BA, Wells College, 1963; MS, Yale, 1964; PhD, Texas (Austin), 1974

Earl Jennings, Professor Emeritus
BSEd, Texas, 1955; MEd, 1956; PhD, 1963

William R. Koch, Professor Emeritus
BA, Wisconsin, 1968; MA, Missouri (Kansas City), 1975; PhD, Missouri (Columbia), 1980

Earl A. Koile, Professor Emeritus
BS, Indiana State Teacher's College, 1939; MEd, Harvard, 1947; EdD, 1953

Guy J. Manaster, Professor Emeritus
BA, Columbia, 1959; PhD, Chicago, 1969

Richard Mowsesial, Associate Professor Emeritus
BSEd, Teacher's College of Connecticut, 1952; MEd, Hartford, 1959; APC, City University of New York, 1963; PhD, Wisconsin, 1965

Beeman N. Phillips, Professor Emeritus
BA, Evansville College, 1949; MS, Indiana, 1950; EdD, 1954

Jackson B. Reid, Professor Emeritus
BS, The Citadel, 1942; PhD, California (Los Angeles), 1951

Janet T. Spence, Ashbel Smith Professor Emeritus
BA, Oberlin College, 1945; MA, PhD, State University of Iowa, 1949; DSc (hon), Oberlin College, 1985

Frank W. Wicker, Professor Emeritus
BA, Texas Christian, 1959; MA, 1961; PhD, Princeton, 1966

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Ricardo C. Ainslie, Professor
BA, California (Berkeley), 1972; MA, Michigan, 1975; PhD, 1979

Douglas G. Allen, Associate Professor
BA, American, 1992; PhD, San Diego State, 2000

Germine H. Awad, Assistant Professor
BS, John Carroll, 1999; MA, Southern Illinois (Carbondale), 2002; PhD, 2005

Keisha L. Bentley, Assistant Professor
BS, Howard, 1997; MA, Columbia, 2000; PhD, Pennsylvania, 2009

S. Natasha Beretvas, Associate Professor
BS, Duke, 1989; MEd, Washington (Seattle), 1997; PhD, 2000

Gary D. Borich, Professor
BS, Indiana, 1965; MA, 1967; EdD, 1970

Lawrence A. Brownstein, Senior Lecturer
BS, Houston, 1967; MA, Oklahoma, 1968; PhD, Texas (Austin), 1977

Cindy I. Carlson, Professor
BA, DePauw, 1971; MS, Indiana (Bloomington), 1978; PhD, 1982

Stephanie W. Cawthon, Assistant Professor
BA, Stanford, 1994; MA, 1995; PhD, Wisconsin (Madison), 2002

Kevin O. Cokley, Associate Professor
BA, Wake Forest, 1993; MEd, North Carolina (Greensboro), 1993; PhD, Georgia State, 1998

Barbara G. Dodd, Professor
BA, Trinity, 1976; MS, 1978; PhD, Texas (Austin), 1984

David J. Drum, Professor
BA, Dickinson College, 1964; MA, American, 1966; PhD, 1969

Edmund T. Emmer, Professor
BA, Michigan, 1962; MA, 1965; PhD, 1967

Toni L. Falbo, Professor
BA, George Washington, 1968; MA, California (Los Angeles), 1969; PhD, 1973

Mary C. Gerwels, Senior Lecturer
BS, Texas (Austin), 1978; MEd, 1990; PhD, 1994

Timothy Z. Keith, Professor
BA, North Carolina (Chapel Hill), 1974; MA, East Carolina, 1978; PhD, Duke, 1982

Christopher J. McCarthy, Professor
BA, Virginia, 1988; MA, Boston College, 1990; PhD, Georgia State, 1995

Leslie A. Moore, Senior Lecturer
BA, Southern Methodist, 1971; PhD, Texas (Austin), 1987

Kristin D. Neff, Associate Professor
BA, California (Los Angeles), 1988; MA, California (Berkeley), 1992; PhD, 1997

Erika A. Patall, Assistant Professor
BA, McGill, 2003; MA, Duke, 2007; PhD, 2009

Keenan A. Pituch, Associate Professor
BA, Bowling Green State, 1984; MA, South Florida, 1987; MS, Florida State, 1993; PhD, 1997

Frank C. Richardson, Professor
BA, Ohio State, 1961; BD, Yale, 1965; PhD, Colorado State, 1971

Daniel H. Robinson, Associate Professor
BS, Nebraska (Lincoln), 1988; MEd, Arizona State, 1991; PhD, Nebraska (Lincoln), 1993

Aaron B. Rochlen, Associate Professor
BA, Michigan (Ann Arbor), 1992; MA, Maryland (College Park), 1997; PhD, 2000

Stephanie S. Rude, Professor
BA, California (Santa Barbara), 1977; PhD, Stanford, 1983

Janay B. Sander, Assistant Professor
BA, Texas (Austin), 1995; MA, 1999; PhD, 2001

- Diane L. Schallert**, *Professor*
BA, San Francisco, 1971; MA, California State (San Francisco), 1973; PhD, Arizona State, 1975
- Eyal Seidemann**, *Associate Professor*
MSc, Universitat Tel Aviv, 1993; PhD, Stanford, 1998
- Alissa R. Sherry**, *Associate Professor*
BA, Auburn, 1991; MA, Austin Peay State, 1996; PhD, Southern Mississippi, 2001
- Kevin D. Stark**, *Professor*
BS, Wisconsin (Stevens Point), 1978; MA, Richmond, 1980; PhD, Wisconsin (Madison), 1984
- Youngsuk Suh**, *Assistant Professor*
BA, Ewha Women's, 1998; MA, 2000; PhD, Wisconsin (Madison), 2006
- Marie-Anne P. Suizzo**, *Associate Professor*
BA, Georgetown, 1981; MA, Stanford, 1987; MEd, Harvard, 1993; EdD, 1997
- Marilla D. Svinicki**, *Professor*
BA, Western Michigan, 1967; MA, 1968; PhD, Colorado, 1972
- Deborah J. Tharinger**, *Associate Professor*
BS, New Mexico, 1973; MA, Arizona State, 1975; PhD, California (Berkeley), 1981
- Richard R. Valencia**, *Professor*
BA, California (Santa Barbara), 1970; MA, 1972; PhD, 1977
- Brandon K. Vaughn**, *Assistant Professor*
BA, West Florida, 1992; MA, 1994; PhD, Florida State, 2006
- Claire Ellen Weinstein**, *Professor*
BS, Brooklyn College, 1967; PhD, Texas (Austin), 1975
- Tiffany A. Whittaker**, *Assistant Professor*
BA, Texas (San Antonio), 1995; MS, 1998; PhD, Texas (Austin), 2003

ADJUNCT PROFESSORS

- Carl J. Anderson**, *Adjunct Assistant Professor*
BA, Texas (Austin), 1974; MEd, 1976; PhD, 1987
- Lynn T. Chang**, *Adjunct Assistant Professor*
BA, Texas (Austin), 1996; MS, Colorado State, 2000; PhD, 2003
- Nancy P. Daley**, *Adjunct Assistant Professor*
BA, Wesleyan; PhD, Texas (Austin), 1991
- Rachel Robillard**, *Adjunct Assistant Professor*
BSElemEd, Texas (Austin), 1977; MA, 1989; MA, 1999; PhD, 2002
- Laura M. Stapleton**, *Adjunct Assistant Professor*
BA, Michigan (Ann Arbor), 1988; MEd, George Mason, 1992; PhD, Maryland (College Park), 2001
- William C. Streusand**, *Adjunct Professor*
BA, Washington (St. Louis), 1975; MD, Baylor College of Medicine, 1980; MD, 1983

DEPARTMENT OF KINESIOLOGY AND HEALTH EDUCATION

John L. Ivy, *Chair*

PROFESSORS EMERITUS

- Charles W. Craven**, *Associate Professor Emeritus*
BSPed, Texas (Austin), 1963; MEd, 1968
- Robert M. Malina**, *Professor Emeritus*
BS, Manhattan College, 1959; MS, 1960; PhD, Wisconsin, 1963
- Jack H. Wilmore**, *Professor Emeritus*
BA, MA, California (Santa Barbara), 1960; PhD, Oregon, 1966

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Lawrence D. Abraham**, *Professor*
BA, Oberlin College, 1971; MS, Kansas State Teacher's College, 1972; EdD, Columbia, 1975
- John Bartholomew**, *Associate Professor*
BA, Harvard, 1989; PhD, Arizona State, 1996
- Darla M. Castelli**, *Associate Professor*
BS, Plymouth State, 1989; MS, Northern Illinois, 1991; PhD, South Carolina (Columbia), 2002
- Laurence H. Chalip**, *Professor*
BA, California (Berkeley), 1972; MSocSci, Waikato, 1979; MA, Chicago, 1983; PhD, 1988
- Edward F. Coyle**, *Professor*
BA, Queens College (New York), 1975; MA, Ball State, 1976; PhD, Arizona, 1979
- Jonathan B. Dingwell**, *Associate Professor*
BS, Miami (Ohio), 1990; MS, Ohio State (Columbus), 1994; PhD, Pennsylvania State, 1998
- Marlene A. Dixon**, *Assistant Professor*
BA, Trinity, 1993; MEd, Texas (Austin), 1998; PhD, Ohio State (Columbus), 2002
- Roger P. Farrar**, *Professor*
BS, Tufts, 1967; PhD, Massachusetts (Amherst), 1976
- B. Christine Green**, *Associate Professor*
BS, George Washington, 1985; MA, Maryland (College Park), 1994; PhD, 1996
- Lisa Griffin**, *Associate Professor*
BS, Guelph, 1993; MS, Western Ontario, 1995; PhD, 1999
- Bob Heere**, *Assistant Professor*
MA, Universiteit van Amsterdam, 2001; PhD, Florida State, 2005
- Carole K. Holahan**, *Professor*
BSEd, Duquesne, 1967; MEd, Massachusetts (Amherst), 1971; PhD, Texas (Austin), 1976
- Thomas M. Hunt**, *Assistant Professor*
BA, Texas (Austin), 2000; JD, Baylor, 2003; PhD, Texas (Austin), 2007
- John L. Ivy**, *Professor*
BS, Old Dominion, 1970; MA, Maryland (College Park), 1974; PhD, 1976
- Jody Jensen**, *Professor*
BSE, Drake, 1973; MS, Massachusetts (Amherst), 1978; PhD, Maryland (College Park), 1989
- Alexandra Loukas**, *Associate Professor*
BA, Windsor, 1992; MA, Michigan State, 1995; PhD, 1997

- Keryn E. Pasch**, *Assistant Professor*
BA, Illinois (Chicago), 1998; MPH, North Carolina (Chapel Hill), 2003; PhD, Minnesota (Minneapolis-St. Paul), 2007
- Fred L. Peterson Jr.**, *Associate Professor*
BS, Toledo, 1972; MS, 1978; PhD, Illinois (Urbana-Champaign), 1981
- Darrell K. Royal**, *Professor*
BS, Oklahoma, 1950
- Waneen Wyrick Spirduso**, *Professor*
BSPed, Texas, 1957; MEd, North Carolina (Greensboro), 1958; EdD, Texas, 1966
- Mary A. Steinhart**, *Distinguished Teaching Professor*
BS, North Carolina (Chapel Hill), 1978; MEd, Lamar, 1980; EdD, Houston (University Park), 1985
- Hirofumi Tanaka**, *Associate Professor*
BA, International Martial Arts, 1989; MS, Ball State, 1992; PhD, Tennessee (Knoxville), 1995
- Janice S. Todd**, *Professor*
BA, Mercer, 1974; MEd, 1976; PhD, Texas (Austin), 1995
- Kenneth W. Tyson**, *Associate Professor*
BA, Southern Methodist, 1960; MEd, Texas (Austin), 1970

ADJUNCT PROFESSORS

- John M. Berardi**, *Adjunct Assistant Professor*
BS, Lock Haven, 1997; PhD, Western Ontario, 2004
- Susan K. Dubois**, *Adjunct Assistant Professor*
MD, Texas Medical Branch (Galveston), 1988
- Vilma T. Falck**, *Adjunct Associate Professor*
BS, Pittsburgh, 1948; MS, Pennsylvania State, 1950; PhD, 1955
- Philip P. Huang**, *Adjunct Assistant Professor*
BA, Rice, 1982; MD, Texas (Southwestern), 1986; MPH, Harvard, 1990
- Charles A. Lindsey Jr.**, *Adjunct Assistant Professor*
BA, Rice, 1962; MD, Southwestern Medical School, 1966
- Alfred L. McAlister**, *Adjunct Associate Professor*
BA, Texas (Austin), 1972; PhD, Stanford, 1976
- Katherine T. McCalister**, *Adjunct Assistant Professor*
BSKin, Texas (Austin), 1993; MA, 1996; PhD, 2003
- Guy S. Parcel**, *Adjunct Professor*
PhD, Pennsylvania State, 1973
- Dimpi Patel**, *Adjunct Assistant Professor*
MD, Kansas City College of Medicine and Biosciences, 2004
- Martha I. Pyron**, *Adjunct Assistant Professor*
BA, Texas (Austin), 1991; MD, Texas Health Science Center (San Antonio), 1996
- Paul J. Roach**, *Adjunct Assistant Professor*
BA, Saint Louis, 1980; MD, Northwestern, 1984
- Peggy M. Russell**, *Adjunct Associate Professor*
BA, Texas (Austin), 1970; DO, North Texas Health Science Center (Fort Worth), 1979
- Ted D. Spears**, *Adjunct Associate Professor*
BA, Texas (Austin), 1976; MD, Texas (Galveston), 1980
- Edward P. Tyson**, *Adjunct Assistant Professor*
BA, Texas (Austin), 1971; MD, Texas Health Science Center (Houston), 1982

Thomas J. Walters, *Adjunct Associate Professor*
BA, State University of New York (Geneseo), 1979; MA, Texas (Austin), 1984; PhD, 1989

Anthony N. Zavaleta, *Adjunct Professor*
BA, Texas (Austin), 1971; MA, 1973; PhD, 1976

DEPARTMENT OF SPECIAL EDUCATION

Herbert J. Rieth, *Chair*

PROFESSORS EMERITUS

Natalie Carter Barraga, *Professor Emeritus*
BS, North Texas State Teacher's College, 1938; MEd, Texas, 1957; EdD, George Peabody College for Teachers, 1963

John D. King, *Professor Emeritus*
BFA, Nebraska State Teachers College, 1956; MA, Nebraska (Lincoln), 1958; EdD, 1964

Robert L. Marion, *Professor Emeritus*
BA, Michigan (Ann Arbor), 1957; MA, 1959; PhD, 1973

Keith D. Turner, *Professor Emeritus*
BA, Western Washington State College, 1967; MS, 1968; PhD, Washington (Seattle), 1974

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Diane Pedrotty Bryant, *Professor*
BS, Framingham State College, 1974; MA, New Mexico, 1980; PhD, 1986

Terry S. Falcomata, *Assistant Professor*
BS, Illinois State, 1997; MS, Southern Illinois (Carbondale), 2002; PhD, Iowa, 2008

Andrea L. Flower, *Assistant Professor*
BA, California (San Diego), 1998; MA, San Diego State, 2001; PhD, Washington (Seattle), 2008

Shernaz Bhatena García, *Associate Professor*
BA, Poona, 1975; Diploma, Dilkhush Teacher Training Center (Bombay), 1976; MS, George Peabody College for Teachers, 1978; PhD, Texas (Austin), 1984

Amanda L. Little, *Assistant Professor*
BA, Missouri (Columbia), 2000; MEd, 2002; PhD, Kansas (Lawrence), 2009

William A. Myers, *Associate Professor*
BS, Syracuse, 1962; MS, 1964; EdD, Southern California, 1969

Mark O'Reilly, *Professor*
BA, University College (Dublin), 1986; MA, Southern Illinois, 1989; PhD, Illinois (Urbana-Champaign), 1992

Alba A. Ortiz, *Professor*
BS, Southwest Texas State, 1969; MEd, 1970; PhD, Texas (Austin), 1976

Randall M. Parker, *Professor*
BS, Wisconsin, 1962; MS, 1964; PhD, Missouri (Columbia), 1970

Barbara L. Pazey, *Assistant Professor*
BM, Muskingum College, 1973; MA, Ohio State (Columbus), 1975; PhD, Texas (Austin), 1996

Herbert J. Rieth, *Professor*
BA, Seton Hall, 1964; MS, Fort Hays State, 1966; EdD, Kansas, 1971

James L. Schaller, *Associate Professor*
BS, Wisconsin (Madison), 1984; MS, 1987; PhD, 1991

Audrey McCray Sorrells, *Associate Professor*
BA, Southeastern Louisiana, 1982; MEd, 1987; PhD, Florida, 1997

Sylvia F. Thompson, *Associate Professor*
BSEd, Texas (Austin), 1988; MS, Miami (Coral Gables), 1992; PhD, Texas (Austin), 1999

Sharon Vaughn, *Professor*
BS, Missouri (Columbia), 1973; MEd, Arizona, 1976; PhD, 1982

Cheryl Y. Wilkinson, *Assistant Professor*
BA, Pomona College, 1975; MA, Texas (Austin), 1977; PhD, 1983

James R. Yates, *Professor*
BS, Abilene Christian College, 1962; MS, North Texas State, 1963; PhD, Texas (Austin), 1971

Nina I. Zuna, *Assistant Professor*
BBA, Louisiana (Monroe), 1989; MEd, Hawaii (Manoa), 2000; PhD, Kansas (Lawrence), 2007

ADJUNCT PROFESSOR

James R. Patton, *Adjunct Associate Professor*
BS, Notre Dame, 1971; MEd, Virginia, 1974; EdD, 1980

UNIVERSITY COLLEAGUE OF THE COLLEGE OF EDUCATION

The following faculty member of the College of Natural Sciences has a special interest in the preparation of teachers and has been extended voting privileges in the College of Education faculty.

J. David Gavenda, *Professor Emeritus, Department of Physics; Professor of Education*
BSPhy, Texas, 1954; MA, 1956; PhD, Brown, 1959

COCKRELL SCHOOL OF ENGINEERING

DEPARTMENT OF AEROSPACE ENGINEERING AND ENGINEERING MECHANICS

Philip L. Varghese, *Chair*

PROFESSORS EMERITUS

Eric Baker Becker, *PE, Professor Emeritus*
BSArchE, Texas, 1957; MSArchE, 1960; PhD, California (Berkeley), 1966

Anthony Bedford, *PE, Distinguished Teaching Professor Emeritus*
BSAsE, Texas, 1961; MS, California Institute of Technology, 1962; PhD, Rice, 1967

Roy R. Craig Jr., *PE, Professor Emeritus*
BSCE, Oklahoma, 1956; MS, Illinois, 1958; PhD, 1960

Raynor L. Duncombe, *Professor Emeritus*
BA, Wesleyan, 1940; MA, Iowa State, 1941; PhD, Yale, 1956

Eugene Armen Ripperger, *Professor Emeritus*
BSCE, Kansas State College of Agriculture and Applied Science, 1939; MSEM, Texas, 1950; PhD, Stanford, 1952

Richard A. Schapery, *PE, Professor Emeritus*
BSME, Wayne State, 1957; MS, California Institute of Technology, 1958; PhD, 1962

Morris Stern, *PE, Professor Emeritus*
BS, Washington (St. Louis), 1952; MS, Illinois, 1958; PhD, 1962

John C. Westkaemper, *PE, Professor Emeritus*
BSAnE, Texas (Austin), 1947; MSME, 1959; PhD, 1967

Ching-Hsie Yew, *PE, Professor Emeritus*
BS, National Taiwan, 1955; MS, Cornell, 1958; PhD, California (Berkeley), 1962

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Maruthi R. Akella, *Associate Professor*
BTechME, Calicut, 1992; MEAsE, Indian Institute of Science (Bangalore), 1994; PhD, Texas A&M, 1998

Ivo Babuska, *Professor*
DiplIng, České vysoké učení technické v Praze, 1949; Dr, 1951; CSc, Czechoslovak Academy of Sciences, 1955; DSc, 1960

Jeffrey K. Bennighof, *PE, Professor*
BS, Virginia Polytechnic Institute, 1982; MS, 1984; PhD, 1986

Robert H. Bishop, *PE, Distinguished Teaching Professor*
BSAsE, Texas A&M, 1979; MS, 1980; PhD, Rice, 1990

Sean M. Buckley, *Assistant Professor*
BS, Illinois (Urbana-Champaign), 1992; MS, Texas (Austin), 1994; PhD, 2000

Graham F. Carey, *PE, Professor*
BS, Queensland, 1966; MS, Washington (Seattle), 1970; PhD, 1974

Noel T. Clemens, *Professor*
BSME, Massachusetts (Amherst), 1985; MSME, Stanford, 1986; PhD, 1991

Clint Dawson, *PE, Professor*
BA, Texas Tech, 1982; MS, 1984; PhD, Rice, 1988

Leszek F. Demkowicz, *Professor*
mgr.inz., Politechnika Krakowska im. Tadeusza Kosciuszki, 1976; mgr, Uniwersytet Jagiellonski, 1978; dr.n.t., Politechnika Krakowska im. Tadeusza Kosciuszki, 1982; Dr.hab., 1987

Wallace T. Fowler, *PE, Distinguished Teaching Professor*
BA, Texas, 1960; MSEM, 1961; PhD, 1965

David B. Goldstein, *Professor*
BSE, Princeton, 1984; MS, California Institute of Technology, 1985; PhD, 1989

Linda J. Hayes, *Professor*
BS, College of William and Mary, 1970; MA, Texas (Austin), 1974; PhD, 1977; MSE, 1981

Rui Huang, *Associate Professor*
BS, University of Science and Technology of China Hefei, 1994; ME, 1996; MA, Princeton, 1998; PhD, 2000

Thomas J. R. Hughes, *Professor*
BE, Pratt Institute, 1965; ME, 1967; MS, PhD, California (Berkeley), 1974

David G. Hull, PE, *Professor*
BS, Purdue, 1959; MS, Washington (Seattle), 1962; PhD, Rice, 1967

Todd E. Humphreys, *Assistant Professor*
BS, Utah State, 2000; MS, 2003; PhD, Cornell, 2008

Stelios Kyriakides, PE, *Professor*
BSAnE, Bristol, 1975; MS, California Institute of Technology, 1976; PhD, 1980

Chad M. Landis, *Associate Professor*
BS, BSME, Pennsylvania, 1994; MS, California (Santa Barbara), 1997; PhD, 1999

Kenneth M. Liechti, *Professor*
BSAnE, Glasgow, 1973; MS, California Institute of Technology, 1974; PhD, 1980

E. Glenn Lightsey, *Professor*
BSE, Princeton, 1986; MSEE, Johns Hopkins, 1991; PhD, Stanford, 1997

Belinda Marchand, *Assistant Professor*
BSAAE, Purdue, 1997; MSAA, 2000; PhD, 2004

Hans Mark, PE, *Professor*
BA, California (Berkeley), 1951; PhD, Massachusetts Institute of Technology, 1954

Mark E. Mear, PE, *Professor*
BSME, Texas (Austin), 1982; SM, Massachusetts Institute of Technology, 1984; SM, Harvard, 1984; PhD, 1986

Cesar A. Ocampo, *Associate Professor*
BSAsE, Kansas, 1990; MSAsE, Colorado (Boulder), 1991; PhD, 1996

J. Tinsley Oden, PE, *Professor*
BS, Louisiana State, 1959; MS, Oklahoma State, 1960; PhD, 1962

Laxminarayan L. Raja, *Associate Professor*
BTech, Indian Institute of Technology (Madras), 1990; MS, Texas A&M, 1992; PhD, Texas (Austin), 1996

Venkat Raman, *Assistant Professor*
BTech, Madurai-Kamaraj, 1998; PhD, Iowa State, 2003

K. Ravi-Chandar, *Professor*
BSAeroE, Bangalore, 1973; DMIT, Madras Institute of Technology, 1976; MSAeroE, California Institute of Technology, 1977; PhD, 1982

Gregory J. Rodin, *Professor*
Nezakonchennoe Vysshie Obrazovanie, Leningradskij Polytechneskij Institut, 1980; SM, Massachusetts Institute of Technology, 1983; PhD, 1986

Bob E. Schutz, PE, *Professor*
BSAsE, Texas (Austin), 1963; MSAsE, 1966; PhD, 1969

Jayant Sirohi, *Assistant Professor*
BS, Indian Institute of Technology Chennai, 1996; MS, Maryland (College Park), 1998; PhD, 2002

Byron D. Tapley, PE, *Professor*
BSME, Texas, 1956; MSEM, 1958; PhD, 1960

Charles E. Tinney, *Assistant Professor*
BS, Clarkson, 1999; MS, 2001; PhD, Syracuse, 2005

Philip L. Varghese, *Distinguished Teaching Professor*
BTech, Indian Institute of Technology (Madras), 1976; MS, Syracuse, 1977; PhD, Stanford, 1983

Mary F. Wheeler, PE, *Professor*
BA, BSEd, Texas, 1960; MA, 1963; PhD, Rice, 1971

ADJUNCT PROFESSORS

Armand Chaput, *Adjunct Professor*
BS, Texas A&M, 1963; MS, 1964; PhD, 1966

Max L. Williams, *Adjunct Professor*
BS, Carnegie Institute of Technology, 1942; MS, California Institute of Technology, 1947; PhD, 1950

DEPARTMENT OF BIOMEDICAL ENGINEERING

Nicholas Peppas, *Chair*

PROFESSOR EMERITUS

Ashley James Welch, PE, *Professor Emeritus*
BSEE, Texas Technological College, 1955; MSEE, Southern Methodist, 1959; PhD, Rice, 1964

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Orly Alter, *Assistant Professor*
BS, Universitat Tel Aviv, 1989; PhD, Stanford, 1999

Kenneth R. Diller, PE, *Professor*
BSE, Ohio State, 1966; SM, 1967; ScD, Massachusetts Institute of Technology, 1972

Andrew K. Dunn, *Assistant Professor*
BS, Bates College, 1992; MS, Northeastern, 1994; PhD, Texas (Austin), 1997

Stas Emelianov, *Associate Professor*
BS, Moskovskij Gosudarstvennyj Universitet, 1986; MS, 1989; PhD, 1993

George Georgiou, *Professor*
BSChE, Manchester, 1981; MSChE, Cornell, 1983; PhD, 1986

Omar Ghattas, *Professor*
BS, Duke, 1984; MS, 1986; PhD, 1988

Mia Markey, *Associate Professor*
BS, Carnegie Mellon, 1998; PhD, Duke, 2002

Thomas E. Milner, *Professor*
BS, Colorado School of Mines, 1981; MS, 1986; PhD, Arizona, 1991

Nicholas Peppas, *Professor*
Diploma, National Technical University of Athens, 1971; DSc, Massachusetts Institute of Technology, 1973

Pengyu Ren, *Assistant Professor*
BS, Zhejiang, 1993; PhD, Cincinnati, 1999

Krishnendu Roy, *Associate Professor*
BS, Indian Institute of Technology (Kharapur), 1993; MSBmE, Boston, 1995; PhD, Johns Hopkins, 1999

H. Grady Rylander III, PE, *Professor*
BSEE, Texas (Austin), 1970; MSEE, 1974; MD, Texas Health Science Center, 1974

Christine E. Schmidt, *Professor*
BSChE, Texas (Austin), 1988; PhD, Illinois (Urbana-Champaign), 1995

Laura J. Suggs, *Assistant Professor*
BA, BSChE, Texas (Austin), 1993; PhD, Rice, 1998

James W. Tunnell, *Assistant Professor*
BSEE, Texas (Austin), 1998; PhD, Rice, 2002

Xiaojing Zhang, *Assistant Professor*
BS, Shanghai Jiaotong, 1995; MS, Maine, 1998; PhD, Stanford, 2005

ADJUNCT AND ADJOINT PROFESSORS

David D. Allison, *Adjunct Assistant Professor*
BS, Iowa, 2004; PhD, Rice, 2008

Catherine G. Ambrose, *Adjoint Associate Professor*
MSE, Texas (Austin), 1989; PhD, 1992

Ananth Annapragada, *Adjoint Associate Professor*
BTech, Anna, 1985; MS, Michigan (Ann Arbor), 1989; PhD, 1991

Michael S. Beauchamp, *Adjoint Assistant Professor*
AB, Harvard, 1992; PhD, California (San Diego), 1997

John H. Byrne, *Adjoint Professor*
BS, Polytechnic, 1968; MS, 1970; PhD, 1973

Kenneth R. Castleman, *Adjunct Professor*
BSEE, Texas (Austin), 1965; MSEE, 1967; PhD, 1970

Claudio Cavasotto, *Adjoint Assistant Professor*
BS, Universidad de Buenos Aires, 1998; PhD, 2000

Jodie Conyers, *Adjoint Assistant Professor*
BS, Trinity, 1995; PhD, Utah, 2000

Charles S. Cox Jr., *Adjoint Professor*
BA, Texas (Austin), 1984; MD, Texas Medical Branch (Galveston), 1988

Vittorio Cristini, *Adjoint Professor*
Laurea, Università degli Studi di Roma "La Sapienza," 1994; PhD, Yale, 2000

Adriana C. Da Silva, *Adjunct Assistant Professor*
MS, Florida (Gainesville), 1996; PhD, 1998

Paolo Decuzzi, *Adjoint Associate Professor*
PhD, Università degli Studi di Napoli, 2000

Luigi Dibiase, *Adjunct Assistant Professor*
MD, Università degli Studi di Bari, 2000

E. S. Duke, *Adjunct Professor*
BS, Nevada (Reno), 1971; DDS, Loyola, 1975; PhD, Purdue, 1986

Marc D. Feldman, *Adjunct Professor*
BS, Duke, 1977; MD, Pennsylvania, 1981

Mauro Ferrari, *Adjoint Professor*
Dottore, Università degli Studi di Padova, 1985; MS, California (Berkeley), 1987; PhD, 1989

Wolfgang Frey, *Adjunct Assistant Professor*
MS, Technische Universität München, 1986; PhD, 1992

Yong-Jian Geng, *Adjoint Professor*
MD, Suzhou Medical College, 1982; MSc, 1987; PhD, Göteborgs Universitet, 1994

Brijesh S. Gill, *Adjoint Assistant Professor*
SB, Harvard, 1993; MD, Alabama (Birmingham), 1997

Rodney Horton, *Adjunct Professor*
BS, Houston Baptist, 1983; MD, Texas Southwestern Medical Center (Dallas), 1988

Joseph A. Käs, *Adjunct Professor*
Vordiplom, Technische Universität München, 1986; Diplom, 1990; PhD, 1993

Patrick K. Kelley, *Adjunct Associate Professor*
BA, Texas (Austin), 1991; MD, Baylor College of Medicine, 1998

Hyunggun Kim, *Adjoint Assistant Professor*
BS, Korea Advanced Institute of Science and Technology, 1997; PhD, Iowa, 2005

Melvin E. Klegerman, *Adjoint Associate Professor*
BA, Illinois (Chicago), 1967; PhD, Loyola of Chicago, 1984

Xuewu Liu, *Adjoint Assistant Professor*
BS, Jilin, 1986; MS, 1989; PhD, Kent State (Kent), 2002

Yin Liu, *Adjoint Assistant Professor*
BS, University of Science and Technology of China Hefei, 1991; MS, Texas (Medical Branch), 2000; MS, Houston, 2002; PhD, Yale, 2007

Fatima A. Merchant, *Adjunct Assistant Professor*
BS, Mumbai, 1989; MS, Texas (Austin), 1992; PhD, 1995

Ponnada A. Narayana, *Adjoint Professor*
BSc, Andhra, 1963; MSc, 1965; PhD, Indian Institute of Technology (Kanpur), 1969

Andrea Natale, *Adjunct Professor*
MD, Università degli Studi di Firenze, 1985

Jonathan Ophir, *Adjunct Professor*
BSEE, Kansas, 1971; MS, 1973; PhD, 1977

Lisa Peppas, *Adjunct Professor*
BS, Rice, 1984; MS, Purdue, 1986; PhD, 1988

Jerrie S. Refuerzo, *Adjoint Assistant Professor*
BS, California (Riverside), 1992; MD, Wayne State, 1996

William P. Roach, *Adjunct Professor*
BA, Avila, 1983; MS, Missouri (Kansas City), 1986; PhD, Missouri (Columbia), 1990

Alexander Rosenstein, *Adjoint Professor*
MD, Minnesota (Duluth), 1982

Harel Shouval, *Adjunct Assistant Professor*
BS, Universitat Tel Aviv, 1987; MS, Makhon Weizmann Lemada, 1990; PhD, Brown, 1994

Richard W. Smalling, *Adjoint Professor*
BS, Texas (Austin), 1970; MS, 1972; MD, Texas Health Science Center (Houston), 1975; PhD, 1977

Jack W. Smith, *Adjoint Professor*
BS, Virginia Polytechnic Institute, 1973; MD, West Virginia, 1977; MS, Ohio State (Columbus), 1980; PhD, 1986

Michael H. Smolensky, *Adjunct Professor*
BS, Illinois (Urbana-Champaign), 1964; MS, 1966; PhD, 1971

Konstantin V. Sokolov, *Adjunct Associate Professor*
Diploma, Moscow Engineering Physics Institute, 1987; PhD, Moskovskij Gosudarstvennyj Universitet, 1992

Takemi Tanaka, *Adjoint Assistant Professor*
Gakushi, Showa Joshi Daigaku, 1990; Shushi, 1992; PhD, Shizuoka Daigaku, 1998

Sharon L. Thomsen, *Adjunct Associate Professor*
AB, Stanford, 1964; MD, 1966

Gerhard Werner, *Adjunct Professor*
MD, Universität Wien, 1945

Muhammad H. Zaman, *Adjunct Assistant Professor*
BS, Arkansas Tech, 1999; MS, Chicago, 2000; PhD, 2003

DEPARTMENT OF CHEMICAL ENGINEERING

Roger T. Bonnecaze, *Chair*

PROFESSORS EMERITUS

James R. Brock, *PE, Professor Emeritus*
BA, Rice Institute, 1952; BS, 1953; MS, Wisconsin, 1954; PhD, 1960

James R. Fair, *PE, Professor Emeritus*
BSChE, Georgia Institute of Technology, 1942; MSE, Michigan, 1949; PhD, Texas, 1955

Adam Heller, *PE, Professor Emeritus*
MS, ha'Universita ha'Ivrith bi'Yerushalayim, 1957; PhD, 1961

David Mautner Himmelblau, *PE, Professor Emeritus*
BS, Massachusetts Institute of Technology, 1947; MBA, Northwestern, 1950; MS, Washington (Seattle), 1956; PhD, 1957

John J. McKetta Jr., *PE, Professor Emeritus*
BSE, Tri-State College, 1937; BSChE, Michigan, 1943; MSChE, 1944; PhD, 1946

Howard F. Rase, *PE, Professor Emeritus*
BSChE, Texas, 1942; MSChE, Wisconsin, 1950; PhD, 1952

Robert S. Schechter, *PE, Professor Emeritus*
BSChE, Agricultural and Mechanical College of Texas, 1950; PhD, Minnesota (Minneapolis-St. Paul), 1956

Hugo Steinfink, *Professor Emeritus*
BS, City College (New York), 1947; MA, Columbia, 1948; PhD, Polytechnic Institute of Brooklyn, 1954

James Edward Stice, *PE, Professor Emeritus*
BSChE, Arkansas (Fayetteville), 1949; MSChE, Illinois Institute of Technology, 1952; PhD, 1963

Eugene H. Wissler, *PE, Professor Emeritus*
BS, Iowa State College, 1950; PhD, Minnesota (Minneapolis-St. Paul), 1955

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

David T. Allen, *PE, Professor*
BSChE, Cornell, 1979; MSChE, California Institute of Technology, 1981; PhD, 1983

Hal S. Alper, *Assistant Professor*
BS, Maryland (College Park), 2002; PhD, Massachusetts Institute of Technology, 2006

Roger T. Bonnecaze, *Professor*
BS(Hons), Cornell, 1985; MS, California Institute of Technology, 1987; PhD, 1991

James R. Chelikowsky, *Professor*
BS, Kansas State, 1970; PhD, California (Berkeley), 1975

Thomas F. Edgar, *PE, Professor*
BSChE, Kansas, 1967; MACHC, Princeton, 1968; PhD, 1971

John G. Ekerdt, *PE, Professor*
BSChE, Wisconsin (Madison), 1974; PhD, California (Berkeley), 1979

Robert B. Eldridge, *PE, Distinguished Senior Lecturer*
BSChE, Arkansas (Fayetteville), 1980; MS, 1981; PhD, Texas (Austin), 1986

Christopher J. Ellison, *Assistant Professor*
BS, Iowa State, 2000; PhD, Northwestern, 2005

Benny D. Freeman, *Professor*
BS, North Carolina State, 1983; PhD, California (Berkeley), 1988

Venkat Ganesan, *Associate Professor*
BTech, Indian Institute of Technology (Madras), 1995; MS, PhD, Massachusetts Institute of Technology, 1999

George Georgiou, *Professor*
BSChE, Manchester, 1981; MSChE, Cornell, 1983; PhD, 1986

Gyeong Hwang, *Associate Professor*
BS, Seoul National, 1991; MS, 1993; MS, California Institute of Technology, 1998; PhD, 1999

Keith P. Johnston, *PE, Professor*
BSE, Michigan, 1977; MSChE, Illinois (Urbana-Champaign), 1979; PhD, 1981

Brian A. Korgel, *Professor*
BS, California (Los Angeles), 1991; PhD, 1997

Douglas R. Lloyd, *PE, Professor*
BA, Waterloo, 1973; MACHC, 1974; PhD, 1977

Jennifer A. Maynard, *Assistant Professor*
BA, Stanford, 1996; PhD, Texas (Austin), 2002

Charles B. Mullins, *PE, Professor*
BSPHy, Texas (Austin), 1975; MSE, 1977; BSChE, Tennessee (Knoxville), 1982; PhD, California Institute of Technology, 1990

Donald Ross Paul, *PE, Professor*
BS, North Carolina State College, 1961; MS, Wisconsin, 1963; PhD, 1965

Nicholas Peppas, *Professor*
Diploma, National Technical University of Athens, 1971; DSc, Massachusetts Institute of Technology, 1973

D'Arcy C. Randall, *Senior Lecturer*
BA, Tulane, 1976; MA, Texas (Austin), 1991; PhD, 2001

Chandragiri D. Rao, *Senior Lecturer*
BS, Mysore, 1958; MSChE, Texas (Austin), 1975; PhD, 1979

Gary T. Rochelle, *PE, Professor*
BS, MSChE, Massachusetts Institute of Technology, 1971; PhD, California (Berkeley), 1977

Peter J. Rosky, *Professor*
BA, Cornell, 1971; MA, Harvard, 1972; PhD, 1978

Isaac C. Sanchez, *PE, Professor*
BS, St. Mary's, 1963; PhD, Delaware, 1969

Christine E. Schmidt, *Professor*
BSChE, Texas (Austin), 1988; PhD, Illinois (Urbana-Champaign), 1995

Thomas M. Truskett, *Associate Professor*
BSChE, Texas (Austin), 1996; MA, Princeton, 1998; PhD, 2001

C. Grant Willson, *Professor*
BS, California (Berkeley), 1962; MS, California State (San Diego), 1969; PhD, California (Berkeley), 1973

ADJUNCT PROFESSORS

- Miguel Jose-Yacamán**, *Adjunct Professor*
BS, Universidad Nacional de México, 1967;
MS, 1968; PhD, 1972
- Chris A. Mack**, *Adjunct Assistant Professor*
BS, Rose-Hulman Institute of Technology,
1982; MS, Maryland (College Park), 1989;
PhD, Texas (Austin), 1998
- Si Zhao J. Qin**, *Adjunct Professor*
BSChE, National Tsing Hua, 1984; MSChE,
1987; PhD, Maryland (College Park), 1992

DEPARTMENT OF CIVIL,
ARCHITECTURAL, AND
ENVIRONMENTAL
ENGINEERING

Sharon L. Wood, *Chair*

PROFESSORS EMERITUS

- Ned H. Burns**, PE, *Professor Emeritus*
BSArchE, Texas, 1954; MSArchE, 1958; PhD,
Illinois, 1962
- Richard Wilson Furlong**, PE, *Professor Emeritus*
BSCE, Southern Methodist, 1952; MSCE,
Washington (St. Louis), 1957; PhD, Texas,
1963
- Earnest Frederick Gloyna**, PE, *Professor Emeritus*
BSCE, Texas Technological College, 1946;
MSCE, Texas, 1949; DE, Johns Hopkins, 1952
- Edward R. Holley**, PE, *Professor Emeritus*
BSCE, MSCE, Georgia Institute of Technol-
ogy, 1960; ScD, Massachusetts Institute of
Technology, 1965
- W. Ronald Hudson**, PE, *Professor Emeritus*
BSCE, Agricultural and Mechanical College
of Texas, 1954; MSCE, 1955; PhD, Texas, 1965
- Thomas William Kennedy**, PE, *Professor Emeritus*
BS, Illinois, 1960; MS, 1962; PhD, 1965
- E. Lothar Koschmieder**, *Professor Emeritus*
Dipl-Phys, Rheinische Friedrich-Wilhelms-
Universität Bonn, 1958; Dr.rer.nat., 1963
- Clyde Edward Lee**, PE, *Professor Emeritus*
BS, Mississippi State College, 1952; MS, 1956;
DE, California (Berkeley), 1962
- Raymond C. Loehr**, PE, *Professor Emeritus*
BS, Case Institute of Technology, 1953; MS,
1956; PhD, Wisconsin, 1961
- L. Hudson Matlock Jr.**, PE, *Professor Emeritus*
BSCE, Texas, 1947; MSCE, 1950
- B. Franklin McCullough**, PE, *Professor Emeritus*
BSCE, Texas, 1957; MSCE, 1962; PhD, Califor-
nia (Berkeley), 1969
- Roy E. Olson**, PE, *Professor Emeritus*
BS, Minnesota (Minneapolis-St. Paul), 1953;
MSCE, 1955; PhD, Illinois, 1960
- Lymon C. Reese**, PE, *Professor Emeritus*
BSCE, Texas, 1949; MSCE, 1950; PhD, Cali-
fornia (Berkeley), 1955
- Charles A. Sorber**, *Professor Emeritus*
BS, Pennsylvania State, 1961; MS, 1966; PhD,
Texas (Austin), 1971
- Richard L. Tucker**, PE, *Professor Emeritus*
BSCE, Texas, 1958; MSCE, 1960; PhD, 1963
- Norman Keith Wagner**, *Associate Professor
Emeritus*
BSMet, Washington (Seattle), 1954; MSMet,
1956; PhD, Hawaii, 1966
- Stephen G. Wright**, PE, *Professor Emeritus*
BS, California (Berkeley), 1966; MS, 1967;
PhD, 1969
- Joseph A. Yura**, PE, *Professor Emeritus*
BSCE, Duke, 1959; MSCE, Cornell, 1961; PhD,
Lehigh, 1965

PROFESSORS, INSTRUCTORS, AND
SENIOR LECTURERS

- John J. Allen**, *Senior Lecturer*
PhD, Illinois (Urbana-Champaign), 1973
- Neal E. Armstrong**, PE, *Professor*
BA, Texas, 1962; MA, 1965; PhD, 1968
- Oguzhan Bayrak**, *Associate Professor*
BSCE, Orta Dogu Teknik Üniversitesi, 1992;
MSCE, Toronto, 1995; PhD, 1998
- Amit Bhasin**, *Assistant Professor*
BCE, Banaras Hindu, 1997; MCE, Texas A&M
(College Station), 2003; DPhil, 2006
- Chandra R. Bhat**, *Professor*
BTech, Indian Institute of Technology (Ma-
dras), 1985; MS, Virginia Polytechnic Insti-
tute, 1987; PhD, Northwestern, 1991
- John Edward Breen**, PE, *Professor*
BSCE, Marquette, 1953; MSCE, Missouri
(Columbia), 1957; PhD, Texas, 1962
- Carlos H. Caldas**, *Associate Professor*
BS, Universidade Federal do Ceará, 1988;
MCE, Universidade Federal Fluminense,
1990; PhD, Illinois (Urbana-Champaign),
2003
- Randall J. Charbeneau**, PE, *Professor*
BS, Michigan (Ann Arbor), 1973; MS, Oregon
State, 1975; PhD, Stanford, 1978
- Richard L. Corsi**, *Professor*
BS, Humboldt State, 1983; MS, California
(Davis), 1985; PhD, 1989
- Ghislaine M. De Regge**, *Senior Lecturer*
BA, Middelbare Normalschool (Sint-
Niklaas), 1961; MA, Texas (Austin), 1976;
PhD, 1986
- Chadi S. El Mohtar**, *Assistant Professor*
BCE, Jâmi'at Bâyrut al-'Arabiya, 2001; MCE,
Michigan State (East Lansing), 2003; DPhil,
Purdue, 2008
- Michael D. Engelhardt**, *Professor*
BS, Illinois (Urbana-Champaign), 1979; MS,
1981; PhD, California (Berkeley), 1988
- Gregory L. Fenves**, *Professor*
BS, Cornell, 1979; MS, California (Berkeley),
1980; PhD, 1984
- Raissa Ferron**, *Assistant Professor*
BES, Howard, 2002; MSE, Northwestern,
2004; DPhil, 2008
- Kevin J. Foliard**, *Associate Professor*
BSCE, Florida Institute of Technology, 1990;
MSCE, California (Berkeley), 1991; PhD, 1995
- David W. Fowler**, PE, *Distinguished Teaching
Professor*
BSArchE, Texas, 1960; MSArchE, 1962; PhD,
Colorado, 1965
- Karl H. Frank**, PE, *Professor*
BSCE, California (Davis), 1966; MS, Lehigh,
1969; PhD, 1972
- Wassim M. Ghannoum**, *Assistant Professor*
BE, McGill, 1996; ME, 1999; PhD, California
(Berkeley), 2007
- Robert B. Gilbert**, PE, *Professor*
BS, Illinois (Urbana-Champaign), 1987; MS,
1988; PhD, 1993
- Hillary Hart**, *Distinguished Senior Lecturer*
AB, New York, 1968; MLitt, Dublin, 1973;
PhD, Bryn Mawr College, 1981
- Todd A. Helwig**, *Associate Professor*
BSCE, Texas (Austin), 1987; MSE, 1989;
PhD, 1994
- Ben R. Hodges**, *Associate Professor*
BSMarineE, United States Merchant Marine
Academy, 1984; MSME, George Washington,
1991; PhD, Stanford, 1997
- James O. Jirsa**, PE, *Professor*
BSCE, Nebraska (Lincoln), 1960; MSCE, Il-
linois, 1962; PhD, 1963
- Maria G. Juenger**, *Associate Professor*
BA, BS, Duke, 1994; PhD, Northwestern,
1999
- Loukas F. Kallivokas**, *Associate Professor*
Diploma, National Technical University of
Athens, 1985; MSCE, Carnegie Mellon, 1990;
PhD, 1995
- Lynn E. Katz**, *Professor*
BES, Johns Hopkins, 1980; MSEnvironE,
Michigan, 1984; MS, 1990; PhD, 1993
- Spyros Athanasios Kinnas**, *Professor*
Diploma, Ethnikon Metsovion Polytechnion
Athinon, 1981; PhD, Massachusetts Institute
of Technology, 1985
- Kerry A. Kinney**, *Professor*
BSChE, California (Davis), 1988;
MSC&EnvironE, 1993; PhD, 1996
- Mary Jo Kirisits**, *Assistant Professor*
BS, State University of New York (Buffalo),
1995; MS, Illinois (Urbana-Champaign), 1997;
PhD, 2000
- Richard E. Klingner**, PE, *Professor*
BSCE, California (Berkeley), 1968; MS, 1969;
PhD, 1977
- Kara M. Kockelman**, *Professor*
BSCE, California (Berkeley), 1991; MCityP,
MSCE, 1996; PhD, 1998
- Desmond F. Lawler**, PE, *Distinguished Teaching
Professor*
BSCE, Notre Dame, 1968; MSEnvironE,
North Carolina (Chapel Hill), 1975; PhD, 1980
- Fernanda L. Leite**, *Assistant Professor*
BArch, Universidade Federal do Ceará, 2002;
MCE, Universidade Federal do Rio Grande
do Sul, 2005; DPhil, Carnegie Mellon, 2009
- Howard M. Liljestrand**, PE, *Professor*
BA, Rice, 1974; PhD, California Institute of
Technology, 1979
- Randy B. Machemehl**, PE, *Professor*
BSCE, Texas (Austin), 1970; MSCE, 1973;
PhD, 1975
- David R. Maidment**, PE, *Professor*
BE, Canterbury, 1972; MS, Illinois (Urbana-
Champaign), 1974; PhD, 1976
- Joseph Francis Malina Jr.**, PE, *Professor*
BCE, Manhattan College, 1957; MSCE, Wis-
consin, 1959; PhD, 1961
- Lance Manuel**, *Associate Professor*
BTech, Indian Institute of Technology
(Bombay), 1984; MSCE, Virginia, 1986; PhD,
Stanford, 1992

Talia M. McCray, *Assistant Professor*
BS, North Carolina Agricultural and Technical State, 1990; BS, Bennett College, 1990; MS, Northwestern, 1992; PhD, Michigan (Ann Arbor), 2001

Daene C. McKinney, PE, *Professor*
BS, Humboldt State, 1983; MS, Cornell, 1986; PhD, 1990

Steven D. Nelson, *Senior Lecturer*
BA, Southern Methodist, 1972; PhD, 1976

Atila Novoselac, *Assistant Professor*
BS, Univerzitet u Beogradu, 1994; MS, 2000; PhD, Pennsylvania State, 2004

William J. O'Brien, *Associate Professor*
BS, Columbia, 1991; MS, Stanford, 1992; MS, 1994; PhD, 1998

James T. O'Connor, PE, *Professor*
BSArchE, Oklahoma State, 1979; MArch, Illinois (Urbana-Champaign), 1980; PhD, Texas (Austin), 1983

Jorge A. Prozzi, *Associate Professor*
Ingeniero Civil, Universidad Nacional del Sur, 1989; BE(Hons), Pretoria, 1996; MSE, California (Berkeley), 1998; PhD, 2001

Ellen M. Rathje, *Professor*
BSCE, Cornell, 1993; MS, California (Berkeley), 1994; PhD, 1997

Danny D. Reible, *Professor*
BS, Lamar, 1977; MS, California Institute of Technology, 1979; PhD, 1982

John A. Rickard, *Senior Lecturer*
BS, Virginia, 1978; MSE, Texas (Austin), 1982

Jeffrey Siegel, *Associate Professor*
BSE, Swarthmore College, 1995; MSME, California (Berkeley), 1999; PhD, 2002

Gerald E. Speitel Jr., PE, *Professor*
BSCE, Union College, 1976; MSEE, North Carolina (Chapel Hill), 1979; PhD, 1985

Kenneth H. Stokoe II, PE, *Professor*
BSCE, Michigan (Ann Arbor), 1966; MSCE, 1967; PhD, 1972

John L. Tassoulas, PE, *Professor*
BS, Yale, 1977; MSCE, Massachusetts Institute of Technology, 1979; PhD, 1981

Fulvio Tonon, *Assistant Professor*
MS, Università degli Studi di Padova, 1995; PhD, Colorado (Boulder), 2000

S. Travis Waller, *Associate Professor*
BS, Ohio State (Columbus), 1997; MS, Northwestern, 1999; PhD, 2000

C. Michael Walton, PE, *Professor*
BSCE, Virginia Military Institute, 1963; MCE, North Carolina State, 1969; PhD, 1971

Dan L. Wheat, PE, *Associate Professor*
BSCE, Colorado (Boulder), 1969; MSCE, Denver, 1973; PhD, Colorado State, 1980

Eric B. Williamson, *Associate Professor*
BSArchE, Texas (Austin), 1990; MSCE, Illinois (Urbana-Champaign), 1992; PhD, 1996

Sharon L. Wood, *Professor*
BSCE, Virginia, 1982; MSCE, Illinois (Urbana-Champaign), 1983; PhD, 1986

Charles M. Woodruff Jr., *Senior Lecturer*
BA, Vanderbilt, 1966; MS, 1968; PhD, Texas (Austin), 1973

Ying Xu, *Assistant Professor*
BCE, Tsinghua, 2001; MCE, 2004; Virginia Polytechnic Institute and State (Blacksburg), 2009

Zhanmin Zhang, *Associate Professor*
BSCE, Xi'an Highway Transportation University, 1983; MSE, Texas (Austin), 1993; PhD, 1996

Jinying Zhu, *Assistant Professor*
BE, Zhejiang, 1992; DE, 1997; PhD, Illinois (Urbana-Champaign), 2006

Jorge G. Zornberg, *Associate Professor*
BS, Universidad Nacional de Córdoba, 1987; MS, Pontificia Universidade Católica do Rio de Janeiro, 1989; PhD, California (Berkeley), 1994

ADJUNCT PROFESSORS

John D. Borchering, PE, *Adjunct Professor*
BSCE, Missouri (Rolla), 1967; MSCE, Stanford, 1968; PhD, 1972

Davis Lee Ford, PE, *Adjunct Professor*
BSCE, Agricultural and Mechanical College of Texas, 1959; MSEHE, Texas, 1964; PhD, 1966

Cindy L. Menches, *Adjunct Assistant Professor*
BS, Southern California, 1989; MS, Pennsylvania State, 1995; PhD, Wisconsin (Madison), 2006

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Anthony P. Ambler, *Chair*

PROFESSORS EMERITUS

Lee Edward Baker, PE, *Professor Emeritus*
BSEE, Kansas, 1945; MS, Rice Institute, 1960; PhD, Baylor College of Medicine, 1965

Martin L. Baughman, PE, *Professor Emeritus*
BSEE, Ohio Northern, 1968; MSEE, Massachusetts Institute of Technology, 1970; PhD, 1972

Francis X. Bostick Jr., *Distinguished Teaching Professor Emeritus*
BSEE, Texas, 1955; MSEE, 1961; PhD, 1964

James C. Browne, *Professor Emeritus*
BA, Hendrix College, 1956; PhD, Texas, 1960

Harvey G. Cragon, *Professor Emeritus*
BSEE, Louisiana Polytechnic Institute, 1950

Arwin Adelbert Dougal, PE, *Professor Emeritus*
BS, Iowa State College, 1952; MS, Illinois, 1955; PhD, 1957

Mario J. Gonzalez Jr., PE, *Professor Emeritus*
BSEE, Texas (Austin), 1964; MSEE, 1969; PhD, 1971

Elmer L. Hixson, PE, *Professor Emeritus*
BSEE, Texas, 1947; MSEE, 1948; PhD, 1960

Benjamin Jack Kuipers, *Professor Emeritus*
BA, Swarthmore College, 1970; PhD, Massachusetts Institute of Technology, 1977

Gerald Jack Lipovski, PE, *Professor Emeritus*
BA, BSEE, Notre Dame, 1966; MS, Illinois, 1967; PhD, 1969

Charles Harold Roth Jr., PE, *Professor Emeritus*
BEE, Minnesota (Minneapolis-St. Paul), 1955; MS, Massachusetts Institute of Technology, 1957; EE, 1959; PhD, Stanford, 1962

Irwin W. Sandberg, PE, *Professor Emeritus*
BEE, Polytechnic Institute of Brooklyn, 1955; MEE, 1956; DEE, 1958

William F. Weldon, PE, *Professor Emeritus*
BS, Trinity, 1967; MSME, Texas (Austin), 1970

Herbert H. Woodson, PE, *Professor Emeritus*
BSEE, MS, Massachusetts Institute of Technology, 1952; DSc, 1956

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Jacob A. Abraham, *Professor*
BSEE, Kerala, 1970; MSEE, Stanford, 1971; PhD, 1974

J. K. Aggarwal, PE, *Professor*
BS, Bombay, 1956; BE, Liverpool, 1960; MSEE, Illinois, 1961; PhD, 1964

Deji Akinwande, *Assistant Professor*
MSc, Case Western Reserve, 2000; BSc, 2000; PhD, Stanford, 2010

Andrea Alu, *Assistant Professor*
Laurea, Università degli Studi Roma Tre, 2001; MS, 2004; PhD, 2007

Anthony P. Ambler, PE, *Professor*
BS, University of Manchester Institute of Science and Technology, 1976; MS, 1977; PhD, 1981

Jeffrey G. Andrews, *Associate Professor*
BS, Harvey Mudd College, 1995; MS, Stanford, 1999; PhD, 2002

Aristotle Arapostathis, *Professor*
BSEE, Massachusetts Institute of Technology, 1976; MSEE, California (Berkeley), 1978; PhD, 1982

Adnan Aziz, *Associate Professor*
BTech, Indian Institute of Technology (Kanpur), 1989; PhD, California (Berkeley), 1995

Ross Baldick, *Professor*
BSc, Sydney, 1983; BE, 1985; MSEECS, California (Berkeley), 1988; PhD, 1990

Sanjay K. Banerjee, *Professor*
BTech, Indian Institute of Technology (Kharagpur), 1979; MS, Illinois (Urbana-Champaign), 1981; PhD, 1983

Seth R. Bank, *Assistant Professor*
BSEE, Illinois (Urbana-Champaign), 1999; MS, Stanford, 2003; PhD, 2006

K. Suzanne Barber, *Professor*
BS, Trinity, 1985; MSEE, Texas (Arlington), 1988; PhD, 1992

William C. Bard, *Senior Lecturer*
BS, Chicago, 1966; MA, Texas (Austin), 1969; MSE, 1976

Don S. Batory, *Professor*
BS, Case Western Reserve, 1975; MS, 1977; PhD, Toronto, 1980

Michael F. Becker, PE, *Professor*
BSE, Johns Hopkins, 1969; MS, Stanford, 1970; PhD, 1973

David F. Beer, *Senior Lecturer*
BA, Arizona, 1963; MA, Arizona State, 1965; PhD, New Mexico, 1973

Mikhail A. Belkin, *Assistant Professor*
BS, Moscow Institute of Physics and Technology, 1998; PhD, California (Berkeley), 2004

Alan C. Bovik, PE, *Professor*
BS, Illinois (Urbana-Champaign), 1980; MS, 1982; PhD, 1984

David R. Brown, PE, *Senior Lecturer*
BS, United States Military Academy, 1965; MSEE, Purdue, 1969; PhD, 1978

Constantine Caramanis, *Assistant Professor*
AB, Harvard, 1999; MS, Massachusetts Institute of Technology, 2001; PhD, 2006

- George L. Cardwell III**, *Senior Lecturer*
BSEE, Texas (Austin), 1962; PhD, 1969
- Craig M. Chase**, *Associate Professor*
BSEE, Cornell, 1986; MSEE, Purdue, 1987; PhD, Cornell, 1993
- Ray Chen**, *Professor*
BS, National Tsing Hua, 1980; MS, California (San Diego), 1983; PhD, California (Irvine), 1988
- Julian Cheng**, *Professor*
BS, Massachusetts Institute of Technology, 1967; MS, 1968; MA, Harvard, 1969; PhD, 1973
- Derek Chiou**, *Assistant Professor*
BS, Massachusetts Institute of Technology, 1989; MS, 1992; PhD, 1999
- John H. Davis**, PE, *Associate Professor*
BSEE, Texas (Austin), 1967; MSEE, 1968; PhD, 1970
- Gustavo A. De Veciana**, *Professor*
BSEECs, California (Berkeley), 1987; MSCS, 1990; PhD, 1993
- Ananth Dodabalapur**, *Professor*
BSEE, Indian Institute of Technology (Madras), 1985; MSE, Texas (Austin), 1987; PhD, 1990
- Mircea D. Driga**, *Professor*
BSEE, Institutul Politehnic din Bucuresti, 1958; DrIng, 1972; PhD, University of Kentucky, 1990
- Mattan Erez**, *Assistant Professor*
BA, BS, Technion-Machon Technologi Le'Israel, 1999; MS, Stanford, 2002; PhD, 2007
- Brian L. Evans**, *Professor*
BSEECs, Rose-Hulman Institute of Technology, 1987; MSEE, Georgia Institute of Technology, 1988; PhD, 1993
- Robert Henry Flake**, PE, *Professor*
BSEPhy, Washington (St. Louis), 1956; AM, 1960; DSc, 1962
- Donald S. Fussell**, *Professor*
BA, Dartmouth College, 1973; MSCS, Texas (Dallas), 1977; PhD, 1980
- Vijay K. Garg**, *Professor*
BTech, Indian Institute of Technology (Kanpur), 1984; MSCS, California (Berkeley), 1985; PhD, 1988
- Andreas Gerstlauer**, *Assistant Professor*
BS, Universität Stuttgart, 1991; MS, 1997; MS, California (Irvine), 1998; PhD, 2004
- Ranjit Charpurey**, *Associate Professor*
BS, Indian Institute of Technology, 1990; MS, California (Berkeley), 1992; PhD, 1995
- Joydeep Ghosh**, *Professor*
BTech, Indian Institute of Technology (Kanpur), 1983; MSCCompE, Southern California, 1984; PhD, 1988
- John B. Goodenough**, PE, *Professor*
AB, Yale, 1943; MS, Chicago, 1951; PhD, 1952
- W. Mack Grady**, PE, *Professor*
BSEE, Texas (Arlington), 1971; MSEE, Purdue, 1973; PhD, 1983
- Neal A. Hall**, *Assistant Professor*
BSME, Texas (Austin), 2000; MS, Georgia Institute of Technology, 2002; PhD, 2004
- Gary A. Hallock**, *Professor*
BS, Rensselaer Polytechnic Institute, 1976; MS, 1977; PhD, 1982
- Arjang Hassibi**, *Assistant Professor*
BS, Tehran, 1997; MS, Stanford, 2001; PhD, 2005
- Robert W. Heath Jr.**, *Associate Professor*
BSEE, Virginia Polytechnic Institute, 1996; MSEE, 1997; PhD, Stanford, 2001
- Lizy K. John**, *Professor*
BS, Kerala Agricultural, 1984; MS, Texas (El Paso), 1989; PhD, Pennsylvania State, 1993
- Christine L. Julien**, *Assistant Professor*
BS, Washington (St. Louis), 2000; MS, 2003; DSc, 2004
- Stephen W. Keckler**, *Professor*
BS, Stanford, 1990; SM, Massachusetts Institute of Technology, 1992; PhD, 1998
- Sarfraz Khurshid**, *Assistant Professor*
BS, London, 1997; MS, Cambridge, 1998; PhD, Massachusetts Institute of Technology, 2003
- Miryung Kim**, *Assistant Professor*
BS, Korea Advanced Institute of Science and Technology, 2001; MS, Washington (Seattle), 2003; PhD, 2008
- Herbert C. Krasner**, *Senior Lecturer*
BS, Missouri (Rolla), 1973; MS, 1975; PhD, 1979
- Alexis Kwasinski**, *Assistant Professor*
Bachiller, Instituto Tecnológico de Buenos Aires, 1993; MS, Illinois (Urbana-Champaign), 2005; PhD, 2007
- Simon S. Lam**, *Professor*
BS, Washington State, 1969; MS, California (Los Angeles), 1970; PhD, 1974
- Jack C. Lee**, *Professor*
BSEE, California (Los Angeles), 1980; MSEE, 1981; PhD, California (Berkeley), 1988
- Hao Ling**, *Professor*
BSEE, Massachusetts Institute of Technology, 1982; MSEE, Illinois (Urbana-Champaign), 1983; PhD, 1986
- Thomas E. Milner**, *Professor*
BS, Colorado School of Mines, 1981; MS, 1986; PhD, Arizona, 1991
- J Strother Moore**, *Professor*
BS, Massachusetts Institute of Technology, 1970; PhD, Edinburgh, 1973
- Dean P. Neikirk**, *Professor*
BSPHy&Math, Oklahoma State, 1979; MSAPhPhy, California Institute of Technology, 1981; PhD, 1983
- Scott Nettles**, *Associate Professor*
BSCh, Michigan State, 1984; MSCS, Carnegie Mellon, 1992; PhD, 1995
- Michael E. Orshansky**, *Associate Professor*
BS, California (Berkeley), 1996; PhD, 2001
- David Z. Pan**, *Associate Professor*
BS, Peking, 1992; MS, California (Los Angeles), 1994; MS, 1998; PhD, 2000
- Yale N. Patt**, *Professor*
BSEE, Northeastern, 1962; MSEE, Stanford, 1963; PhD, 1966
- John A. Pearce**, *Professor*
BSME, Clemson, 1968; MSME, 1971; MSEE, Purdue, 1977; PhD, 1980
- Dewayne E. Perry**, *Professor*
BA, Westmont College, 1962; MSCS, Stevens Institute of Technology, 1977; PhD, 1978
- Edward Joseph Powers Jr.**, PE, *Professor*
BSEE, Tufts, 1957; MSEE, Massachusetts Institute of Technology, 1959; PhD, Stanford, 1965
- Theodore S. Rappaport**, *Professor*
BS, Purdue, 1982; MS, 1984; PhD, 1987
- Leonard F. Register**, *Associate Professor*
BSEE, BSPHy, North Carolina State, 1983; PhD, 1990
- H. Grady Rylander III**, PE, *Professor*
BSEE, Texas (Austin), 1970; MSEE, 1974; MD, Texas Health Science Center (San Antonio), 1974
- Sujay Sanghavi**, *Assistant Professor*
BTech, Indian Institute of Technology Bombay, 2000; MS, Illinois (Urbana-Champaign), 2002; MS, 2005; PhD, 2006
- Surya Santoso**, *Associate Professor*
BS, Universitas Kristen Satya Wacana, 1992; MSE, Texas (Austin), 1994; PhD, 1996
- Sanjay Shakkottai**, *Associate Professor*
BE, Bangalore, 1995; ME, Indian Institute of Science, 1998; PhD, Illinois (Urbana-Champaign), 2002
- Ben G. Streetman**, PE, *Professor*
BSEE, Texas, 1961; MSEE, 1963; PhD, 1966
- Earl E. Swartzlander Jr.**, PE, *Professor*
BSEE, Purdue, 1967; MSEE, Colorado (Boulder), 1969; PhD, Southern California, 1972
- Nur A. Toubia**, *Professor*
BS, Minnesota (Minneapolis-St. Paul), 1990; MS, Stanford, 1991; PhD, 1996
- Emanuel Tutuc**, *Assistant Professor*
BS, École Normale Supérieure (Paris), 1997; MS, Princeton, 1999; PhD, 2004
- Jonathan W. Valvano**, *Professor*
BS, MS, Massachusetts Institute of Technology, 1977; PhD, 1981
- Haris Vikalo**, *Assistant Professor*
BS, Sveučilište u Zagrebu, 1995; MS, Lehigh, 1997; MS, Stanford, 2002; PhD, 2003
- Sriram Vishwanath**, *Associate Professor*
BTech, Indian Institute of Technology (Madras), 1998; MS, California Institute of Technology, 1999; PhD, Stanford, 2003
- Baxter Frank Womack**, PE, *Professor*
BSEE, Arkansas (Fayetteville), 1956; MSEE, 1958; PhD, Purdue, 1963
- Ramesh Yerraballi**, *Senior Lecturer*
BE, Osmania, 1991; PhD, Old Dominion, 1996
- Ali E. Yilmaz**, *Assistant Professor*
BS, Bilkent Üniversitesi, 1999; MS, Illinois (Urbana-Champaign), 2001; PhD, 2005
- Edward T. Yu**, *Professor*
AM, Harvard, 1986; AB, 1986; PhD, California Institute of Technology, 1991

ADJUNCT PROFESSORS

- Douglas C. Burger**, *Adjunct Professor*
BS, Yale, 1991; MS, Wisconsin (Madison), 1993; PhD, 1998
- Joe C. Campbell**, *Adjunct Professor*
BSPHy, Texas (Austin), 1967; MSPHy, Illinois (Urbana-Champaign), 1971; PhD, 1973

Andrew J. Dillon, *Adjunct Professor*
BS, Purdue (West Lafayette), 1972; JD, John Marshall Law School, 1979

Robert B. McCann, *Adjunct Professor*
BSEE, Texas (Austin), 1970; MSE, 1972; PhD, 1975

Mark W. McDermott, *Adjunct Assistant Professor*
BSEE, New Mexico, 1977; MSE, Texas (Austin), 1988

William H. Neal, *Adjunct Associate Professor*
BSEE, Texas (Austin), 1971; MSE, 1973

Karl D. Stephan, *Adjunct Associate Professor*
BS, California Institute of Technology, 1976; ME, Cornell, 1977; PhD, Texas (Austin), 1983

Eric J. Swanson, *Adjunct Professor*
BSEE, Michigan State, 1977; MSEE, California Institute of Technology, 1980

Shouli Yan, *Adjunct Assistant Professor*
BS, Shanghai Jiaotong, 1992; MS, 1995; PhD, Texas A&M (College Station), 2002

DEPARTMENT OF MECHANICAL ENGINEERING

Joseph J. Beaman Jr., *Chair*

PROFESSORS EMERITUS

Billy Howard Amstead, PE, *Professor Emeritus*
BSME, Texas, 1941; MSME, 1949; PhD, 1955

Charles Sprague Beightler, PE, *Professor Emeritus*
BSME, Michigan, 1950; MA, 1954; PhD, Northwestern, 1961

David T. Blackstock, *Professor Emeritus*
BSPHy, Texas, 1952; MA, 1953; PhD, Harvard, 1960

Michael E. Crawford, *Professor Emeritus*
BSE, Arizona State, 1969; MSE, 1971; PhD, Stanford, 1976

Zwy Eliezer, PE, *Professor Emeritus*
Diplom de Stat, Universitatea din Bucur-esti, 1951; MScMatEngr, Technion—Machon Technology Le’Israel, 1969; DSc, 1972

Paul A. Jensen, PE, *Professor Emeritus*
BSEE, Illinois, 1959; MSEE, Pittsburgh (Main Campus), 1963; PhD, Johns Hopkins, 1967

Jerold W. Jones, PE, *Professor Emeritus*
BSME, Utah, 1962; MS, Stanford, 1965; PhD, Utah, 1970

Davor Juricic, *Professor Emeritus*
DiplIng, Univerzitet u Beogradu, 1953; DSc, 1964

Billy V. Koen, PE, *Professor Emeritus*
BA, Texas, 1960; BSChE, 1961; SMNucE, Massachusetts Institute of Technology, 1962; Diplôme d’Ingénieur en Génie atomique, Institut national des Sciences et Techniques nucléaires, 1963; ScD, Massachusetts Institute of Technology, 1968

J. Parker Lamb Jr., PE, *Professor Emeritus*
BME, Auburn, 1954; MS, Illinois, 1958; PhD, 1961

William G. Lesso, PE, *Professor Emeritus*
BS, Notre Dame, 1953; MBA, Xavier (Ohio), 1963; MS, Case Institute of Technology, 1966; PhD, 1967

Frederick F. Ling, *Professor Emeritus*
BS, St. John’s (Shanghai), 1947; BS, Bucknell, 1949; MS, Carnegie Institute of Technology, 1951; DSc, 1954

Harris L. Marcus, *Professor Emeritus*
BS, Purdue, 1963; PhD, Northwestern, 1967

Kurt M. Marshek, *Professor Emeritus*
BSME, Wisconsin, 1966; MS, 1968; PhD, Ohio State, 1971

Ronald L. Panton, PE, *Professor Emeritus*
BA, BSME, Wichita State, 1956; MS, Wisconsin, 1962; PhD, California (Berkeley), 1966

H. Grady Rylander Jr., PE, *Professor Emeritus*
BSME, Texas, 1943; MSME, 1952; PhD, Georgia Institute of Technology, 1965

John P. Stark, PE, *Professor Emeritus*
BS, Oklahoma, 1960; PhD, 1963

George B. Thurston, PE, *Professor Emeritus*
BSPHy, Texas, 1944; MA, 1948; PhD, 1952

Gary C. Vliet, PE, *Professor Emeritus*
BSChE, Alberta, 1955; MSME, Stanford, 1957; PhD, 1962

William F. Weldon, PE, *Professor Emeritus*
BS, Trinity, 1967; MSME, Texas (Austin), 1970

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Theodore A. Aanstoos, *Senior Lecturer*
BSME, Texas (Austin), 1980; MSE, 1987

Jonathan F. Bard, PE, *Professor*
BS, Rensselaer Polytechnic Institute, 1968; MS, Stanford, 1969; DSc, George Washington, 1979

J. Wesley Barnes, PE, *Professor*
BSME, Texas (Austin), 1967; MSIndE, Arkansas (Fayetteville), 1969; PhD, 1971

Ronald E. Barr, PE, *Professor*
BSEE, Marquette, 1969; PhD, 1975

Joseph J. Beaman Jr., PE, *Professor*
BSME, Texas (Austin), 1972; MSME, 1975; ScD, Massachusetts Institute of Technology, 1978

Adela Ben-Yakar, *Assistant Professor*
BS, Technion-Machon Technologi Le’Israel, 1992; MS, 1995; PhD, Stanford, 2000

J. Eric Bickel, *Assistant Professor*
BS, New Mexico State, 1992; MS, Stanford, 1994; PhD, 1999

Steven Biegalski, *Associate Professor*
BS, Maryland (College Park), 1991; ME, Florida, 1992; PhD, Illinois (Urbana-Champaign), 1996

David G. Bogard, *Professor*
BSME, Oklahoma State, 1974; MS, 1976; PhD, Purdue, 1982

David L. Bourell, PE, *Professor*
BSME, Texas A&M, 1975; MSMatSci&Eng, Stanford, 1976; PhD, 1979

Michael D. Bryant, PE, *Professor*
BSEE, Illinois (Chicago Circle), 1971; MS, Northwestern, 1980; PhD, 1981

Matthew I. Campbell, *Associate Professor*
BSME, Carnegie Mellon, 1995; MSME, 1997; PhD, 2000

Dongmei Maggie Chen, *Assistant Professor*
BE, Tsinghua, 1990; MS, Eastern Michigan, 1993; MS, Michigan (Ann Arbor), 2001; PhD, 2006

Shaochen Chen, *Professor*
BS, National Tsing Hua, 1989; MS, Akron, 1995; PhD, California (Berkeley), 1999

Richard H. Crawford, *Professor*
BSME, Louisiana State (Baton Rouge), 1982; MSME, Purdue, 1985; PhD, 1989

Alexandre K. Da Silva, *Assistant Professor*
BS, Universidade Federal de Santa Catarina, 1998; MS, 2001; PhD, Duke, 2005

Mark Deinert, *Assistant Professor*
BS, ME, Cornell, 1997; MS, 2001; PhD, 2003

Dragan Djurdjanovic, *Assistant Professor*
BS, Univerzitet u Nišu, 1997; MS, Nanyang Technological, 1999; MS, PhD, Michigan (Ann Arbor), 2002

Janet L. Ellzey, PE, *Professor*
BSME, Texas (Austin), 1978; MSE, 1980; PhD, California (Berkeley), 1985

Ofodike A. Ezekoye, *Professor*
BS, Pennsylvania, 1987; MS, California (Berkeley), 1989; PhD, 1991

Eric P. Fahrenthold, PE, *Professor*
BS, United States Military Academy, 1974; MS, Rice, 1981; PhD, 1984

Donglei Fan, *Assistant Professor*
BS, Nanjing, 1999; MS, Johns Hopkins, 2003; MS, 2005; PhD, 2007

Benito Fernández, *Associate Professor*
Ingeniero de Materiales, Universidad Simón Bolívar, 1981; MS, Massachusetts Institute of Technology, 1985; PhD, 1988

Paulo Ferreira, *Associate Professor*
Lic, Universidade do Porto, 1988; PhD, Illinois (Urbana-Champaign), 1996

John B. Goodenough, PE, *Professor*
AB, Yale, 1943; MS, Chicago, 1951; PhD, 1952

Matthew J. Hall, PE, *Professor*
BS, Wisconsin (Madison), 1980; MS, 1982; MA, Princeton, 1984; PhD, 1987

Mark F. Hamilton, *Professor*
BSEE, Columbia, 1978; MS, Pennsylvania State, 1981; PhD, 1983

John J. Hasenbach, *Associate Professor*
BS, Washington (St. Louis), 1991; MS, Georgia Institute of Technology, 1995; PhD, 1998

Carlos H. Hidrovo Chavez, *Assistant Professor*
BS, Massachusetts Institute of Technology, 1995; MS, Illinois (Urbana-Champaign), 1996; PhD, 2001

Paul S. Ho, *Professor*
BS, National Cheng Kung, 1957; MS, National Tsing Hua, 1959; PhD, Rensselaer Polytechnic Institute, 1965

John R. Howell, PE, *Professor*
BSChE, Case Institute of Technology, 1958; MS, 1960; PhD, 1962

Thomas M. Kiehne, *Senior Lecturer*
BS, United States Military Academy, 1969; MSME, Michigan State, 1978; PhD, Texas (Austin), 1985

Dale E. Klein, PE, *Professor*
BSME, Missouri (Columbia), 1970; MSME, 1971; PhD, 1977

Desiderio Kovar, *Associate Professor*
BS, California (Berkeley), 1990; MS, Carnegie Mellon, 1992; PhD, 1995

Thomas J. Krueger, *Senior Lecturer*
BS, Concordia, 1966; MEd, Texas A & M (College Station), 1971; PhD, 1975

Erhan Kutanoglu, *Associate Professor*
BS, Bilkent Üniversitesi, 1992; MS, 1995; PhD, Lehigh, 1999

- Sheldon Landsberger**, *Professor*
BS, Sir George Williams, 1972; MS, Salford, 1973; MS, Concordia, 1976; PhD, Toronto, 1982
- Wei Li**, *Associate Professor*
BS, Tsinghua, 1990; PhD, Michigan (Ann Arbor), 1999
- Raul G. Longoria**, *Professor*
BSME, Texas (Austin), 1985; PhD, 1989
- Arumugam Manthiram**, *Professor*
BS, Madurai-Kamaraj, 1974; MS, 1976; PhD, Indian Institute of Technology (Madras), 1980
- Glenn Y. Masada**, PE, *Professor*
BSME, Hawaii, 1971; MSME, Stanford, 1972; ScD, Massachusetts Institute of Technology, 1979
- Ronald D. Matthews**, PE, *Professor*
BSME, Texas (Austin), 1971; MS, California (Berkeley), 1972; PhD, 1977
- Jeremy P. Meyers**, *Assistant Professor*
BS, Stanford, 1993; PhD, California (Berkeley), 1998
- Tessie J. Moon**, *Professor*
BS, Grove City College, 1983; MS, Illinois (Urbana-Champaign), 1986; PhD, 1989
- Ora C. Moore**, *Senior Lecturer*
BA, Texas (Austin), 1988; MA, 1990
- David P. Morton**, *Professor*
BSMath&Phy, Stetson, 1987; MSOR, Stanford, 1990; PhD, 1993
- Robert D. Moser**, *Professor*
BS, Massachusetts Institute of Technology, 1978; MS, Stanford, 1981; PhD, 1984
- Richard Neptune**, *Associate Professor*
BSME, California (Davis), 1991; MSME, 1993; PhD, 1996
- Steven P. Nichols**, PE, *Professor*
BSME, Texas (Austin), 1972; MSME, 1973; PhD, 1975; JD, 1983
- Raymond L. Orbach**, *Professor*
BS, California Institute of Technology, 1956; PhD, California (Berkeley), 1960
- Mostafa Pirnia**, *Senior Lecturer*
MS, Tehran, 1965
- Elmira Popova**, *Associate Professor*
MSMath, Sofiski Universitet "Kliment Ohridski," 1985; PhD, Case Western Reserve, 1995
- Llewellyn Rabenberg**, PE, *Associate Professor*
BSMetalE, South Dakota School of Mines and Technology, 1978; MSMatS, California (Berkeley), 1980; PhD, 1983
- Kenneth M. Ralls**, *Professor*
BS, Stanford, 1960; SMMetallurgy, Massachusetts Institute of Technology, 1962; ScD, 1964
- Rodney Scott Ruoff**, *Professor*
BSCh, Texas (Austin), 1981; PhD, Illinois (Urbana-Champaign), 1988
- Juan M. Sanchez**, *Professor*
Licenciado en física, Universidad Nacional de Córdoba, 1971; MS, California (Los Angeles), 1974; PhD, 1977
- Philip S. Schmidt**, PE, *Distinguished Teaching Professor*
SBAeronautics&Astronautics, Massachusetts Institute of Technology, 1962; MSME, Stanford, 1965; PhD, 1968
- Erich A. Schneider**, *Assistant Professor*
BS, Cornell, 1995; ME, 1997; PhD, 2002
- Carolyn C. Seepersad**, *Assistant Professor*
BS, West Virginia, 1996; BA, Oxford, 1998; MS, Georgia Institute of Technology, 2001; PhD, 2004
- Luis Sentis**, *Assistant Professor*
BS, Universitat Politècnica de Catalunya, 1996; MSc, Stanford, 2000; PhD, 2007
- Li Shi**, *Associate Professor*
BE, National Tsing Hua, 1991; MSME, Arizona State, 1997; PhD, California (Berkeley), 2000
- S.V. Sreenivasan**, *Professor*
BE, Regional Engineering College (Tiruchi), 1987; MS, Ohio State (Columbus), 1988; PhD, 1994
- Eric M. Taleff**, *Professor*
BSME, MSMatSci, Rice, 1989; MS, Stanford, 1991; PhD, 1994
- Delbert Tesar**, PE, *Professor*
BSME, Nebraska (Lincoln), 1959; MSME, 1960; PhD, Georgia Institute of Technology, 1964
- Alfred E. Traver**, PE, *Senior Lecturer*
BSME, Massachusetts Institute of Technology, 1961; MSME, Iowa State, 1962; PhD, Texas (Austin), 1968
- Michael Webber**, *Assistant Professor*
BA, BSAsE, Texas (Austin), 1995; MS, Stanford, 1996; PhD, 2001
- Harovel G. Wheat**, PE, *Associate Professor*
BA, Colorado (Boulder), 1969; MSMetallurgy, Denver, 1974; PhD, Texas (Austin), 1985
- Preston S. Wilson**, PE, *Associate Professor*
BS, Texas (Austin), 1990; MS, 1994; PhD, Boston, 2002
- Billy H. Wood**, *Senior Lecturer*
BS, Texas A & M, 1974; MArch, 1977
- Kristin L. Wood**, *Professor*
BS, Colorado State, 1985; MS, California Institute of Technology, 1986; PhD, 1990

DEPARTMENT OF PETROLEUM AND GEOSYSTEMS ENGINEERING

Tadeusz W. Patzek, *Chair*

PROFESSORS EMERITUS

- Ben H. Caudle**, PE, *Professor Emeritus*
BSCh, Texas, 1943; PhD, 1963
- Robert S. Schechter**, PE, *Professor Emeritus*
BSChE, Agricultural and Mechanical College of Texas, 1950; PhD, Minnesota (Minneapolis-St. Paul), 1956

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Matthew Balhoff**, *Assistant Professor*
BS, Louisiana State (Baton Rouge), 2000; PhD, 2005
- J. Eric Bickel**, *Assistant Professor*
BS, New Mexico State, 1992; MS, Stanford, 1994; PhD, 1999

- Paul M. Bommer**, *Senior Lecturer*
BSPE, Texas (Austin), 1976; MSE, 1977; PhD, 1979
- Steven L. Bryant**, *Associate Professor*
BE, Vanderbilt, 1981; PhD, Texas (Austin), 1986
- Martin E. Chenevert**, PE, *Senior Lecturer*
BSPE, Louisiana State, 1958; MSPE, Texas, 1964
- David DiCarlo**, *Assistant Professor*
BS, Case Western Reserve, 1987; MS, Cornell, 1990; PhD, 1994
- John G. Ekerdt**, *Professor*
BSChE, Wisconsin (Madison), 1974; PhD, California (Berkeley), 1979
- Kenneth E. Gray**, *Professor*
BSPE, Tulsa, 1956; MSPE, 1957; PhD, Texas, 1962
- Charles G. Groat**, *Professor*
AB, Rochester, 1962; MS, Massachusetts, 1967; PhD, Texas (Austin), 1970
- Christopher Jablonowski**, *Assistant Professor*
BSCE, Virginia Polytechnic Institute, 1991; MBA, Tulane, 1996; PhD, Pennsylvania State, 2002
- Russell T. Johns**, PE, *Professor*
BSEE, Northwestern, 1982; MS, PhD, Stanford, 1992
- Larry W. Lake**, PE, *Professor*
BSE, Arizona State, 1967; PhD, Rice, 1973
- Kishore K. Mohanty**, *Professor*
BS, Indian Institute of Technology Kanpur, 1976; PhD, Minnesota (Duluth), 1981
- Quoc P. Nguyen**, *Assistant Professor*
BE, Tokyo Daigaku, 1996; MSc, Landbouwiniversiteit Wageningen, 1998; MBA, Asian Institute of Technology, 1999; PhD, Technische Universiteit Delft, 2003
- Jon E. Olson**, *Associate Professor*
BSCE, BSEarthSci, Notre Dame, 1984; PhD, Stanford, 1991
- Tadeusz W. Patzek**, *Professor*
MS, Politechnika Slaska, 1974; PhD, 1980
- Ekwere J. Peters**, PE, *Professor*
BS, Leicester, 1971; MS, Alberta, 1975; PhD, 1979
- Gary A. Pope**, PE, *Professor*
BSChE, Oklahoma State, 1967; PhD, Rice, 1972
- Kamy Sepehrnoori**, PE, *Professor*
BSME, Texas (Austin), 1973; MSE, 1974; PhD, 1977
- Mukul M. Sharma**, PE, *Professor*
BTech, Indian Institute of Technology (Kanpur), 1980; MS, Southern California, 1981; MS, 1982; PhD, 1985
- Sanjay Srinivasan**, *Associate Professor*
BTech, Indian School of Mines, 1987; MS, Southern California, 1989; PhD, Stanford, 2000
- Carlos Torres-Verdin**, *Professor*
BSGeophysE, Instituto Politécnico Nacional, 1982; MSE, Texas (Austin), 1985
- Mark P. Walsh**, *Senior Lecturer*
BS, Illinois (Chicago), 1977; MS, Texas (Austin), 1979; PhD, 1983

Mary F. Wheeler, PE, Professor
BA, BSEd, Texas, 1960; MA, 1963; PhD,
Rice, 1971

ADJUNCT PROFESSOR

Krishan A. Malik, PE, Adjunct Professor
BS, Punjab, 1965; MS, 1966; MSPE, Texas
(Austin), 1972

COLLEGE OF FINE ARTS

DEPARTMENT OF ART AND ART HISTORY

John A. Yancey, Chair

PROFESSORS EMERITUS

Shirley Mills Alexander, Professor Emeritus
BA, London, 1959; MA, New York, 1963;
PhD, 1967

Jacqueline E. Barnitz, Professor Emeritus
BA, Brooklyn, 1973; MPhil, City University of
New York, 1981; PhD, 1986

Rebecca L. Brooks, Professor Emeritus
BFA, Texas (Austin), 1968; MFA, 1970; PhD,
1974

Stephen J. Daly, Professor Emeritus
BA, San Jose State, 1964; MFA, Cranbrook
Academy of Art, 1967

**William Kelly Fearing, Ashbel Smith Professor
Emeritus**
BA, Louisiana Polytechnic Institute, 1941;
MFA, Teachers College, Columbia, 1950

Kenneth Burch Fiske, Professor Emeritus
BS, Southern California, 1950; MA, 1952

**Eleanor Simmons Greenhill, Ashbel Smith Profe-
sor Emeritus**
BA, Texas Technological College, 1934; MA,
Columbia, 1945; Dr, Ludwig-Maximilians-
Universität München, 1959

Terence Grieder, Professor Emeritus
BA, Colorado, 1953; MS, Wisconsin, 1956;
MA, Pennsylvania, 1960; PhD, 1961

Paul Peter Hatgil, Professor Emeritus
BSEd, Massachusetts School of Art, 1950;
MFA, Columbia, 1951

Thana Lauhakaikul, Professor Emeritus
BFA, Silpakorn, 1968; MSArtEd, Massachu-
setts College of Art, 1974

Alvin Albert Nickel, Professor Emeritus
BArtEd, School of the Art Institute of Chi-
cago, 1952; MArtEd, 1960

Kenneth W. Prescott, Professor Emeritus
BS, Western Michigan, 1942; MA, Michigan,
1948; PhD, 1950; MEd, Delaware, 1952

Brenda Preyer, Professor Emeritus
BA, Wellesley College, 1964; MA, Harvard,
1966; PhD, 1976

Peter A. Saul, Professor Emeritus
BFA, Washington (St. Louis), 1956

Denise Schmandt-Besserat, Professor Emeritus
Diplôme, École du Louvre, 1965

Jarvis W. Ulbricht, Professor Emeritus
BArtEd, Kansas, 1965; MA, 1969; PhD,
Iowa, 1976

**Lewis R. Wiman, Distinguished Teaching Professor
Emeritus**
MFA, Florida, 1966

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Christopher O. Adejumo, Associate Professor
BFA, Université nationale du Bénin, 1983;
MFA, Massachusetts (Dartmouth), 1993;
PhD, Ohio State, 1997

Anthony Alofsin, Professor
BA, Harvard, 1971; MArch, 1981; PhM, Co-
lumbia, 1983; PhD, 1987; Architect

Jonathan P. Bober, Senior Lecturer
AB, Brown, 1976; MA, Harvard, 1978

Paul E. Bolin, Professor
BA, Seattle Pacific, 1976; MS, Oregon, 1980;
PhD, 1986

Steve Bourget, Associate Professor
BS, Université de Montréal, 1985; MSc, 1989;
PhD, 1994

Troy D. Brauntuch, Associate Professor
BFA, California Institute of the Arts, 1975

Sarah A. Canright, Senior Lecturer
BFA, School of the Art Institute of Chicago,
1964

Annette D. Carozzi, Senior Lecturer
BA, Brandeis, 1975

Kate Catterall, Associate Professor
BA, Glasgow School of Art, 1989; MA, 1992

Edward Chambers, Assistant Professor
PhD, London, 1998

Michael Ray Charles, Professor
BA, McNeese State, 1989; MFA, Houston
(University Park), 1993

Michael Charlesworth, Professor
BA, Reading, 1977; MA, Manchester, 1979;
PhD, Kent at Canterbury, 1991

Lee R. Chesney, Associate Professor
BFA, Illinois, 1969; MFA, Indiana (Bloom-
ington), 1972

John R. Clarke, Professor
BA, Georgetown, 1967; MA, Yale, 1969;
PhD, 1973

Thelma Coles, Professor
BA, San Diego State, 1975; MFA, 1978

Penelope J. Davies, Associate Professor
BA, Cambridge, 1986; MA, 1990; MA, MPhil,
Yale, 1990; PhD, 1993

Sandra Fernandez, Assistant Professor
BSArt, Wisconsin (Madison), 1991; MA, 1992;
MFA, 1995

Andrea Giunta, Professor
MA, Universidad de Buenos Aires, 1989;
PhD, 1999

Mark Goodman, Professor
BA, Boston College, 1970

Julia Guernsey, Associate Professor
BS, Marquette, 1986; MA, Wisconsin (Mil-
waukee), 1992; PhD, Texas (Austin), 1997

Kenneth J. Hale, Professor
BA, California State College (Long Beach),
1971; MFA, Illinois (Urbana-Champaign),
1973

Peter A. Hall, Senior Lecturer
BA, Hull, 1986

**Linda Dalrymple Henderson, Distinguished Teach-
ing Professor**
BA, Dickinson College, 1969; MA, MPhil,
Yale, 1972; PhD, 1975

Donald Devoy Herron, Associate Professor
BFA, Wichita State, 1971; MFA, Tulane, 1973

Timothy High, Associate Professor
BFA, Texas Tech, 1973; MA, Wisconsin (Madi-
son), 1975; MFA, 1976

Joan A. Holladay, Professor
BA, Cornell, 1974; MA, Brown, 1978; PhD,
1982

Teresa Hubbard, Associate Professor
BFA, Texas (Austin), 1988; MFA, Nova Scotia
College of Art and Design, 1992

Richard Moxley Jordan, Associate Professor
BA, Southwestern at Memphis, 1958; BFA,
School of the Art Institute of Chicago, 1962;
MFA, Syracuse, 1964

Janet E. Kastner, Associate Professor
BFA, Kansas City Art Institute, 1977; MFA,
Alfred, 1979

Gloria J. Lee, Associate Professor
SB, Massachusetts Institute of Technology,
1983; MFA, Yale, 1991

Janice Leoshko, Associate Professor
BA, Ohio State, 1974; MA, 1976; PhD, 1987

Beili Liu, Assistant Professor
BA, Tennessee (Knoxville), 2001; MFA, Michi-
gan (Ann Arbor), 2003

William A. Lundberg, Professor
BA, San Jose State, 1964; MA, California
(Berkeley), 1966

Vincent A. Mariani, Professor
BFA, Yale, 1959

Melinda M. Mayer, Assistant Professor
BA, Principia College, 1976; MA, Southern
Methodist, 1981; PhD, Pennsylvania State,
1999

Lawrence D. McFarland, Professor
BFA, Kansas City Art Institute, 1973; MFA,
Nebraska (Lincoln), 1976

Jeffrey L. Meikle, Professor
AB, AM, Brown, 1971; PhD, Texas (Austin),
1977

Melissa W. Miller, Associate Professor
BFA, New Mexico, 1974

Michael J. Mogavero, Associate Professor
BS, State University of New York (Buffalo),
1973; MFA, Maryland Institute, College of
Art, 1975

Stephennie Mulder, Assistant Professor
BA, Utah, 1997; MA, Princeton, 2001; PhD,
Pennsylvania, 2007

Leslie Mutchler, Assistant Professor
BFA, Kent State, 1998; MFA, Temple, 2004

Moyosore Okediji, Associate Professor
BA, Obafemi Awolowo, 1977; MFA, Benin,
1982; PhD, Wisconsin (Madison), 1995

Daniel M. Olsen, Associate Professor
BFA, Wisconsin (Milwaukee), 1985; MFA,
Cranbrook Academy of Art, 1990

Nassos Papalexandrou, Associate Professor
BA, Ethnikon kai Kapodistriakon Panepistim-
ion Athinon, 1988; MA, Princeton, 1993;
PhD, 1998

- Glenn Peers, Professor**
BA, Acadia, 1984; MA, McGill, 1987; PhD, Johns Hopkins, 1995
- Bogdan P. Perzynski, Professor**
Magister Sztuki, Panstwowa Wyższa Szkoła Sztuk Plastycznych (Poznan), 1979
- Bradley R. Petersen, Associate Professor**
BA, Georgia, 1968; BFA, School of the Art Institute of Chicago, 1970; MFA, Georgia, 1975
- Susan W. Rather, Associate Professor**
BA, Denison, 1978; MA, Delaware, 1981; PhD, 1986
- Ann Morris Reynolds, Associate Professor**
BA, Smith College, 1979; MPhil, City University of New York, 1987
- Andrew M. Riggsby, Professor**
AB, Harvard, 1987; MA, California (Berkeley), 1988; PhD, 1993
- Margo L. Sawyer, Professor**
BA, Chelsea School of Art, 1980; MFA, Yale, 1982
- Yunchiahn C. Sena, Assistant Professor**
BA, Minnesota (Duluth), 1995; MA, 1997; PhD, Chicago, 2007
- David Shields, Assistant Professor**
BFA, Memphis State, 1991; MFA, Cranbrook Academy of Art, 1994
- Richard Schiff, Professor**
BA, Harvard, 1965; MA, Yale, 1969; PhD, 1973
- Cherise Smith, Assistant Professor**
BA, Arizona, 1991; MA, 1997; PhD, Stanford, 2004
- Jeffrey Chipps Smith, Professor**
BA, Duke, 1973; MA, Columbia, 1975; PhM, 1976; PhD, 1979
- Michael Smith, Associate Professor**
BA, Colorado College, 1973
- John S. Stoney, Assistant Professor**
BFA, Syracuse, 1988; MFA, Cranbrook Academy of Art, 1998
- Eva Struhala, Senior Lecturer**
BA, Universität Wien, 1990; MA, 1996; PhD, Johns Hopkins, 2007
- David S. Stuart, Professor**
BA, Princeton, 1989; PhD, Vanderbilt, 1995
- Daniel Sutherland, Associate Professor**
BFA, James Madison, 1988; MFA, Syracuse, 1991
- Roberto J. Tejada, Associate Professor**
BA, New York, 1986; PhD, State University of New York (Buffalo), 2004
- Louis A. Waldman, Associate Professor**
BA, Hunter College, 1989; MA, New York, 1993; PhD, 1999
- Susan Whyne, Associate Professor**
BFA, Cooper Union, 1968; MA, San Francisco State College, 1974
- Jeff Williams, Assistant Professor**
BFA, Columbus College of Art Design, 1998; MFA, Syracuse, 2002
- John A. Yancey, Professor**
BFA, School of the Art Institute of Chicago, 1980; MFA, Georgia Southern, 1993

SARAH AND ERNEST BUTLER SCHOOL OF MUSIC

B. Glenn Chandler, Director

PROFESSORS EMERITUS

- Rebecca A. Baltzer, Professor Emerita**
BA, Randolph-Macon Woman's College, 1962; MA, Boston, 1964; PhD, 1973
- Wayne R. Barrington, Professor Emeritus**
BMusic, New England Conservatory of Music, 1949
- Morris J. Beachy, Professor Emeritus**
BMusic, Colorado Agricultural and Mechanical College, 1951; MMusic, Oregon, 1952; DMA, Southern California, 1964
- Richard D. Blair, Professor Emeritus**
BMusic, New England Conservatory of Music, 1956; MMusic, Texas, 1966
- Paula A. Crider, Professor Emerita**
BMusic, Southern Mississippi, 1967; MMusic, Texas (Austin), 1970
- Raymond D. Crisara, Distinguished Teaching Professor Emeritus**
BFA (hon), State University of New York (Cortland), 1996
- Hanns-Bertold Dietz, Professor Emeritus**
Staatsexamen für Kirchenmusik, Staatliche Hochschule für Musik Weimar, 1948; MMusic, Notre Dame, 1954; Drphil, Leopold-Franzens Universität Innsbruck, 1956
- Vincent R. DiNino, Professor Emeritus**
BS, Minnesota, 1941; MS, North Dakota State, 1955
- George A. Frock, Professor Emeritus**
BSMusicEd, Illinois (Chicago), 1960; MMusicEd, Kansas (Lawrence), 1963
- John W. Grubbs, Associate Professor Emeritus**
BA, California (Los Angeles), 1957; MA, 1964; PhD, 1972
- Lita Anne Guerra, Professor Emerita**
BMusic, Texas, 1957; MMusic, 1959
- John Harrison Hicks, Professor Emeritus**
BMusic, New England Conservatory of Music, 1948; Diplôme, Conservatoire national supérieur de Musique (Paris), 1950; MMusic, Boston, 1951
- Donald Knaub, Professor Emeritus**
BMusic, Rochester, 1951; MMusic, 1961
- Karl Korte, Professor Emeritus**
BS, Juilliard School of Music, 1953; MS, 1956
- Stefan M. Kostka, Professor Emeritus**
BMusic, Colorado, 1962; MMusic, Texas, 1964; PhD, Wisconsin, 1969
- Paul Olefsky, Professor Emeritus**
Diploma, Curtis Institute of Music, 1947
- Frank N. Speller, Associate Professor Emeritus**
BMusic, Colorado, 1961; MMusic, Indiana, 1962; DMA, Colorado (Boulder), 1968
- Phyllis C. Young, Professor Emeritus**
BMusic, Texas, 1949; MMusic, 1950

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Gregory D. Allen, Professor**
BMusic, Oberlin College, 1970; MMusic, Peabody Conservatory of Music, 1972
- Byron P. Almen, Associate Professor**
BA, St. Olaf College, 1990; MMusic, Indiana (Bloomington), 1992; PhD, 1998
- Elliott Antokoletz, Professor**
BA, Hunter College, 1968; MA, 1970; PhD, City University of New York, 1975
- Nathaniel O. Brickens, Professor**
BMusic, Southern, 1974; MMusic, Michigan (Ann Arbor), 1975; DMA, Texas (Austin), 1989
- Steven Bryant, Associate Professor**
BMusic, Ohio, 1969; MMusic, Wichita State, 1971
- James W. Buhler, Associate Professor**
BA, Carleton College, 1986; PhD, Pennsylvania, 1996
- Thomas A. Burritt, Associate Professor**
BMusic, Ithaca College, 1993; MMusic, Kent State, 1994; DMA, Northwestern, 1990
- Lorenzo F. Candelaria, Associate Professor**
BMusic, Oberlin College, 1995; MPhil, Yale, 1998; PhD, 2001
- Robert Carnochan, Associate Professor**
BA, Towson, 1986; MMusic, Colorado (Boulder), 1993; DMA, Texas (Austin), 1999
- B. Glenn Chandler, Professor**
BMusic, Samford, 1962; MMusic, Southern Baptist Theological Seminary, 1966; PhD, Indiana (Bloomington), 1975
- Daniel Ching, Senior Lecturer**
BMusic, Oberlin College, 1995; MMusic, Cleveland Institute of Music, 1998
- Eugenia Costa-Giomi, Professor**
BA, Conservatorio Nacional de Musica "Carlos Lopez Buchardo," 1980; MA, 1984; PhD, Ohio State, 1991
- Andrew F. Dell'Antonio, Associate Professor**
BA, Yale, 1985; MA, California (Berkeley), 1987; PhD, 1991
- Robert DeSimone, Professor**
BA, Southern California, 1959; MA, 1968; DMA, Washington (Seattle), 1981
- Eric A. Drott, Assistant Professor**
BA, Pennsylvania, 1995; PhD, Yale, 2001
- Robert A. Duke, Distinguished Teaching Professor**
BSMusicEd, Florida State, 1976; MMusic, 1977; PhD, 1983
- Anne Epperson, Professor**
BA, Notre Dame de Namur, 1971; MM, Louisiana State (Baton Rouge), 1975
- Veit F. Erlmann, Professor**
BA, Universität zu Köln, 1973; MA, Freie Universität Berlin, 1974; PhD, Universität zu Köln, 1978
- Delaine Fedson, Senior Lecturer**
BMus, Northern Iowa, 1980; MMus, Texas (Austin), 1984
- Robert Freeman, Professor**
BA, Harvard, 1957; MFA, Princeton, 1960; PhD, 1967
- John M. Fremgen, Associate Professor**
BMusic, Millikin, 1991; MMusic, Southern California, 1993

- Nancy B. Garrett**, *Professor*
BMusic, Rochester, 1963; MMusic, Texas, 1966
- Marianne Gedigian**, *Professor*
BMusic, Boston, 1986
- Sophia Gilmson**, *Associate Professor*
MMusic, Saint-Petersburg Music State Conservatory "N.A. Rimsky-Korsakov," 1973
- Joshua T. Gindele**, *Senior Lecturer*
Diploma, Oberlin College, 1997; BMusic, Juilliard, 2000
- Donald Grantham**, *Professor*
BMusic, Oklahoma, 1970; MMusic, Southern California, 1974; DMA, 1980
- Eugene Gratovich**, *Associate Professor*
BMusic, Boston, 1963; MMusic, Illinois, 1965; DMA, Boston, 1968
- Gerre E. Hancock**, *Professor*
BMusic, Texas, 1955; MMusic, Union Theological Seminary, 1961
- Judith E. Hancock**, *Senior Lecturer*
BA, Syracuse, 1956; MMusic, Union Theological Seminary, 1961
- Jeff Hellmer**, *Distinguished Teaching Professor*
BMusic, Northern Iowa, 1981; MMusic, Rochester, 1983
- Rebecca Henderson**, *Associate Professor*
BMusic, Oberlin College, 1982; MMusic, Rochester, 1985
- Jacqueline Henninger**, *Assistant Professor*
BMusic, Texas (Austin), 1992; MMusic, 1998; PhD, 2000
- Martha Hilley**, *Distinguished Teaching Professor*
BMusic, Sam Houston State, 1967; MMusic, 1971
- Adam Holzman**, *Distinguished Teaching Professor*
BMusic, Florida State, 1982; MMusic, 1984
- Patrick Hughes**, *Associate Professor*
BA, St. Olaf College, 1984; MMusic, Wisconsin (Madison), 1988
- David C. Hunter**, *Senior Lecturer*
BLS, Wales (Aberystwyth), 1978; MSLS, Illinois (Urbana-Champaign), 1984; PhD, 1989
- Judith A. Jellison**, *Distinguished Teaching Professor*
BSMusicEd, Indiana University of Pennsylvania, 1962; MEd, 1964; MA, Missouri (Columbia), 1967; PhD, Florida State, 1972
- Kristin Wolfe Jensen**, *Professor*
BMusic, BMusicEd, Oberlin College, 1989; MMusic, Juilliard, 1991
- Leonard Johnson**, *Associate Professor*
BA, San Diego State, 1965; MA, 1968
- Jerry F. Junkin**, *Distinguished Teaching Professor*
BMusic, Texas (Austin), 1978; MMusic, 1979
- K. M. Knittel**, *Associate Professor*
BA, Carleton College, 1987; MFA, Princeton, 1989; PhD, 1992
- John C. Largess**, *Senior Lecturer*
Diploma, Curtis Institute of Music, 1992; BA, Yale, 1995
- Brian Lewis**, *Professor*
BMusic, Juilliard, 1991; MMusic, 1993
- William L. Lewis**, *Professor*
BMusic, Texas Christian, 1953
- James R. Lowe**, *Assistant Professor*
BM, Rochester, 1989; MM, Michigan (Ann Arbor), 1991
- Richard L. MacDowell**, *Associate Professor*
BMusic, New England Conservatory of Music, 1972; MMusic, Northwestern, 1983
- Betty P. Mallard**, *Associate Professor*
BMusic, Texas, 1964; MMusic, Southern California, 1968; DMA, Texas (Austin), 1979
- Hunter C. March**, *Professor*
BS, Lebanon Valley College, 1960; MMusic, Michigan (Ann Arbor), 1970; PhD, 1980
- Anne A. Meyers**, *Assistant Professor*
Diploma, The Juilliard School, 1990
- Karl H. Miller**, *Assistant Professor*
BA, Macalester College, 1990; PhD, New York, 2002
- John R. Mills**, *Associate Professor*
BA, Texas (Austin), 1975; MMusic, Southwest Texas State, 1992; DMA, Texas (Austin), 1998
- Robin D. Moore**, *Associate Professor*
BA, California (Santa Barbara), 1987; MA, 1990; PhD, Texas (Austin), 1995
- James M. Morrow Jr.**, *Associate Professor*
BMusic, Hardin-Simmons, 1986; MMusic, Ohio State, 1989; DMA, Texas (Austin), 1996
- Roger E. Myers**, *Professor*
BMusic, Southern California, 1990; MMusic, 1992
- Luisa Nardini**, *Assistant Professor*
BA, MA, Università degli Studi di Napoli, 1995; PhD, Università degli Studi di Roma "La Sapienza," 2001
- Anton Nel**, *Professor*
BMusic, Witwatersrand, 1983; MMusic, Cincinnati, 1984
- B. David Neubert**, *Professor*
BA, San Jose State, 1974; MMusic, Rochester, 1975; DMA, Texas (Austin), 1982
- David P. Neumeyer**, *Professor*
BMusic, Michigan State (East Lansing), 1972; MPhil, Yale, 1975; PhD, 1976
- Caroline P. O'Meara**, *Assistant Professor*
AB, Princeton, 1998; MA, California (Los Angeles), 2002; PhD, 2006
- Edward R. Pearsall**, *Associate Professor*
BS, Indiana University of Pennsylvania, 1976; MMusicEd, Missouri (Kansas City), 1986; PhD, Wisconsin (Madison), 1994
- Suzanne M. Pence**, *Associate Professor*
BMusicEd, Millikin, 1981; MMusicEd, Wichita State, 1983; DMA, Missouri (Kansas City), 1993
- Bruce W. Pennycook**, *Professor*
BMusic, Toronto, 1973; MMusic, 1974; DMA, Stanford, 1978
- Russell F. Pinkston**, *Professor*
BA, Dartmouth College, 1975; MA, Columbia, 1978; DMA, 1984
- Harvey C. Pittel**, *Professor*
BMusic, Southern California, 1965; MMusic, Northwestern, 1966
- A. David Renner**, *Associate Professor*
BMusic, Rochester, 1960; MMusic, 1965
- Glenn A. Richter**, *Professor*
BMusic, Texas (Austin), 1971; MMusic, 1975
- Charles A. Roeckle**, *Senior Lecturer*
BMusic, St. Louis Institute of Music, 1964; MMusic, Texas (Austin), 1966; PhD, 1978
- Mark J. Sarisky**, *Assistant Professor*
BS, Wilkes College, 1986
- Ray K. Sasaki**, *Distinguished Teaching Professor*
BMusic, California State (Fresno), 1972; MMusic, North Texas State, 1975
- Sonia T. Seeman**, *Assistant Professor*
BA, Michigan (Ann Arbor), 1980; MA, Washington (Seattle), 1990; PhD, California (Los Angeles), 2002
- Yevgeniy Sharlat**, *Assistant Professor*
BA, Curtis Institute of Music, 2001; MMusic, Yale, 2004
- Stephen M. Slawek**, *Professor*
BA, Pennsylvania, 1971; BMusic, Banares Hindu, 1974; MMusic, 1976; MA, Hawaii (Manoa), 1978; PhD, Illinois (Urbana-Champaign), 1986
- David A. Small**, *Associate Professor*
BMusic, DePauw, 1982; Artist Diploma in Opera, Cincinnati, 1984; MMusic, 1987
- Nikita Storozhev**, *Associate Professor*
Diploma, Moscow State Tchaikovsky Conservatory, 1978
- Rose A. Taylor**, *Professor*
BMusic, Southern California, 1968
- Bion Tsang**, *Associate Professor*
BA, Harvard, 1989; MMusic, Yale, 1991; DMA, 1993
- Joshua Tucker**, *Assistant Professor*
BMusic, Dalhousie, 1998; MA, Michigan (Ann Arbor), 2000; PhD, 2005
- Michael C. Tusa**, *Professor*
BA, Yale, 1975; MMusic, 1976; MFA, Princeton, 1978; PhD, 1983
- Charles W. Villarrubia**, *Senior Lecturer*
BMusic, Louisiana State (Baton Rouge), 1986; MMusic, Boston, 1988
- Dan E. Welcher**, *Professor*
BMusic, Rochester, 1969; MMusic, Manhattan School of Music, 1972
- Marianne Wheeldon**, *Associate Professor*
BMusic, London, 1990; MPhil, Yale, 1993; PhD, 1997
- Darlene Wiley**, *Professor*
BMusic, College of Wooster, 1967; MMusic, Illinois, 1969
- Nathan Williams**, *Assistant Professor*
Diplom, Hochschule für Musik und darstellende Kunst, 1983; MM, Rochester, 1985; DMA, The Juilliard School, 1992
- Satoko Sandy Yamamoto**, *Senior Lecturer*
BMusic, Cleveland Institute of Music, 1996; MMusic, 1998
- Laurie Scott Young**, *Associate Professor*
BMusic, State University of New York (Fredonia), 1977; MMusic, Nebraska (Lincoln), 1979; PhD, Texas (Austin), 1987
- Daxun Zhang**, *Assistant Professor*
BMusic, Indiana (Bloomington), 2005
- Gerhardt Zimmermann**, *Professor*
BMusicEd, Bowling Green State, 1967; MFA, Iowa, 1972

DEPARTMENT OF THEATRE AND DANCE

Holly Williams, *Interim Chair*

PROFESSORS EMERITUS

Oscar G. Brockett, *Distinguished Teaching Professor Emeritus*

BA, George Peabody College for Teachers, 1947; MA, Stanford, 1949; PhD, 1953

John W. Brokaw, *Professor Emeritus*

BA, Arizona State, 1959; MA, Arizona, 1964; PhD, Indiana (Bloomington), 1970

Bernard B. Engel, *Professor Emeritus*

BA, Allegheny College, 1957; MFA, Yale, 1960; PhD, Pittsburgh (Main Campus), 1968

David Nancarrow, *Professor Emeritus*

BA, Virginia, 1960; MFA, Yale, 1963; PhD, Birmingham, 1975

Gordon Peacock, *Professor Emeritus*

BEd, Alberta, 1949; MFA, Carnegie Institute of Technology, 1952

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Lee Abraham, *Associate Professor*

BA, Antioch College, 1970; MFA, California Institute of the Arts, 1977

Megan Alrutz, *Assistant Professor*

PhD, Arizona State (Tempe), 2004

Andrea P. Beckham, *Senior Lecturer*

BA, Texas (Austin), 1986

Paul A. Bonin, *Assistant Professor*

BA, Texas (Austin), 1986; MA, St. Mary's, 1991; PhD, Texas (Austin), 2006

Charlotte Canning, *Professor*

BA, Amherst College, 1986; PhD, Washington (Seattle), 1991

Rodger D. Caspers, *Senior Lecturer*

MFA, Texas (Austin), 1984

Pamela D. Christian, *Associate Professor*

BA, Princeton, 1985; MFA, Texas (Austin), 1995; PhD, Southern Illinois (Carbondale), 1999

Douglas J. Dempster, *Professor*

BA, St. Lawrence, 1977; MA, North Carolina (Chapel Hill), 1980; PhD, 1983

Steven Dietz, *Professor*

BA, Northern Colorado, 1980

Franchelle Dorn, *Distinguished Teaching Professor*

BA, Finch College, 1972; MFA, Yale, 1975

Lucien Douglas, *Associate Professor*

BFA, Connecticut, 1971; PhD, Michigan State, 1996

Stephen T. Gerald, *Associate Professor*

BA, Bard College, 1973; MFA, Rutgers, 1977

James J. Glavan, *Professor*

BA, Kent State, 1977; MA, 1984

Michelle Habeck, *Assistant Professor*

BFA, Salem State College, 1996; MFA, Northwestern, 1999

Barney Hammond, *Associate Professor*

MA, Houston, 1977

Richard M. Isakes, *Professor*

BA, New School for Social Research, 1969; MFA, Carnegie-Mellon, 1975

Coleman A. Jennings, *Professor*

BFA, Texas, 1958; MFA, 1961; EdD, New York, 1974

Joni L. Jones, *Associate Professor*

BS, MacMurray College, 1977; MA, Northwestern, 1978; PhD, New York, 1993

David Justin, *Associate Professor*

MA, Birmingham, 2000

Joan Lazarus, *Associate Professor*

BA, State University of New York (Buffalo), 1972; MA, Wyoming, 1974; MFA, Arizona State, 1982

Amarante Lucero, *Professor*

BA, New Mexico, 1970; MFA, Southern Methodist, 1976

Denise V. Martel, *Senior Lecturer*

BA, Saint Michael's College, 1986; MFA, Illinois (Urbana-Champaign), 1989

Susan E. Mickey, *Professor*

BFA, North Carolina (Greensboro), 1977; MFA, Alabama (Tuscaloosa), 1979

Francie Ostrower, *Professor*

BA, Swarthmore College, 1981; MA, Yale, 1982; MPhil, 1985; PhD, 1991

Ray C. Otte, *Associate Professor*

BA, Virginia (Charlottesville), 1978; MFA, Southern California, 1995

Deborah A. Paredes, *Associate Professor*

BA, Trinity, 1993; PhD, Northwestern, 2002

Rebecca Rossen, *Assistant Professor*

BA, Wesleyan, 1990; PhD, Northwestern, 2006

Robert N. Schmidt, *Professor*

BA, Wisconsin (Madison), 1976; MFA, 1979

Andee Scott, *Assistant Professor*

BA, Texas (Austin), 1996; MFA, Texas Woman's, 2001

Yacov Sharir, *Professor*

BFA, Jerusalem Bezalel Academy of Fine Arts, 1966

Holly Williams, *Professor*

BA, Barnard College, 1979; MFA, Texas Woman's, 1993

Lyn C. Elam Wiltshire, *Associate Professor*

Suzan L. Zeder, *Distinguished Teaching Professor*

BFA, Trinity, 1969; MFA, Southern Methodist, 1972; PhD, Florida State, 1978

JOHN A. AND KATHERINE G. JACKSON SCHOOL OF GEOSCIENCES

DEPARTMENT OF GEOLOGICAL SCIENCES

Stephen P. Grand, *Chair*

PROFESSORS EMERITUS

Milo M. Backus, *Professor Emeritus*

BS, Massachusetts Institute of Technology, 1952; PhD, 1956

Daniel S. Barker, *Professor Emeritus*

BS, Yale, 1956; MS, California Institute of Technology, 1958; PhD, Princeton, 1961

Robert E. Boyer, *Professor Emeritus*

BA, Colgate, 1951; MA, Indiana, 1954; PhD, Michigan, 1959

Leonard Franklin Brown Jr., *Professor Emeritus*

BS, Baylor, 1951; MS, Wisconsin, 1953; PhD, 1955

Stephen Edmund Clabaugh, *Professor Emeritus*

BSGeo, Texas, 1940; MA, 1941; PhD, Harvard, 1950

Peter T. Flawn, *Professor Emeritus*

BA, Oberlin College, 1947; MS, Yale, 1948; PhD, 1951

Robert Louis Folk, *Professor Emeritus*

BS, Pennsylvania State College, 1946; MS, 1950; PhD, 1952

William E. Galloway, *Professor Emeritus*

BS, Texas A&M, 1966; MA, Texas (Austin), 1968; PhD, 1971

Edward C. Jonas, *Professor Emeritus*

BS, Rice Institute, 1944; MS, Illinois, 1952; PhD, 1954

Lynton S. Land, *Professor Emeritus*

BA, Johns Hopkins, 1962; MA, 1963; PhD, Lehigh, 1966

Wann Langston Jr., *Professor Emeritus*

BS, Oklahoma, 1943; MS, 1947; PhD, California (Berkeley), 1952

Ernest L. Lundelius Jr., *Professor Emeritus*

BSGeo, Texas, 1950; PhD, Chicago, 1954

Arthur Maxwell, *Professor Emeritus*

BS, New Mexico, 1949; MS, California (San Diego), 1952; PhD, 1959

Earle F. McBride, *Professor Emeritus*

BA, Augustana College (Illinois), 1954; MA, Missouri, 1956; PhD, Johns Hopkins, 1960

William R. Muehlberger, *Professor Emeritus*

BS, California Institute of Technology, 1949; MS, 1950; PhD, 1954

Yosio Nakamura, *Professor Emeritus*

PhD, Pennsylvania State, 1963

Douglas Smith, *Professor Emeritus*

BS, California Institute of Technology, 1962; MA, Harvard, 1963; PhD, California Institute of Technology, 1969

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Jay L. Banner**, *Professor*
BA, Pennsylvania, 1978; MSEarthSci, State University of New York (Stony Brook), 1981; PhD, 1986
- Jamie D. Barnes**, *Assistant Professor*
BS, Texas (Austin), 2000; BA, 2000; MS, New Mexico (Albuquerque), 2002; PhD, 2006
- Christopher J. Bell**, *Associate Professor*
BS, College of William and Mary, 1988; MS, Northern Arizona, 1990; PhD, California (Berkeley), 1997
- Philip C. Bennett**, *Professor*
BS, The Evergreen State College, 1981; MS, Syracuse, 1985; PhD, 1988
- Daniel O. Breecker**, *Assistant Professor*
BA, Amherst, 2001; MS, New Mexico (Albuquerque), 2004; PhD, 2008
- Meinhard B. Cardenas**, *Assistant Professor*
BS, University of the Philippines (Diliman), 1999; MS, Nebraska (Lincoln), 2002; PhD, New Mexico Institute of Mining and Technology, 2006
- William D. Carlson**, *Distinguished Teaching Professor*
BS, Stanford, 1974; PhD, California (Los Angeles), 1980
- Ginny A. Catania**, *Assistant Professor*
BS, Western Ontario, 1994; MSc, Minnesota (Crookston), 1998; PhD, Washington (Seattle), 2004
- Elizabeth J. Catlos**, *Associate Professor*
BS, California (San Diego), 1994; PhD, California (Los Angeles), 2000
- Julia A. Clarke**, *Associate Professor*
BA, Brown, 1995; MPhil, Yale, 1998; PhD, 2002
- Mark P. Cloos**, *Professor*
BS, Illinois (Urbana-Champaign), 1976; PhD, California (Los Angeles), 1981
- Kerry H. Cook**, *Professor*
BS, Villanova, 1975; MS, Rice, 1977; PhD, North Carolina State, 1984
- Ian W. D. Dalziel**, *Professor*
BS, Edinburgh, 1959; PhD, 1963
- Robert E. Dickinson**, *Professor*
BA, Harvard, 1961; MS, Massachusetts Institute of Technology, 1962; PhD, 1966
- William L. Fisher**, *Professor*
BS, Southern Illinois, 1954; MS, Kansas, 1958; PhD, 1961; DSc (hon), Southern Illinois, 1986; DE (hon), Colorado School of Mines, 2002
- Peter B. Flemings**, *Professor*
BA, Dartmouth College, 1984; MS, Cornell, 1987; PhD, 1990
- Sergey B. Fomel**, *Associate Professor*
Bakalavr, Novosibirskij Gosudarstvennyj Universitet, 1990; PhD, Stanford, 2001
- Rong Fu**, *Professor*
BS, Beijing, 1984; PhD, Columbia, 1991
- James E. Gardner**, *Associate Professor*
BS, Southern Methodist, 1985; MA, Washington (Seattle), 1987; PhD, Rhode Island, 1993
- Omar Ghattas**, *Professor*
BS, Duke, 1984; MS, 1986; PhD, 1988
- Stephen P. Grand**, *Professor*
BS, McGill, 1978; PhD, California Institute of Technology, 1986
- Charles G. Groat**, *Professor*
AB, Rochester, 1962; MS, Massachusetts, 1967; PhD, Texas (Austin), 1970
- Mark A. Helper**, *Distinguished Senior Lecturer*
BS, Illinois (Urbana-Champaign), 1978; PhD, Texas (Austin), 1985
- Marc A. Hesse**, *Assistant Professor*
BS, Edinburgh, 2000; MS, Massachusetts Institute of Technology, 2002; MPhil, Cambridge, 2003; PhD, Stanford, 2008
- Brian K. Horton**, *Associate Professor*
BS, New Mexico, 1992; MS, Montana State, 1994; PhD, Arizona, 1998
- Joel P. Johnson**, *Assistant Professor*
BS, Massachusetts Institute of Technology, 1997; PhD, 2007
- Charles Kerans**, *Professor*
BS, St. Lawrence, 1977; PhD, Carleton, 1982
- Richard A. Ketcham**, *Associate Professor*
BA, Williams College, 1987; PhD, Texas (Austin), 1995
- Wonsuck Kim**, *Assistant Professor*
BS, Yonsei University Seoul, 1998; MS, 2000; PhD, Minnesota (Minneapolis-St. Paul), 2007
- Gary A. Kocurek**, *Professor*
BS, Houston (University Park), 1975; MS, 1977; PhD, Wisconsin (Madison), 1980
- J. Richard Kyle**, *Professor*
BS, Tennessee Technological, 1970; MS, Tennessee (Knoxville), 1973; PhD, Western Ontario, 1977
- John C. Lassiter**, *Associate Professor*
BA, Brown, 1989; PhD, California (Berkeley), 1995
- Luc L. Lavier**, *Assistant Professor*
BA, Université de Franche-Comté, 1990; MSc, Université de Montpellier I, 1991; MA, Columbia, 1996; MPhil, 1998; PhD, 1999
- Jung-Fu Lin**, *Assistant Professor*
BS, National Cheng Kung, 1992; MS, 1994; PhD, Chicago, 2002
- Leon E. Long**, *Distinguished Teaching Professor*
BS, Wheaton College, 1954; MA, Columbia, 1958; PhD, 1959
- Randall A. Marrett**, *Professor*
BS, California (Santa Cruz), 1984; PhD, Cornell, 1990
- David Mohrig**, *Associate Professor*
BA, Pomona College, 1983; MS, Washington (Seattle), 1987; PhD, 1994
- Sharon Mosher**, *Professor*
BS, Illinois (Urbana-Champaign), 1973; MS, Brown, 1975; PhD, Illinois (Urbana-Champaign), 1978
- Raymond L. Orbach**, *Professor*
BS, California Institute of Technology, 1966; PhD, California (Berkeley), 1960
- David B. Prior**, *Professor*
BA, Queen's (Belfast), 1964; PhD, 1968
- Terrence M. Quinn**, *Professor*
BS, State University of New York (Oneonta), 1982; MS, Wichita State, 1984; PhD, Brown, 1989
- Timothy B. Rowe**, *Professor*
BA, Occidental College, 1975; MS, Chicago, 1981; PhD, California (Berkeley), 1986
- Mrinal K. Sen**, *Professor*
BS, Indian School of Mines, 1977; MS, 1979; PhD, Hawaii (Manoa), 1987
- Timothy M. Shanahan**, *Assistant Professor*
BS, Brown, 1994; MS, Arizona, 1999; PhD, 2006
- John M. Sharp Jr.**, *Professor*
BGeoE, Minnesota (Minneapolis-St. Paul), 1967; MS, PhD, Illinois (Urbana-Champaign), 1974
- Kyle T. Spikes**, *Assistant Professor*
BS, Kansas (Lawrence), 2001; MS, 2002; MS, Stanford, 2007; PhD, 2008
- James T. Sprinkle**, *Professor*
BS, Massachusetts Institute of Technology, 1965; MA, Harvard, 1966; PhD, 1971
- Ronald J. Steel**, *Professor*
BS, Glasgow, 1967; PhD, 1970
- Paul L. Stoffa**, *Professor*
BS, Rensselaer Polytechnic Institute, 1970; PhD, Columbia, 1974
- Robert H. Tatham**, *Professor*
BS, California State (Northridge), 1967; MS, Houston, 1970; PhD, Columbia, 1975
- Scott W. Tinker**, *Professor*
BS, Trinity, 1982; MS, Michigan (Ann Arbor), 1985; PhD, Colorado (Boulder), 1996
- Clark R. Wilson**, *Professor*
BA, California (San Diego), 1970; MS, 1973; PhD, 1975
- Zong-Liang Yang**, *Associate Professor*
BS, Nanjing Institute of Meteorology, 1984; MS, Melbourne, 1989; PhD, Macquarie, 1992

ADJUNCT PROFESSORS

- Steven L. Bachtel**, *Adjunct Professor*
BS, Idaho, 1982; MS, 1984; PhD, Texas A&M (College Station), 1995
- Krishan A. Malik**, *Adjunct Professor*
BS, Punjab (Lahore), 1965; MSc, 1966; MS, Texas (Austin), 1972; PhD, 1987

SCHOOL OF INFORMATION

Andrew P. Dillon, *Chair*

PROFESSORS EMERITUS

- Donald G. Davis**, *Professor Emeritus*
PhD, Illinois (Urbana-Champaign), 1972
- Julie Hallmark**, *Professor Emeritus*
PhD, Texas (Austin), 1973
- Billie G. Herring**, *Professor Emeritus*
PhD, Texas (Austin), 1974
- William V. Jackson**, *Professor Emeritus*
PhD, Harvard, 1952
- Francis L. Miksa**, *Professor Emeritus*
PhD, Chicago, 1974
- Brooke E. Sheldon**, *Professor Emeritus*
PhD, Pittsburgh, 1977

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- William F. Aspray Jr.**, *Professor*
BA, Wesleyan, 1973; MA, 1973; MA, Wisconsin, 1975; PhD, 1980
- Diane E. Bailey**, *Assistant Professor*
BS, California (Berkeley), 1988; MS, 1990; PhD, 1994
- Randolph G. Bias**, *Associate Professor*
BS, Florida State, 1973; PhD, Texas (Austin), 1978
- Andrew P. Dillon**, *Professor*
BA, University College, Cork, 1984; MA, 1987; PhD, Lough-borough University of Technology, 1991
- Philip Doty**, *Associate Professor*
MLS, Syracuse, 1988; PhD, 1995
- Melanie D. Feinberg**, *Assistant Professor*
BA, Stanford, 1992; MS, California (Berkeley), 2004; PhD, Washington (Seattle), 2008
- Lui Francisco-Revilla**, *Assistant Professor*
BS, Universidad Iberoamericana, 1992; MS, Texas A&M, 1998; PhD, 2004
- Caroline J. Frick**, *Assistant Professor*
BA, Miami (Ohio), 1993; MA, East Anglia, 1995; PhD, Texas (Austin), 2005
- Patricia K. Galloway**, *Associate Professor*
BA, Millsaps College, 1966; MA, North Carolina (Chapel Hill), 1968; PhD, 1973
- Gary Geisler**, *Assistant Professor*
BA, California (San Diego); MS, North Carolina (Chapel Hill), 1998; PhD, 2003
- David B. Gracy II**, *Professor*
PhD, Texas Tech, 1971
- E. Glynn Harmon**, *Professor*
MS, Case Western Reserve, 1965; PhD, 1970
- Fred M. Heath**, *Professor*
BA, Tulane, 1966; MA, Virginia, 1968; MSLS, Florida State (Tallahassee); EdD, Virginia Polytechnical Institute, 1980
- Barbara F. Immroth**, *Professor*
PhD, Pittsburgh, 1980
- Matthew A. Lease**, *Assistant Professor*
BS, Washington (Seattle), 1999; MS, Brown, 2004; PhD, 2009
- W. Bernard Lukenbill**, *Professor*
PhD, Indiana (Bloomington), 1973
- Loriene Roy**, *Professor*
BT, Oregon Institute of Technology, 1977; MLS, Arizona, 1980; PhD, Illinois (Urbana-Champaign), 1987
- Ciaran Trace**, *Assistant Professor*
BA, University College Dublin, 1992; Diploma, 1995; PhD, California (Los Angeles), 2004
- Jo Lynn Westbrook**, *Associate Professor*
BS, Illinois State (Normal), 1979; MA, Chicago, 1982; PhD, Michigan (Ann Arbor), 1995
- Andrew B. Whinston**, *Professor*
PhD, Carnegie Mellon, 1962
- Megan A. Winget**, *Assistant Professor*
BA, Georgia (Athens), 1990; MA, Virginia (Charlottesville), 1993; MS, North Carolina (Chapel Hill), 1999; PhD, 2006
- Michael B. Winship**, *Professor*
AB, Harvard, 1971; MS, Simmons College, 1982; DPhil, Oxford, 1990

ADJUNCT PROFESSORS

- Claudia F. Chidester**, *Adjunct Assistant Professor*
BA, Wellesley College, 1978; MLIS, Texas (Austin), 1986
- Veronica P. Covington**, *Adjunct Assistant Professor*
BS, BS, Texas A&M (Kingsville), 1970; MEd, Sam Houston State, 1986; MS, 1991; PhD, Texas A&M (College Station), 1996
- Rebecca K. Elder**, *Adjunct Assistant Professor*
BA, Virginia (Charlottesville), 1998; MSLS, Texas (Austin), 2003
- Stan Gunn Jr.**, *Adjunct Assistant Professor*
BS, Texas (Tyler), 1990; MLS, Texas (Austin), 1998
- Lance A. Hayden**, *Adjunct Assistant Professor*
BA, New Mexico (Albuquerque), 1994; MLIS, Texas (Austin), 1997; PhD, 2009
- Mary M. Hoffman**, *Adjunct Assistant Professor*
BA, Rice, 1991; MSLS, North Texas, 1992; JD, Texas (Austin), 2001
- Michael S. Laird**, *Adjunct Assistant Professor*
BSRTF, Texas (Austin), 1985; MLIS, 1989
- Ann E. Minner**, *Adjunct Assistant Professor*
BA, Southern Illinois (Edwardsville), 1991; MLIS, Texas (Austin), 1998
- Danielle C. Plumer**, *Adjunct Assistant Professor*
BA, New Mexico State (Las Cruces), 1990; MA, California (Davis), 1994; MS, Texas (Austin), 2003; PhD, California (Davis), 1998
- Alonso F. Seay**, *Adjunct Assistant Professor*
BS, Florida State, 1995; MS, Georgia Institute of Technology, 2000; PhD, Carnegie-Mellon, 2006
- Kim C. Smith**, *Adjunct Assistant Professor*
MA, California (Berkeley), 1969; PhD, Brown, 1983
- Stephanie D. Swenson**, *Adjunct Assistant Professor*
BFA, Texas (Austin), 1989; MSLS, 1999; PhD, 1994
- Amanda J. Williams**, *Adjunct Assistant Professor*
BA, Texas (Austin), 1976; MLS, 1978; PhD, 1998

COLLEGE OF LIBERAL ARTS

DEPARTMENT OF AMERICAN STUDIES

Steven D. Hoelscher, *Chair*

PROFESSORS EMERITUS

- Alfred W. Crosby**, *Professor Emeritus*
BA, Harvard, 1952; MAT, 1956; PhD, Boston, 1961
- William Merrell Stott**, *Professor Emeritus*
BA, Yale, 1962; PhM, 1970; PhD, 1972

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Robert H. Abzug**, *Professor*
BA, Harvard, 1967; PhD, California (Berkeley), 1977

Cary Cordova, *Assistant Professor*

- MA, Texas (Austin), 1999; PhD, 2005
- Janet M. Davis**, *Associate Professor*
BA, Carleton College, 1986; MA, Wisconsin (Madison), 1992; PhD, 1998
- Elizabeth Engelhardt**, *Associate Professor*
BA, Duke, 1992; MA, PhD, Emory, 1999
- Neil F. Foley**, *Associate Professor*
BA, Virginia, 1971; MA, Georgetown, 1975; MA, Michigan (Ann Arbor), 1985; PhD, 1990
- Steven D. Hoelscher**, *Professor*
BA, Gustavus Adolphus College, 1986; MA, Toronto, 1989; PhD, Wisconsin (Madison), 1995
- Randolph R. Lewis**, *Associate Professor*
BA, Texas (Austin), 1988; MA, 1990; PhD, 1994
- Nhi T. Lieu**, *Assistant Professor*
BA, California (San Diego), 1995; MA, PhD, Michigan (Ann Arbor), 2004
- José E. Limón**, *Professor*
BA, Texas (Austin), 1966; MA, 1969; PhD, 1978
- Stephen H. Marshall**, *Assistant Professor*
BA, Louisville, 1992; BA, Oxford, 1994; PhD, Harvard, 2002
- Jeffrey L. Meikle**, *Professor*
AB, AM, Brown, 1971; PhD, Texas (Austin), 1977
- Julia L. Mickenberg**, *Associate Professor*
AB, Brown, 1990; PhD, Minnesota (Minneapolis-St. Paul), 2000
- Angela N. Paik**, *Assistant Professor*
BA, Columbia, 2001; MA, Yale, 2005; PhD, 2009
- Mark C. Smith**, *Associate Professor*
BA, Massachusetts (Amherst), 1971; MA, Texas (Austin), 1975; PhD, 1980; MSSW, 1990
- Shirley E. Thompson**, *Associate Professor*
AB, Harvard/Radcliffe, 1992; AM, Harvard, 2000; PhD, 2001

DEPARTMENT OF ANTHROPOLOGY

Samuel M. Wilson, *Chair*

PROFESSORS EMERITUS

- Richard N. Adams**, *Professor Emeritus*
BA, Michigan, 1947; MA, Yale, 1949; PhD, 1951
- Claud Allen Bramblett**, *Professor Emeritus*
BA, Texas, 1962; MA, 1965; PhD, California (Berkeley), 1967
- Robert A. Fernea**, *Professor Emeritus*
BA, Reed College, 1954; MA, Chicago, 1955; PhD, 1959
- Thomas R. Hester**, *Professor Emeritus*
BA, Texas, 1969; PhD, California (Berkeley), 1972
- James A. Neely**, *Professor Emeritus*
BA, Mexico City College, 1958; MA, Arizona, 1968; PhD, 1974
- William W. Newcomb Jr.**, *Professor Emeritus*
BA, Michigan, 1943; MA, 1947; PhD, 1953

Henry A. Selby, *Professor Emeritus*
BA, Toronto, 1955; MA, London, 1961; PhD,
Stanford, 1966

Joel Sherzer, *Professor Emeritus*
BA, Oberlin College, 1964; MA, Pennsylvania,
1966; PhD, 1968

Dee Ann Story, *Professor Emeritus*
BA, Texas, 1953; MA, 1956; PhD, California
(Los Angeles), 1963

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Kamran Asdar Ali, *Associate Professor*
MB, BS, Karachi, 1987; MA, Johns Hopkins,
1991; PhD, 1997

Cecilia Balli, *Assistant Professor*
BA, Stanford, 1998; PhD, Rice, 2009

Deborah A. Bolnick, *Assistant Professor*
BA, California (Davis), 1999; MA, 2001;
PhD, 2005

James Brow, *Professor*
BA, Oxford, 1960; MA, 1964; PhD, Washing-
ton (Seattle), 1974

Karl W. Butzer, *Professor*
BS, McGill, 1954; MS, 1955; Dr.rer.nat.,
Rheinische Friedrich-Wilhelms-Universität
Bonn, 1957

Craig A. Campbell, *Assistant Professor*
BA, British Columbia, 1998; MA, Alberta,
2001; PhD, 2009

Darrell G. Creel, *Associate Professor*
BA, Texas (Austin), 1975; MA, 1977; PhD,
Arizona, 1986

James R. Denbow, *Associate Professor*
BA, Illinois, 1968; MA, Indiana (Bloomington),
1976; PhD, 1983

Nora C. England, *Professor*
BA, Bryn Mawr College, 1967; MA, Florida,
1971; PhD, 1975

Veit F. Erlmann, *Professor*
BA, Universität zu Köln, 1973; MA, Freie
Universität Berlin, 1974; PhD, Universität
zu Köln, 1978

Richard R. Flores, *Professor*
BA, Notre Dame, 1978; MA, Incarnate Word
College, 1984; PhD, Texas (Austin), 1989

Douglas E. Foley, *Professor*
BA, Northern Iowa, 1961; MA, Stanford,
1966; PhD, 1970

Maria Franklin, *Associate Professor*
BA, Auburn, 1989; MA, California (Berkeley),
1991; PhD, 1997

Kaushik Ghosh, *Assistant Professor*
BA, Brandeis, 1988; MA, Princeton, 1991;
PhD, 1996

Edmund T. Gordon, *Associate Professor*
BA, Swarthmore College, 1974; MA, Stanford,
1975; PhD, 1981

Charles R. Hale, *Professor*
BA, Harvard, 1981; PhD, Stanford, 1989

William F. Hanks, *Professor*
BS, Georgetown, 1975; MA, Chicago, 1979;
PhD, 1983

John M. Hartigan Jr., *Associate Professor*
BA, Michigan (Ann Arbor), 1987; PhD, Cali-
fornia (Santa Cruz), 1995

Jennifer Johnson-Hanks, *Professor*
BA, Northwestern, 1994; MA, 1996; PhD,
2000

John W. Kappelman, *Professor*
BS, Yale, 1979; MA, Harvard, 1983; PhD, 1987

Elizabeth L. Keating, *Professor*
BA, California (Berkeley), 1988; MA, Califor-
nia (Los Angeles), 1990; PhD, 1994

Ward Keeler, *Associate Professor*
BA, Cornell, 1970; MA, Chicago, 1977; PhD,
1982

E. Christopher Kirk, *Associate Professor*
BA, Texas (Austin), 1995; PhD, Duke, 2003

Rebecca J. Lewis, *Assistant Professor*
BA, Duke, 1994; PhD, 2004

José E. Limón, *Professor*
BA, Texas (Austin), 1966; MA, 1969; PhD,
1978

Martha Menchaca, *Professor*
BA, California (Santa Cruz), 1978; MA, Stan-
ford, 1983; PhD, 1987

Sofian Merabet, *Assistant Professor*
BA, Universität Bayreuth, 1996; MA, State
University of New York (Binghamton),
1998; MA, Columbia, 1999; MPhil, 2004;
PhD, 2009

Angela M. Nonaka, *Assistant Professor*
BA, Kansas, 1990; MA, National University
Corporation Tsukuba College of Technology,
1994; MA, Indiana (Bloomington), 1996;
PhD, California (Los Angeles), 2007

Jemima Pierre, *Assistant Professor*
BA, Tulane, 1995; MA, Texas (Austin), 1998;
PhD, 2002

Denne N. Reed, *Assistant Professor*
BS, Michigan (Ann Arbor), 1993; MA, State
University of New York (Stony Brook), 1997;
PhD, 2003

Enrique R. Rodriguez, *Assistant Professor*
BA, Texas (Austin), 1994; MA, Chicago, 1997;
PhD, 2002

Suzanne K. Seriff, *Senior Lecturer*
BA, Swarthmore College, 1978; MA, Texas
(Austin), 1984; PhD, 1989

Liza Shapiro, *Professor*
BA, State University of New York (Albany),
1983; PhD, State University of New York
(Stony Brook), 1991

Lok C. Siu, *Associate Professor*
BA, California (Berkeley), 1993; MA, Stanford,
1995; PhD, 2000

Christen A. Smith, *Assistant Professor*
AB, Princeton, 1999; MA, Stanford, 2003;
PhD, 2007

Shannon Speed, *Associate Professor*
BA, San Francisco State, 1989; MA, Texas
(Austin), 1992; MA, California (Davis), 1996;
PhD, 2001

Kathleen C. Stewart, *Professor*
BA, Massachusetts (Amherst), 1976; MA,
Michigan (Ann Arbor), 1978; PhD, 1987

Jürgen K. Streack, *Associate Professor*
Magister Artium, Freie Universität Berlin,
1976; PhD, 1981

Pauline Strong, *Associate Professor*
BA, Colorado College, 1975; MA, Chicago,
1980; PhD, 1992

Brian M. Stross, *Professor*
BA, California (Berkeley), 1964; PhD, 1969

Circe D. Sturm, *Associate Professor*
BA, Texas (Austin), 1991; MA, California
(Davis), 1994; PhD, 1997

John W. Traphagan, *Associate Professor*
BA, Massachusetts (Lowell), 1983; MA, Yale,
1986; PhD, Pittsburgh, 1997

Fred Valdez Jr., *Associate Professor*
BA, Texas (Austin), 1975; MA, Harvard, 1980;
PhD, 1987

João Costa Vargas, *Associate Professor*
BA, Universidade Estadual de Campinas,
1989; MA, 1993; MA, California (San Diego),
1994; PhD, 1999

Kamala Visweswaran, *Associate Professor*
BA, California (Berkeley), 1984; MA, Stan-
ford, 1987; PhD, 1990

Mariah D. Wade, *Associate Professor*
BA, Texas (Austin), 1990; MA, 1993; PhD,
1998

Samuel Wilson, *Professor*
BA, Southwest Missouri State, 1978; MA,
Chicago, 1981; PhD, 1986

Anthony C. Woodbury, *Professor*
BA, Chicago, 1975; PhD, California (Berke-
ley), 1981

DEPARTMENT OF ASIAN STUDIES

Joel P. Breerton, *Chair*

PROFESSORS EMERITUS

Richard W. Lariviere, *Professor Emeritus*
BA, Iowa, 1972; PhD, Pennsylvania, 1978

Rodney F. Moag, *Associate Professor Emeritus*
BS, Syracuse, 1961; MA, Wisconsin (Madi-
son), 1966; PhD, 1973

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Itty Abraham, *Associate Professor*
BA, Loyola College (Madras), 1982; MS, Il-
linois (Urbana-Champaign), 1986; PhD, 1993

Yukie Aida, *Senior Lecturer*
BSEd, Seattle, 1981; BA, Washington (Se-
attle), 1982; MA, Texas (Austin), 1986; PhD,
1988

Kamran Asdar Ali, *Associate Professor*
MB, BS, Karachi, 1987; MA, Johns Hopkins,
1991; PhD, 1997

Joel P. Breerton, *Associate Professor*
BA, Kenyon College, 1970; MPhil, Yale, 1973;
PhD, 1975

James Brow, *Professor*
BA, Oxford, 1960; MA, 1964; PhD, Washing-
ton (Seattle), 1974

Sung-Sheng Yvonne Chang, *Professor*
BA, National Taiwan, 1973; MA, Michigan
(Ann Arbor), 1975; PhD, Texas (Austin), 1981;
PhD, Stanford, 1984

Kirsten C. Fischer, *Assistant Professor*
BA, Connecticut College, 1991; MA, California (Berkeley), 1998; PhD, 2004

Oliver Freiburger, *Assistant Professor*
MA, Georg-August-Universität Göttingen, 1994; PhD, 1999

Kaushik Ghosh, *Assistant Professor*
BA, Brandeis, 1988; MA, Princeton, 1991; PhD, 1996

Lalitha Gopalan, *Associate Professor*
BA, Madras Christian College, 1982; MA, Delhi Vishwavidyalaya, 1984; MA, Rochester, 1987; PhD, 1993

Kathryn Hansen, *Professor*
AB, Harvard Radcliffe, 1968; MA, California (Berkeley), 1970; PhD, 1978

Roger Hart, *Assistant Professor*
BS, Massachusetts Institute of Technology, 1979; MS, Stanford, 1982; MA, California (Los Angeles), 1991; PhD, 1997

Edeltraud Harzer Clear, *Senior Lecturer*
PhD, Washington (Seattle), 1986

Heather A. Hindman, *Assistant Professor*
BA, Reed College, 1993; MA, Chicago, 1995; PhD, 2003

Camilla H. Hsieh, *Senior Lecturer*
MA, Indiana (Bloomington), 1981; PhD, Texas (Austin), 1995

William J. Hurst, *Assistant Professor*
AB, AM, Chicago, 1998; PhD, California (Berkeley), 2005

Syed Akbar Hyder, *Associate Professor*
BA, Texas A&M (College Station), 1992; MA, Texas (Austin), 1994; PhD, Harvard, 1999

Robert D. King, *Distinguished Teaching Professor*
BS, MS, Georgia Institute of Technology, 1959; MA, Wisconsin, 1962; PhD, 1965

Shanti Kumar, *Associate Professor*
BS, Osmania, 1987; BA, 1988; MA, 1989; MS, Texas Christian, 1994; PhD, Indiana (Bloomington), 1998

Chiu-Mi Lai, *Senior Lecturer*
BA, Pomona College, 1983; MA, Washington (Seattle), 1986; PhD, 1990

Janice Leoshko, *Associate Professor*
BA, Ohio State, 1974; MA, 1976; PhD, 1987

Huaiyin Li, *Associate Professor*
BA, Soochow, 1984; MA, Chinese Academy of Social Sciences, 1987; PhD, California (Los Angeles), 2000

Patricia MacLachlan, *Associate Professor*
BA, British Columbia, 1986; MA, Columbia, 1990; MPhil, 1992; PhD, 1996

Madhavi Mallapragada, *Assistant Professor*
BA, Madras, 1989; MA, Stella Maris College, 1991; PhM, Jawaharlal Nehru, 1995; MA, Wisconsin (Madison), 1999; PhD, 2003

Mark Metzler, *Associate Professor*
BA, Stanford, 1980; MA, California (Santa Cruz), 1989; PhD, California (Berkeley), 1998

Gail Minault, *Professor*
BA, Smith College, 1961; MA, Pennsylvania, 1966; PhD, 1972

Hoang H. Ngo, *Senior Lecturer*
BA, Dai hoc Quoc Gia Hanoi, 1989; MA, 1998; PhD, 2002

J. Patrick Olivelle, *Professor*
BA(Hons), Oxford, 1972; PhD, Pennsylvania, 1974; MA, Oxford, 1977

Robert M. Oppenheim, *Associate Professor*
AB, Princeton, 1991; MA, Chicago, 1995; PhD, 2003

Stephen H. Phillips, *Professor*
BA, Harvard, 1975; PhD, 1982

Sankaran Radhakrishnan, *Senior Lecturer*
MA, Annamalai, 1975; PhD, 1985

Martha Ann Selby, *Associate Professor*
BA, Iowa, 1982; PhD, Chicago, 1994

David M. Sena, *Assistant Professor*
BA, California (Berkeley), 1993; MA, Chicago, 1998; PhD, 2005

Jishnu Shankar, *Senior Lecturer*
BA, Delhi Vishwavidyalaya, 1983; MA, 1986

Nancy K. Stalker, *Associate Professor*
PhD, Portland State, 1984; MA, Stanford, 1995; PhD, 2002

Naoko Suito, *Senior Lecturer*
BA, Washington, MEd, Washington (Seattle); PhD, Texas (Austin), 1991

Cynthia M. Talbot, *Associate Professor*
BA, Michigan (Ann Arbor), 1975; MA, 1980; PhD, Wisconsin (Madison), 1988

Wen-Hua Teng, *Senior Lecturer*
BA, National Taiwan, 1978; MA, Texas (Austin), 1984; PhD, 1990

John W. Traphagan, *Associate Professor*
BA, Massachusetts (Lowell), 1983; MA, Yale, 1986; PhD, Pittsburgh, 1997

Chien-Hsin Tsai, *Assistant Professor*
BA, Washington (Seattle), 2003; MA, Harvard, 2005; PhD, 2009

Herman H. van Olphen, *Professor*
BA, Rice, 1963; PhD, Texas (Austin), 1970

Kamala Visweswaran, *Associate Professor*
BA, California (Berkeley), 1984; MA, Stanford, 1987; PhD, 1990

ADJUNCT PROFESSOR

Rupert Snell, *Adjunct Professor*
BA, London, 1974; PhD, 1984

DEPARTMENT OF CLASSICS

Stephen A. White, *Chair*

PROFESSORS EMERITUS

David Armstrong, *Professor Emeritus*
BA, Princeton, 1961; PhD, Texas (Austin), 1968

Ingrid E. M. Edlund-Berry, *Professor Emeritus*
PhilKand, PhilMag, Lunds Universitet, 1965; PhilLic, 1969; MA, Bryn Mawr College, 1969; PhD, 1971

Peter Green, *Professor Emeritus*
BA, Cambridge, 1950; MA, PhD, 1954; FRSL

James Alfred Hiitt, *Associate Professor Emeritus*
BA, Southern Methodist, 1949; PhD, Princeton, 1954

John H. Kroll, *Professor Emeritus*
BA, Oberlin College, 1959; MAT, Harvard, 1961; MA, 1962; PhD, 1968

Douglass Stott Parker, *Professor Emeritus*
BA, Michigan, 1949; MA, Princeton, 1951; PhD, 1952

Cynthia W. Shelmerdine, *Professor Emeritus*
BA, Bryn Mawr College, 1970; BA, Cambridge, 1972; MA, Harvard, 1976; PhD, 1977

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Deborah Beck, *Assistant Professor*
BA, Yale, 1989; AM, Harvard, 1994; PhD, 1997

Joseph Coleman Carter, *Professor*
BA, Amherst College, 1963; PhD, Princeton, 1971

Lesley Ann Dean-Jones, *Associate Professor*
BA, London, 1977; MA, Stanford, 1985; PhD, 1987

Jennifer V. Ebbele, *Associate Professor*
BA, Brigham Young, 1994; MA, Pennsylvania State, 1996; MA, Pennsylvania, 1999; PhD, 2001

Steven J. Friesen, *Professor*
BA, Fresno Pacific College, 1976; MDiv, Fuller Theological Seminary, 1979; AM, Harvard, 1986; PhD, 1990

Michael Gagarin, *Professor*
BA, Stanford, 1963; MA, Harvard, 1965; PhD, Yale, 1968

Karl Galinsky, *Distinguished Teaching Professor*
BA, Bowdoin College, 1963; MA, Princeton, 1965; PhD, 1966

Jennifer E. Gates-Foster, *Assistant Professor*
BA, Virginia, 1997; MA, Michigan (Ann Arbor), 2001; MA, 2004; PhD, 2005

Jim Hankinson, *Professor*
BA, Oxford, 1980; PhD, Cambridge, 1986

Thomas K. Hubbard, *Professor*
BA, Santa Clara, 1975; MA, California (Berkeley), 1977; PhD, Yale, 1980

Lawrence Y. Kim, *Assistant Professor*
BA, Brown, 1992; PhD, Princeton, 2001

Ayelet Haimson Lushkov, *Assistant Professor*
BA, Universitat Tel Aviv, 2001; MA, Yale, 2005; MPhil, 2006; PhD, 2009

Timothy J. Moore, *Professor*
BA, Millersville State College, 1981; PhD, North Carolina (Chapel Hill), 1989

M. Gwyn Morgan, *Professor*
BA, Exeter, 1959; PhD, 1962

Alexander P. D. Mourelatos, *Professor*
BA, Yale, 1958; MA, 1961; PhD, 1964

William R. Nethercut, *Professor*
BA, Harvard, 1958; MA, Columbia, 1960; PhD, 1963

Thomas G. Palaima, *Professor*
BA, Boston College, 1973; PhD, Wisconsin (Madison), 1980; PhD (hon), Uppsala Universitet, 1994

Paula J. Perlman, *Professor*
BA, California (Santa Cruz), 1973; MA, California (Berkeley), 1978; PhD, 1984

Adam T. Rabinowitz, *Assistant Professor*
BA, Swarthmore College, 1995; MA, Michigan (Ann Arbor), 2000; PhD, 2004

Andrew M. Riggsby, *Professor*
AB, Harvard, 1987; MA, California (Berkeley), 1988; PhD, 1993

Rabun M. Taylor, *Assistant Professor*
BA, Haverford College, 1982; PhD, Minnesota (Minneapolis-St. Paul), 1997

- L. Michael White, Professor**
BA, Abilene Christian, 1971; MA, 1973; MDiv, Yale, 1975; MA, 1977; MPhil, 1978; PhD, 1982
- Stephen A. White, Professor**
BA, Illinois (Urbana-Champaign), 1978; MA, 1980; PhD, Nebraska (Lincoln), 1981; PhD, California (Berkeley), 1987
- Paul B. Woodruff, Distinguished Teaching Professor**
BA, Princeton, 1965; BA, Oxford, 1968; PhD, Princeton, 1973

DEPARTMENT OF ECONOMICS

Dale Stahl, Chair

PROFESSORS EMERITUS

- Vincent J. Geraci, Professor Emeritus**
BSEE, Illinois, 1965; MBA, 1967; MA, Duke, 1969; PhD, Wisconsin (Madison), 1974
- William P. Glade Jr., Professor Emeritus**
BBA, Texas, 1950; MA, 1951; PhD, 1955
- Niles M. Hansen, Professor Emeritus**
BA, Centre College of Kentucky, 1958; MA, Indiana, 1959; PhD, 1963
- Forest Garrett Hill, Professor Emeritus**
BA, Texas, 1941; MA, 1946; PhD, Columbia, 1950
- Frank Tomasson Jannuzi, Professor Emeritus**
BA, Dartmouth College, 1955; PhD, London, 1958
- F. Ray Marshall, Professor Emeritus**
BA, Millsaps College, 1949; MA, Louisiana State, 1950; PhD, California (Berkeley), 1954
- Daniel C. Morgan Jr., Professor Emeritus**
BBA, Texas, 1953; MA, 1955; PhD, Wisconsin, 1961

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Jason I. Abrevaya, Professor**
AB, Harvard, 1992; PhD, Massachusetts Institute of Technology, 1996
- Andres Almazan, Associate Professor**
Licenciatura en Ciencias Empresariales, Universidad de Málaga, 1989; Master en Económica, Centro de Estudios Monetarios y Financieros, 1991; PhD, Massachusetts Institute of Technology, 1996
- Marina D. Azzimonti-Renzo, Assistant Professor**
BA, Universidad de San Andres, 1999; PhD, Rochester, 2004
- Valerie R. Bencivenga, Senior Lecturer**
BA, Princeton, 1976; MA, Toronto, 1977; PhD, 1985
- Svetlana Boyarchenko, Associate Professor**
MA, Rostovkij Gosudarstvennyj Universitet, 1978; PhD, 1983; MA, Central European, 1997; PhD, Pennsylvania, 2001
- Stephen G. Bronars, Professor**
BA, Illinois (Urbana-Champaign), 1978; MA, Chicago, 1980; PhD, 1983
- Richard C. Chiburis, Assistant Professor**
BA, MS, Harvard, 2002; MA, Princeton, 2006; PhD, 2009
- Harry Cleaver, Associate Professor**
BA, Antioch College, 1967; PhD, Stanford, 1975

- Russell W. Cooper, Professor**
BA, Clark, 1977; MA, Pennsylvania, 1979; PhD, 1982
- Philip Dean Corbae, Professor**
BA, Colgate, 1982; PhD, Yale, 1990
- Douglas C. Dacy, Professor**
BBA, Texas, 1950; MA, 1956; PhD, Harvard, 1964
- Stephen Donald, Professor**
BEcon, Sydney, 1985; PhD, British Columbia, 1990
- Richard Dusansky, Professor**
BA, Brooklyn College, 1964; PhD, Brown, 1969
- Emilio C. Espino, Assistant Professor**
Licenciado, Universidad Nacional de La Plata, 1993; MA, Universidad Torcuato Di Tella, 1995; PhD, Cornell, 2000
- Kripa M. Freitas, Assistant Professor**
BS, Mumbai, 2000; MA, Northwestern, 2002; PhD, 2007
- Daniel S. Hamermesh, Professor**
AB, Chicago, 1965; PhD, Yale, 1969
- Takashi Hayashi, Assistant Professor**
MA, Osaka Daigaku, 1998; MA, Rochester, 2001; PhD, 2004
- Kenneth Hendricks, Professor**
BA, British Columbia, 1976; MA, 1977; PhD, Wisconsin, 1982
- Wayne R. Hickenbottom, Senior Lecturer**
PhD, Minnesota (Minneapolis-St. Paul), 1992
- Melvin J. Hinich, Professor**
BS, Carnegie Institute of Technology, 1959; MS, 1960; PhD, Stanford, 1964
- David Andrew Kendrick, Professor**
BA, Texas, 1960; PhD, Massachusetts Institute of Technology, 1966
- Burhanettin Kurusçu, Assistant Professor**
BS, Bilkent Üniversitesi, 1996; MA, Rochester, 2000; PhD, 2002
- Robert P. Lieli, Assistant Professor**
BA, Kossuth Lajos Tudományegyetem, 1999; PhD, California (San Diego), 2004
- Stephen P. Magee, Professor**
BA, Texas Technological College, 1965; MA, 1966; PhD, Massachusetts Institute of Technology, 1969
- Laurent Mathevet, Assistant Professor**
BS, Université Jean Monnet, 2003; MS, California Institute of Technology, 2005; PhD, 2008
- Eugenio J. Miravete, Associate Professor**
BA, Universidad de Valencia, 1989; PhD, Northwestern, 1996
- Alfred L. Norman, Professor**
BA, Harvard, 1958; MA, California (Los Angeles), 1966; PhD, Minnesota (Minneapolis-St. Paul), 1971
- Gerald S. Oettinger, Associate Professor**
BA, California (Davis), 1987; PhD, Massachusetts Institute of Technology, 1992
- Beatrix Paal, Assistant Professor**
BS, Budapesti Közgazdaságtudományi Egyetem, 1990; MA, Cornell, 1996; MA, 1997; PhD, 1999
- Marcin Peski, Assistant Professor**
BA, Uniwersytet Warszawski, 2000; MA, Szkoła Główna Handlowa w Warszawie, 2000; MA, Northwestern, 2001; PhD, 2005

- Natalia Ramondo, Assistant Professor**
BA, Universidad de Buenos Aires, 1997; MA, Universidad Torcuato di Tella, 2000; PhD, Chicago, 2006
- Brian E. Roberts, Professor**
BA, Trinity College (Connecticut), 1980; PhD, Washington (St. Louis), 1986
- Michael A. Sadler, Senior Lecturer**
BA, New Mexico, 1986; MS, London School of Economics and Political Science, 1990; PhD, Texas (Austin), 1997
- David S. Sibley, Professor**
BA, Stanford, 1969; PhD, Yale, 1973
- Daniel T. Slesnick, Professor**
BS, Washington (Seattle), 1978; PhD, Harvard, 1982
- Dale O. Stahl, Professor**
BS, MS, Massachusetts Institute of Technology, 1969; EE, 1970; PhD, California (Berkeley), 1981
- Maxwell B. Stinchcombe, Professor**
BA, California (Berkeley), 1978; MA, 1984; PhD, 1986
- Sheridan Titman, Professor**
BS, Colorado (Boulder), 1975; MS, Carnegie-Mellon, 1978; PhD, 1981
- Stephen J. Trejo, Associate Professor**
BA, Chicago, 1981; MA, 1983; PhD, 1988
- Randal B. Watson, Assistant Professor**
BA, Australian National, 1990; MA, Osaka Daigaku, 1994; PhD, Northwestern, 2003
- Andrew B. Whinston, Professor**
BA, Michigan, 1957; MS, Carnegie Institute of Technology, 1960; PhD, 1962
- Roberton C. Williams III, Associate Professor**
AB, Harvard, 1994; PhD, Stanford, 1999
- Thomas E. Wiseman, Associate Professor**
BA, Swarthmore College, 1996; MA, Northwestern, 1997; PhD, 2001

ADJUNCT PROFESSOR

- Michael D. Pore, Adjunct Associate Professor**
BA, Texas, 1965; MS, Texas Tech, 1969; PhD, 1973

DEPARTMENT OF ENGLISH

Elizabeth Butler Cullingford, Chair

PROFESSORS EMERITUS

- James Bernard Ayres, Distinguished Teaching Professor Emeritus**
BA, Baylor, 1958; MA, Florida State, 1960; PhD, Ohio State, 1964
- Norman Kittrell Farmer Jr., Professor Emeritus**
BA, Principia College, 1955; MA, Trinity, 1960; PhD, Pennsylvania, 1966
- John P. Farrell, Professor Emeritus**
BA, Fordham, 1961; PhD, Indiana, 1967
- Betty Sue Flowers, Distinguished Teaching Professor Emeritus**
BA, Texas (Austin), 1969; MA, 1970; PhD, London, 1973
- Kate Frost, Associate Professor Emeritus**
BA, Barry College, 1962; MA, Princeton, 1971; PhD, 1974

- Zulfikar Ghose**, *Professor Emeritus*
BA, Keele, 1959
- Ralph James Kaufmann**, *Professor Emeritus*
BA, Grinnell College, 1947; MA, Princeton, 1949; PhD, 1953
- Bernth O. Lindfors**, *Professor Emeritus*
BA, Oberlin College, 1959; MA, Northwestern, 1961; PhD, California (Los Angeles), 1969
- Joseph Fetler Malof**, *Professor Emeritus*
BA, Kenyon College, 1956; MA, California (Los Angeles), 1957; PhD, 1962
- Joseph John Moldenhauer**, *Professor Emeritus*
BA, Amherst College, 1956; MA, Columbia, 1957; PhD, 1964
- William Merrell Stott**, *Professor Emeritus*
BA, Yale, 1962; PhM, 1970; PhD, 1972
- William O. S. Sutherland**, *Professor Emeritus*
BA, North Carolina (Chapel Hill), 1942; MA, 1947; PhD, 1950
- William Burton Todd**, *Professor Emeritus*
BA, Lehigh, 1940; MA, 1947; PhD, Chicago, 1949
- John Ralston Trimble**, *Distinguished Teaching Professor Emeritus*
BA, Princeton, 1962; MA, California (Berkeley), 1964; PhD, 1971
- Robert Gray Twombly**, *Associate Professor Emeritus*
BA, Amherst College, 1957; MA, Yale, 1959; PhD, 1965
- Gary Neal Underwood**, *Associate Professor Emeritus*
BA, Texas A&M, 1962; MA, 1964; PhD, Minnesota (Minneapolis-St. Paul), 1970
- Warwick Paul Wadlington**, *Professor Emeritus*
BS, United States Military Academy, 1961; MA, Tulane, 1966; PhD, 1967
- David Anthony Wevill**, *Professor Emeritus*
BA, Cambridge, 1957; MA, 1969
- James I. Wimsatt**, *Professor Emeritus*
BA, Michigan, 1950; MA, Wayne State, 1959; PhD, Duke, 1964
- PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS**
- Michael W. Adams**, *Distinguished Teaching Associate Professor*
BA, Texas Tech, 1968; PhD, Texas (Austin), 1973
- Samuel Baker**, *Associate Professor*
BA, Columbia, 1991; MA, Chicago, 1994; PhD, 2001
- Janine Barchas**, *Associate Professor*
AB, Stanford, 1989; MA, Chicago, 1990; PhD, 1995
- Jeffrey Barnouw**, *Professor*
BA, Yale, 1963; PhD, 1969
- J. K. Barret**, *Assistant Professor*
BA, Pennsylvania, 1998; PhD, Princeton, 2008
- Phillip Barrish**, *Associate Professor*
BA, MA, Pennsylvania, 1985; MA, Cornell, 1988; PhD, 1991
- Lance Bertelsen**, *Professor*
BA, Dartmouth College, 1969; PhD, Washington (Seattle), 1979
- Daniel Birkholz**, *Associate Professor*
BA, Carleton College, 1990; MA, Toronto, 1991; PhD, Minnesota (Minneapolis-St. Paul), 1999
- Mary E. Blockley**, *Professor*
BA, Bryn Mawr College, 1977; MA, Yale, 1978; PhD, 1984
- Brian A. Bremen**, *Associate Professor*
BA, Princeton, 1975; MA, Middlebury College, 1984; PhD, Princeton, 1989
- Douglas S. Bruster**, *Professor*
BA, Nebraska (Lincoln), 1985; MA, Harvard, 1987; PhD, 1990
- Jerome F. A. Bump**, *Professor*
BA, Minnesota (Minneapolis-St. Paul), 1965; MA, California (Berkeley), 1966; PhD, 1972
- Thomas Cable**, *Professor*
BA, Yale, 1964; PhD, Texas (Austin), 1969
- Mia E. Carter**, *Distinguished Teaching Associate Professor*
BA, Massachusetts (Boston), 1984; MA, Wisconsin (Milwaukee), 1987; PhD, 1992
- Evan B. Carton**, *Professor*
BA, Columbia, 1974; MA, Johns Hopkins, 1976; PhD, 1979
- Larry D. Carver**, *Professor*
BA, Wesleyan, 1966; PhD, Rochester, 1973
- Oscar H. Casares**, *Assistant Professor*
BFA, Texas (Austin), 1987; MFA, Iowa, 2001
- David H. Charney**, *Professor*
BA, Brandeis, 1978; MA, Massachusetts (Amherst), 1981; PhD, Carnegie Mellon, 1985
- Matthew Cohen**, *Associate Professor*
BA, Oberlin, 1992; MA, William and Mary, 1995; PhD, 2002
- Andrew Cooper**, *Associate Professor*
BA, Harvard, 1975; BA, Cambridge, 1977; PhM, Columbia, 1979; PhD, 1982
- James H. Cox**, *Assistant Professor*
BA, Denison, 1991; MA, New Mexico, 1994; PhD, Nebraska (Lincoln), 1999
- Elizabeth Butler Cullingford**, *Distinguished Teaching Professor*
BA, Oxford, 1969; PhD, 1977
- Ann Luja Cvetkovich**, *Professor*
BA, Reed College, 1980; MA, Cornell, 1985; PhD, 1988
- D. Diane Davis**, *Associate Professor*
BA, Midwestern, 1986; MA, Indiana (Fort Wayne), 1989; PhD, Texas (Arlington), 1995
- Rasha Diab**, *Assistant Professor*
BA, Ain Shams, 1994; MA, 2002; PhD, Wisconsin (Madison), 2009
- Brian F. Doherty**, *Senior Lecturer*
BA, Marquette, 1977; PhD, Wisconsin (Milwaukee), 1994
- Lester L. Faigley**, *Professor*
BA, North Carolina State, 1969; MA, Miami (Ohio), 1972; PhD, Washington (Seattle), 1976
- Linda Ferreira-Buckley**, *Associate Professor*
BA, Providence College, 1981; MA, Pennsylvania State, 1985; PhD, 1990
- Alan W. Friedman**, *Professor*
BA, Queens College, City University of New York, 1961; MA, New York, 1962; PhD, Rochester, 1966
- Laura Furman**, *Professor*
BA, Bennington College, 1968
- James D. Garrison**, *Distinguished Teaching Professor*
AB, Princeton, 1965; MA, California (Berkeley), 1967; PhD, 1972
- John M. González**, *Associate Professor*
AB, Princeton, 1988; MA, Stanford, 1991; PhD, 1998
- Don Graham**, *Professor*
BA, North Texas State, 1962; MA, 1964; PhD, Texas (Austin), 1971
- Ian Francis Hancock**, *Professor*
MA, London, 1969; PhD, 1971
- Barbara Jane Harlow**, *Professor*
BA, Simmons College, 1970; MA, Chicago, 1971; PhD, State University of New York (Buffalo), 1977
- Elizabeth Harris**, *Associate Professor*
BS, Carnegie Institute of Technology, 1965; MA, Boston, 1967; MA, Trinity College (Dublin), 1973; PhD, Stanford, 1976
- Elizabeth A. Hedrick**, *Associate Professor*
BA, Duke, 1975; MA, Northwestern, 1976; MA, Columbia, 1980; PhD, 1986
- Kurt Heinzelman**, *Professor*
BA, Middlebury College, 1969; MA, 1972; PhD, Massachusetts (Amherst), 1978
- Susan Heinzelman**, *Associate Professor*
BA, London, 1968; MA, Western Ontario, 1971; PhD, 1977
- Geraldine Heng**, *Associate Professor*
BA, National University of Singapore, 1976; MA, 1980; MA, Cornell, 1986; PhD, 1990
- Jacqueline M. Henkel**, *Associate Professor*
BA, St. Cloud State, 1976; MA, Minnesota (Minneapolis-St. Paul), 1983; PhD, 1984
- R. Rolando Hinojosa-Smith**, *Professor*
BSEd, Texas, 1953; MA, New Mexico Highlands, 1963; PhD, Illinois, 1969
- Lars Hinrichs**, *Assistant Professor*
MA, Albert-Ludwigs-Universität Freiburg im Breisgau, 2001; PhD, 2006
- Neville W. Hoad**, *Associate Professor*
BA, Witwatersrand, 1988; MPhil, Columbia, 1995; PhD, 1998
- Justin D. Hodgson**, *Assistant Professor*
BA, Illinois, 2003; MA, Southern Illinois (Edwardsville), 2005; PhD, Clemson, 2009
- Coleman Hutchison**, *Assistant Professor*
BS, Vanderbilt, 1999; MA, Northwestern, 2002; PhD, 2006
- Meta D. Jones**, *Assistant Professor*
BA, Princeton, 1995; MA, Stanford, 1996; PhD, 2000
- Ernest N. Kaulbach**, *Distinguished Teaching Professor*
BA, St. Mary's College, 1957; MA, Fairfield, 1961; PhD, Cornell, 1970
- Martin W. Kevorkian**, *Associate Professor*
BSME, Stanford, 1990; MA, 1991; MA, California (Los Angeles), 1994; PhD, 2000
- Sara E. Kimball**, *Associate Professor*
BA, Radcliffe College, 1976; PhD, Pennsylvania, 1983
- David D. Kornhaber**, *Assistant Professor*
AB, Harvard, 2002; MA, Columbia, 2003; MPhil, 2005; PhD, 2009

Judith Kroll, *Associate Professor*
BA, Smith College, 1964; MA, Yale, 1966;
MPhil, 1967; PhD, 1974

Joseph E. Kruppa, *Professor*
BA, Rice Institute, 1960; MA, Columbia, 1961;
PhD, Johns Hopkins, 1964

Peter N. La Salle, *Professor*
BA, Harvard, 1969; MA, Chicago, 1972

Julia Lee, *Assistant Professor*
BA, Amherst College, 1995; MA, North Carolina (Chapel Hill), 1999; PhD, California (Los Angeles), 2005

Wayne Lesser, *Associate Professor*
BA, Pennsylvania, 1970; MA, Chicago, 1971;
PhD, 1975

José E. Limón, *Professor*
BA, Texas (Austin), 1966; MA, 1969; PhD,
1978

James N. Loehlin, *Distinguished Teaching Associate Professor*
BA, Texas (Austin), 1986; BA, Oxford, 1988;
PhD, Stanford, 1993

Mark G. Longaker, *Associate Professor*
BA, Southwestern Louisiana, 1996; MA,
1999; PhD, Pennsylvania State, 2003

Allen MacDuffie, *Assistant Professor*
BA, Georgetown, 1997; AM, Harvard, 2001;
PhD, 2006

Carol Hanbery MacKay, *Distinguished Teaching Professor*
BA, Stanford, 1966; MA, 1967; PhD, California (Los Angeles), 1979

James L. Magnuson, *Professor*
BS, Wisconsin, 1963; MA, 1964

Eric S. Mallin, *Associate Professor*
BA, Brandeis, 1978; MA, Stanford, 1979;
PhD, 1986

Elizabeth McCracken, *Professor*
BA, MA, Boston, 1988; MS, Drexel, 1993;
MFA, Iowa, 1990

Lisa L. Moore, *Associate Professor*
BA, Queen's (Kingston), 1986; MA, Cornell,
1989; PhD, 1991

Gretchen Murphy, *Associate Professor*
BA, Syracuse, 1993; MA, Washington (Seattle), 1995; PhD, 1999

Neil Robert Nehring, *Associate Professor*
BA, Kansas, 1978; MA, 1980; PhD, Michigan (Ann Arbor), 1985

Domino Renee Pérez, *Associate Professor*
BA, Southwest Texas State, 1991; MA, 1994;
PhD, Nebraska (Lincoln), 1998

John G. Pipkin, *Assistant Professor*
BA, Washing and Lee, 1989; MA, North Carolina (Chapel Hill), 1991; PhD, Rice, 1997

Eric D. Pritchard, *Assistant Professor*
BA, Lincoln, 2002; MA, Wisconsin (Madison), 2004; PhD, 2006

Wayne A. Rebhorn, *Professor*
BA, Pennsylvania, 1964; PhD, Yale, 1968

Roger deV. Renwick, *Professor*
BC, McGill, 1962; MA, California (Los Angeles), 1971; PhD, Pennsylvania, 1974

Mattie U. Richardson, *Assistant Professor*
BS, Dartmouth College, 1992; MFA, Bennington College, 1995; MA, California (Berkeley), 1999; PhD, 2005

Elizabeth Merle Richmond-Garza, *Distinguished Teaching Associate Professor*
BA, California (Berkeley), 1985; MA, Columbia, 1986; MPhil, Oxford, 1988; PhD, Columbia, 1990

Patricia Roberts-Miller, *Associate Professor*
BA, California (Berkeley), 1981; MA, 1983;
PhD, 1987

John P. Rumrich, *Professor*
BA, St. Lawrence, 1976; MA, Virginia, 1977;
PhD, 1981

John J. Ruskiewicz, *Professor*
BA, St. Vincent College, 1972; MA, Ohio State (Columbus), 1973; PhD, 1977

Elizabeth Scala, *Associate Professor*
BA, Wellesley College, 1988; MA, Harvard,
1990; PhD, 1994

William Joseph Scheick, *Professor*
BA, Montclair State College, 1963; MA, Illinois, 1965; PhD, 1969

Joshua K. Sessions, *Assistant Professor*
BFA, New York, 1993; MFA, Iowa, 2001

Snehal A. Shingavi, *Assistant Professor*
BA, Trinity, 1997; BA, 1997; PhD, California (Berkeley), 2008

Clay Spinuzzi, *Associate Professor*
BA, North Texas, 1991; MA, 1994; PhD, Iowa State, 1999

Thomas F. Staley, *Professor*
BA, BS, Regis College, 1957; MA, Tulsa, 1958;
PhD, Pittsburgh (Main Campus), 1962

Margaret A. Syverson, *Associate Professor*
BA, Iowa, 1970; MA, California (San Diego),
1992; PhD, 1994

Jeffrey Walker, *Professor*
BA, Portland State, 1972; MA, 1977; PhD,
California (Berkeley), 1985

Frank Whigham, *Professor*
BA, Occidental College, 1967; MA, San Diego State, 1970; PhD, California (San Diego), 1976

Thomas Bacon Whitbread, *Professor*
BA, Amherst College, 1952; MA, Harvard,
1953; PhD, 1959

Jennifer Margaret Wilks, *Associate Professor*
AB, Bryn Mawr College, 1995; AM, Cornell,
2000; PhD, 2003

Michael B. Winship, *Professor*
BA, Harvard, 1971; MS, Simmons College,
1982; PhD, Oxford, 1989

Hannah C. Wojciehowski, *Associate Professor*
BA, Dallas, 1979; PhM, Yale, 1983; PhD, 1984

Helena Woodard, *Associate Professor*
BS, East Carolina, 1976; MA, 1979; PhD,
North Carolina (Chapel Hill), 1991

Marjorie Curry Woods, *Professor*
BA, Stanford, 1969; MA, Toronto, 1970;
PhD, 1977

Dean H. Young, *Professor*
BA, Indiana (Bloomington), 1978; MFA, 1984

ADJUNCT PROFESSORS

Sabrina Barton, *Adjunct Associate Professor*
BA, Oberlin College, 1982; MA, New York,
1986; MA, Cornell, 1989; PhD, 1992

George S. Christian, *Adjunct Professor*
BA, Texas (Austin), 1982; JD, 1984; MA, 1997;
PhD, 2000

JOHN L. WARFIELD CENTER FOR AFRICAN AND AFRICAN AMERICAN STUDIES

Joni L. Jones, *Director*

PROFESSORS EMERITUS

Robert K. Holz, *Professor Emeritus*
BA, Southern Illinois, 1958; MA, 1959; PhD,
Michigan State, 1963

Hal Wylie, *Associate Professor Emeritus*
BA, Arizona, 1957; MA, Stanford, 1961;
PhD, 1965

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Christopher O. Adejumo, *Associate Professor*
BFA, Université nationale du Bénin, 1983;
MFA, Massachusetts (Dartmouth), 1993;
PhD, Ohio State, 1997

Jossianna Arroyo Martínez, *Associate Professor*
BA, Universidad de Puerto Rico, Recinto de
Rio Pedras, 1989; PhD, California (Berkeley),
1998

Keisha L. Bentley, *Assistant Professor*
BS, Howard, 1997; MA, Columbia, 2000;
PhD, Pennsylvania, 2009

Anthony L. Brown, *Assistant Professor*
BA, California State (Long Beach), 1993; MA,
1997; PhD, Wisconsin (Madison), 2006

Carolyn M. Brown, *Professor*
BSPhr, Xavier University of Louisiana, 1989;
PhD, Florida, 1994

Keffrelyn D. Brown, *Assistant Professor*
BS, Houston, 1993; MEd, Harvard, 1999;
PhD, Wisconsin (Madison), 2006

Simone A. Browne, *Assistant Professor*
BA, Toronto, 1997; BEd, York, 1998; MA,
Toronto, 2001; PhD, 2006

John Sibley Butler, *Professor*
BA, Louisiana State (Baton Rouge), 1969;
MA, Northwestern, 1972; PhD, 1974

Benjamin Carrington, *Assistant Professor*
BS, Loughborough, 1994; PhD, Leeds Metropolitan, 2004

Michael Ray Charles, *Professor*
BA, McNeese State, 1989; MFA, Houston
(University Park), 1993

King E. Davis, *Professor*
BSW, California State, 1964; MSW, 1966;
PhD, Brandeis, 1971

Oloruntoyin O. Falola, *Distinguished Teaching Professor*
BA, Ife, 1976; PhD, 1981

Kevin M. Foster, *Assistant Professor*
BA, College of William and Mary, 1991; MA,
Texas (Austin), 1994; PhD, 2001

Dawnovise N. Fowler, *Assistant Professor*
BA, Spelman College, 1993; AM, Chicago,
1998; PhD, Howard, 2003

Maria Franklin, *Associate Professor*
BA, Auburn, 1983; MA, California (Berkeley),
1991; PhD, 1997

Dorie J. Gilbert, *Associate Professor*
BBA, Texas (Austin), 1983; MSSW, 1992;
PhD, 1996

Tiffany M. Gill, *Assistant Professor*
BA, Georgetown, 1996; PhD, Rutgers (New Brunswick), 2003

Terri E. Givens, *Associate Professor*
BA, Stanford, 1987; MA, California (Los Angeles), 1996; PhD, 1999

Edmund T. Gordon, *Associate Professor*
BA, Swarthmore College, 1974; MA, Stanford, 1975; PhD, 1981

Darlene Grant, *Associate Professor*
BA, Wittenberg, 1982; MSSA, Case Western Reserve, 1984; PhD, Tennessee (Knoxville), 1993

Frank A. Guridy, *Assistant Professor*
BA, Syracuse, 1993; MA, Illinois (Chicago), 1996; PhD, Michigan (Ann Arbor), 2002

Louis Harrison, *Associate Professor*
BS, New Orleans, 1979; MEd, 1987; PhD, Louisiana State (Baton Rouge), 1997

Julian V. Heilig, *Assistant Professor*
BA, Michigan (Ann Arbor), 1997; MA, 1999; MA, Stanford, 2004; PhD, 2006

Juliet Hooker, *Associate Professor*
BA, Williams College, 1994; MA, Cornell, 1998; PhD, 2001

Joni L. Jones, *Associate Professor*
BS, MacMurray College, 1977; MA, Northwestern, 1978; PhD, New York, 1993

Meta D. Jones, *Assistant Professor*
BA, Princeton, 1995; MA, Stanford, 1996; PhD, 2000

Stephen Marshall, *Assistant Professor*
BA, Louisville, 1992; BA, Oxford, 1994; PhD, Harvard, 2002

Fehintola A. Mosadomi, *Assistant Professor*
Diplôme, Besançon, 1976; BEd, Ibadan, 1979; MA, Delaware, 1984; MA, 1989; PhD, Tulane, 1998

Deborah A. Paredes, *Associate Professor*
BA, Trinity, 1993; PhD, Northwestern, 2002

Tasha A. Philpot, *Associate Professor*
BA, Marquette, 1996; MPP, Michigan (Ann Arbor), 1997; PhD, 2003

Jemima Pierre, *Assistant Professor*
BA, Tulane, 1995; MA, Texas (Austin), 1998; PhD, 2002

Detra Price-Dennis, *Assistant Professor*
BS, Ohio State (Columbus), 1996; MEd, 1997; PhD, 2009

Mattie U. Richardson, *Assistant Professor*
BS, Dartmouth College, 1992; MFA, Bennington College, 1995; MA, California (Berkeley), 1999; PhD, 2005

Keith Robinson, *Assistant Professor*
BA, California (Los Angeles), 2000; MA, Michigan (Ann Arbor), 2002; PhD, 2006

Cherise Smith, *Assistant Professor*
BA, Arizona, 1991; MA, 1997; PhD, Stanford, 2004

Eric Tang, *Assistant Professor*
BA, New York, 1996; MPhil, 2001; PhD, 2006

Shirley E. Thompson, *Associate Professor*
AB, Harvard, 1992; AM, 2000; PhD, 2001

Almeida J. Toribio, *Professor*
BA, Cornell, 1985; MA, Brandeis, 1987; PhD, Cornell, 1993

João Costa Vargas, *Associate Professor*
BA, Universidade Estadual de Campinas, 1989; MA, 1993; MA, California (San Diego) 1994; PhD, 1999

Gregory J. Vincent, *Professor*
BA, Hobart and William Smith Colleges, 1983; JD, Ohio State (Columbus), 1987; EdD, Pennsylvania, 2004

Juliet E. K. Walker, *Professor*
BA, Roosevelt, 1963; MA, Chicago, 1970; PhD, 1976

Samuel Craig Watkins, *Associate Professor*
BA, Texas (Austin), 1988; PhD, Michigan (Ann Arbor), 1994

Barbara W. White, *Professor*
BS, Florida Agricultural and Mechanical, 1964; BS, Florida State, 1974; MSW, 1975; PhD, 1986

Jennifer Margaret Wilks, *Associate Professor*
AB, Bryn Mawr College, 1995; AM, Cornell, 2000; PhD, 2003

Jerome D. Williams, *Professor*
BA, Pennsylvania, 1969; MS, Union College, 1975; PhD, Colorado (Boulder), 1986

Helena Woodard, *Associate Professor*
BS, East Carolina, 1976; MA, 1979; PhD, North Carolina (Chapel Hill), 1991

CENTER FOR ASIAN AMERICAN STUDIES

Madeline Hsu, *Director*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Madeline Hsu, *Associate Professor*
BA, Pomona College, 1989; MA, Yale, 1993; PhD, 1996

Shanti Kumar, *Associate Professor*
BS, Osmania, 1987; BA, 1988; MA, 1989; MS, Texas Christian, 1994; PhD, Indiana (Bloomington), 1998

Julia Lee, *Assistant Professor*
BA, Amherst College, 1995; MA, North Carolina (Chapel Hill), 1999; PhD, California (Los Angeles), 2005

Nhi T. Lieu, *Assistant Professor*
BA, California (San Diego), 1995; MA, PhD, Michigan (Ann Arbor), 2004

Madhavi Mallapragada, *Assistant Professor*
BA, Madras, 1989; MA, Stella Maris College, 1991; PhM, Jawaharlal Nehru, 1995; MA, Wisconsin (Madison), 1999; PhD, 2003

Angela N. Paik, *Assistant Professor*
BA, Columbia, 2001; MA, Yale, 2005; PhD, 2009

Sharmila Rudrappa, *Associate Professor*
BS, Agricultural Sciences (Bangalore), 1989; MS, Wisconsin (Madison), 1996; PhD, 2001

Lok C. Siu, *Associate Professor*
BA, California (Berkeley), 1993; MA, Stanford, 1995; PhD, 2000

CENTER FOR MEXICAN AMERICAN STUDIES

José E. Limón, *Director*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Cris Cabello De Martínez, *Senior Lecturer*
BA, Universidad de Guanajuato, 1981; MA, Texas (Austin), 1985; PhD, 1993

Jason P. Casellas, *Assistant Professor*
BA, Loyola, 1999; MA, Princeton, 2003; PhD, 2006

James H. Cox, *Assistant Professor*
BA, Denison, 1991; MA, New Mexico (Albuquerque), 1994; PhD, Nebraska (Lincoln), 1999

Richard R. Flores, *Professor*
BA, Notre Dame, 1978; MA, Incarnate Word College, 1984; PhD, Texas (Austin), 1989

John M. González, *Associate Professor*
AB, Princeton, 1988; MA, Stanford, 1991; PhD, 1998

Gloria González-López, *Associate Professor*
BA, Universidad Regiomontana, 1981; MA, Houston (Clear Lake), 1991; MA, Southern California, 1997; PhD, 2000

David Leal, *Associate Professor*
BA, Stanford, 1990; MA, Harvard, 1995; PhD, 1998

José E. Limón, *Professor*
BA, Texas (Austin), 1966; MA, 1969; PhD, 1978

Anne M. Martínez, *Assistant Professor*
BA, Michigan (Ann Arbor), 1992; PhD, Minnesota (Minneapolis-St Paul), 2003

John McKiernan-González, *Assistant Professor*
BA, Oberlin, 1991; MA, Michigan (Ann Arbor), 1995; PhD, 2002

Martha Menchaca, *Professor*
BA, California (Santa Barbara), 1978; MA, Stanford, 1984; PhD, 1987

Domino Renee Pérez, *Associate Professor*
BA, Southwest Texas State, 1991; MA, 1994; PhD, Nebraska (Lincoln), 1998

Charles E. Ramírez Berg, *Distinguished Teaching Professor*
MA, Texas (Austin), 1975; PhD, 1987

Luis Urrieta, *Associate Professor*
BA, California (Los Angeles), 1995; MA, California State (Los Angeles), 1999; PhD, North Carolina (Chapel Hill), 2003

Richard R. Valencia, *Professor*
BA, California (Santa Barbara), 1970; MA, 1972; PhD, 1977

Angela Valenzuela, *Professor*
BA, Angelo State, 1981; MA, Texas (Austin), 1983; MA, Stanford, 1985; PhD, 1990

Emilio Zamora, *Professor*
BA, Texas A&I (Kingsville), 1969; MA, 1972; PhD, Texas (Austin), 1983

DEPARTMENT OF FRENCH AND ITALIAN

Daniela Bini, *Chair*

PROFESSORS EMERITUS

- Michel A. Dassonville**, *Professor Emeritus*
Licence ès lettres, Université de Lille, 1948;
Doctortat ès lettres, Université Laval, 1953
- Richard B. Grant**, *Professor Emeritus*
BA, Harvard, 1947; MA, Pennsylvania, 1949;
PhD, Harvard, 1952
- William W. Kibler**, *Professor Emeritus*
BA, Notre Dame, 1963; MA, North Carolina
(Chapel Hill), 1966; PhD, 1968
- Antonella Pease**, *Associate Professor Emeritus*
Laurea, Università degli Studi di Firenze, 1947
- A. Donald Sellstrom**, *Professor Emeritus*
BA, Texas, 1947; MA, 1949; MA, Princeton,
1953; PhD, 1956
- Dina M. Sherzer**, *Professor Emeritus*
Licence, Université de Grenoble, 1963; MA,
Pennsylvania, 1967; PhD, 1970
- James Francis Miller Stephens Jr.**, *Professor Emeritus*
BA, Texas, 1946; MA, 1948; PhD, Yale, 1954
- Hal Wylie**, *Associate Professor Emeritus*
BA, Arizona, 1957; MA, Stanford, 1961;
PhD, 1965

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Mary J. Baker**, *Professor*
BA, Stanford, 1961; MA, Virginia, 1964; PhD,
Harvard, 1969
- Daniela Bini**, *Professor*
Laurea, Università degli Studi di Roma, 1967;
PhD, Texas (Austin), 1978
- Douglas Biow**, *Professor*
BA, Bennington College, 1979; MA, Johns
Hopkins, 1988; PhD, 1990
- David P. Birdsong**, *Professor*
BA, Dartmouth College, 1974; MA, Harvard,
1975; PhD, 1979
- Marc L. Bizer**, *Associate Professor*
AB, Brown, 1982; MA, Princeton, 1990;
PhD, 1992
- Carl S. Blyth**, *Associate Professor*
BA, North Carolina (Chapel Hill), 1980; MAT,
1986; PhD, Cornell, 1990
- Paola Bonifazio**, *Assistant Professor*
MA, Pittsburgh (Bradford), 2003; PhD, New
York, 2008
- Barbara E. Bullock**, *Professor*
BA, Colby, 1981; MA, Delaware (Newark),
1990; PhD, 1990
- Jean-Pierre Cauvin**, *Professor*
BA, Princeton, 1957; PhD, 1968
- Bryan A. Donaldson**, *Assistant Professor*
BA, Indiana (Bloomington), 1999; MA, 2006;
PhD, 2008
- Michael Johnson**, *Assistant Professor*
BA, The American University of Paris, 1998;
PhD, Emory, 2005

- Karen W. Kelton**, *Senior Lecturer*
BA, Wayne State College, 1970; MLS, Texas
(Austin), 1976
- François P. Lagarde**, *Associate Professor*
Maîtrise, Université de Toulouse-le-Mirail,
1981; MA, West Virginia, 1981; PhD, Stan-
ford, 1985
- Knud P. Lambrecht**, *Professor*
Licence, Université de Lausanne, 1966; MA,
California (Berkeley), 1981; PhD, 1986
- Catherine Léger**, *Assistant Professor*
BA, Université de Moncton, 1991; MA, Univer-
sité du Québec à Montréal, 1999; PhD, 2006
- Jane N. Lippmann**, *Professor*
BA, Miami (Florida), 1959; MA, Illinois, 1960;
PhD, 1965
- Jean-Pierre Montreuil**, *Professor*
Licence, Maîtrise, Université de Caen, 1969;
MA, Texas (Austin), 1973; PhD, 1977
- Antonella D. Olson**, *Distinguished Senior Lecturer*
Laurea, Università degli Studi di Roma, 1978
- Karen A. Pagani**, *Assistant Professor*
BA, Cornell, 2001; MA, Chicago, 2002;
PhD, 2008
- Guy P. Raffa**, *Associate Professor*
BS, Duke, 1982; PhD, Indiana (Blooming-
ton), 1991
- Cinzia Russi**, *Assistant Professor*
Laurea, Università Abruzzese degli Studi
"Gabriele d'Annunzio," 1992; MA, San Jose
State, 1998; MA, Washington (Seattle), 2001;
PhD, 2003
- Hélène Tissières**, *Assistant Professor*
BFA, Art Center College of Design, 1986; MA,
New York, 1993; PhD, 2000
- Thomas R. Vessely**, *Senior Lecturer*
BA, San Francisco State College, 1968; PhD,
Indiana, 1979
- Alexandra K. Wettlaufer**, *Associate Professor*
BA, Princeton, 1982; MPhil, Columbia, 1989;
PhD, 1993
- Seth L. Wolitz**, *Professor*
BA, Chicago, 1958; PhD, Yale, 1965

ADJUNCT PROFESSORS

- Brigitte Bauer**, *Adjunct Associate Professor*
Kandidaats, Katholieke Universiteit Nijme-
gen, 1982; Doctoraal, 1987; Doctoraal, 1988;
PhD, 1992
- Maria Z. Wells**, *Adjunct Professor*
DR, Pisa, 1959

DEPARTMENT OF GEOGRAPHY AND THE ENVIRONMENT

Kenneth R. Young, *Interim Chair*

PROFESSORS EMERITUS

- Alfred W. Crosby**, *Professor Emeritus*
BA, Harvard, 1952; MAT, 1956; PhD, Boston,
1961
- Robert K. Holz**, *Professor Emeritus*
BA, Southern Illinois, 1958; MA, 1959; PhD,
Michigan State, 1963

- David L. Huff**, *Professor Emeritus*
BA, Oregon, 1955; MBA, Washington (Seattle),
1957; PhD, 1960
- Ian R. Manners**, *Professor Emeritus*
BA, Oxford, 1964; MA, 1968; DPhil, 1969

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Paul C. Adams**, *Associate Professor*
BEnvironD, Colorado (Boulder), 1984; MS,
Wisconsin (Madison), 1990; PhD, 1993
- Adina K. Batnitzky**, *Assistant Professor*
BA, Barnard College, 1998; MA, Brown, 2002;
PhD, 2005
- Karl W. Butzer**, *Professor*
BS, McGill, 1954; MS, 1955; Dr.rer.nat.,
Rheinische Friedrich-Wilhelms-Universität
Bonn, 1957
- Ipsita Chatterjee**, *Assistant Professor*
BS, Calcutta, 1998; MA, Jawaharlal Nehru,
2000; MS, 2002; PhD, Clark (Worcester)
2007
- Kelley Crews-Meyer**, *Associate Professor*
BSMarineSci, South Carolina (Columbia),
1992; MA, 1995; MA, North Carolina (Chapel
Hill), 1996; PhD, 2000
- William E. Doolittle**, *Professor*
BA, Texas Christian, 1974; MA, Missouri (Co-
lumbia), 1976; PhD, Oklahoma, 1979
- Robin W. Doughty**, *Professor*
BA, Reading, 1966; PhD, California (Berke-
ley), 1971
- Robert A. Dull**, *Assistant Professor*
BA, California (Santa Barbara), 1991; MA,
San Francisco State, 1995; PhD, California
(Berkeley), 2001
- David J. Eaton**, *Professor*
BA, Oberlin College, 1971; MPA, MSHyg,
Pittsburgh (Main Campus), 1972; PhD, Johns
Hopkins, 1976
- Steven D. Hoelscher**, *Professor*
BA, Gustavus Adolphus College, 1986; MA,
Toronto, 1989; PhD, Wisconsin (Madison),
1995
- Paul F. Hudson**, *Associate Professor*
BS, Jacksonville, 1991; MS, Florida, 1993;
PhD, Louisiana State (Baton Rouge), 1998
- Troy M. Kimmel Jr.**, *Senior Lecturer*
BS, Texas A&M (College Station), 1983
- Gregory W. Knapp**, *Associate Professor*
BA, California (Berkeley), 1975; MS, Wiscon-
sin (Madison), 1979; PhD, 1984
- Edgardo M. Latrubesse**, *Associate Professor*
BS, Universidad Nacional de San Luis, 1989;
PhD, 1992
- Jennifer A. Miller**, *Assistant Professor*
BA, Miami (Florida), 1992; MA, Ohio State
(Columbus), 1997; PhD, San Diego State,
2003
- Francisco L. Pérez**, *Professor*
Licenciado de Arquitectura, Universidad
Central de Venezuela, 1973; MLA, California
(Berkeley), 1976; PhD, 1985
- R. H. Richardson**, *Professor*
BS, Agricultural and Mechanical College of
Texas, 1959; MS, North Carolina State, 1962;
PhD, 1965

- Sahotra Sarkar, Professor**
BA, Columbia, 1981; MA, Chicago, 1984; PhD, 1989
- Rebecca M. Torres, Assistant Professor**
BA, Wisconsin (Madison), 1987; MS, California (Davis), 1994; PhD, 2000
- Peter Ward, Professor**
BA, Hull, 1973; PhD, Liverpool, 1976
- Robert H. Wilson, Professor**
BS, Oklahoma State, 1971; MS, 1972; MA, MCityP, Pennsylvania, 1974; PhD, 1979
- Kenneth R. Young, Professor**
BSLibArts&Scis, Illinois (Urbana-Champaign), 1978; MS, Florida (Gainesville), 1984; PhD, Colorado (Boulder), 1990
- Leo E. Zonn, Professor**
BA, California State (Northridge), 1969; MA, 1972; PhD, Wisconsin (Milwaukee), 1975

DEPARTMENT OF GERMANIC STUDIES

Peter Hess, Chair

PROFESSORS EMERITUS

- Hubert P. Heinen, Professor Emeritus**
BA, Texas, 1958; PhD, 1964
- J. Christopher Middleton, Professor Emeritus**
BA, Oxford, 1951; MA, PhD, 1954
- Robert R. Mollenaer, Associate Professor Emeritus**
BA, Dartmouth College, 1954; MA, Indiana, 1958; PhD, 1960
- Thomas J. O'Hare, Associate Professor Emeritus**
BS, Marquette, 1959; MA, South Dakota, 1962; PhD, Texas, 1964
- George Schulz-Behrend, Professor Emeritus**
BA, Colorado, 1935; MA, 1936; PhD, Iowa, 1944
- Walter D. Wetzels, Professor Emeritus**
Staatsexamen, Universität zu Köln, 1954; PhD, Princeton, 1968

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Zsuzsanna Ittzes Abrams, Associate Professor**
BA, Wisconsin (Eau Claire), 1991; MA, Arizona, 1993; PhD, 1997
- Katherine M. Arens, Professor**
BA, Northwestern, 1975; MA, Stanford, 1976; PhD, 1980
- Kirsten Belgum, Associate Professor**
Zwischenprüfung, Albert-Ludwigs-Universität Freiburg im Breisgau, 1982; MA, Wisconsin (Madison), 1983; PhD, 1989
- Hans C. Boas, Associate Professor**
Zwischenprüfung, Georg-August-Universität Göttingen, 1993; MA, North Carolina (Chapel Hill), 1995; PhD, 2000
- Pascale R. Bos, Associate Professor**
Propaedeuse Neerlandistiek, Universiteit van Amsterdam, 1986; Doctoraal Algemene Literatuur Wetenschap, 1992; PhD, Minnesota (Minneapolis-St. Paul), 1998
- Philip M. Broadbent, Assistant Professor**
BA, Oxford, 1999; MA, University College (London), 2000; PhD, 2005

- Sabine Hake, Professor**
BA, Universität Hannover, 1977; MA, 1982; PhD, 1984
- Peter A. Hess, Associate Professor**
BA, Universität Zürich, 1977; MA, Michigan (Ann Arbor), 1980; PhD, 1984
- John M. Hoberman, Professor**
BA, Haverford College, 1966; MA, California (Berkeley), 1969; PhD, 1975
- Robert D. King, Distinguished Teaching Professor**
BS, MS, Georgia Institute of Technology, 1959; MA, Wisconsin, 1962; PhD, 1965
- Hans-Bernhard Moeller, Associate Professor**
BA, Knox College (Illinois), 1960; MA, Southern California, 1962; PhD, 1964
- Marc E. Pierce, Assistant Professor**
BA, Massachusetts (Amherst), 1992; MA, California (Los Angeles), 1995; PhD, Michigan (Ann Arbor), 2002
- Sandra B. Straubhaar, Senior Lecturer**
PhD, Michigan State, 1982
- Jürgen K. Streeck, Associate Professor**
Magister Artium, Freie Universität Berlin, 1976; Dr.phil., 1981
- Janet Swaffar, Professor**
BA, Mankato State, 1956; MA, Wisconsin, 1959; PhD, 1965
- Per Urlaub, Assistant Professor**
MA, Utah (Salt Lake City), 2002; PhD, Stanford, 2008.
- John M. Weinstock, Professor**
BSME, Wisconsin, 1957; PhD, 1967
- Lynn R. Wilkinson, Associate Professor**
BA, California (Santa Barbara), 1973; MA, California (Berkeley), 1975; PhD, 1983

ADJUNCT PROFESSOR

- Karl W. Krauss, Adjunct Associate Professor**
MA, Universität Hamburg, 1987; PhD, 2000

DEPARTMENT OF GOVERNMENT

Gary P. Freeman, Chair

PROFESSORS EMERITUS

- David Braybrooke, Professor Emeritus**
BA, Harvard, 1948; MA, Cornell, 1951; PhD, 1953
- Walter D. Burnham, Professor Emeritus**
AB, Johns Hopkins, 1951; AM, Harvard, 1958; PhD, 1963
- Lawrence S. Graham, Professor Emeritus**
BA, Duke, 1958; MA, Wisconsin, 1961; PhD, Florida, 1965
- Robert L. Hardgrave, Professor Emeritus**
BA, Texas, 1960; MA, Chicago, 1962; PhD, 1966
- Richard H. Kraemer, Professor Emeritus**
BS, Houston, 1956; MLitt, Pittsburgh, 1957; PhD, Texas (Austin), 1970
- William S. Livingston, Professor Emeritus**
BA, MA, Ohio State, 1943; PhD, Yale, 1950
- Janice C. May, Professor Emeritus**
BA, Minnesota (Minneapolis-St. Paul), 1944; MA, 1946; PhD, 1952

- James Robert Roach, Professor Emeritus**
BA, Iowa, 1943; MA, Harvard, 1948; PhD, 1950
- Karl Michael Schmitt, Professor Emeritus**
BA, Catholic University of America, 1947; MA, 1949; PhD, Pennsylvania, 1954

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Itty Abraham, Associate Professor**
BA, Loyola College (Madras), 1982; MS, Illinois (Urbana-Champaign), 1986; PhD, 1993
- Jeffrey B. Abramson, Professor**
BA, Amherst College, 1969; PhD, Harvard, 1977
- Bethany L. Albertson, Assistant Professor**
BA, Loyola Marymount, 1999; MA, Chicago, 2001; PhD, 2006
- Zoltan D. Barany, Professor**
BA, Carleton, 1986; MA, Nebraska (Lincoln), 1988; PhD, Virginia, 1991
- Catherine Boone, Professor**
BA, California (San Diego), 1981; PhD, Massachusetts Institute of Technology, 1987
- Jason M. Brownlee, Associate Professor**
BA, Emory, 1997; MA, Princeton, 2000; PhD, 2004
- Bruce Buchanan II, Professor**
BA, Stanford, 1967; MA, Yale, 1969; PhM, 1970; PhD, 1972
- J. Budziszewski, Professor**
BA, Florida, 1975; MA, 1977; PhD, Yale, 1982
- Jason P. Casellas, Assistant Professor**
BA, Loyola (New Orleans), 1999; MA, Princeton, 2003; PhD, 2005
- Terrence L. Chapman, Assistant Professor**
BA, Illinois Wesleyan, 2001; PhD, Emory, 2007
- Henry A. Dietz, Distinguished Teaching Professor**
BA, Miami (Ohio), 1964; MA, Indiana, 1968; PhD, Stanford, 1972
- David Van Deusen Edwards, Professor**
BA, Swarthmore College, 1962; MA, Harvard, 1964; PhD, 1966
- Zachary S. Elkins, Assistant Professor**
BA, Yale, 1992; MA, Texas (Austin), 1996; PhD, California (Berkeley), 2003
- James Enelow, Professor**
BA, Michigan (Ann Arbor), 1971; MA, New York, 1973; PhD, Rochester, 1977
- Gary P. Freeman, Professor**
BA, Emory, 1967; MA, Wisconsin (Madison), 1968; PhD, 1975
- James K. Galbraith, Professor**
BA, Harvard, 1974; MA, PhM, Yale, 1977; PhD, 1981
- George Gavrillis, Assistant Professor**
BA, MA, Chicago, 1994; PhD, Columbia, 2003
- Terri E. Givens, Associate Professor**
BA, Stanford, 1987; MA, California (Los Angeles), 1996; PhD, 1999
- Kenneth F. Greene, Assistant Professor**
BA, California (Santa Cruz), 1991; MA, California (Berkeley), 1996; PhD, 2002
- Benjamin Gregg, Associate Professor**
BA, Yale, 1980; PhD, Freie Universität Berlin, 1985; MA, Princeton, 1991; PhD, 1996

Roderick P. Hart, *Distinguished Teaching Professor*
BA, Massachusetts, 1966; MA, Pennsylvania State, 1968; PhD, 1970

Clement M. Henry, *Professor*
AB, Harvard, 1957; PhD, 1963; MBA, Michigan, 1981

Melvin J. Hinich, *Professor*
BS, Carnegie Institute of Technology, 1959; MS, 1960; PhD, Stanford, 1964

Juliet Hooker, *Associate Professor*
BA, Williams College, 1994; MA, Cornell, 1998; PhD, 2001

Wendy Hunter, *Associate Professor*
BA, Cornell, 1982; MA, California (Berkeley), 1985; PhD, 1992

William J. Hurst, *Assistant Professor*
AB, AM, Chicago, 1998; PhD, California (Berkeley), 2005

Gary J. Jacobsohn, *Professor*
BA, City College, City University of New York, 1967; MA, Cornell, 1971; PhD, 1972

Stephen A. Jessee, *Assistant Professor*
BA, BSMath, Texas (Austin), 2002; PhD, Stanford, 2007

Bryan D. Jones, *Professor*
BA, Alabama (Tuscaloosa), 1966; PhD, Texas (Austin), 1970

Andrew J. Karch, *Associate Professor*
BA, Yale, 1997; PhD, Harvard, 2003

David Leal, *Associate Professor*
BA, Stanford, 1990; MA, Harvard, 1995; PhD, 1998

Sanford V. Levinson, *Professor*
BS, Duke, 1962; PhD, Harvard, 1969; JD, Stanford, 1973

Tse-min Lin, *Associate Professor*
BS, National Taiwan, 1975; MA, Kansas, 1983; PhD, Minnesota (Minneapolis-St. Paul), 1990

Stefanie A. Lindquist, *Professor*
BA, Ursinus College, 1985; PhD, South Carolina (Columbia), 1996

Robert C. Luskin, *Associate Professor*
BA, Virginia, 1969; PhD, Michigan (Ann Arbor), 1983

Patricia Maclachlan, *Associate Professor*
BA, British Columbia, 1986; MA, Columbia, 1990; MPhil, 1992; PhD, 1996

Raul L. Madrid, *Associate Professor*
BA, Yale, 1985; MA, Stanford, 1995; PhD, 1999

Aloysius P. Martinich, *Professor*
BA, Windsor, 1969; MA, California (San Diego), 1971; PhD, 1973

Maxwell E. McCombs, *Professor*
BA, Tulane, 1960; MA, Stanford, 1961; PhD, 1966

Eric McDaniel, *Assistant Professor*
BA, Wilberforce, 1998; MA, Illinois (Urbana-Champaign), 2000; PhD, 2004

Patrick J. McDonald, *Assistant Professor*
BA, Minnesota (Minneapolis-St. Paul), 1996; MA, Ohio State (Columbus), 2000; PhD, 2002

Robert Moser, *Associate Professor*
BS, Nebraska Wesleyan, 1988; MA, Wisconsin (Madison), 1990; PhD, 1995

Lorraine S. Pangle, *Associate Professor*
BA, Yale, 1981; MA, Chicago, 1985; PhD, 1999

Thomas L. Pangle, *Professor*
AB, Cornell, 1966; PhD, Chicago, 1972

Ami Pedahzur, *Associate Professor*
BA, Universitat Haifa, 1994; MA, 1996; PhD, 1998

Hersel Watson Perry Jr., *Associate Professor*
BA, Southern Methodist, 1974; PhD, Michigan (Ann Arbor), 1987

Tasha S. Philpot, *Associate Professor*
BA, Marquette, 1996; MPP, Michigan (Ann Arbor), 1997; PhD, 2003

Scot Powe, *Professor*
BA, Yale, 1965; JD, Washington (Seattle), 1968

David F. Prindle, *Professor*
BA, California (Santa Cruz), 1970; MA, California (Los Angeles), 1972; PhD, Massachusetts Institute of Technology, 1977

Gretchen Ritter, *Professor*
BA, Cornell, 1983; PhD, Massachusetts Institute of Technology, 1992

Brian E. Roberts, *Professor*
BA, Trinity College (Connecticut), 1980; PhD, Washington (St. Louis), 1986

Victoria E. Rodríguez, *Professor*
BA, Instituto Tecnológico y de Estudios Superiores de Monterrey, 1975; MA, Texas (El Paso), 1981; PhD, California (Berkeley), 1987

Thomas K. Seung, *Professor*
BA, Yale, 1958; MA, 1961; PhD, 1965

Daron Shaw, *Professor*
BA, California (Los Angeles), 1988; MA, 1990; PhD, 1994

Charles M. Silver, *Professor*
BA, Florida, 1979; MA, Chicago, 1981; JD, Yale, 1987

Bartholomew H. Sparrow, *Professor*
BA, Dartmouth College, 1981; MA, Texas (Austin), 1984; PhD, Chicago, 1991

Devin A. Stauffer, *Associate Professor*
BA, Kenyon College, 1992; PhD, Boston College, 1998

Sean Theriault, *Associate Professor*
BA, Richmond, 1993; MS, Rochester, 1996; MA, Stanford, 2000; PhD, 2001

Peter Trubowitz, *Associate Professor*
BA, Clark, 1976; PhD, Massachusetts Institute of Technology, 1986

Jeffrey K. Tulis, *Associate Professor*
BA, Bates College, 1972; MA, Brown, 1974; PhD, Chicago, 1982

Robert Harrison Wagner, *Professor*
BA, Rice Institute, 1958; BA, Oxford, 1960; MA, 1964; PhD, Harvard, 1966

Kurt Weyland, *Professor*
Staatsexamen, Johannes Gutenberg-Universität Mainz, 1984; MA, Texas (Austin), 1986; PhD, Stanford, 1991

Samuel G. Workman, *Assistant Professor*
BS, West Virginia Institute of Technology, 2001; MA, West Virginia, 2003; PhD, Washington (Seattle), 2005

DEPARTMENT OF HISTORY

Alan Tully, *Chair*

PROFESSORS EMERITUS

William Reynolds Braisted, *Professor Emeritus*
BA, Stanford, 1939; MA, Chicago, 1940; PhD, 1950

Alfred W. Crosby, *Professor Emeritus*
BA, Harvard, 1952; MAT, 1956; PhD, Boston, 1961

Robert A. Divine, *Professor Emeritus*
BA, Yale, 1951; MA, 1952; PhD, 1954

Hafez Farmayan, *Professor Emeritus*
BA, Stanford, 1949; MA, 1950; PhD, Georgetown, 1953

William H. Goetzmann, *Professor Emeritus*
PhD, Yale, 1957

Lewis L. Gould, *Professor Emeritus*
BA, Brown, 1961; MA, Yale, 1962; PhD, 1966

Richard Graham, *Professor Emeritus*
BA, College of Wooster, 1956; MA, Texas, 1957; PhD, 1961

Michael G. Hall, *Professor Emeritus*
BA, Princeton, 1949; PhD, Johns Hopkins, 1956

John E. Lamphear Jr., *Professor Emeritus*
BA, Trinity College (Connecticut), 1963; MA, London, 1968; PhD, 1972

Clarence G. Lasby, *Professor Emeritus*
BA, Redlands, 1953; MA, California (Los Angeles), 1959; PhD, 1962

Standish Meacham, *Professor Emeritus*
BA, Yale, 1954; PhD, Harvard, 1961

Sidney Monas, *Professor Emeritus*
BA, Princeton, 1948; MA, Harvard, 1951; PhD, 1955

Edward J. M. Rhoads, *Professor Emeritus*
BA, Yale, 1960; MA, Harvard, 1961; PhD, 1970

John E. Sunder, *Professor Emeritus*
BA, Washington (St. Louis), 1949; MA, 1950; PhD, 1954

Philip L. White, *Professor Emeritus*
BA, Baldwin-Wallace College, 1947; MA, Columbia, 1949; PhD, 1954

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Robert H. Abzug, *Professor*
BA, Harvard, 1967; PhD, California (Berkeley), 1977

Kamran S. Aghaie, *Associate Professor*
BA, Tennessee (Knoxville), 1991; MA, California (Los Angeles), 1995; PhD, 1999

Daina R. Berry, *Associate Professor*
BA, California (Los Angeles), 1992; MA, 1994; PhD, 1998

Douglas C. Biow, *Professor*
BA, Bennington College, 1979; MA, Johns Hopkins, 1998; PhD, 1990

Marion E. Bodian, *Professor*
BA, Harvard, 1969; MA, Hebrew, 1981; PhD, 1988

Susan Renee Boettcher, *Assistant Professor*
BA, Trinity, 1991; MA, Wisconsin (Madison), 1992; PhD, 1998

- H. W. Brands, Professor**
 AB, Stanford, 1975; MA, Reed College, 1978; MS, Portland State, 1981; PhD, Texas (Austin), 1985
- Benjamin C. Brower, Assistant Professor**
 BA, Idaho, 1991; MA, Colorado (Boulder), 1994; PhD, Cornell, 2005
- Jonathan C. Brown, Professor**
 BA, Wisconsin, 1966; MA, Arizona, 1968; PhD, Texas (Austin), 1976
- Norman D. Brown, Professor**
 BA, Indiana, 1957; MA, North Carolina (Chapel Hill), 1959; PhD, 1963
- Erika Bsumek, Associate Professor**
 BA, Utah, 1991; PhD, Rutgers (New Brunswick), 2000
- Virginia Garrard Burnett, Associate Professor**
 BA, Centenary College, 1979; MA, Tulane, 1980; PhD, 1986
- Matthew J. Butler, Associate Professor**
 BA, Bristol, 1995; PhD, 1999
- Jorge Canizares, Professor**
 MA, Wisconsin (Madison), 1990; PhD, 1995
- Don E. Carleton, Senior Lecturer**
 BS, Houston, 1969; MA, 1974; PhD, 1978
- Ruramisai Charumbira, Assistant Professor**
 BA, Saint Mary's, 1998; MA, Toronto, 2001; PhD, Yale, 2006
- Sally H. Clarke, Professor**
 BA, Johns Hopkins, 1980; MA, Brown, 1986; PhD, 1987
- Judith G. Coffin, Associate Professor**
 BA, Trinity College (Connecticut), 1976; PhD, Yale, 1985
- David F. Crew, Distinguished Teaching Professor**
 BA, McMaster, 1967; MA, Cornell, 1970; PhD, 1975
- Kelley Crews-Meyer, Associate Professor**
 BSMarineSci, South Carolina (Columbia), 1992; MA, 1995; MA, North Carolina (Chapel Hill), 1996; PhD, 2000
- Janet M. Davis, Associate Professor**
 BA, Carleton College, 1986; MA, Wisconsin (Madison), 1992; PhD, 1998
- Susan Deans-Smith, Associate Professor**
 BA, Warwick, 1978; PhM, Cambridge, 1979; PhD, 1984
- Yoav Di-Capua, Assistant Professor**
 BA, ha'Universita ha'Ivrith bi'Yerushalayim, 1996; MA, Universitat Tel Aviv, 1999; PhD, Princeton, 2004
- Carolyn Eastman, Assistant Professor**
 BA, California (Santa Cruz), 1988; MA, New Hampshire, 1996; MA, Johns Hopkins, 1997; PhD, 2001
- Oloruntoyin O. Falola, Distinguished Teaching Professor**
 BA(Hons), Ife, 1976; PhD, 1981
- Neil F. Foley, Associate Professor**
 BA, Virginia, 1971; MA, Georgetown, 1975; MA, Michigan (Ann Arbor), 1985; PhD, 1990
- William Forbath, Professor**
 AB, Harvard, 1974; BA, Cambridge, 1976; JD, Yale, 1983; PhD, 1992
- George B. Forgie, Distinguished Teaching Associate Professor**
 BA, Amherst College, 1963; LLB, MA, Stanford, 1967; PhD, 1972
- Alison Knowles Frazier, Associate Professor**
 BA, State University of New York (Albany), 1987; MA, MPhil, Columbia, 1990; PhD, 1996
- Seth W. Garfield, Associate Professor**
 BA, Yale, 1988; MA, 1992; PhD, 1996
- Tiffany M. Gill, Assistant Professor**
 BA, Georgetown, 1996; PhD, Rutgers (New Brunswick), 2003
- Laurie Green, Associate Professor**
 BA, Wesleyan, 1979; MA, New York, 1990; PhD, Chicago, 1999
- Frank A. Gurdy, Assistant Professor**
 BA, Syracuse, 1993; MA, Illinois (Chicago), 1996; PhD, Michigan (Ann Arbor), 2002
- Julie Hardwick, Professor**
 BA, Nottingham, 1984; MA, Wisconsin (Milwaukee), 1986; MA, Johns Hopkins, 1988; PhD, 1991
- Roger Hart, Assistant Professor**
 BS, Massachusetts Institute of Technology, 1979; MS, Stanford, 1982; MA, California (Los Angeles), 1991; PhD, 1997
- Anthony Gerald Hopkins, Professor**
 BA, London, 1960; PhD, 1964
- Madeline Y. Hsu, Associate Professor**
 BA, Pomona College, 1989; MA, Yale, 1993; PhD, 1996
- Bruce J. Hunt, Associate Professor**
 BA, BS, Washington (Seattle), 1979; PhD, Johns Hopkins, 1984
- Jacqueline Jones, Professor**
 BA, Delaware (Newark), 1970; MA, Wisconsin (Madison), 1972; PhD, 1976
- Neil D. Kamil, Associate Professor**
 BA, Brandeis, 1976; MA, Johns Hopkins, 1981; PhD, 1989
- Mark A. Lawrence, Associate Professor**
 BA, Stanford, 1988; MA, 1989; PhD, Yale, 1999
- Brian P. Levack, Distinguished Teaching Professor**
 BA, Fordham, 1965; MA, Yale, 1967; PhD, 1970
- Philippa Levine, Professor**
 BA, Cambridge, 1979; MA, 1983; PhD, Oxford, 1983
- Huaiyin Li, Associate Professor**
 BA, Soochow, 1984; MA, Chinese Academy of Social Sciences, 1987; PhD, California (Los Angeles), 2000
- Tatjana Lichtenstein, Assistant Professor**
 BA, KØbenhavn's Universitet, 1997; MA, Brandeis, 1999; KØbenhavns Universitet, 2000; PhD, Toronto, 2009
- W. Roger Louis, Distinguished Teaching Professor**
 BA, Oklahoma, 1959; PhD, Oxford, 1962
- Abigail J. Lustig, Assistant Professor**
 BA, California (Berkeley), 1990; MA, 1993; PhD, 1997
- Abraham Marcus, Associate Professor**
 BA, Universitat Tel Aviv, 1973; PhM, Columbia, 1978; PhD, 1979
- Alberto A. Martinez, Assistant Professor**
 BA, Puerto Rico (Utuado), 1992; MA, New York University, 1995; PhD, Minnesota (Minneapolis-St. Paul), 2000
- Anne M. Martinez, Assistant Professor**
 BA, Michigan (Ann Arbor), 1992; PhD, Minnesota (Minneapolis-St. Paul), 2003
- Aloysius P. Martinich, Professor**
 BA, Windsors, 1969; MA, California (San Diego), 1971; PhD, 1973
- Tracie M. Matsysik, Associate Professor**
 BA, Washington (Seattle), 1994; MA, Cornell, 1997; PhD, 2001
- John McKiernan-Gonzalez, Assistant Professor**
 BA, Oberlin College, 1991; PhD, Michigan (Ann Arbor), 2002
- Mark Metzler, Associate Professor**
 BA, Stanford, 1980; MA, California (Santa Cruz), 1989; PhD, California (Berkeley), 1998
- G. Howard Miller, Distinguished Teaching Associate Professor**
 BA, North Texas State, 1964; MA, 1966; PhD, Michigan, 1970
- Karl H. Miller, Assistant Professor**
 BA, Macalester College, 1990; PhD, New York, 2002
- Gail Minault, Professor**
 BA, Smith College, 1961; MA, Pennsylvania, 1966; PhD, 1972
- Leonard N. Moore, Associate Professor**
 BA, Jackson State, 1993; MLibArts, Cleveland State, 1994; PhD, Ohio State (Columbus), 1998
- M. Gwyn Morgan, Professor**
 BA, Exeter, 1959; PhD, 1962
- Joan Neuberger, Professor**
 BA, Grinnell College, 1975; MA, Stanford, 1978; PhD, 1985
- Mary C. Neuburger, Associate Professor**
 BA, Oregon, 1990; MA, Washington (Seattle), 1993; PhD, 1997
- Martha G. Newman, Associate Professor**
 BA, Harvard, 1980; MA, Stanford, 1982; PhD, 1988
- Robert Olwell, Associate Professor**
 BA, Wisconsin (Milwaukee), 1983; MA, 1985; MA, Johns Hopkins, 1988; PhD, 1991
- David M. Oshinsky, Distinguished Teaching Professor**
 BS, Cornell, 1965; MS, 1967; PhD, Brandeis, 1971
- Richard H. Pells, Professor**
 BA, Rutgers (New Brunswick), 1963; MA, Harvard, 1964; PhD, 1969
- Penne L. Restad, Senior Lecturer**
 BA, Montana State, 1972; MA, Oregon, 1978; PhD, Texas (Austin), 1993
- James Sidbury, Professor**
 BA, Johns Hopkins, 1980; MA, 1987; PhD, 1991
- Mark C. Smith, Associate Professor**
 BA, Massachusetts (Amherst), 1971; MA, Texas (Austin), 1975; PhD, 1980; MSSW, 1990
- Denise A. Spellberg, Associate Professor**
 BA, Smith College, 1980; MA, Columbia, 1983; MPhil, 1984; PhD, 1989
- Nancy K. Stalker, Associate Professor**
 BA, Portland State, 1984; MA, Stanford, 1995; PhD, 2002
- Michael B. Stoff, Distinguished Teaching Associate Professor**
 BA, Rutgers (New Brunswick), 1969; PhM, Yale, 1972; PhD, 1977

Cynthia M. Talbot, *Associate Professor*
BA, Michigan (Ann Arbor), 1975; MA, 1980;
PhD, Wisconsin (Madison), 1988

Alan Tully, *Professor*
BA, Queen's (Kingston), 1965; MA, Toronto,
1968; PhD, Johns Hopkins, 1973

Ann Twinam, *Professor*
BA, Northern Illinois, 1968; PhM, Yale, 1972;
PhD, 1976

James M. Vaughn, *Assistant Professor*
BA, Cornell, 2000; PhD, Chicago, 2008

Andrew Villalon, *Senior Lecturer*
BA, Yale, 1964; MA, 1966; PhD, 1984

Juliet E. K. Walker, *Professor*
BA, Roosevelt, 1963; MA, Chicago, 1970;
PhD, 1976

Charters Wynn, *Associate Professor*
BA, California (Santa Cruz), 1977; MA, Stan-
ford, 1979; PhD, 1987

Emilio Zamora, *Professor*
BA, Texas A&I (Kingsville), 1969; MA, 1972;
PhD, Texas (Austin), 1983

ADJUNCT PROFESSORS

Herman Freudenberg, *Adjunct Professor*
BA, Columbia, 1950; MA, 1951; PhD, 1957

John J. McCusker, *Adjunct Professor*
BA, St. Bernard's Seminary College, 1961;
MA, Rochester, 1963; PhD, Pittsburgh (Main
Campus), 1970

Carla R. Phillips, *Adjunct Professor*
BA, Pomona, 1965; MA, New York, 1966;
PhD, 1972

William D. Phillips Jr., *Adjunct Professor*
BA, Mississippi, 1964; MA, Tennessee (Knox-
ville), 1966; PhD, New York, 1971

TERESA LOZANO LONG INSTITUTE OF LATIN AMERICAN STUDIES

Charles Hale, *Director*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Jonathan C. Brown, *Professor*
BA, Wisconsin, 1966; MA, Arizona, 1968;
PhD, Texas (Austin), 1976

Mercedes Lynn de Uriarte, *Associate Professor*
BA, California State (Fullerton), 1972; MA,
Yale, 1974; PhM, 1978; PhD, 1996

Henry A. Dietz, *Distinguished Teaching Professor*
BA, Miami (Ohio), 1964; MA, Indiana, 1968;
PhD, Stanford, 1975

Nora C. England, *Professor*
BA, Bryn Mawr College, 1967; MA, Florida,
1971; PhD, 1975

Seth W. Garfield, *Associate Professor*
BA, Yale, 1988; MA, 1992; PhD, 1996

Robin D. Moore, *Associate Professor*
BA, California (Santa Barbara), 1987; MA,
1990; PhD, Texas (Austin), 1995

Kenneth R. Young, *Professor*
BSLibArts&Scis, Illinois (Urbana-Cham-
paign), 1978; MS, Florida (Gainesville), 1984;
PhD, Colorado (Boulder), 1990

DEPARTMENT OF LINGUISTICS

Richard P. Meier, *Chair*

PROFESSORS EMERITUS

John G. Bordie, *Professor Emeritus*
BA, Chicago, 1949; PhD, Texas, 1958

Robert T. Harms, *Professor Emeritus*
BA, Chicago, 1952; MA, 1956; PhD, 1960

Bjorn E. Lindblom, *Professor Emeritus*
FilmMag, Stockholms Universitet, 1960; Fil-
Lic, Uppsala universitet, 1963; FilDr, Lunds
universitet, 1968

Robert E. Wall, *Professor Emeritus*
BS, Illinois, 1957; MA, Harvard, 1958; PhD,
1961

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Nicholas M. Asher, *Professor*
BA, MA, Yale, 1976; BA, Oxford, 1978; PhM,
Yale, 1981; PhD, 1982

Jason M. Baldrige, *Assistant Professor*
BA, Toledo, 1996; MA, MSE, Pennsylvania,
1998; PhD, Edinburgh, 2002

Colin J. Bannard, *Assistant Professor*
BS, London, 2000; MPhil, Birmingham,
2001; MSc, Edinburgh, 2002; PhD, 2006

Aaron Bar-Adon, *Professor*
BA, MA, ha'Universita ha'Ivrith
bi'Yerushalayim, 1949; PhD, 1959

David I. Beaver, *Associate Professor*
BA, Bristol, 1988; MS, Edinburgh, 1989;
PhD, 1995

John T. Beavers, *Assistant Professor*
BA, BSCS, Texas (Austin), 2000; MA, Stan-
ford, 2002; PhD, 2006

Hans C. Boas, *Associate Professor*
BA, Georg-August-Universität Göttingen,
1993; North Carolina (Chapel Hill), 1995;
PhD, 2000

Raymond P. Connolly, *Senior Lecturer*
BA, Rochester Institute of Technology, 1972;
MA, Eastern New Mexico, 1980; MA, Califor-
nia State (Northridge), 1987

Megan J. Crowhurst, *Associate Professor*
BA, British Columbia, 1985; MA, Arizona,
1989; PhD, 1991

Nora C. England, *Professor*
BA, Bryn Mawr College, 1967; MA, Florida,
1971; PhD, 1975

Patience L. Epps, *Assistant Professor*
BA, College of William and Mary, 1994; PhD,
Virginia, 2005

Katrin E. Erk, *Assistant Professor*
Diploma, Universität Koblenz-Landau, 1998;
Drlng, Universität des Saarlandes, 2002

Ian Francis Hancock, *Professor*
MA, London, 1969; PhD, 1971

William F. Hanks, *Professor*
BS, Georgetown, 1975; MA, Chicago, 1979;
PhD, 1983

Elizabeth L. Keating, *Professor*
BA, California (Berkeley), 1988; MA, Califor-
nia (Los Angeles), 1990; PhD, 1994

Robert D. King, *Distinguished Teaching Professor*
BS, MS, Georgia Institute of Technology,
1959; MA, Wisconsin, 1962; PhD, 1965

Knud P. Lambrecht, *Professor*
MA, California (Berkeley), 1981; PhD, 1986

Peter F. MacNeilage, *Professor*
BA, Canterbury, 1957; MA, 1959; PhD, Mc-
Gill, 1962

Richard P. Meier, *Professor*
BA, Chicago, 1973; MA, Washington (St. Lou-
is), 1975; PhD, California (San Diego), 1982

Scott Myers, *Professor*
BA, Oregon, 1981; PhD, Massachusetts
(Amherst), 1987

David G. Quinto-Pozos, *Assistant Professor*
MA, Texas (Austin), 1998; PhD, 2002

Franky L. Ramont, *Senior Lecturer*
BA, Gallaudet, 1990; MA, Nebraska (Lin-
coln), 1997

Gilbert C. Rappaport, *Professor*
BS, Massachusetts Institute of Technology,
1973; MA, California (Los Angeles), 1975;
PhD, 1979

Carol L. Seeger, *Senior Lecturer*
BA, Gallaudet, 1972; BA, Concordia (St. Paul),
1975; MS, Western Maryland College, 1992

Rajka Smiljanic, *Assistant Professor*
PhD, Illinois (Urbana-Champaign), 2002

Harvey M. Sussman, *Distinguished Teaching
Professor*
BA, Queens College, City University of New
York, 1965; MS, Wisconsin, 1967; PhD, 1970

Stephen Wechsler, *Associate Professor*
BA, California (Berkeley), 1979; PhD, Stan-
ford, 1991

Anthony C. Woodbury, *Professor*
BA, Chicago, 1975; PhD, California (Berke-
ley), 1981

CENTER FOR MIDDLE EASTERN STUDIES

Kamran S. Aghaie, *Director*

PROFESSORS EMERITUS

Robert A. Fernea, *Professor Emeritus*
BA, Reed College, 1954; MA, Chicago, 1955;
PhD, 1959

Robert K. Holz, *Professor Emeritus*
BA, Southern Illinois, 1958; MA, 1959; PhD,
Michigan State, 1963

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Peter F. Abboud, *Professor*
BS, London, 1956; MA, The American Univer-
sity in Cairo, 1960; PhD, Texas, 1964

Kamran S. Aghaie, *Associate Professor*
BA, Tennessee (Knoxville), 1991; MA, Califor-
nia (Los Angeles), 1995; PhD, 1999

Mahmoud M. Al-Batal, *Associate Professor*
BA, Al-Jāmi'ah al-Lubnaniyah, 1977; Diplôme,
1978; MA, Michigan (Ann Arbor), 1981;
PhD, 1985

- Kamran Ali**, *Associate Professor*
BS, MB, Karachi, 1987; MA, Johns Hopkins, 1991; PhD, 1997
- Samer Ali**, *Associate Professor*
BA, Chicago, 1990; MA, Utah, 1997; PhD, Indiana (Bloomington), 2002
- Germine H. Awad**, *Assistant Professor*
BS, John Carroll, 1999; MA, Southern Illinois (Carbondale), 2002; PhD, 2005
- Hina Azam**, *Assistant Professor*
BA, Loyola, 1992; MA, Duke, 2000; PhD, 2005
- Aaron Bar-Adon**, *Professor*
BA, MA, ha'Universita ha'Ivrith bi'Yerushalayim, 1949; PhD, 1959
- Adina K. Batnitzky**, *Assistant Professor*
BA, Barnard College, 1998; MA, Brown, 2002; PhD, 2005
- Benjamin C. Brower**, *Assistant Professor*
BA, Idaho, 1991; MA, Colorado (Boulder), 1994; PhD, Cornell, 2005
- Jason M. Brownlee**, *Associate Professor*
BA, Emory, 1997; MA, Princeton, 2000; PhD, 2004
- Kristen Brustad**, *Associate Professor*
BA, Georgetown, 1980; MA, Harvard, 1986; PhD, 1991
- Mounira Charrad**, *Associate Professor*
BA, Université Paris-Sorbonne (Paris IV), 1964; MA, École Pratique des Hautes Études, 1965; PhD, Harvard, 1980
- Yoav Di-Capua**, *Assistant Professor*
BA, ha'Universita ha'Ivrith bi'Yerushalayim, 1996; MA, Universitat Tel Aviv, 1999; PhD, Princeton, 2004
- David J. Eaton**, *Professor*
BA, Oberlin College, 1971; MPA, MSHyg, Pittsburgh (Main Campus), 1972; PhD, Johns Hopkins, 1977
- Tarek A. El-Ariss**, *Assistant Professor*
BA, American University of Beirut, 1991; MA, Cornell, 1997; PhD, 2004
- Yildiray Erdener**, *Senior Lecturer*
BA, Staatliche Hochschule für Musik Freiburg, 1968; MA, Indiana, 1980; PhD, 1987
- Jennifer Gates-Foster**, *Assistant Professor*
BA, Virginia (Charlottesville), 1997; MA, Michigan (Ann Arbor), 2001; MA, 2004; PhD, 2005
- George Gavrilis**, *Assistant Professor*
BA, MA, Chicago, 1994; PhD, Columbia, 2002
- Mohammad Ghanoonparvar**, *Professor*
Licence, Dāneshgāhé Esfahan, 1966; MA, Eastern Michigan, 1972; PhD, Texas (Austin), 1979
- Kate Gillespie**, *Associate Professor*
BA, Harvard, 1974; MBA, Virginia, 1976; PhD, London, 1983
- Karen Grumberg**, *Assistant Professor*
BA, Texas (Austin), 1997; MA, California (Los Angeles), 1999; PhD, 2004
- Jo Ann Hackett**, *Professor*
BA, DePauw, 1970; MA, Indiana (Bloomington), 1975; PhD, Harvard, 1980
- Hossein Haghshenas**, *Senior Lecturer*
PhD, Texas (Austin), 1991
- Barbara Jane Harlow**, *Professor*
BA, Simmons College, 1970; MA, Chicago, 1971; PhD, State University of New York (Buffalo), 1977
- Geraldine Heng**, *Associate Professor*
BA, National University of Singapore, 1976; MA, 1980; MA, Cornell, 1986; PhD, 1990
- Clement M. Henry**, *Professor*
AB, Harvard, 1957; PhD, 1963; MBA, Michigan, 1981
- Michael C. Hillmann**, *Professor*
BA, Loyola College, 1962; MA, Chicago, 1969; PhD, 1974
- John Huehnergard**, *Professor*
BA, Wilfrid Laurier, 1974; PhD, Harvard, 1979
- Syed Akbar Hyder**, *Associate Professor*
BA, Texas A&M (College Station), 1992; MA, Texas (Austin), 1994; PhD, Harvard, 2000
- Harold Alter Liebowitz**, *Professor*
BA, Yeshiva, 1955; MA, New York, 1965; PhD, Pennsylvania, 1972
- W. Roger Louis**, *Distinguished Teaching Professor*
BA, Oklahoma, 1959; PhD, Oxford, 1962
- Abraham Marcus**, *Associate Professor*
BA, Universitat Tel Aviv, 1973; PhM, Columbia, 1978; PhD, 1979
- Sofian Merabet**, *Assistant Professor*
BA, Universitat Bayreuth, 1996; MA, State University of New York (Binghamton), 1998; MA, Columbia, 1999; MPhil, 2004; PhD, 2009
- Gail Minault**, *Professor*
BA, Smith College, 1961; MA, Pennsylvania, 1966; PhD, 1972
- Mohammad A. Mohammad**, *Associate Professor*
Lic, Gami't Dimasq, 1971; MA, Southern California, 1985; PhD, 1989
- Fehintola A. Mosadomi**, *Assistant Professor*
Bed, Universidad Iberoamericana, 1979; MA, Delaware, 1984; MA, 1989; PhD, Tulane, 1998
- Stephennie Mulder**, *Assistant Professor*
BA, Utah, 1997; MA, Princeton, 2001; PhD, Pennsylvania, 2007
- William R. Nethercutt**, *Professor*
BA, Harvard, 1958; MA, Columbia, 1960; PhD, 1963
- Mary C. Neuburger**, *Associate Professor*
BA, Oregon, 1990; MA, Washington (Seattle), 1993; PhD, 1997
- Thomas G. Palaima**, *Professor*
BA, Boston College, 1973; PhD, Wisconsin (Madison), 1980; PhD (hon), Uppsala Universitet, 1994
- Athanasio Papalexandrou**, *Associate Professor*
BA, Athens, 1988; MA, Princeton, 1993; PhD, 1998
- Na'ama Pat-El**, *Assistant Professor*
BA, Ha'Universita Ha'Ivrit Bi'Yerushalayim, 2000; MA, 2002; PhD, Harvard, 2008
- Ami Pedahzur**, *Associate Professor*
BA, Universitat Haifa, 1994; MA, 1996; PhD, 1998
- Glenn Peers**, *Professor*
BA, Acadia, 1984; MA, McGill, 1987; PhD, Johns Hopkins, 1995
- Esther L. Raizen**, *Associate Professor*
BA, Universitat Tel Aviv, 1976; MA, 1982; PhD, Texas (Austin), 1987
- Sonia T. Seeman**, *Assistant Professor*
BA, Michigan (Ann Arbor), 1980; MA, Washington (Seattle), 1990; PhD, California (Los Angeles), 2002
- Faegheh Shirazi**, *Associate Professor*
BA, Houston, 1975; MS, Kansas State, 1976; PhD, Ohio State, 1985
- Denise A. Spellberg**, *Associate Professor*
BA, Smith College, 1980; MA, Columbia, 1983; MPhil, 1984; PhD, 1989
- Hélène Tissières**, *Assistant Professor*
BFA, Art Center College of Design, 1986; MA, New York, 1993; PhD, 2000
- Karin Wilkins**, *Professor*
BA, Bucknell, 1984; MA, Pennsylvania, 1987; PhD, 1991
- Seth L. Wolitz**, *Professor*
BA, Chicago, 1958; PhD, Yale, 1965

DEPARTMENT OF MIDDLE EASTERN STUDIES

Esther L. Raizen, *Chair*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Peter F. Abboud**, *Professor*
BS, London, 1956; MA, The American University in Cairo, 1960; PhD, Texas, 1964
- Kamran S. Aghaie**, *Associate Professor*
BA, Tennessee (Knoxville), 1991; MA, California (Los Angeles), 1995; PhD, 1999
- Mahmoud M. Al-Batal**, *Associate Professor*
BA, Al-Jāmi'ah al-Lubnaniyah, 1977; Diplôme, 1978; MA, Michigan (Ann Arbor), 1981; PhD, 1985
- Kamran Asdar Ali**, *Associate Professor*
BS, MB, Karachi, 1987; MA, Johns Hopkins, 1991; PhD, 1997
- Samer Ali**, *Associate Professor*
BA, Chicago, 1990; MA, Utah, 1997; PhD, Indiana (Bloomington), 2002
- Hina Azam**, *Assistant Professor*
BA, Loyola, 1992; MA, Duke, 2000; PhD, 2005
- Aaron Bar-Adon**, *Professor*
BA, MA, ha'Universita ha'Ivrith bi'Yerushalayim, 1949; PhD, 1959
- Jason M. Brownlee**, *Associate Professor*
BA, Emory, 1997; MA, Princeton, 2000; PhD, 2004
- Kristen Brustad**, *Associate Professor*
BA, Georgetown, 1980; MA, Harvard, 1986; PhD, 1991
- Mounira Charrad**, *Associate Professor*
BA, Université Paris-Sorbonne (Paris IV), 1964; MA, École Pratique des Hautes Études, 1965; PhD, Harvard, 1980
- Yoav Di-Capua**, *Assistant Professor*
BA, ha'Universita ha'Ivrith bi'Yerushalayim, 1996; MA, Universitat Tel Aviv, 1999; PhD, Princeton, 2004
- Rasha Diab**, *Assistant Professor*
BA, Ain Shams, 1994; MA, 2002; PhD, Wisconsin (Madison), 2009

David J. Eaton, *Professor*
BA, Oberlin College, 1971; MPA, MSHyg, Pittsburgh (Main Campus), 1972; PhD, Johns Hopkins, 1977

Tarek A. El-Ariss, *Assistant Professor*
BA, American University of Beirut, 1991; MA, Cornell, 1997; PhD, 2004

Yildiray Erdener, *Senior Lecturer*
BA, Staatliche Hochschule für Musik Freiburg, 1968; MA, Indiana, 1980; PhD, 1987

George Gavrilis, *Assistant Professor*
BA, MA, Chicago, 1994; PhD, Columbia, 2003

Mohammad Ghanoonparvar, *Professor*
Licence, Dāneshgāhē Esfahan, 1966; MA, Eastern Michigan, 1972; PhD, Texas (Austin), 1979

Kate Gillespie, *Associate Professor*
BA, Harvard, 1974; MBA, Virginia, 1976; PhD, London, 1983

Karen Grumberg, *Assistant Professor*
BA, Texas (Austin), 1997; MA, California (Los Angeles), 1999; PhD, 2004

Jo Ann Hackett, *Professor*
BA, DePauw, 1970; MA, Indiana (Bloomington), 1975; PhD, Harvard, 1980

Barbara Jane Harlow, *Professor*
BA, Simmons College, 1970; MA, Chicago, 1971; PhD, State University of New York (Buffalo), 1977

Clement M. Henry, *Professor*
AB, Harvard, 1957; PhD, 1963; MBA, Michigan, 1981

Michael C. Hillmann, *Professor*
BA, Loyola College, 1962; MA, Chicago, 1969; PhD, 1974

John Huehnergard, *Professor*
BA, Wilfrid Laurier, 1974; PhD, Harvard, 1979

Harold Alter Liebowitz, *Professor*
BA, Yeshiva, 1955; MA, New York, 1965; PhD, Pennsylvania, 1972

W. Roger Louis, *Distinguished Teaching Professor*
BA, Oklahoma, 1959; PhD, Oxford, 1962

Abraham Marcus, *Associate Professor*
BA, Universitat Tel Aviv, 1973; PhM, Columbia, 1978; PhD, 1979

Mohammad A. Mohammad, *Associate Professor*
Lic, Gami't Dimasq, 1971; MA, Southern California, 1985; PhD, 1989

Fehintola A. Mosadomi, *Assistant Professor*
BEEd, Universidad Iberoamericana, Ciudad de México, 1979; MA, Delaware, 1984; MA, 1989; PhD, Tulane, 1998

Stephennie Mulder, *Assistant Professor*
BA, Utah, 1997; MA, Princeton, 2001; PhD, Pennsylvania, 2007

Na'ama Pat-El, *Assistant Professor*
BA, Ha'Universita Ha'lvrit Bi'Yerushalayim, 2000; MA, 2002; PhD, Harvard, 2008

Ami Pedahzur, *Associate Professor*
BA, Universitat Haifa, 1994; MA, 1996; PhD, 1998

Esther L. Raizen, *Associate Professor*
BA, Universitat Tel Aviv, 1976; MA, 1982; PhD, Texas (Austin), 1987

Martha Schulte-Nafeh, *Senior Lecturer*
BS, Pennsylvania, 1975; MA, The American University in Cairo, 1982; MA, Arizona (Tucson), 1990; PhD, 2004

Sonia T. Seeman, *Assistant Professor*
BA, Michigan (Ann Arbor), 1980; MA, Washington (Seattle), 1990; PhD, California (Los Angeles), 2002

Faeqeh Shirazi, *Associate Professor*
BA, Houston, 1975; MS, Kansas State, 1976; PhD, Ohio State, 1985

Denise A. Spellberg, *Associate Professor*
BA, Smith College, 1980; MA, Columbia, 1983; MPhil, 1984; PhD, 1989

Karin Wilkins, *Professor*
BA, Bucknell, 1984; MA, Pennsylvania, 1987; PhD, 1991

DEPARTMENT OF PHILOSOPHY

E. David Sosa, *Chair*

PROFESSORS EMERITUS

Edwin B. Allaire, *Professor Emeritus*
BA, Drew, 1956; MA, Iowa, 1958; PhD, 1960

Robert S. Boyer, *Professor Emeritus*
BA, Texas (Austin), 1967; PhD, 1971

Grayson Douglas Browning, *Professor Emeritus*
BA, Texas, 1954; MA, 1955, PhD, 1958

Robert Louis Causey, *Professor Emeritus*
BS, California Institute of Technology, 1963; PhD, California (Berkeley), 1967

Robert Hilary Kane, *Distinguished Teaching Professor Emeritus*
BA, College of the Holy Cross, 1960; MA, Yale, 1962; PhD, 1964

Norman M. Martin, *Professor Emeritus*
MA, Chicago, 1947; PhD, California (Los Angeles), 1952

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Nicholas M. Asher, *Professor*
BA, MA, Yale, 1976; BA, Oxford, 1978; PhM, Yale, 1981; PhD, 1982

Mitchell N. Berman, *Professor*
AB, Harvard, 1988; MA, Michigan (Ann Arbor), 1994; JD, 1993

Daniel A. Bonevac, *Professor*
BA, Haverford College, 1975; MA, Pittsburgh (Main Campus), 1977; PhD, 1980

Lawrence R. Buchanan, *Assistant Professor*
BA, North Carolina State, 1998; PhD, 2008

J. Budziszewski, *Professor*
BA, Florida, 1975; MA, 1977; PhD, Yale, 1982

Jonathan P. Dancy, *Professor*
BA, Oxford, 1969; PhB, 1971; MA, 1972

John Deigh, *Professor*
BA, California (Los Angeles), 1971; MA, 1975; PhD, 1979

Joshua Dever, *Associate Professor*
BA, Princeton, 1991; PhD, California (Berkeley), 1998

Sinan Dogramaci, *Assistant Professor*
BA, Princeton, 2003; PhD, New York, 2009

Jim Hankinson, *Professor*
BA, Oxford, 1980; PhD, Cambridge, 1986

Kathleen M. Higgins, *Professor*
BA, Missouri (Kansas City), 1977; MA, Yale, 1978; PhM, 1979; PhD, 1982

Herbert I. Hochberg, *Professor*
BA, Wayne State, 1950; MA, 1951; PhD, Iowa, 1954

Cory Juhl, *Associate Professor*
BS, Georgia Institute of Technology, 1983; MA, Texas (Austin), 1986; PhD, Pittsburgh (Main Campus), 1992

Robert Charles Koons, *Professor*
BA, Michigan State (East Lansing), 1979; BA, Oxford, 1981; PhD, California (Los Angeles), 1987

Charles A. Krecz, *Senior Lecturer*
BA, Miami, 1968; PhD, Texas (Austin), 1975

Vladimir Lifschitz, *Professor*
Matematik, Leningradskij Gosudarstvennyj Universitet, 1968; Kandidat, Matematicheskii Institut Akademii Nauk SSSR, 1971

Anna-Sara Malmgren, *Assistant Professor*
BA, Kingston College, 1999; BPhil, Oxford, 2001; PhD, New York, 2009

Aloysius P. Martinich, *Professor*
BA, Windsor, 1969; MA, California (San Diego), 1971; PhD, 1973

Alexander P. D. Mourelatos, *Professor*
BA, Yale, 1958; MA, 1961; PhD, 1964

Adam Pautz, *Assistant Professor*
BA, Minnesota (Morris), 1998; PhD, New York, 2004

Stephen H. Phillips, *Professor*
BA, Harvard, 1975; PhD, 1982

Ian N. Proops, *Associate Professor*
BPhil, Oxford, 1989; BA, 1989; PhD, Harvard, 1998

R. Mark Sainsbury, *Professor*
BA, Oxford, 1964; MA, 1969; PhD, 1970

Sahotra Sarkar, *Professor*
BA, Columbia, 1981; MA, Chicago, 1984; PhD, 1989

Thomas K. Seung, *Professor*
BA, Yale, 1958; MA, 1961; PhD, 1965

Tara Smith, *Professor*
BA, Virginia, 1983; MA, Johns Hopkins, 1985; PhD, 1989

E. David Sosa, *Professor*
AB, AM, Brown, 1988; MA, Princeton, 1995; PhD, 1996

Michael Tye, *Professor*
BA, Oxford, 1972; MA, State University of New York (Buffalo), 1974; PhD, 1975

Stephen A. White, *Professor*
BA, Illinois (Urbana-Champaign), 1978; MA, 1980; PhD, Nebraska (Lincoln), 1981; PhD, California (Berkeley), 1987

Paul B. Woodruff, *Distinguished Teaching Professor*
BA, Princeton, 1965; BA, Oxford, 1968; PhD, Princeton, 1973

ADJUNCT PROFESSOR

William J. Winslade, *Adjunct Professor*
BA, Monmouth College, 1963; PhD, Northwestern, 1967; JD, California (Los Angeles), 1972

PLAN II HONORS PROGRAM

Michael B. Stoff, *Interim Director*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Ruth E. Buskirk, *Senior Lecturer*
AB, Earlham College and Earlham School of Religion, 1965; MAT, Harvard, 1966; PhD, California (Davis), 1972

Wendy I. Domjan, *Senior Lecturer*
BA, Wisconsin (Madison), 1973; MA, 1975; PhD, 1977

Alexandra Wettlaufer, *Associate Professor*
MA, Columbia, 1987; MPhil, 1989; PhD, 1993

ADJUNCT PROFESSORS

Thomas A. Bay, *Adjunct Professor*
BA, Rice, 1973; MA, 1975; MA, Columbia, 1983; PhD, 1987

Paul J. Burka, *Adjunct Professor*
BA, Rice, 1963; LLB, Texas (Austin), 1967

Ronald A. Carson, *Adjunct Professor*
BA, Franklin College, 1962; BDiv, Colgate Rochester Crozer Divinity School, 1965; PhD, Glasgow, 1968

Alfred L. McAlister, *Adjunct Associate Professor*
BA, Texas (Austin), 1972; PhD, Stanford, 1976

Mark L. Perlmutter, *Adjunct Professor*
BS, Northwestern, 1971; JD, Texas (Austin), 1974

Robert L. Pitman, *Adjunct Professor*
BS, Abilene Christian, 1985; JD, Texas (Austin), 1988

Henry G. Thomas Jr., *Adjunct Assistant Professor*
BA, Princeton, 1967; MAEd, Harvard, 1974

Edward L. Walker, *Adjunct Professor*
BE, Manchester, 1990; DPhil, York, 1994

William J. Winslade, *Adjunct Professor*
BA, Monmouth, 1963; JD, California (Los Angeles), 1972; PhD, Northwestern, 1967

DEPARTMENT OF PSYCHOLOGY

James W. Pennebaker, *Chair*

PROFESSORS EMERITUS

Duane G. Albrecht, *Professor Emeritus*
BA, California (Berkeley), 1973; PhD, 1978

Arnold H. Buss, *Professor Emeritus*
BA, New York, 1947; PhD, Indiana, 1952

Philip B. Gough, *Professor Emeritus*
BA, Minnesota (Minneapolis-St. Paul), 1955; MA, 1957; PhD, 1961

Robert L. Helmreich, *Professor Emeritus*
BA, Yale, 1959; MS, 1965; PhD, 1966

Wayne H. Holtzman, *Professor Emeritus*
BS, Northwestern, 1944; MA, 1947; PhD, Stanford, 1950

Joseph M. Horn, *Professor Emeritus*
BS, Oklahoma State, 1963; MA, Minnesota (Minneapolis-St. Paul), 1967; PhD, 1969

Ira Iscoe, *Ashbel Smith Professor Emeritus*
BA, Sir George Williams, 1942; MA, California (Los Angeles), 1948; PhD, 1951

John C. Loehlin, *Professor Emeritus*
BA, Harvard, 1947; PhD, California (Berkeley), 1957

Janet T. Spence, *Ashbel Smith Professor Emeritus*
BA, Oberlin College, 1945; MA, PhD, State University of Iowa, 1949; DSc (hon), Oberlin College, 1985; DSc (hon), Ohio State, 1987

Delbert D. Thiessen, *Professor Emeritus*
BA, San Jose State College, 1958; PhD, California (Berkeley), 1962

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Dana H. Ballard, *Professor*
BS, Massachusetts Institute of Technology, 1967; MS, Michigan (Ann Arbor), 1967; PhD, California (Irvine), 1974

Jennifer S. Beer, *Assistant Professor*
BA, California (Berkeley), 1996; PhD, 2002

Christopher G. Beevers, *Assistant Professor*
BA, Texas (San Antonio), 1995; MS, Miami (Florida), 1999; PhD, 2002

Rebecca Bigler, *Professor*
BA, Oberlin College, 1986; MS, Pennsylvania State, 1988; PhD, 1991

David M. Buss, *Professor*
BA, Texas (Austin), 1976; PhD, California (Berkeley), 1981

Caryn L. Carlson, *Professor*
BS, Florida State, 1980; MS, Georgia, 1982; PhD, 1984

Patrick J. Carroll, *Senior Lecturer*
BA, College of William and Mary, 1971; MA, 1977; PhD, Massachusetts (Amherst), 1983

Leslie B. Cohen, *Professor*
BA, California (Los Angeles), 1961; PhD, 1966

Lawrence K. Cormack, *Associate Professor*
BS, Florida, 1986; PhD, California (Berkeley), 1992

David P. Crews, *Ashbel Smith Professor*
BA, Maryland (College Park), 1969; PhD, Rutgers (Newark), 1973

Robert Crosnoe, *Associate Professor*
BA, Texas (Austin), 1994; MA, Stanford, 1995; PhD, 1999

Yvon Delville, *Professor*
BS, Université de Liège, 1983; PhD, Massachusetts (Amherst), 1992

Randy L. Diehl, *Professor*
BS, Illinois (Urbana-Champaign), 1971; PhD, Minnesota (Minneapolis-St. Paul), 1976

Andrew P. Dillon, *Professor*
BA, University College (Cork), 1984; MA, 1987; PhD, Loughborough University of Technology, 1991

Juan M. Dominguez, *Assistant Professor*
PhD, State University of New York (Buffalo), 2002

Michael P. Domjan, *Professor*
BA, Grinnell College, 1969; PhD, McMaster, 1973

Wendy I. Domjan, *Senior Lecturer*
BA, Wisconsin (Madison), 1973; MA, 1975; PhD, 1977

Christine L. Duvauchelle, *Associate Professor*
BA, Hawaii (Manoa), 1984; PhD, California (Santa Barbara), 1991

Catharine H. Echols, *Associate Professor*
BA, California (San Diego), 1980; MA, Illinois (Urbana-Champaign), 1984; PhD, 1987

Kim Fromme, *Professor*
BS, Washington (Seattle), 1981; PhD, 1988

Wilson S. Geisler III, *Professor*
BA, Stanford, 1971; PhD, Indiana (Bloomington), 1976

David L. Gilden, *Professor*
BA, Wisconsin (Madison), 1974; MA, Texas (Austin), 1979; PhD, 1982

Rueben A. Gonzales, *Professor*
BSPPhr, Texas (Austin), 1977; PhD, 1983

Francisco Gonzalez-Lima, *Professor*
BS, Tulane, 1976; BA, 1977; PhD, Puerto Rico (Medical Sciences Campus), 1980

Andrea C. Gore, *Professor*
AB, Princeton, 1985; PhD, Wisconsin (Madison), 1990

Samuel D. Gosling, *Professor*
BA, Leeds, 1991; PhD, California (Berkeley), 1998

Zenzi M. Griffin, *Professor*
MA, Illinois (Urbana-Champaign), 1996; PhD, 1998

Andreana P. Haley, *Assistant Professor*
BA, Concord, 1996; MA, Virginia, 2001; PhD, 2005

Kathryn P. Harden, *Assistant Professor*
BA, Furman, 2003; MA, Virginia, 2005; PhD, 2009

Mary M. Hayhoe, *Professor*
BA, Queensland, 1970; PhD, California (San Diego), 1979

Marlone D. Henderson, *Assistant Professor*
BS, Michigan State (East Lansing), 1999; PhD, New York, 2006

Carole K. Holahan, *Professor*
BSEd, Duquesne, 1967; MEd, Massachusetts (Amherst), 1971; PhD, Texas (Austin), 1976

Charles J. Holahan, *Professor*
BA, Duquesne, 1967; MS, Massachusetts, 1970; PhD, 1971

Alexander C. Huk, *Assistant Professor*
BA, Swarthmore College, 1996; PhD, Stanford, 2001

Aletha C. Huston, *Professor*
BA, Stanford, 1960; MA, Minnesota (Minneapolis-St. Paul), 1962; PhD, 1965

Ted L. Huston, *Professor*
BS, Lewis and Clark College, 1965; PhD, State University of New York (Albany), 1972

Jody Jensen, *Professor*
BSE, Drake, 1973; MS, Massachusetts (Amherst), 1978; PhD, Maryland (College Park), 1989

Theresa Jones, *Professor*
BA, Texas (Austin), 1987; PhD, 1992

Robert A. Josephs, *Professor*
BA, Cornell, 1983; MS, Washington (Seattle), 1986; PhD, Michigan (Ann Arbor), 1990

Judith Langlois, *Professor*
BA, Louisiana State (Baton Rouge), 1969; MA, 1971; PhD, 1973

Hongjoo Joanne Lee, *Assistant Professor*
BS, State University of New York (Birmingham), 1997; MS, Yale, 1999; MPH, 2001; PhD, 2002

Cristine H. Legare, *Assistant Professor*
MA, Michigan (Ann Arbor), 2005; PhD, 2008

Marc S. Lewis, *Associate Professor*
BA, Indiana (Bloomington), 1969; MA, Cincinnati, 1971; PhD, 1973

Bradley C. Love, *Associate Professor*
BS, Brown, 1995; PhD, Northwestern, 1999

Peter F. MacNeilage, *Professor*
BA, Canterbury, 1957; MA, 1959; PhD, McGill, 1962

W. Todd Maddox, *Professor*
BA, San Diego State, 1985; MA, California (Santa Barbara), 1991; PhD, 1992

Arthur B. Markman, *Professor*
BS, Brown, 1988; MA, Illinois (Urbana-Champaign), 1990; PhD, 1992

Dennis McFadden, *Ashbel Smith Professor*
BA, Sacramento State College, 1962; PhD, Indiana, 1967

Richard P. Meier, *Professor*
BA, Chicago, 1973; MA, Washington (St. Louis), 1975; PhD, California (San Diego), 1982

Cindy M. Meston, *Professor*
BA, British Columbia, 1991; MA, 1993; PhD, 1995

Marie H. Monfils, *Assistant Professor*
BS, Calgary, 2000; MS, 2002; PhD, Lethbridge (Alberta), 2005

A. Rebecca Neal-Beevers, *Assistant Professor*
BA, John Hopkins, 1993; MS, Miami (Coral Gables), 1997; PhD, 2002

James W. Pennebaker, *Professor*
BA, Eckerd College, 1972; PhD, Texas (Austin), 1977

Jonathan W. Pillow, *Assistant Professor*
BA, Arizona (Tucson), 1997; PhD, New York, 2005

Russell A. Poldrack, *Professor*
BA, Baylor (Waco), 1989; MA, Illinois (Urbana-Champaign), 1991; PhD, 1995

Alison R. Preston, *Assistant Professor*
BA, Pennsylvania, 1997; MA, Stanford, 2001; PhD, 2004

Manuel Ramirez III, *Professor*
BA, Texas, 1960; PhD, 1963

Ann M. Repp, *Senior Lecturer*
BA, Texas (Austin), 1974; MA, 1981; PhD, 1994

Timothy Schallert, *Distinguished Teaching Professor*
BA, San Francisco, 1971; MA, California State (San Francisco), 1973; PhD, Arizona State, 1976

David M. Schnyer, *Associate Professor*
BA, Virginia, 1992; MA, Arizona, 1994; PhD, 1998

Eyal Seidemann, *Associate Professor*
MS, Universitat Tel Aviv, 1993; PhD, Stanford, 1998

Devendra Singh, *Professor*
BA, Agra, 1959; MA, 1961; PhD, Ohio State, 1966

James E. Spivey, *Senior Lecturer*
BA, Georgia Institute of Technology, 1954; PhD, Texas, 1964

David W. Springer, *Distinguished Teaching Professor*
BA, Florida State, 1990; MSW, 1992; PhD, 1997

William B. Swann Jr., *Professor*
BA, Gettysburg College, 1974; PhD, Minnesota (Minneapolis-St. Paul), 1978

Michael J. Telch, *Professor*
BA, Massachusetts (Amherst), 1975; MA, University of the Pacific, 1978; PhD, Stanford, 1982

Elliot M. Tucker-Drob, *Assistant Professor*
BA, Cornell, 2004; MA, Virginia (Charlottesville), 2007; PhD, 2009

Jacqueline D. Woolley, *Professor*
BS, Carnegie-Mellon, 1980; MS, Michigan (Ann Arbor), 1987; PhD, 1990

ADJUNCT PROFESSORS

Adriana A. Alcantara, *Adjunct Assistant Professor*
BAPsy, California State (Long Beach), 1986; MA, Illinois (Urbana-Champaign), 1990; PhD, 1993

Robert J. Buchanan, *Adjunct Associate Professor*
MD, Saint Louis, 1993

Michael Gibertini, *Adjunct Assistant Professor*
BA, Northwestern, 1979; MA, Houston, 1982; PhD, 1984

Jerry R. Grammer, *Adjunct Assistant Professor*
BA, Texas (Austin), 1969; MBA, MLA, Southern Methodist, 1972; PhD, Texas Southwestern Medical Center, 1982

Norman P. Li, *Adjunct Assistant Professor*
BA, Northwestern, 1986; MBA, Michigan (Ann Arbor), 1988; MA, Arizona State, 2001; PhD, 2003

Martita A. Lopez, *Adjunct Associate Professor*
BS, Massachusetts, 1971; MS, Syracuse, 1974; PhD, 1977

Pamela R. Moore, *Adjunct Assistant Professor*
BA, Texas (Austin), 1982; MA, Texas Tech, 1985; PhD, 1991

Robert. P. O'Brien, *Adjunct Assistant Professor*
BA, Trinity, 1971; MA, 1972; PhD, Florida (Gainesville), 1976

J. N. Rutledge, *Adjunct Professor*
BS, Oklahoma (Norman), 1976; MD, Oklahoma Health Sciences Center (Oklahoma City), 1980

Scott M. Steiner, *Adjunct Assistant Professor*
BA, California (San Diego), 1993; MA, Texas (Austin), 1996; PhD, 2002

Eric Stice, *Adjunct Associate Professor*
BS, Oregon, 1989; MA, Arizona State, 1992; PhD, 1996

Roberta Tsukahara, *Adjunct Assistant Professor*
BA, Texas (Dallas), 1984; MA, North Texas, 1988; PhD, Northeastern, 1994

David M. Tucker, *Adjunct Associate Professor*
BA, Texas (Austin), 1977; MS, Georgia, 1981; PhD, 1983

David C. Weigle, *Adjunct Assistant Professor*
BA, Houston Baptist, 1976; MEd, Southwest Texas State, 1990

Walter Wilczynski, *Adjunct Professor*
BA, BS, Lehigh, 1974; PhD, Michigan (Ann Arbor), 1978

DEPARTMENT OF RHETORIC AND WRITING

Linda Ferreira-Buckley, *Chair*

PROFESSOR EMERITUS

John Ralston Trimble, *Distinguished Teaching Professor Emeritus*
BA, Princeton, 1962; MA, California (Berkeley), 1964; PhD, 1971

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Larry D. Carver, *Professor*
BA, Wesleyan, 1966; PhD, Rochester, 1973

David H. Charney, *Professor*
BA, Brandeis, 1978; MA, Massachusetts (Amherst), 1981; PhD, Carnegie Mellon, 1985

Richard A. Cherwitz, *Professor*
BA, Iowa, 1974; MA, 1976; PhD, 1978

Dana L. Cloud, *Associate Professor*
BA, Pennsylvania State, 1986; MA, Iowa, 1991; PhD, 1992

D. Diane Davis, *Associate Professor*
BA, Midwestern, 1986; MA, Indiana (Fort Wayne), 1989; PhD, Texas (Arlington), 1995; PhD, The European Graduate School, 2003

Rasha Diab, *Assistant Professor*
BA, Ain Shams, 1994; MA, 2002; PhD, Wisconsin (Madison), 2009

Lester L. Faigley, *Professor*
BA, North Carolina State, 1969; MA, Miami (Ohio), 1972; PhD, Washington (Seattle), 1976

Linda Ferreira-Buckley, *Associate Professor*
BA, Providence College, 1981; MA, Pennsylvania State, 1985; PhD, 1990

Joshua G. Gunn, *Assistant Professor*
BA, George Washington, 1996; MA, Minnesota (Minneapolis-St. Paul), 1998; PhD, 2002

Justin D. Hodgson, *Assistant Professor*
BA, Illinois College, 2003; MA, Southern Illinois (Edwardsville), 2005; PhD, Clemson, 2009

Robert D. King, *Distinguished Teaching Professor*
BS, MS, Georgia Institute of Technology, 1959; MA, Wisconsin, 1962; PhD, 1965

Mark G. Longaker, *Associate Professor*
BA, Southern Louisiana, 1996; MA, Pennsylvania State, 1999; PhD, 2003

Eric D. Pritchard, *Assistant Professor*
BA, Lincoln, 2002; MA, Wisconsin (Madison), 2004; PhD, 2006

Patricia Roberts-Miller, *Associate Professor*
BA, California (Berkeley), 1981; MA, 1983; PhD, 1987

John J. Ruszkiewicz, *Professor*
BA, St. Vincent College, 1972; MA, Ohio State (Columbus), 1973; PhD, 1977

Clay Spinuzzi, *Associate Professor*
BA, North Texas, 1991; MA, 1994; PhD, Iowa State, 1999

Margaret A. Syverson, *Associate Professor*
BA, Iowa, 1970; MA, California (San Diego), 1992; PhD, 1994

Jeffrey Walker, *Professor*
BA, Portland State, 1972; MA, 1977; PhD, California (Berkeley), 1985

DEPARTMENT OF AIR FORCE SCIENCE

Christopher W. Bowman, *Chair*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Christopher C. Bowman**, *Colonel, United States Air Force: Professor*
BA, United States Air Force Academy, 1984; MA, State University of New York (Plattsburgh), 1989; MA, Naval War College, 2002
- Son T. Nguyen**, *Associate Professor*
BS, Syracuse, 1991; MS, Georgia Military College, 1997
- Heidi L. Potter**, *Captain, United States Air Force; Associate Professor*
BS, New Mexico, 1992; MA, 1999
- Scott D. Stout**, *Assistant Professor*
BS, Excelsior College, 2002; MBA, Touro University International, 2007

DEPARTMENT OF MILITARY SCIENCE

Boris G. Robinson, *Chair*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Ricky T. Garvin**, *Associate Professor*
BA, Columbia College, 1998; MA, Webster (Webster Groves), 2008
- Charles A. Neveau**, *Associate Professor*
BA, United States Military Academy, 2001
- Jose L. Reyes**, *Associate Professor*
BA, St. Edward's University (Austin), 1999
- Boris G. Robinson**, *Lieutenant Colonel, United States Army; Professor*
BS, Christopher Newport, 1989; MS, Troy State, 1998; MMS, Marine Corps, 2002

DEPARTMENT OF NAVAL SCIENCE

James M. Spence, *Chair*

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- David G. Hogsten**, *Commander, United States Navy: Associate Professor*
BA, Miami (Oxford), 1987; MA, Troy State, 1992; PhD, Naval War College, 2005
- Ronald L. Lobato**, *Captain, United States Navy; Assistant Professor*
BS, United States Air Force Academy, 1998
- Eric J. Rasmussen**, *Lieutenant, United States Navy; Assistant Professor*
BS, Iowa State, 2003
- Walter L. Sack**, *Lieutenant, United States Navy; Assistant Professor*
BSKin, Texas (Austin), 2001
- James M. Spence**, *Captain, United States Navy; Professor*
BS, United States Naval Academy, 1980; MA, Naval War College, 1994

DEPARTMENT OF SLAVIC AND EURASIAN STUDIES

Thomas J. Garza, *Chair*

PROFESSOR EMERITUS

John Sotter Kolsti, *Distinguished Teaching Professor Emeritus*
BA, Harvard, 1957; MA, 1962; PhD, 1966

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Zoltan D. Barany**, *Professor*
BA, Carleton, 1986; MA, Nebraska (Lincoln), 1988; PhD, Virginia, 1991
- Cynthia J. Buckley**, *Associate Professor*
BA, Michigan (Ann Arbor), 1985; MA, 1988; PhD, 1991
- Craig S. Cravens**, *Senior Lecturer*
PhD, Princeton, 1998
- Thomas J. Garza**, *Distinguished Teaching Associate Professor*
BA, Haverford College, 1980; MA, Bryn Mawr College, 1981; MA, Harvard, 1985; EdD, 1987
- Hyoung S. Kim**, *Senior Lecturer*
BA, Chung Ang, 1997; MA, Texas (Austin), 2004; PhD, 2009
- Tatiana Kuzmic**, *Assistant Professor*
BA, Gordon College, 1998; PhD, Illinois (Urbana-Champaign), 2008
- Keith A. Livers**, *Associate Professor*
BA, Williams College, 1985; MA, Michigan (Ann Arbor), 1989; PhD, 1995
- Robert Moser**, *Associate Professor*
BA, Nebraska Wesleyan, 1988; MA, Wisconsin (Madison), 1990; PhD, 1995
- Joan Neuberger**, *Professor*
BA, Grinnell College, 1975; MA, Stanford, 1978; PhD, 1985
- Mary C. Neuberger**, *Associate Professor*
BA, Oregon, 1990; MA, Washington (Seattle), 1993; PhD, 1997
- Leslie C. O'Bell**, *Associate Professor*
BA, Radcliffe College, 1968; MA, Harvard, 1971; PhD, 1977
- Michael A. Pesenson**, *Assistant Professor*
PhD, Yale, 2001
- Gilbert C. Rappaport**, *Professor*
BS, Massachusetts Institute of Technology, 1973; MA, California (Los Angeles), 1975; PhD, 1979
- Seth L. Wolitz**, *Professor*
BA, Chicago, 1958; PhD, Yale, 1965
- Charters Wynn**, *Associate Professor*
BA, California (Santa Cruz), 1977; MA, Stanford, 1979; PhD, 1987

DEPARTMENT OF SOCIOLOGY

Robert A. Hummer, *Chair*

PROFESSORS EMERITUS

Harley L. Browning, *Professor Emeritus*
BA, Kent State, 1949; PhD, California (Berkeley), 1962

Walter Irving Firey Jr., *Professor Emeritus*

BA, Washington (Seattle), 1938; MA, 1940; MA, Harvard, 1943; PhD, 1945

W. Parker Frisbie, *Professor Emeritus*

BA, Southwest Texas State College, 1969; MA, North Carolina (Chapel Hill), 1971; PhD, 1972

Omer R. Galle, *Professor Emeritus*

BA, Bethel College (Kansas), 1959; MA, Chicago, 1962; PhD, 1968

S. Dale McLemore, *Professor Emeritus*

BSEd, Texas, 1952; MA, 1956; PhD, Yale, 1960

Gideon A. Sjoberg, *Professor Emeritus*

BA, New Mexico, 1946; MA, 1947; PhD, Washington State, 1949

Teresa A. Sullivan, *Professor Emeritus*

BA, Michigan State, 1970; MA, Chicago, 1972; PhD, 1975

Antonio Ugalde, *Professor Emeritus*

MA, Stanford, 1964; PhD, 1969

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Ari Adut, *Assistant Professor*

BA, Bogaziçi Üniversitesi, 1993; DEA, École des Hautes Études en Sciences Sociales, 1994; PhD, Chicago, 2003

Jacqueline L. Angel, *Professor*

BA, Pennsylvania State, 1979; MA, Oklahoma, 1983; PhD, Rutgers (New Brunswick), 1989

Ronald J. Angel, *Professor*

BA, Illinois (Urbana-Champaign), 1970; MS, Wisconsin (Madison), 1977; PhD, 1981

Javier Auyero, *Professor*

BA, Universidad de Buenos Aires, 1991; MA, New School for Social Research, 1995; PhD, 1997

Simone A. Browne, *Assistant Professor*

BA, Toronto, 1997; BEd, York, 1998; MA, Toronto, 2001; PhD, 2006

Cynthia J. Buckley, *Associate Professor*

BA, Michigan (Ann Arbor), 1985; MA, 1988; PhD, 1991

John Sibley Butler, *Professor*

BA, Louisiana State (Baton Rouge), 1969; MA, Northwestern, 1972; PhD, 1974

Benjamin Carrington, *Assistant Professor*

BS, Loughborough, 1994; PhD, Leeds Metropolitan, 2004

Shannon E. Cavanagh, *Assistant Professor*

BA, Maryland (College Park), 1992; MA, North Carolina (Chapel Hill), 2001; PhD, 2003

Mounira Charrad, *Associate Professor*

BA, Université Paris-Sorbonne (Paris IV), 1964; MA, École Pratique des Hautes Études, 1965; PhD, Harvard, 1980

Wenhong Chen, *Assistant Professor*

BA, University of International Business and Economics, 1995; MA, Toronto, 2001; PhD, 2007

Robert Crosnoe, *Associate Professor*

BA, Texas (Austin), 1994; MA, Stanford, 1995; PhD, 1999

- Catherine Cubbin**, *Associate Professor*
BA, Pennsylvania, 1991; PhD, Johns Hopkins, 1998
- Sheldon Eklund-Olson**, *Professor*
BA, Seattle Pacific College, 1966; MA, Washington (Seattle), 1968; PhD, 1971
- Christopher G. Ellison**, *Professor*
BA, Duke, 1982; PhD, 1991
- Toni L. Falbo**, *Professor*
BA, George Washington, 1968; MA, California (Los Angeles), 1969; PhD, 1973
- Norval D. Glenn**, *Professor*
BA, New Mexico, 1954; PhD, Texas, 1962
- Gloria González-López**, *Associate Professor*
BA, Universidad Regiomontana, 1981; MA, Houston (Clear Lake), 1991; MA, Southern California, 1997; PhD, 2000
- Penny A. Green**, *Senior Lecturer*
BS, Louisiana State (Shreveport), 1972; New Orleans, 1974; PhD, Texas (Austin), 1986
- Hossein Haghshenas**, *Senior Lecturer*
PHD, Texas (Austin), 1991
- Mark D. Hayward**, *Professor*
BA, Washington State, 1975; AM, Indiana (Bloomington), 1978; PhD, 1981
- John C. Higley**, *Professor*
BA, Norwich, 1960; MA, Connecticut, 1964; PhD, 1968
- Robert A. Hummer**, *Professor*
BA, Adrian College, 1985; MA, Florida State, 1990; PhD, 1993
- William R. Kelly**, *Professor*
BA, Indiana (Bloomington), 1972; MA, 1977; PhD, 1978
- David S. Kirk**, *Assistant Professor*
BA, Vanderbilt, 1996; MA, Chicago, 2002; PhD, 2006
- Susan E. Marshall**, *Distinguished Teaching Professor*
BA, Denver, 1972; MA, Massachusetts (Amherst), 1977; PhD, 1980
- Leticia J. Marteleto**, *Assistant Professor*
BA, Universidade Federal de Minas Gerais, 1995; MA, Bowling Green State, 1997; MA, Michigan (Ann Arbor), 2000; PhD, 2001
- John Mirowsky**, *Professor*
BA, South Florida, 1975; MA, Yale, 1978; PhD, 1981
- Chandra Muller**, *Professor*
BA, California (Santa Barbara), 1975; MED, Stanford, 1976; MA, Chicago, 1983; PhD, 1991
- Marc Musick**, *Associate Professor*
BA, Texas (Austin), 1992; MA, Duke, 1994; PhD, 1997
- Joseph E. Potter**, *Professor*
BA, Yale, 1968; MPA, Princeton, 1973; PhD, 1975
- Daniel A. Powers**, *Associate Professor*
BA, Wisconsin (Madison), 1976; MS, 1984; PhD, 1991
- Tetyana Pudrovska**, *Assistant Professor*
BA, Kharkov State, 1995; MA, 2001; MA, Maryland University College (Adelphi), 2004; PhD, Wisconsin (Madison), 2008
- Thomas W. Pullum**, *Professor*
BA, Stanford, 1964; MA, Chicago, 1967; MS, 1968; PhD, 1971
- R. Kelly Raley**, *Professor*
BA, Texas (Austin), 1989; MS, Wisconsin (Madison), 1991; PhD, 1994
- Mark Regnerus**, *Associate Professor*
BA, Trinity Christian College, 1993; MA, North Carolina (Chapel Hill), 1997; PhD, 2000
- Catherine Riegle-Crumb**, *Assistant Professor*
BA, Texas A&M (College Station), 1993; MA, Chicago, 1996; PhD, 2000
- Bryan R. Roberts**, *Professor*
BA, Oxford, 1961; MA, Chicago, 1963; PhD, 1964
- Keith Robinson**, *Assistant Professor*
BA, California (Los Angeles), 2000; MA, Michigan (Ann Arbor), 2002; PhD, 2006
- Nestor P. Rodriguez**, *Professor*
BA, Texas A & M (Kingsville), 1973; MA, 1974; PhD, Texas (Austin), 1984
- Mary Rose**, *Associate Professor*
BA, Stanford, 1991; MA, Duke, 1996; PhD, 1998
- Catherine Ross**, *Professor*
BA, Carleton College, 1975; MA, Yale, 1977; PhM, 1977; PhD, 1980
- Sharmila Rudrappa**, *Associate Professor*
BS, Agricultural Sciences (Bangalore), 1989; MS, Wisconsin (Madison), 1996; PhD, 2001
- Arthur Sakamoto**, *Professor*
BA, Harvard, 1981; MS, Wisconsin (Madison), 1985; PhD, 1988
- Debra Umberson**, *Professor*
BA, Arkansas (Little Rock), 1980; MSW, 1981; MA, Vanderbilt, 1983; PhD, 1985
- Andres Villarreal**, *Associate Professor*
BS, Massachusetts Institute of Technology, 1989; MS, 1991; MA, California (San Diego), 1994; PhD, Chicago, 2002
- Peter Ward**, *Professor*
BA, Hull, 1973; PhD, Liverpool, 1976
- E. Mark Warr**, *Professor*
BA, Pacific Lutheran, 1974; MA, Arizona, 1976; PhD, 1979
- Alexandra A. Weinreb**, *Associate Professor*
BA, Durham, 1991; PhD, Pennsylvania, 2000
- Christine L. Williams**, *Professor*
BA, Oklahoma, 1980; MA, California (Berkeley), 1982; PhD, 1986
- Robert D. Woodberry**, *Assistant Professor*
BA, Wheaton College, 1987; MA, Fuller Seminary, 1993; MA, Notre Dame, 1997; PhD, North Carolina (Chapel Hill), 2003
- Michael Young**, *Associate Professor*
BA, Columbia, 1989; PhD, New York, 2000
- Wei-Hsin Yu**, *Associate Professor*
BBA, National Taiwan University, 1992; MA, Chicago, 1995; PhD, 1999
- Robert Brody**, *Professor Emeritus*
BA, Rutgers (New Brunswick), 1962; MA, Illinois, 1963; PhD, Harvard, 1971
- Fred P. Ellison**, *Professor Emeritus*
BA, Texas, 1941; MA, California (Berkeley), 1948; PhD, 1952
- Miguel Ergio González-Gerth**, *Professor Emeritus*
BA, Texas, 1950; MA, 1955; MA, Princeton, 1960; PhD, 1973
- Virginia Higginbotham**, *Associate Professor Emeritus*
BA, Southern Methodist, 1957; MA, 1962; PhD, Tulane, 1966
- Lily Litvak**, *Professor Emeritus*
BS, Universidad Nacional Autónoma de México, 1967; MA, Tufts, 1969; PhD, California (Berkeley), 1972
- Joseph H. Matluck**, *Professor Emeritus*
BA, Brooklyn College, 1940; MA, Mexico City College, 1949; Doctor en Filosofía y Letras, Universidad Nacional Autónoma de México, 1951
- Douglass M. Rogers**, *Associate Professor Emeritus*
BA, Oberlin College, 1951; MA, Wisconsin, 1953; PhD, 1964
- George D. Schade**, *Professor Emeritus*
BA, Oregon, 1945; MA, 1947; PhD, California (Berkeley), 1953
- Carlos A. Solé**, *Professor Emeritus*
BSL, Georgetown, 1960; PhD, 1966
- Yolanda Solé**, *Professor Emeritus*
BS, Georgetown, 1961; MA, 1962; PhD, 1966
- K. Carter Wheelock**, *Professor Emeritus*
BA, Texas Technological College, 1949; MA, 1950; PhD, Texas, 1966

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Omoniye Afolabi**, *Assistant Professor*
BA, Obafemi Awolowo, 1984; MA, Wisconsin (Madison), 1993; PhD, 1997
- Arturo Arias**, *Professor*
BA, Boston, 1973; MA, 1974; PhD, L'Ecole des Hautes Etudes en Sciences Sociales, 1978
- Jossianna Arroyo Martínez**, *Associate Professor*
BA, Universidad de Puerto Rico, Recinto de Rio Pedras, 1989; PhD, California (Berkeley), 1998
- Jason R. Borge**, *Associate Professor*
BA, Pomona College, 1987; MA, Columbia, 1991; PhD, California (Berkeley), 2002
- Cris Cabello De Martínez**, *Senior Lecturer*
BA, Universidad de Guanajuato, 1981; MA, Texas (Austin), 1985; PhD, 1993
- Lui E. Carcamo-Huechante**, *Assistant Professor*
BA, Universidad Austral de Chile, 1985; MA, Oregon (Eugene), 1997; PhD, Cornell, 2001
- Héctor Domínguez-Ruvalcaba**, *Associate Professor*
BA, Universidad Veracruzana, 1984; MA, New Mexico State, 1995; PhD, Colorado (Boulder), 1999
- Enrique Fierro**, *Associate Professor*
Bachiller, Instituto Vasquez Acevedo, 1959; Profesor, Instituto de Profesores, Acevedo, 1966; Licenciado, Universidad de la República (Uruguay), 1967; Profesor Agregado, 1973

DEPARTMENT OF SPANISH AND PORTUGUESE

Nicolas Shumway, *Interim Chair*

PROFESSORS EMERITUS

- Mildred Vinson Boyer**, *Professor Emeritus*
BA, Baylor, 1947; MA, 1949; PhD, Texas, 1956

Michael Paul Harney, *Associate Professor*
BA, California (Los Angeles), 1971; MA, California (Berkeley), 1975; PhD, 1983

Frederick G. Hensey, *Professor*
BA, Mexico City College, 1956; PhD, Texas (Austin), 1967

R. Rolando Hinojosa-Smith, *Professor*
BSEd, Texas, 1953; MA, New Mexico Highlands, 1963; PhD, Illinois, 1969

Vance R. Holloway, *Associate Professor*
BA, California (Berkeley), 1979; MA, 1985; PhD, 1990

Orlando Rene Kelm, *Associate Professor*
BA, Brigham Young, 1983; MA, 1985; PhD, California (Berkeley), 1989

Dale April Koike, *Professor*
BA, California State (Los Angeles), 1972; MA, New Mexico, 1974; PhD, 1981

Naomi Lindstrom, *Professor*
BA, Chicago, 1971; MA, Arizona State, 1972; PhD, 1974

Marta Luján, *Professor*
PhD, Texas (Austin), 1972

Delia L. Montesinos, *Senior Lecturer*
BA, Trinity, 1966; MA, Texas (Pan American), 1983; PhD, Texas (Austin), 2000

James R. Nicolopoulos, *Associate Professor*
BA, California (Berkeley), 1985; MA, 1987; PhD, 1992

Chiyo Nishida, *Associate Professor*
BA, Jochi Daigaku, 1971; MA, 1979; MA, Arizona, 1984; PhD, 1987

Marta Ortega-Llebaria, *Assistant Professor*
BA, Universitat de Barcelona, 1990; MA, Indiana (Bloomington), 1992; MA, 1993; PhD, 1998

José Pereiro-Otero, *Assistant Professor*
Licenciatura, Universidade de Santiago de Compostela, 1993; MA, Colorado (Boulder), 1995; PhD, 2002

Gabriela Polit, *Assistant Professor*
BPhil, Pontificia Universidad Católica de Ecuador, 1990; MA, New School for Social Research, 1996; PhD, New York, 2002

Cory A. Reed, *Associate Professor*
BA, Dartmouth College, 1984; MA, Princeton, 1987; PhD, 1989

Jill Robbins, *Associate Professor*
BA, Brown, 1973; MA, Kansas, 1985; PhD, 1992

Sonia Rencador, *Associate Professor*
Licenciatura, Universidade de Brasília, 1989; MA, 1992; PhD, New York, 1999

Maximo R. Salaberry, *Professor*
BA, Escuela Militar de Aeronáutica (Uruguay), 1983; MA, Maine, 1993; PhD, Cornell, 1997

César A. Salgado, *Associate Professor*
BA, Harvard, 1984; PhM, Yale, 1988; PhD, 1993

Nicolas Shumway, *Professor*
BA, Brigham Young, 1969; MA, California (Los Angeles), 1971; PhD, 1976

Madeline Sutherland-Meier, *Associate Professor*
BA, MA, Stanford, 1974; PhD, California (San Diego), 1983

Ivan P. Teixeira, *Professor*
BA, Universidade de São Paulo, 1977; MA, 1988; PhD, 1997

Almeida J. Toribio, *Professor*
BA, Cornell, 1985; MA, Brandeis, 1987; PhD, Cornell, 1993

Stanislav Zimic, *Professor*
Diploma B-Italijanscina, Univerza "Edvarda Kardelja" v Ljubljani, 1955; MA, Miami (Florida), 1958; PhD, Duke, 1964

COLLEGE OF NATURAL SCIENCES

DEPARTMENT OF ASTRONOMY

Neal J. Evans II, *Chair*

PROFESSORS EMERITUS

Frank N. Bash, *Professor Emeritus*
BA, Willamette, 1959; MA, Harvard, 1962; PhD, Virginia, 1967

William H. Jefferys, *Professor Emeritus*
BA, Wesleyan, 1962; MS, Yale, 1964; PhD, 1965

R. Edward Nather, *Professor Emeritus*
BA, Whitman College, 1947; PhD, Cape Town, 1972

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Volker Bromm, *Associate Professor*
BS, Christian-Albrechts-Universität zu Kiel, 1989; MS, Ruprecht-Karls-Universität Heidelberg, 1993; PhD, Yale, 2000

Harriet L. Dinerstein, *Professor*
BS, Yale, 1975; PhD, California (Santa Cruz), 1980

Sarah Dodson-Robinson, *Assistant Professor*
BS, Rochester Institute of Technology, 2002; MS, California (Santa Cruz), 2005; PhD, 2008

Neal J. Evans II, *Professor*
BA, California (Berkeley), 1968; PhD, 1973

Karl Gebhardt, *Professor*
BS, Rochester, 1986; MS, Michigan State (East Lansing), 1990; PhD, Rutgers (New Brunswick), 1994

Jenny E. Greene, *Assistant Professor*
BS, Yale, 2000; AM, Harvard, 2003; PhD, 2006

Mary M. Hemenway, *Senior Lecturer*
BS, Notre Dame College (Ohio), 1965; MA, Virginia, 1967; PhD, 1971

Daniel T. Jaffe, *Professor*
BA, Harvard, 1975; MA, 1978; PhD, 1981

Shardha Jogee, *Associate Professor*
BA, Cambridge, 1992; MPhil, MS, Yale, 1994; MA, Cambridge, 1995; PhD, Yale, 1999

Eiichiro Komatsu, *Associate Professor*
BS, Tohoku Daigaku, 1997; MS, 1999; PhD, 2001

John Kormendy, *Professor*
BS, Toronto, 1970; PhD, California Institute of Technology, 1976

Pawan Kumar, *Professor*
BS, Gorakhpur, 1976; MTech, Indian Institute of Technology (Kanpur), 1980; PhD, California Institute of Technology, 1988

John H. Lacy, *Professor*
BS, Massachusetts Institute of Technology, 1972; PhD, California (Berkeley), 1979

David L. Lambert, *Professor*
BA, Oxford, 1960; PhD, 1965

Milos Milosavljevic, *Assistant Professor*
AB, Harvard, 1997; PhD, Rutgers (New Brunswick), 2002

Edward L. Robinson, *Professor*
BA, Arizona, 1969; PhD, Texas (Austin), 1973

John M. Scalo, *Professor*
BS, Southern California, 1969; MA, California (Los Angeles), 1972; PhD, 1973

Paul R. Shapiro, *Professor*
BA, Harvard, 1974; PhD, 1978

Gregory Alan Shields, *Professor*
BS, Stanford, 1968; MS, California Institute of Technology, 1969; PhD, 1972

Christopher A. Sneden, *Professor*
BA, Haverford College, 1969; PhD, Texas (Austin), 1973

Steven Weinberg, *Regental Professor*
BA, Cornell, 1954; PhD, Princeton, 1957

J. Craig Wheeler, *Distinguished Teaching Professor*
BS, Massachusetts Institute of Technology, 1965; PhD, Colorado (Boulder), 1969

Derek Wills, *Professor*
BSc, ARCS, London, 1963; PhD, Cambridge, 1966

Donald E. Winget, *Professor*
BS, Illinois (Urbana-Champaign), 1976; MA, Rochester, 1978; PhD, 1982

ADJUNCT PROFESSORS

Michel Breger, *Adjunct Professor*
BS, University of Cape Town, 1964; MA, California (Berkeley), 1967; PhD, 1969

Nicholas B. Suntzeff, *Adjunct Professor*
BS, Stanford, 1974; PhD, California (Santa Cruz), 1980

SCHOOL OF BIOLOGICAL SCIENCES

Henry R. Bose Jr., *Director*

PROFESSORS EMERITUS

Karen Artzt, *Ashbel Smith Professor Emeritus*
BA, Cornell, 1964; PhD, 1972

Theodore Delevoryas, *Professor Emeritus*
BS, Massachusetts, 1950; MS, Illinois, 1951; PhD, 1954

Charles F. Earhart Jr., *Professor Emeritus*
BA, Knox College, 1962; PhD, Purdue, 1967

Hugh S. Forrest, *Professor Emeritus*
BS, Glasgow, 1944; PhD, London, 1947; PhD, Cambridge, 1951; DSc, London, 1971

Gary Freeman, *Professor Emeritus*
BS, Chicago, 1960; PhD, 1964

Antone G. Jacobson, *Professor Emeritus*
BA, Harvard, 1951; PhD, Stanford, 1955

Marshall C. Johnston, *Professor Emeritus*
BSGeo, Texas, 1951; MA, 1952; PhD, 1955

Jeanne M. Lagowski, *Professor Emeritus*
BS, Bradley, 1951; MS, 1952; PhD, Michigan, 1957

- Tom J. Mabry**, *Professor Emeritus*
BS, MS, East Texas State, 1953; PhD, Rice Institute, 1960
- Bassett Maguire Jr.**, *Professor Emeritus*
BA, Cornell, 1953; PhD, 1957
- Marjorie P. Maguire**, *Professor Emeritus*
BS, Cornell, 1947; PhD, 1952
- H. Eldon Sutton**, *Ashbel Smith Professor Emeritus*
BSCh, Texas, 1948; MA, 1949; PhD, 1953
- Paul J. Szaniszló**, *Professor*
BA, Ohio Wesleyan, 1961; MA, North Carolina (Chapel Hill), 1964; PhD, 1967
- Guy A. Thompson Jr.**, *Professor Emeritus*
BS, Mississippi State, 1953; PhD, California Institute of Technology, 1959
- Billie Lee Turner**, *Professor Emeritus*
BS, Sul Ross State College, 1949; MS, Southern Methodist, 1950; PhD, State College of Washington, 1953
- Marshall Ralph Wheeler**, *Professor Emeritus*
BA, Baylor, 1939; PhD, Texas, 1947
- PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS**
- John J. Abbott**, *Senior Lecturer*
BS, Texas A&M (College Station), 1993; MS, North Texas, 1998; PhD, 1999
- Seema Agarwala**, *Assistant Professor*
BS, Calcutta, 1983; PhD, State University of New York (Stony Brook), 1990
- Richard W. Aldrich**, *Professor*
BS, Arizona, 1975; PhD, Stanford, 1980
- Nigel S. Atkinson**, *Professor*
BS, Texas A&M, 1979; PhD, Pennsylvania State (Hershey Medical Center), 1986
- Mark W. Bierner**, *Senior Lecturer*
BA, Texas (Austin), 1968; PhD, 1971
- George D. Bittner**, *Professor*
BA, Duke, 1962; PhD, Stanford, 1967
- Daniel I. Bolnick**, *Associate Professor*
BA, Williams College, 1996; PhD, California (Davis), 2003
- Henry R. Bose Jr.**, *Professor*
BS, Elmhurst College, 1962; MS, Indiana, 1965; PhD, 1967
- Jerry J. Brand**, *Professor*
BS, Manchester College, 1963; PhD, Purdue, 1971
- Frank H. Bronson**, *Professor*
BS, Kansas State, 1956; MS, 1957; PhD, Pennsylvania State, 1961
- R. Malcolm Brown Jr.**, *Professor*
BA, Texas, 1961; PhD, 1964
- Jim Bull**, *Professor*
BS, Texas Tech, 1971; PhD, Utah, 1977
- Ruth E. Buskirk**, *Distinguished Senior Lecturer*
BA, Earlham College, 1965; MAT, Harvard, 1966; PhD, California (Davis), 1972
- David Cannatella**, *Professor*
BS, Southwestern Louisiana, 1976; MA, Kansas, 1979; MPh, 1981; PhD, 1985
- Clarence S. M. Chan**, *Associate Professor*
BA, Vassar College, 1977; PhD, Cornell, 1985
- Zengjian J. Chen**, *Professor*
BS, Zhejiang Agricultural University, 1984; MA, Nanjing Agricultural University, 1987; PhD, Texas A&M (College Station), 1993
- David P. Crews**, *Ashbel Smith Professor*
BA, Maryland (College Park), 1969; PhD, Rutgers (Newark), 1973
- Molly E. Cummings**, *Assistant Professor*
BA, Stanford, 1990; Post-Graduate Diploma, James Cook University of North Queensland, 1993; PhD, California (Santa Barbara), 2001
- Arturo De Lozanne**, *Distinguished Teaching Associate Professor*
BE, Universidad Autónoma Metropolitana, 1982; PhD, Stanford, 1988
- Jaquelin P. Dudley**, *Professor*
BS, West Virginia, 1973; PhD, Baylor College of Medicine, 1978
- Johann K. Eberhart**, *Assistant Professor*
BA, Bethel College, 1993; MS, Wichita State, 1997; PhD, Missouri (Columbia), 2002
- Leanne H. Field**, *Distinguished Senior Lecturer*
BA, Florida State, 1972; MS, Georgia, 1974; PhD, Texas (Austin), 1987
- Ila P. Fiete**, *Assistant Professor*
BS, Michigan (Ann Arbor), 1997; BS, 1997; AM, Harvard, 2000; PhD, 2004
- Janice Fischer**, *Professor*
BS, Union College, 1981; PhD, Harvard, 1987
- Norma L. Fowler**, *Professor*
BA, Chicago, 1973; PhD, Duke, 1978
- Lee A. Fuiman**, *Professor*
BS, Long Island (Southampton), 1975; MS, Cornell, 1978; PhD, Michigan (Ann Arbor), 1983
- George Georgiou**, *Professor*
BSChE, Manchester, 1981; MSChE, Cornell, 1983; PhD, 1986
- Lawrence E. Gilbert**, *Professor*
BA, Texas, 1966; PhD, Stanford, 1971
- Nace L. Golding**, *Associate Professor*
BS, Connecticut, 1989; PhD, Wisconsin (Madison), 1996
- Ellen Gottlieb**, *Assistant Professor*
AB, Smith College, 1978; PhD, Yale, 1987
- Jeffrey M. Gross**, *Assistant Professor*
BS, Maryland (Baltimore), 1996; PhD, Duke, 2002
- Robin Gutell**, *Professor*
BA, California (San Diego), 1977; PhD, California (Santa Cruz), 1984
- Adron Harris**, *Professor*
BS, New Mexico State, 1967; MS, Arizona, 1970; PhD, North Carolina (Chapel Hill), 1973
- Kristen M. Harris**, *Professor*
BS, Moorhead State, 1976; MS, Illinois (Champaign-Urbana), 1979; PhD, Kent State, 1982
- Rasika M. Harshey**, *Professor*
BSc, Banaras Hindu, 1970; MSc, Nagpur, 1972; PhD, Indian Institute of Science, 1977
- Christine V. Hawkes**, *Assistant Professor*
BA, Bucknell, 1993; PhD, Pennsylvania, 2000
- David L. Herrin**, *Professor*
BS, Miami (Florida), 1977; PhD, South Florida, 1985
- David M. Hillis**, *Professor*
BS, Baylor, 1980; MA, Kansas, 1983; MPh, 1984; PhD, 1985
- Johann Hofmann**, *Assistant Professor*
MS, Universität Tübingen, 1993; PhD, Universität Leipzig, 1997
- Jon M. Huibregtse**, *Professor*
BS, Michigan (Ann Arbor), 1983; PhD, 1989
- Alexander C. Huk**, *Assistant Professor*
BA, Swarthmore College, 1996; PhD, Stanford, 2001
- Enamul Huq**, *Associate Professor*
BS, Dhaka, 1987; MS, 1988; PhD, Purdue, 1997
- Brent L. Iverson**, *Professor*
BSCh, Stanford, 1982; PhD, California Institute of Technology, 1987
- Vishwanath R. Iyer**, *Associate Professor*
BS, Mumbai, 1987; MS, The Maharaja Sayajirao (Baroda), 1989; PhD, Harvard, 1996
- Robert K. Jansen**, *Professor*
BS, Wisconsin (Oshkosh), 1976; PhD, Ohio State (Columbus), 1982
- Makkuni Jayaram**, *Professor*
BSc, Kerala, 1969; MSc, Indian Agricultural Research Institute, 1971; PhD, Indian Institute of Science, 1977
- Arlen W. Johnson**, *Professor*
BA, California (Santa Cruz), 1982; PhD, Harvard, 1989
- Daniel Johnston**, *Professor*
BS, Virginia, 1970; PhD, Duke, 1974
- Thomas E. Juenger**, *Associate Professor*
BS, Illinois (Urbana-Champaign), 1991; PhD, Chicago, 1999
- Klaus Kalthoff**, *Professor*
Philosophicum, Universität Hamburg, 1964; Staatsexamen, Albert-Ludwigs-Universität Freiburg im Breisgau, 1967; Dr.rer.nat., 1971
- Timothy H. Keitt**, *Professor*
BA, Florida, 1987; MS, 1992; PhD, New Mexico, 1995
- Mark Kirkpatrick**, *Professor*
BA, Harvard, 1978; PhD, Washington (Seattle), 1983
- Helmut J. Koester**, *Assistant Professor*
BS, Ruprecht-Karls-Universität Heidelberg, 1995; PhD, Max-Planck-Institut für Medizinische Forschung, 1999
- Robert Krug**, *Professor*
MA, Harvard, 1961; PhD, Rockefeller, 1966
- John W. La Claire II**, *Professor*
BS, Cornell, 1973; MA, South Florida, 1975; PhD, California (Berkeley), 1979
- Alan M. Lambowitz**, *Professor*
BS, Brooklyn College, 1968; PhD, Yale, 1972
- Mathew A. Leibold**, *Professor*
BS, Arizona, 1980; MS, 1981; PhD, Michigan State, 1988
- Donald A. Levin**, *Professor*
BS, Illinois, 1960; MS, 1962; PhD, 1964
- Craig Randal Linder**, *Associate Professor*
BA, St. John's College, 1982; MS, Cornell, 1987; PhD, Brown, 1994
- Alan Martin Lloyd**, *Professor*
BA, Washington (St. Louis), 1979; PhD, Stanford, 1993
- Paul MacDonald**, *Professor*
BS, Colorado State, 1978; MS, Georgia Institute of Technology, 1980; PhD, Vanderbilt, 1983

- Mikhail V. Matz**, *Assistant Professor*
BS, Moskovskij Gosudarstvennyj Universitet, 1989; MS, 1991; PhD, Shemyakin-Ovchinnikov Institute, 1999
- Michael Mauk**, *Professor*
BS, New Orleans, 1979; PhD, Stanford, 1985
- James D. Mauseth**, *Professor*
BS, Washington (Seattle), 1970; PhD, 1975
- Mona Mehdy**, *Associate Professor*
BA, California (Berkeley), 1977; PhD, California (San Diego), 1984
- Richard J. Meyer**, *Professor*
BA, Swarthmore College, 1967; PhD, Pennsylvania, 1972
- Lauren A. Meyers**, *Associate Professor*
BA, Harvard, 1996; PhD, Stanford, 2000
- John Mihic**, *Associate Professor*
BS, Toronto, 1984; MS, 1988; PhD, 1992
- Ian J. Molineux**, *Professor*
BS, Newcastle upon Tyne, 1966; PhD, Oxford, 1969
- Jennifer R. Morgan**, *Assistant Professor*
BS, North Carolina (Chapel Hill), 1995; PhD, Duke, 2001
- Hitoshi Morikawa**, *Associate Professor*
MD, Kyoto Daigaku, 1989; PhD, 1999
- Ulrich G. Mueller**, *Professor*
MS, Rheinische Friedrich-Wilhelms-Universität Bonn, 1984; MA, Cornell, 1986; PhD, 1992
- Raymond L. Neubauer**, *Senior Lecturer*
BA, Dartmouth College, 1964; MA, Chicago, 1966; PhD, Texas (Austin), 1993
- Hiroshi Nishiyama**, *Assistant Professor*
BSc, Kyoto, 1996; MSc, 1998; PhD, 2002
- Theresa O'Halloran**, *Associate Professor*
BA, Michigan (Ann Arbor), 1978; PhD, North Carolina (Chapel Hill), 1986
- Julie M. Palmer**, *Senior Lecturer*
BA, North Carolina (Chapel Hill), 1977; MS, Utah State (Logan), 1981; PhD, Texas (Austin), 1989
- José L. Panero**, *Associate Professor*
BA, Miami, 1984; MS, Tennessee (Knoxville), 1986; PhD, 1990
- Camille Parmesan**, *Associate Professor*
BSZoo, Texas (Austin), 1984; PhD, 1995
- Tanya T. Paull**, *Professor*
BS, MS, Stanford, 1991; PhD, California (Los Angeles), 1996
- Shelley M. Payne**, *Distinguished Teaching Professor*
BA, Rice, 1972; PhD, Texas Health Science Center (Dallas), 1977
- Eric R. Pianka**, *Professor*
BA, Carleton College, 1960; PhD, Washington (Seattle), 1965
- Jonathan Pierce-Shimomura**, *Assistant Professor*
BS, State University of New York (Binghamton), 1994; PhD, Oregon (Eugene), 2000
- Jonathan W. Pillow**, *Assistant Professor*
BA, Arizona (Tucson), 1997; PhD, New York University, 2005
- Martin Poenie**, *Associate Professor*
BA, California State (Northridge), 1973; MA, California State (Fullerton), 1979; PhD, Stanford, 1986
- Russell A. Poldrack**, *Professor*
BA, Baylor, 1989; MA, Illinois (Urbana-Champaign), 1991; PhD, 1995
- George D. Pollak**, *Professor*
BS, American, 1964; PhD, Maryland, 1970
- William H. Press**, *Professor*
AB, Harvard, 1969; MS, California Institute of Technology, 1971; PhD, 1972
- Alison R. Preston**, *Assistant Professor*
BA, Pennsylvania, 1997; MA, Stanford, 2001; PhD, 2004
- Nicholas J. Prieb**, *Assistant Professor*
BA, BS, California (San Diego), 1994; PhD, California (San Francisco), 2001
- Kimberly Raab-Graham**, *Assistant Professor*
BA, California State (Long Beach), 1992; PhD, California (Santa Barbara), 1998
- Mary Ann Rankin**, *Professor*
BS, Louisiana State (New Orleans), 1966; PhD, Iowa, 1972
- R. H. Richardson**, *Professor*
BS, Agricultural and Mechanical College of Texas, 1959; MS, North Carolina State, 1962; PhD, 1965
- Austen Fox Riggs II**, *Professor*
BA, Harvard, 1948; MA, 1949; PhD, 1951
- Stanley J. Roux Jr.**, *Distinguished Teaching Professor*
BS, Spring Hill College, 1966; MS, Loyola (New Orleans), 1968; PhD, Yale, 1971
- Michael J. Ryan**, *Professor*
BA, Glassboro State College, 1975; MS, Rutgers (Newark), 1977; PhD, Cornell, 1982
- Bob G. Sanders**, *Professor*
BS, Concord College, 1954; MA, Pennsylvania State, 1958; PhD, 1961
- Sahotra Sarkar**, *Professor*
BA, Columbia, 1981; MA, Chicago, 1984; PhD, 1989
- K. Sathasivan**, *Senior Lecturer*
BS, Tamil Nadu Agricultural, 1978; MS, 1980; PhD, Louisiana State (Baton Rouge), 1991
- Sara L. Sawyer**, *Assistant Professor*
BSChE, Kansas, 1996; PhD, Cornell, 2003
- Eyal Seidemann**, *Associate Professor*
MS, Universität Tel Aviv, 1993; PhD, Stanford, 1998
- Martin Shankland**, *Distinguished Teaching Professor*
AB, Cornell, 1975; PhD, California (Berkeley), 1981
- Dee U. Silverthorn**, *Senior Lecturer*
BS, Tulane, 1970; PhD, South Carolina (Columbia), 1973
- Beryl B. Simpson**, *Professor*
BA, Radcliffe College, 1964; MA, PhD, Harvard, 1967
- Michael C. Singer**, *Professor*
BA, Oxford, 1967; PhD, Stanford, 1971
- John C. Sisson**, *Associate Professor*
BS, California (San Diego), 1986; PhD, Stanford, 1996
- D. M. Snodderly Jr.**, *Professor*
SM, Massachusetts Institute of Technology, 1963; SB, 1963, PhD, Rockefeller, 1969
- David Stein**, *Professor*
BS, Winnipeg, 1982; PhD, Stanford, 1989
- Scott W. Stevens**, *Associate Professor*
BS, Illinois (Urbana-Champaign), 1991; PhD, North Carolina (Chapel Hill), 1996
- Christopher Sullivan**, *Assistant Professor*
BS, Penn State (University Park); 1995; PhD, Pittsburgh, 2000
- Sibum Sung**, *Assistant Professor*
BS, Seoul National, 1996; MS, 1998; Wisconsin (Madison), 2004
- Edward C. Theriot**, *Professor*
MS, Louisiana State, 1978; PhD, Michigan (Ann Arbor), 1983
- Peter Thomas**, *Professor*
BS, Hull, 1970; PhD, Leicester, 1977
- Wesley J. Thompson**, *Professor*
BS, North Texas State, 1970; PhD, California (Berkeley), 1975
- Ming Tian**, *Assistant Professor*
BS, Peking, 1987; PhD, Harvard, 1994
- Michael S. Trent**, *Associate Professor*
BA, Virginia College (Wise), 1994; PhD, East Tennessee State, 1998
- Philip W. Tucker**, *Professor*
BA, Texas (Austin), 1966; MA, 1969; PhD, Texas A&M, 1974
- Billie L. Turner**, *Professor*
BS, Sul Ross State College, 1949; MS, Southern Methodist, 1950; PhD, State College of Washington, 1953
- Emin T. Ulug**, *Senior Lecturer*
BA, Texas (Austin), 1977; PhD, 1984
- Steven A. Vokes**, *Assistant Professor*
BA, Swarthmore College, 1997; PhD, Texas (Austin), 2002
- James R. Walker**, *Professor*
BS, Northwestern State College, 1960; PhD, Texas, 1963
- John B. Wallingford**, *Associate Professor*
BA, Wesleyan, 1992; PhD, Texas (Austin), 1998
- Marvin Whiteley**, *Associate Professor*
BSZoo, Texas (Austin), 1995; MS, Southwest Texas State, 1997; PhD, Iowa, 2001
- Claus O. Wilke**, *Assistant Professor*
Diploma, Ruhr-Universität Bochum, 1996; PhD, 1999
- Harold H. Zakon**, *Professor*
BS, Marlboro College, 1972; PhD, Cornell, 1981

ADJUNCT PROFESSORS

- Suzanne S. Barth**, *Adjunct Associate Professor*
BA, Texas (Austin), 1969; PhD, 1983
- Mary R. Beckham**, *Adjunct Assistant Professor*
BS, Tennessee Technological, 1978; MEd, Mary Hardin-Baylor (Belton), 1998
- Guy L. Bush**, *Adjunct Professor*
BS, Iowa State, 1953; MS, Virginia Polytechnic Institute, 1960; PhD, Harvard, 1964
- Richard A. Dixon**, *Adjunct Professor*
BA, Oxford, 1973; MA, 1976; DPhil, 1976
- Janet Duben-Engelkirk**, *Adjunct Associate Professor*
BS, Akron, 1974; BS, 1975; MS, 1979; EdD, Baylor College of Medicine, 1988
- Greta A. Fryxell**, *Adjunct Professor*
BA, Augustana College (Illinois), 1948; MEd, Texas A&M, 1969; PhD, 1975
- Paul A. Fryxell**, *Adjunct Professor*
BA, Augustana College (Illinois), 1949; MS, Iowa State, 1951; PhD, 1955
- Timothy M. George**, *Adjunct Professor*
BACe, Columbia University (New York City), 1982; MD, New York University, 1986

Randall Goldblum, *Adjunct Professor*
BS, Tulane, 1964; MD, Texas Medical Branch
(Galveston), 1969

Judy Jobe, *Adjunct Assistant Professor*
BS, Lamar, 1967

David G. Johnson, *Adjunct Associate Professor*
BA, Texas (Austin), 1985; PhD, Texas (South-
western Medical Center at Dallas), 1991

Daniel J. Ladd, *Adjunct Associate Professor*
BES, Johns Hopkins, 1962; MSE, 1968; MD,
Maryland, 1969

Judith D. Larsen, *Adjunct Assistant Professor*
BS, Wisconsin, 1962

Doris Lefkowitz, *Adjunct Professor*
BS, Miami, 1966; MS, Texas Tech, 1978; PhD,
Texas Tech Health Sciences Center, 1986

Stanley Lefkowitz, *Adjunct Professor*
BS, Miami, 1955; MS, 1957; PhD, Maryland
(Baltimore), 1961

Christophe Leveque, *Adjunct Assistant Professor*
BS, Tulane, 1975; MD, Louisiana State (Medi-
cal Center), 1981

Guosong Liu, *Adjunct Professor*
MS, Academy of Traditional Chinese Medi-
cine, 1982; MD, Chuanbei Medical School,
1982; PhD, California (Los Angeles), 1990

Karen R. McClure, *Adjunct Assistant Professor*
BS, Texas A&M, 1978; BS&MedTech, Texas
Health Science Center (Houston), 1979; MS,
Texas Woman's, 1998

Greg A. Mihailoff, *Adjunct Professor*
BSc, Ashland, 1968; MS, Ohio State (Colum-
bus), 1973; PhD, 1974

Susan J. Pacinda, *Adjunct Assistant Professor*
BS, Texas A&M (College Station), 1988; MD,
Texas Health Science Center (Houston), 1992

David M. Parichy, *Adjunct Assistant Professor*
BA, Reed College, 1991; PhD, California
(Davis), 1997

Dennis R. Schneider, *Adjunct Associate Professor*
BA, Texas (Austin), 1973; PhD, 1978

Ingo Schlupp, *Adjunct Professor*
Doctorate, Hamburg, 1995

William H. Sofer, *Adjunct Professor*
BS, New York Brooklyn College, 1961; PhD,
Miami (Coral Gables), 1967

Jeffrey J. Tarrand, *Adjunct Assistant Professor*
BS, Virginia Polytechnic Institute, 1975; MS,
1977; MD, Virginia, 1981

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

Stephen F. Martin, *Chair*

PROFESSORS EMERITUS

Nathan L. Bauld, *Professor Emeritus*
BS, West Virginia, 1956; PhD, Illinois, 1959

James E. Boggs, *Professor Emeritus*
AB, Oberlin College, 1943; MS, Michigan,
1944; PhD, 1953

Raymond E. Davis, *Distinguished Teaching Profes-
sor Emeritus*
BS, Kansas, 1960; PhD, Yale, 1965

Gerhard J. Fonken, *Ashbel Smith Professor Emeritus*
BS, California (Berkeley), 1954; PhD, 1957

John C. Gilbert, *Adjunct Professor Emeritus*
BS, Wyoming, 1961; MS, Yale, 1962; PhD,
1965

Boyd A. Hardesty, *Professor Emeritus*
BS, Washington State, 1954; PhD, California
Institute of Technology, 1960

Richard J. Lagow, *Professor Emeritus*
BA, Rice, 1967; PhD, 1969

Joseph J. Lagowski, *Professor Emeritus*
BS, Illinois, 1952; MS, Michigan, 1954; PhD,
Michigan State, 1957; PhD, Cambridge, 1959

Petr Munk, *Professor Emeritus*
MS, Institute of Chemical Technology, 1956;
PhD, Institute of Macromolecular Chemistry,
1960; DSc, 1967

Joanne M. Ravel, *Ashbel Smith Professor Emeritus*
BSCh, Texas, 1944; MA, 1946; PhD, 1954

Lester J. Reed, *Ashbel Smith Professor Emeritus*
BS, Tulane, 1943; PhD, Illinois, 1946

Stephen E. Webber, *Professor Emeritus*
BA, Washington (St. Louis), 1962; PhD,
Chicago, 1965

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Eric V. Anslyn, *Distinguished Teaching Professor*
BS, California State (Northridge), 1982; PhD,
California Institute of Technology, 1987

Dean R. Appling, *Professor*
BS, Texas A&M, 1977; PhD, Vanderbilt, 1981

Paul F. Barbara, *Professor*
BA, Hofstra, 1974; PhD, Brown, 1978

Allen J. Bard, *Professor*
BS, City College (New York), 1955; MA, 1957;
PhD, Harvard, 1958

Christopher W. Bielawski, *Associate Professor*
BS, Illinois (Urbana-Champaign), 1997; PhD,
California Institute of Technology, 2003

Jennifer S. Brodbelt, *Professor*
BSCh, Virginia, 1983; PhD, Purdue, 1988

Karen Browning, *Associate Professor*
BSCh, Texas (Austin), 1975; PhD, Illinois
(Urbana-Champaign), 1980

Alan Champion, *Distinguished Teaching Professor*
BA, New College, 1972; PhD, California (Los
Angeles), 1977

James R. Chelikowsky, *Professor*
BS, Kansas State, 1970; PhD, California
(Berkeley), 1975

Alan H. Cowley, *Professor*
BS, Manchester, 1955; MS, 1956; PhD, 1958

Richard M. Crooks, *Professor*
BS, Illinois (Urbana-Champaign), 1981; PhD,
Texas (Austin), 1987

Ron Elber, *Professor*
BS, ha'Universita ha'Ivrith bi'Yerushalayim,
1981; PhD, 1985

Andrew Ellington, *Professor*
BS, Michigan State (East Lansing), 1981; PhD,
Harvard, 1988

Fatima Fakhreddine, *Senior Lecturer*
BS, Lebanese, 1987; MS, Texas (Austin),
1996; PhD, 1999

Marvin L. Hackert, *Professor*
BA, Central College, 1966; PhD, Iowa State,
1970

Graeme A. Henkleman, *Assistant Professor*
BS, Queen's University at Kingston, 1996;
PhD, Washington (Seattle), 2001

David W. Hoffman, *Associate Professor*
BS, Massachusetts (Amherst), 1979; MS,
1982; PhD, Duke, 1986

James A. Holcombe, *Professor*
BA, Colorado College, 1970; MS, Michigan
(Ann Arbor), 1972; PhD, 1974

Bradley J. Holliday, *Assistant Professor*
BS, Allegheny College, 1997; MS, Northwest-
ern, 1998; PhD, 2002

Simon M. Humphrey, *Assistant Professor*
MChem, East Anglia, 2002; PhD, Cambridge,
2005

Brent L. Iverson, *Distinguished Teaching Professor*
BSCh, Stanford, 1982; PhD, California Insti-
tute of Technology, 1987

Kenneth A. Johnson, *Professor*
BS, Iowa, 1971; PhD, Wisconsin (Madison),
1975

Richard A. Jones, *Professor*
BS, London, 1976; DIC, PhD, 1978

Adrian Keatinge-Clay, *Assistant Professor*
BS, Stanford, 1999; BS, 1999; PhD, California
(San Francisco), 2004

G. Barrie Kitto, *Professor*
BS, Victoria University of Wellington, 1961;
MA, 1962; PhD, Brandeis, 1966

Michael J. Krische, *Professor*
BS, California (Berkeley), 1989; PhD, Stan-
ford, 1996

Cynthia LaBrake, *Senior Lecturer*
BS, West Virginia, 1987; PhD, Loyola, 1992

Alan M. Lambowitz, *Professor*
BS, Brooklyn College, 1968; PhD, Yale, 1972

David A. Laude, *Distinguished Teaching Professor*
BS, University of the South, 1979; MS, Virginia
Polytechnic Institute, 1981; PhD, California
(Riverside), 1984

Sang-Hyun Lim, *Assistant Professor*
BS, Seoul National University, 1994; MS, 1998;
PhD, Illinois (Urbana-Champaign), 2003

Hung-Wen (Ben) Liu, *Professor*
BSCh, Tunghai, 1974; MA, Columbia, 1977;
MPhil, PhD, 1981

Philip D. Magnus, *Professor*
BSc, Imperial College of Science and Tech-
nology, 1965; PhD, 1968; DSc, London, 1982

Dmitrii E. Makarov, *Associate Professor*
BSPHy, Moscow Institute of Physics and
Technology, 1990; PhD, Institute of Chemical
Physics (Moscow), 1992

Edward M. Marcotte, *Professor*
BS&Micro, Texas (Austin), 1990; PhD, 1995

Stephen F. Martin, *Professor*
BS, New Mexico, 1968; MA, Princeton, 1970;
PhD, 1972

Stephen A. Monti, *Professor*
BS, California (Berkeley), 1961; PhD, Mas-
sachusetts Institute of Technology, 1964

Charles B. Mullins, *PE, Professor*
BSPHy, Texas (Austin), 1975; MSE, 1977;
BSChE, Tennessee (Knoxville), 1982; PhD,
California Institute of Technology, 1990

Jon D. Robertus, *Professor*
BA, Minnesota (Minneapolis-St. Paul), 1967;
PhD, California (San Diego), 1972

- Peter J. Rossky**, *Professor*
BA, Cornell, 1971; MA, Harvard, 1972; PhD, 1978
- Rick Russell**, *Associate Professor*
BA, Earlham College, 1991; PhD, Johns Hopkins, 1997
- Jonathan L. Sessler**, *Professor*
BS, California (Berkeley), 1977; PhD, Stanford, 1982
- Jason B. Shear**, *Professor*
BSCh, Texas (Austin), 1989; PhD, Stanford, 1994
- Ruth I. Shear**, *Senior Lecturer*
BS, Griffith University, 1983; PhD, 1991
- Dionicio R. Siegel**, *Assistant Professor*
BA, Reed College, 1997; PhD, Harvard, 2003
- John F. Stanton**, *Professor*
BGS, MS, Michigan (Ann Arbor), 1984; PhD, Harvard, 1989
- Keith J. Stevenson**, *Associate Professor*
BA, Puget Sound, 1989; PhD, Utah, 1997
- David A. Vanden Bout**, *Associate Professor*
BS, Duke, 1990; PhD, Texas (Austin), 1995
- Lauren J. Webb**, *Assistant Professor*
AB, Bowdoin College, 2000; PhD, California Institute of Technology, 2005
- Katherine A. Willets**, *Assistant Professor*
AB, Dartmouth, 1999; PhD, Stanford, 2005
- C. Grant Willson**, *Professor*
BS, California (Berkeley), 1962; MS, California State (San Diego), 1969; PhD, California (Berkeley), 1973
- Robert E. Wyatt**, *Professor*
BS, Illinois Institute of Technology, 1961; MA, Johns Hopkins, 1963; PhD, 1965
- Y. Whitney Yin**, *Assistant Professor*
MD, Tianjin Medical College, 1988; PhD, North Carolina (Chapel Hill), 1996
- Yan Zhang**, *Assistant Professor*
BS, Tsinghua, 1997; MS, Oregon, 2000; PhD, Scripps Research Institute, 2004
- Xiao Y. Zhu**, *Professor*
BS, Fudan University Shanghai, 1984; PhD, Texas (Austin), 1989

ADJUNCT PROFESSORS

- David E. Graham**, *Adjunct Assistant Professor*
AB, Cornell, 1995; MS, Illinois (Urbana-Champaign), 1998; PhD, 2000
- Lara K. Mahal**, *Adjunct Professor*
BA, California (Santa Cruz), 1995; PhD, California (Berkeley), 2000
- John T. McDevitt**, *Adjunct Professor*
BSCh, California Polytechnic State, 1982; PhD, Stanford, 1987

DEPARTMENT OF COMPUTER SCIENCE

J Strother Moore II, *Chair*

PROFESSORS EMERITUS

- Robert S. Boyer**, *Professor Emeritus*
BA, Texas (Austin), 1967; PhD, 1971
- James C. Browne**, *Professor Emeritus*
BA, Hendrix College, 1956; PhD, Texas, 1960

- Harvey G. Cragon**, *Professor Emeritus*
BSEE, Louisiana Polytechnic Institute, 1950
- Benjamin Jack Kuipers**, *Professor Emeritus*
BA, Swarthmore College, 1970; PhD, Massachusetts Institute of Technology, 1977
- John C. Loehlin**, *Professor Emeritus*
BA, Harvard, 1947; PhD, California (Berkeley), 1957
- Norman Marshall Martin**, *Professor Emeritus*
MA, Chicago, 1947; PhD, California (Los Angeles), 1952

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- J. K. Aggarwal**, PE, *Professor*
BS, Bombay, 1956; BE, Liverpool, 1960; MSEE, Illinois, 1961; PhD, 1964
- Lorenzo Alvisi**, *Professor*
Laurea, Università degli Studi di Bologna, 1987; MS, Cornell, 1994; PhD, 1995
- William F. Aspray Jr.**, *Professor*
BA, Wesleyan, 1973; MA, 1973; MA, Wisconsin, 1975; PhD, 1980
- Chandrajit L. Bajaj**, *Professor*
BTech, Indian Institute of Technology (Delhi), 1980; MS, Pittsburgh, 1981; MS, Cornell, 1983; PhD, 1984
- Dana H. Ballard**, *Professor*
BS, Massachusetts Institute of Technology, 1967; MS, Michigan (Ann Arbor), 1970; PhD, California (Irvine), 1974
- Don S. Batory**, *Professor*
BS, Case Western Reserve, 1975; MS, 1977; PhD, Toronto, 1980
- Alan K. Cline**, *Professor*
BS, Michigan (Ann Arbor), 1967; MA, 1968; PhD, 1970
- William R. Cook**, *Assistant Professor*
BS, Tulane, 1984; MS, Brown, 1985; PhD, 1989
- Michael D. Dahlin**, *Professor*
BS, Rice, 1991; MS, California (Berkeley), 1993; PhD, 1995
- Inderjit S. Dhillon**, *Professor*
BTech, Indian Institute of Technology (Bombay), 1989; PhD, California (Berkeley), 1997
- E. Allen Emerson II**, *Professor*
BSMath, Texas (Austin), 1976; MS, Harvard, 1978; PhD, 1981
- Donald S. Fussell**, *Professor*
BA, Dartmouth College, 1973; MSCS, Texas (Dallas), 1977; PhD, 1980
- Anna Gal**, *Associate Professor*
Diploma, Moskovskij Gosudarstvennyj Universitet, 1983; MS, Chicago, 1990; PhD, 1995
- Omar Ghattas**, *Professor*
BS, Duke, 1984; MS, 1986; PhD, 1988
- Mohamed G. Gouda**, *Professor*
BSAse, Cairo, 1968; BSMath, 1971; MA, York, 1972; MMath, Waterloo, 1973; PhD, 1977
- Kristen L. Grauman**, *Assistant Professor*
BA, Boston College, 2001; MS, Massachusetts Institute of Technology, 2003; PhD, 2006
- Warren A. Hunt Jr.**, *Professor*
BS, Rice, 1980; PhD, Texas (Austin), 1985
- Stephen W. Keckler**, *Professor*
BS, Stanford, 1990; SM, Massachusetts Institute of Technology, 1992; PhD, 1998
- Adam R. Klivans**, *Assistant Professor*
BS, MS, Carnegie Mellon, 1997; PhD, Massachusetts Institute of Technology, 2002
- Simon S. Lam**, *Professor*
BS, Washington State, 1969; MS, California (Los Angeles), 1970; PhD, 1974
- Matthew A. Lease**, *Assistant Professor*
BA, Washington (Seattle), 1999; MS, Brown, 2004; PhD, 2009
- Vladimir Lifschitz**, *Professor*
Matematik, Leningradskij Gosudarstvennyj Universitet, 1968; Kandidat, Matematicheski Institut Akademii Nauk SSSR, 1971
- Calvin Lin**, *Associate Professor*
BSE, Princeton, 1985; PhD, Washington (Seattle), 1992
- Kathryn S. McKinley**, *Professor*
BA, Rice, 1985; MA, 1990; PhD, 1992
- Risto Miikkulainen**, *Professor*
BA, Southwestern, 1984; Diplomi-insinööri, Teknillinen korkeakoulu, 1986; PhD, California (Los Angeles), 1990
- Daniel P. Miranker**, *Professor*
BSMath, Massachusetts Institute of Technology, 1979; MS, Columbia, 1983; PhD, 1986
- Jayadev Misra**, *Professor*
BTech, Indian Institute of Technology (Kanpur), 1969; PhD, Johns Hopkins, 1973
- Aloysius K. Mok**, *Professor*
BS, MS, Massachusetts Institute of Technology, 1977; PhD, 1982
- Raymond J. Mooney**, *Professor*
BS, Illinois (Urbana-Champaign), 1983; MS, 1985; PhD, 1987
- J Strother Moore II**, *Professor*
BS, Massachusetts Institute of Technology, 1970; PhD, Edinburgh, 1973
- Gordon S. Novak Jr.**, *Professor*
BSEE, Texas (Austin), 1969; MA, 1971; PhD, 1976
- Yale N. Patt**, *Professor*
BS, Northeastern, 1962; MS, Stanford, 1963; PhD, 1966
- Keshav K. Pingali**, *Professor*
BTech, Indian Institute of Technology (Kanpur), 1978; MS, Massachusetts Institute of Technology, 1983; DSc, 1986
- Charles Gregory Plaxton**, *Professor*
BSc, Toronto, 1985; PhD, Stanford, 1989
- Bruce W. Porter**, *Professor*
BS, California (Irvine), 1977; MS, 1982; PhD, 1984
- William H. Press**, *Professor*
AB, Harvard, 1969; MS, California Institute of Technology, 1971; PhD, 1972
- Lili Qiu**, *Assistant Professor*
BS, Bridgeport, 1996; MS, Cornell, 1999; PhD, 2001
- Vijaya Ramachandran**, *Professor*
BE, Indian Institute of Science, 1977; MSE, 1979; PhD, Princeton, 1983
- Elaine A. Rich**, *Senior Lecturer*
AB, Brown, 1972; PhD, Carnegie-Mellon, 1979
- Michael D. Scott**, *Senior Lecturer*
BS, Stanford, 1990; MS, Rensselaer Polytechnic Institute, 1998

Vitaly Shmatikov, *Associate Professor*
BS, Washington (Seattle), 1994; MS, Stanford, 1997; MS, 1999; PhD, 2000

Peter H. Stone, *Associate Professor*
BS, Chicago, 1993; MS, Carnegie Mellon, 1995; PhD, 1998

Robert van de Geijn, *Professor*
BS, Wisconsin (Madison), 1981; PhD, Maryland (College Park), 1987

Michael H. Walfish, *Assistant Professor*
AB, Harvard, 1998; SM, Massachusetts Institute of Technology, 2004; PhD, 2008

Tandy Warnow, *Professor*
BA, California (Berkeley), 1984; PhD, 1991

Brent R. Waters, *Assistant Professor*
BS, California (Los Angeles), 2000; MA, Princeton, 2002; PhD, 2004

Andrew B. Whinston, *Professor*
BA, Michigan, 1957; MS, Carnegie Institute of Technology, 1960; PhD, 1962

Emmett Witchel, *Assistant Professor*
BA, BS, Stanford, 1992; MS, 1994; PhD, Massachusetts Institute of Technology, 2004

Yin Zhang, *Assistant Professor*
BS, Peking, 1997; MS, Cornell, 1999; PhD, 2001

David Zuckerman, *Professor*
AB, Harvard, 1987; PhD, California (Berkeley), 1991

ADJUNCT PROFESSORS

Haran Boral, *Adjunct Associate Professor*
BS, City University of New York, 1977; MS, 1978; PhD, Wisconsin (Madison), 1981

Douglas C. Burger, *Adjunct Professor*
BS, Yale, 1991; MS, Wisconsin (Madison), 1993; PhD, 1998

Phillip E. Cannata, *Adjunct Professor*
BS, Notre Dame, 1972; PhD, 1980

Harrick M. Vin, *Professor*
BTech, Indian Institute of Technology (Bombay), 1987; MS, Colorado State, 1988; PhD, California (San Diego), 1993

SCHOOL OF HUMAN ECOLOGY

Catherine A. Surra, *Chair*

PROFESSORS EMERITUS

M. Beth Gillham, *Associate Professor Emeritus*
BS, Texas Technological College, 1962; PhD, Iowa State, 1975

John B. Longenecker, *Professor Emeritus*
BS, Franklin and Marshall College, 1952; MA, Texas, 1954; PhD, 1956

Phyllis L. Richards, *Professor Emeritus*
BA, Chicago, 1942; MA, 1950; PhD, Florida State, 1964

Richard A. Willis, *Professor Emeritus*
PhD, Oklahoma Health Sciences Center, 1979

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Edward Anderson, *Associate Professor*
BS, Illinois (Urbana-Champaign), 1984; MA, Virginia, 1987; PhD, 1989

Margaret E. Briley, *Professor*
BSHE, Texas, 1950; MS, Texas Tech, 1968; PhD, 1973

Jonathan Y. Chen, *Professor*
BS, Southern Yangtze, 1982; PhD, Leeds, 1995

Henry P. Ciolino, *Assistant Professor*
BA, New Orleans, 1976; PhD, Louisiana State Medical Center (New Orleans), 1990

Jane S. Craig, *Senior Lecturer*
BS, Washington State, 1959; MS, Illinois, 1961; MBA, Texas (Austin), 1984; PhD, Texas Tech, 1993

Theodore H. Dix, *Associate Professor*
BA, Lake Forest College, 1971; MA, Northwestern, 1973; PhD, 1980

Jeanne Freeland-Graves, *Professor*
BA, Georgian Court College, 1971; MS, Rutgers (New Brunswick), 1973; PhD, 1975

Marci E. Gleason, *Associate Professor*
BS, Penn State (University Park), 1998; PhD, New York University, 2004

Sue A. Greninger, *Associate Professor*
BS, Arizona, 1965; MS, Illinois (Urbana-Champaign), 1970; PhD, 1973

Nancy Hazen-Swann, *Associate Professor*
BS, Pittsburgh (Main Campus), 1974; PhD, Minnesota (Minneapolis-St. Paul), 1979

Stephen D. Hursting, *Professor*
BA, Earlham College, 1980; MPH, North Carolina (Chapel Hill), 1988; PhD, 1992

Aletha C. Huston, *Professor*
BA, Stanford, 1960; MA, Minnesota (Minneapolis-St. Paul), 1962; PhD, 1965

Ted L. Huston, *Professor*
BS, Lewis and Clark College, 1965; PhD, State University of New York (Albany), 1972

Deborah B. Jacobvitz, *Professor*
AB, California (Berkeley), 1980; PhD, Minnesota (Minneapolis-St. Paul), 1987

Christopher Jolly, *Associate Professor*
BSNtr, Texas A&M (College Station), 1992; PhD, 1996

Su Yeong Kim, *Assistant Professor*
BA, Southern California, 1995; PhD, California (Davis), 2003

Karrol Ann Kitt, *Associate Professor*
BS, Nebraska (Lincoln), 1969; MS, 1973; PhD, Purdue, 1978

Kimberly Kline, *Professor*
BA, Texas (Austin), 1971; PhD, 1985

Mourad Krifa, *Assistant Professor*
BS, Institut Supérieur Industriel, 1996; MS, Université de Haute Alsace (Mulhouse-Colmar), 1997; PhD, 2001

Judith H. Langlois, *Professor*
BA, Louisiana State (Baton Rouge), 1969; MA, 1971; PhD, 1973

Hyun-Hwa Lee, *Assistant Professor*
BS, Inha, 1995; MS, 1997; PhD, Iowa State, 2004

RoseAnn Loop, *Professor*
BSEd, Kansas State Teacher's College, 1964; PhD, Texas (Austin), 1968

Timothy J. Loving, *Assistant Professor*
BA, Texas (Austin), 1995; MS, Purdue, 1997; PhD, 2001

Lisa Ann Neff, *Assistant Professor*
BA, Dayton, 1996; MA, Wake Forest, 1998; PhD, Florida (Gainesville), 2002

Eve Nicols, *Senior Lecturer*
BA, London Institute, 1979; MA, 1981

Nomeli P. Nuñez, *Assistant Professor*
BA, California (Santa Cruz), 1992; PhD, Washington State, 1999; MPH, Johns Hopkins, 2002

Julia Ann Reed, *Associate Professor*
BS, Purdue, 1969; PhD, 1973

Bob G. Sanders, *Professor*
BS, Concord College, 1954; MA, Pennsylvania State, 1958; PhD, 1961

D. Max Snodderly, *Professor*
SB, SM, Massachusetts Institute of Technology, 1963; PhD, Rockefeller, 1969

Katherine Southworth, *Senior Lecturer*
BS, Kentucky (Lexington), 1966; MS, 1968

Lydia C. Steinman, *Senior Lecturer*
MA, Texas (Austin), 1987

Catherine A. Surra, *Professor*
BS, Pennsylvania State, 1972; MS, Maryland (College Park), 1974; PhD, Pennsylvania State, 1980

Bugao Xu, *Professor*
BS, Northwest Institute of Textile Science and Technology, 1982; MS, 1984; MS, Maryland (College Park), 1991; PhD, 1992

ADJUNCT PROFESSORS

John Digiovanni, *Adjunct Professor*
BS, Washington (Seattle), 1974; PhD, 1978

Michelle A. Lane, *Adjunct Assistant Professor*
BS, Cornell, 1991; PhD, Rutgers (New Brunswick), 1996

Jennifer L. Matjasko, *Adjunct Assistant Professor*
BS, Pennsylvania State, 1993; PhD, Chicago, 2001

DEPARTMENT OF MARINE SCIENCE

Lee A. Fuiman, *Chair*

PROFESSORS EMERITUS

Connie R. Arnold, *Professor Emeritus*
BS, Southwest Texas State College, 1960; MA, 1962; PhD, Texas A&M, 1968

Bassett Maguire Jr., *Professor Emeritus*
BA, Cornell, 1953; PhD, 1957

Patrick L. Parker, *Professor Emeritus*
BA, Arkansas (Fayetteville), 1955; MS, 1957; PhD, 1959

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Edward J. Buskey, *Professor*
BA, Brown, 1974; MS, British Columbia, 1976; PhD, Rhode Island, 1983

Kenneth H. Dunton, *Professor*
BS, Maine (Orono), 1975; MS, Western Washington, 1977; PhD, Alaska (Fairbanks), 1985

- Deana L. Erdner**, *Assistant Professor*
BS, Carnegie Mellon, 1991; PhD, Massachusetts Institute of Technology, 1997
- Lee A. Fuiman**, *Professor*
BS, Long Island (Southampton), 1975; MS, Cornell, 1978; PhD, Michigan (Ann Arbor), 1983
- Wayne S. Gardner**, *Professor*
BS, Wisconsin (Stevens Point), 1963; MS, Wisconsin (Madison), 1964; PhD, 1971
- G. Joan Holt**, *Professor*
BS, Texas (Arlington), 1964; MA, 1972; PhD, Texas A&M, 1976
- Zhanfei Liu**, *Assistant Professor*
BS, Xiamen, 1997; MS, 2000; PhD, Stony Brook, 2006
- James W. McClelland**, *Assistant Professor*
BS, Washington (Seattle), 1991; PhD, Boston, 1998
- Dong-Ha Min**, *Assistant Professor*
BS, Seoul National, 1987; MS, 1989; PhD, California (San Diego), 1999
- Pablo Munguia**, *Assistant Professor*
BS, Universidad de Guadalajara, 2000; PhD, Florida State, 2006
- Luiz A. Rocha**, *Assistant Professor*
BSc, Universidade Federal da Paraíba, 1996; MSc, 1999; PhD, Florida, 2003
- Gerald C. Shank**, *Assistant Professor*
BS, Virginia Polytechnic Institute, 1988; MS, North Carolina (Chapel Hill), 1993; PhD, 2003
- Peter Thomas**, *Professor*
BS, Hull, 1970; PhD, Leicester, 1977
- Tracy A. Villareal**, *Professor*
BS, Texas A&M, 1978; MS, 1981; PhD, Rhode Island, 1989
- Benjamin Walther**, *Assistant Professor*
BS, Texas (Austin), 2000; PhD, Massachusetts Institute of Technology, 2007

ADJUNCT PROFESSOR

- Paul A. Montagna**, *Adjunct Professor*
BS, State University of New York (Stony Brook), 1971; MS, Northeastern, 1975; PhD, South Carolina (Columbia), 1983

DEPARTMENT OF MATHEMATICS

William Beckner, *Chair*

PROFESSORS EMERITUS

- Sterling K. Berberian**, *Professor Emeritus*
BS, Michigan State, 1948; MS, 1950; PhD, Chicago, 1955
- E. Ward Cheney**, *Professor Emeritus*
BA, Lehigh, 1951; PhD, Kansas, 1957
- John R. Durbin**, *Professor Emeritus*
BA, Wichita, 1956; MA, 1958; PhD, Kansas, 1964
- Don E. Edmondson**, *Professor Emeritus*
BSME, Southern Methodist, 1945; MS, 1948; PhD, California Institute of Technology, 1954
- Clifford S. Gardner**, *Professor Emeritus*
BA, Harvard, 1944; PhD, New York, 1953

- Peter W. M. John**, *Professor Emeritus*
BA, Oxford, 1944; MA, 1948; Postgraduate Diploma in Statistics, 1949; PhD, Oklahoma, 1955
- Roger Cook Osborn**, *Professor Emeritus*
BA, Texas, 1940; MA, 1942; PhD, 1954
- Haskell P. Rosenthal**, *Professor Emeritus*
BS, Massachusetts Institute of Technology, 1961; MS, Stanford, 1963; PhD, 1965
- Ralph E. Showalter**, *Professor Emeritus*
BS, North Carolina State, 1964; MA, 1965; PhD, Illinois (Urbana-Champaign), 1968
- Dale E. Walston**, *Associate Professor Emeritus*
BA, Agricultural and Mechanical College of Texas, 1952; MA, Texas, 1959; PhD, 1961
- Robert F. Williams**, *Professor Emeritus*
BA, Texas, 1948; PhD, Virginia, 1954

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

- Daniel Allcock**, *Associate Professor*
BSMath, BSMPhy, Texas (Austin), 1991; PhD, California (Berkeley), 1996
- Todd Arbogast**, *Professor*
BS, Minnesota (Minneapolis-St. Paul), 1981; SM, Chicago, 1983; PhD, 1987
- Efraim Pacillas Armendariz**, *Professor*
BA, Agricultural and Mechanical College of Texas, 1960; MS, 1962; PhD, Nebraska (Lincoln), 1966
- Ivo M. Babuska**, *Professor*
DiplIng, České Vysoké učení technické v Praze, 1949; Dr, 1951; CSC, Czechoslovak Academy of Sciences, 1955; DrSc, 1960
- William Beckner**, *Professor*
BS, Missouri (Columbia), 1963; PhD, Princeton, 1975
- David Ben-Zvi**, *Associate Professor*
BA, Princeton, 1994; MA, Harvard, 1996; PhD, 1999
- Klaus R. Bichteler**, *Professor*
Diplom, Universität Hamburg, 1963; Dr.rer. nat., 1965
- Andrew J. Blumberg**, *Assistant Professor*
AB, Harvard, 1998; MS, Chicago, 2001; PhD, 2005
- Patrick L. Brockett**, *Professor*
BA, California State (Long Beach), 1970; MA, PhD, California (Irvine), 1975
- Luis A. Caffarelli**, *Professor*
Licenciatura en Ciencias Matemáticas, Universidad de Buenos Aires, 1968; Doctor en Matemáticas, 1972
- Thomas Chen**, *Assistant Professor*
MS, Eidgenössische Technische Hochschule Zürich, 1992; MS, 1996; PhD, 1999; PhD, 2001
- Yingda Cheng**, *Instructor*
BSc, University of Science and Technology of China (Hefei), 2003; MSc, Brown, 2004; PhD, 2007
- Mirela Ciperiani**, *Assistant Professor*
BA, Smith College, 2000; MA, Princeton, 2002; PhD, 2006
- Alan K. Cline**, *Professor*
BS, Michigan (Ann Arbor), 1967; MA, 1968; PhD, 1970
- James W. Daniel**, *Distinguished Teaching Professor*
BA, Wabash College, 1962; MS, Stanford, 1963; PhD, 1965
- Katherine M. Davis**, *Distinguished Teaching Professor*
BA, Cornell, 1970; PhD, 1974
- Rafael de la Llave**, *Professor*
Licenciado en Ciencias Físicas, Universidad Complutense de Madrid, 1979; PhD, Princeton, 1983
- John D. Dollard**, *Professor*
BA, Yale, 1958; MA, Princeton, 1960; PhD, 1963
- Bjorn Engquist**, *Professor*
BS, Uppsala Universitet, 1966; PhD, 1969
- Alessio Figalli**, *Associate Professor*
Laurea in Mathematics, Scuola Normale Superiore di Pisa, 2004; MA, 2006; PhD, 2007
- Daniel Freed**, *Professor*
BA, MA, Harvard, 1981; PhD, California (Berkeley), 1985
- Irene Martinez Gamba**, *Professor*
MS, Chicago, 1985; PhD, 1989
- John E. Gilbert**, *Distinguished Teaching Professor*
BA, Oxford, 1960; MA, DPhil, 1963
- Robert E. Gompf**, *Professor*
BS, Massachusetts Institute of Technology, 1979; PhD, California (Berkeley), 1984
- Oscar Gonzalez**, *Associate Professor*
BSME, Texas (Austin), 1991; MS, Stanford, 1992; MS, PhD, 1996
- Cameron M. Gordon**, *Professor*
BA, Cambridge, 1966; PhD, 1971; MA, 1973
- Ronny Hadani**, *Assistant Professor*
BA, Open University, 1996; MSc, Makhon Weizmann Lemada, 1998; PhD, Universität Tel Aviv, 2006
- Gary C. Hamrick**, *Professor*
BA, Texas Christian, 1961; MS, Georgia Institute of Technology, 1968; PhD, Virginia, 1971
- Raymond C. Heitmann**, *Professor*
BS, Stevens Institute of Technology, 1969; PhD, Wisconsin (Madison), 1974
- David F. Helm**, *Assistant Professor*
AB, Harvard, 1995; PhD, California (Berkeley), 2003
- Corinne Irwin**, *Senior Lecturer*
BA, Texas (Austin), 1974; MA, 1979
- Sean Keel**, *Professor*
BA, Carleton College, 1984; MS, Chicago, 1985; PhD, 1989
- Daniel F. Knopf**, *Associate Professor*
BA, Wisconsin (Milwaukee), 1993; PhD, 1999
- Hans Koch**, *Professor*
Physikdiplom, Eidgenössische Technische Hochschule Zürich, 1974; Thèse en physique, Université de Genève, 1978
- John E. Luecke**, *Professor*
BA, Princeton, 1979; PhD, Texas (Austin), 1985
- J Strother Moore II**, *Professor*
BS, Massachusetts Institute of Technology, 1970; PhD, Edinburgh, 1973
- Hossein Namazi**, *Assistant Professor*
BS, Sharif University of Technology, 1999; PhD, State University of New York (Stony Brook), 2005

Andrew M. Neitzke, *Assistant Professor*
AB, Princeton, 1998; PhD, Harvard, 2005

Edward W. Odell, *Professor*
BA, State University of New York (Binghamton), 1969; PhD, Massachusetts Institute of Technology, 1975

J. Tinsley Oden, PE, *Professor*
BS, Louisiana State, 1959; MS, Oklahoma State, 1960; PhD, 1962

Bruce P. Palka, *Professor*
BS, Notre Dame, 1965; PhD, Michigan (Ann Arbor), 1972

Mary R. Parker, *Senior Lecturer*
BA, Texas (Austin), 1971; MA, Oregon, 1972; PhD, Texas (Austin), 1988

Natasa Pavlovic, *Assistant Professor*
Diploma, Univerzitet u Beogradu, 1996; MS, Illinois (Chicago), 1998; PhD, 2002

Timothy Perutz, *Assistant Professor*
BA, Cambridge, 2000; PhD, London, 2005

Charles Radin, *Professor*
BS, City College, City University of New York, 1965; PhD, Rochester, 1970

Diane S. Radin, *Senior Lecturer*
BA, Queens College, City University of New York, 1966; MA, Rochester, 1968

Alan W. Reid, *Professor*
BS, Aberdeen, 1984; MS, 1985; PhD, 1988

Kui Ren, *Assistant Professor*
BS, Nanjing, 1998; MS, Peking (Beijing), 2001; PhD, Columbia (New York City), 2006

Altha Blanchet Rodin, *Senior Lecturer*
BS, Southwestern Louisiana, 1981; MS, 1983; PhD, Texas (Austin), 1988

F. Rodriguez-Villegas, *Professor*
Licenciatura en Ciencias Matemáticas, Universidad de Buenos Aires, 1985; PhD, Ohio State, 1990

Lorenzo A. Sadun, *Professor*
BS, Massachusetts Institute of Technology, 1981; MA, California (Berkeley), 1982; PhD, 1987

David J. Saltman, *Professor*
BA, MS, Chicago, 1972; PhD, Yale, 1976

Mihai Sirbu, *Assistant Professor*
BS, Universitatea "Alexandru Ioan Cuza" din Iasi, 1998; MS, Carnegie Mellon, 2000; PhD, 2004

Michael Starbird, *Distinguished Teaching Professor*
BA, Pomona College, 1970; MA, Wisconsin (Madison), 1973; PhD, 1974

P. Uri Treisman, *Professor*
BA, California (Los Angeles), 1969; MA, California (Berkeley), 1983; PhD, 1985

Yen-Hsi Tsai, *Associate Professor*
BS, National Taiwan University, 1995; MA, California (Los Angeles), 1999; PhD, 2002

Karen K. Uhlenbeck, *Professor*
BS, Michigan, 1964; MA, Brandeis, 1966; PhD, 1968

Jeffrey D. Vaaler, *Professor*
BS, Lawrence, 1970; MS, Illinois (Urbana-Champaign), 1971; PhD, 1974

Leslie Jane F. Vaaler, *Senior Lecturer*
MA, Princeton, 1979; PhD, 1982

Alexis F. Vasseur, *Associate Professor*
AM, École Normale Supérieure, 1995; PhD, Université de Jussieu, 1999

James W. Vick, *Ashbel Smith Professor; Distinguished Teaching Professor*
BS, Louisiana State (Baton Rouge), 1964; MA, Virginia, 1966; PhD, 1968

Mikhail M. Vishik, *Professor*
Kandidat nauk, matematika, Moskovskij Gosudarstvennyj Universitet im. M.V. Lomonosova, 1976; PhD, 1980

Jose F. Voloch, *Professor*
Mestrado, Instituto de Matemática Pura e Aplicada, 1982; PhD, Cambridge, 1985

Mary F. Wheeler, PE, *Professor*
BA, BSEd, Texas, 1960; MA, 1963; PhD, Rice, 1971

Lexing Ying, *Assistant Professor*
BS, Shanghai Jiaotong, 1998; MS, New York, 2000; PhD, 2004

Thaleia Zariphopoulou, *Professor*
Ptychion, Ethnikon Metsovion Polytechnion Athinon, 1984; MS, Brown, 1985; PhD, 1989

Gordan Zitkovic, *Assistant Professor*
BS, Sveuciliste u Zagrebu, 1997; MS, Technische Universität Wien, 1999; PhD, Columbia, 2002

ADJUNCT PROFESSORS

Gerard Barbanson, *Adjunct Professor*
BS, Université de Rennes I, 1963; MS, 1967; PhD, Université Louis Pasteur (Strasbourg I), 1975

Michael D. Pore, *Adjunct Associate Professor*
BA, Texas (Austin), 1965; MS, Texas Tech, 1969; PhD, 1973

Raul F. Tempone, *Adjunct Associate Professor*
Phd, Kungliga teknisz höskolan Stockholm, 2002

DEPARTMENT OF PHYSICS

John T. Markert, *Chair*

PROFESSORS EMERITUS

Frederik W. de Wette, *Professor Emeritus*
Cand, Rijksuniversiteit Utrecht, 1947; Drs, 1950; Dr, 1959

Cecile DeWitt-Morette, *Professor Emeritus*
Licence ès sciences, Université de Caen, 1943; Doctorat d'Etat, Université de Paris, 1947

J. David Gavenda, *Professor Emeritus*
BSPhy, Texas, 1954; MA, 1956; PhD, Brown, 1959

Thomas A. Griffy, *Professor Emeritus*
BA, Rice, 1959; MA, 1960; PhD, 1961

William D. McCormick, *Professor Emeritus*
BS, California Institute of Technology, 1953; PhD, Duke, 1959

A. Wilson Nolle, *Professor Emeritus*
BA, Southwest Texas State Teachers College, 1938; MA, Texas, 1939; PhD, Massachusetts Institute of Technology, 1947

Melvin E. L. Oakes, *Distinguished Teaching Professor Emeritus*
BS, Louisiana State (Baton Rouge), 1958; PhD, Florida State, 1964

William C. Schieve, *Professor Emeritus*
PhD, Lehigh, 1959

Jack B. Swift, *Professor Emeritus*
BS, Arkansas, 1963; MS, Illinois, 1965; PhD, 1968

James C. Thompson, *Professor Emeritus*
BA, Texas Christian, 1952; MA, Rice Institute, 1954; PhD, 1956

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Peter R. Antoniewicz, *Professor*
BS, North Carolina State, 1959; MS, Purdue, 1964; PhD, 1965

Roger D. Bengtson, *Professor*
BS, Nebraska, 1962; MS, Virginia Polytechnic Institute, 1964; PhD, Maryland, 1968

Herbert L. Berk, *Professor*
BS, New York, 1960; MA, Princeton, 1962; PhD, 1964

Arno Böhm, *Professor*
Dipl-Phys, Freie Universität Berlin, 1962; Dr.rer.nat., Philipps-Universität Marburg, 1966

James R. Chelikowsky, *Professor*
BS, Kansas State, 1970; PhD, California (Berkeley), 1975

Charles B. Chiu, *Distinguished Teaching Professor*
BS, Seattle Pacific College, 1961; PhD, California (Berkeley), 1965

W. Rory Coker, *Professor*
BS, Georgia, 1961; MS, 1964; PhD, 1966

Alejandro de Lozanne, *Professor*
BS, Purdue, 1976; PhD, Stanford, 1982

Alexander A. Demkov, *Associate Professor*
Diploma, Moscow Institute of Steel and Alloys, 1986; PhD, Arizona State, 1995

Duane A. Dicus, *Professor*
BS, Washington (Seattle), 1961; MS, 1963; PhD, California (Los Angeles), 1968

Jacques Distler, *Professor*
AB, Harvard, 1982; PhD, 1987

Todd Ditmire, *Professor*
BA, Harvard, 1991; MS, California (Davis), 1993; PhD, 1995

Michael Downer, *Professor*
BA, Rochester, 1976; MA, Oxford, 1978; PhD, Harvard, 1983

James L. Erskine, *Professor*
BSEE, Washington (Seattle), 1964; MS, 1966; PhD, 1973

Gregory A. Fiete, *Assistant Professor*
BS, Purdue (West Lafayette), 1997; AM, Harvard, 1999; PhD, 2003

Manfred Fink, *Professor*
Diplom, Universität Fridericiana Karlsruhe (Technische Hochschule), 1963; Dr, 1966

Willy Fischler, *Professor*
Licence en sciences physiques, Université libre de Bruxelles, 1972; Docteur en sciences physiques, 1976

Richard Fitzpatrick, *Associate Professor*
MA, Cambridge, 1984; PhD, Sussex, 1988

Ernst-Ludwig Florin, *Associate Professor*
Diplom, Technische Universität München, 1990; PhD, 1995

- Lothar W. Frommhold**, *Professor*
Dr, Universität Hamburg, 1961; Dr.habil., 1964
- Kenneth W. Gentle**, *Professor*
BS, Massachusetts Institute of Technology, 1962; PhD, 1966
- Austin M. Gleeson**, *Professor*
BS, Drexel Institute of Technology, 1960; MS, Pennsylvania, 1963; PhD, 1965
- Richard D. Hazeltine**, *Professor*
BA, Harvard, 1964; MS, Michigan, 1966; PhD, 1968
- Daniel J. Heinzen**, *Professor*
BS, Massachusetts Institute of Technology, 1981; PhD, 1988
- Gerald W. Hoffmann**, *Professor*
BA, Occidental College, 1966; PhD, California (Los Angeles), 1971
- C. Wendell Horton Jr.**, *Professor*
BSPhy, Texas, 1963; MS, California (San Diego), 1965; PhD, 1967
- Vadim Kaplunovsky**, *Professor*
BSc, ha'Universita ha'Ivrith bi'Yerushalayim, 1978; PhD, Universitat Tel-Aviv, 1983
- John W. Keto**, *Professor*
BS, Michigan, 1968; PhD, Wisconsin, 1972
- Joshua Klein**, *Assistant Professor*
BA, Cornell, 1988; MA, Princeton, 1990; PhD, 1994
- Leonard Kleinman**, *Professor*
BA, California (Los Angeles), 1955; MS, 1956; PhD, California (Berkeley), 1960
- Eiichiro Komatsu**, *Associate Professor*
BS, Tohoku, 1997; MS, 1999; PhD, 2001
- Sacha E. Kopp**, *Associate Professor*
BA, Chicago, 1990; MS, 1992; PhD, 1994
- Karol Lang**, *Professor*
MS, Uniwersytet Warszawski, 1979; PhD, Rochester, 1985
- Xiaoqin Li**, *Assistant Professor*
BA, Beijing Normal, 1997; MS, Michigan (Ann Arbor), 2002; PhD, 2003
- Allan MacDonald**, *Professor*
BA, St. Francis Xavier, 1973; MS, Toronto, 1974; PhD, 1978
- Michael P. Marder**, *Professor*
AB, Cornell, 1982; PhD, California (Santa Barbara), 1986
- Christina Markert**, *Assistant Professor*
BA, Johann Wolfgang Goethe-Universität Frankfurt, 1993; MA, 1996; PhD, 2001
- John T. Markert**, *Professor*
BA, Bowdoin College, 1979; MS, Cornell, 1984; PhD, 1987
- Richard A. Matzner**, *Professor*
BS, Notre Dame, 1963; PhD, Maryland, 1967
- Philip J. Morrison**, *Professor*
BS, California (San Diego), 1972; MS, 1974; PhD, 1979
- Qian Niu**, *Professor*
BS, Peking, 1981; MS, Washington (Seattle), 1983; PhD, 1985
- Raymond L. Orbach**, *Professor*
BS, California Institute of Technology, 1966; PhD, California (Berkeley), 1960
- Sonia Paban**, *Associate Professor*
BSPHy, Universitat de Barcelona, 1984; PhD, 1988
- Mark G. Raizen**, *Professor*
BS, Universitat Tel Aviv, 1980; PhD, Texas (Austin), 1989
- Linda E. Reichl**, *Professor*
BS, Denver, 1964; MS, 1967; PhD, 1969
- Peter J. Riley**, *Professor*
BAppS, British Columbia, 1956; MAppS, 1958; PhD, Alberta, 1962
- Jack L. Ritchie**, *Professor*
BSPHy, Texas (Austin), 1977; MA, Rochester, 1979; PhD, 1983
- Roy F. Schwitters**, *Professor*
SB, Massachusetts Institute of Technology, 1966; PhD, 1971
- Chih-Kang Ken Shih**, *Professor*
BS, National Tsing Hua, 1977; MS, Oregon, 1981; PhD, Stanford, 1988
- George T. Shubeita**, *Assistant Professor*
BS, Birzeit, 1995; PhD, Université de Lausanne, 2002
- Gennady Shvets**, *Associate Professor*
BS, Moscow Institute of Physics and Technology, 1989; PhD, Massachusetts Institute of Technology, 1995
- Greg O. Sitz**, *Professor*
BA, Rice, 1981; PhD, Stanford, 1987
- E. C. G. Sudarshan**, *Professor*
BS, Madras, 1951; MA, 1952; PhD, Rochester, 1958; DSc, Wisconsin, 1969
- Harry L. Swinney**, *Professor*
BS, Southwestern at Memphis, 1961; PhD, Johns Hopkins, 1968
- Maxim Tsoi**, *Associate Professor*
BS, Moscow Institute of Physics and Technology, 1993; MS, 1995; PhD, Universität Konstanz, 1998
- Jack S. Turner**, *Associate Professor*
BS, Duke, 1964; PhD, Indiana, 1969
- Steven Weinberg**, *Regental Professor*
BA, Cornell, 1954; PhD, Princeton, 1957
- Robert E. Wyatt**, *Professor*
BS, Illinois Institute of Technology, 1961; MA, ohns Hopkins, 1963; PhD, 1965
- Zhen Yao**, *Associate Professor*
BSPHy, University of Science and Technology of China (Hefei), 1992; MS, Harvard, 1993; PhD, 1997
- Beverly A. Hall**, RN, *Professor Emeritus*
BS, Texas Christian, 1957; MA, New York, 1961; PhD, Colorado (Boulder), 1974
- Joy H. Penticuff**, RN, *Distinguished Teaching Professor Emeritus*
BSN, Medical College of Georgia School of Nursing, 1968; MA, MSN, Case Western Reserve, 1973; PhD, 1976

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Gayle J. Acton, RN, *Associate Professor*
BSN, Central State, 1974; MSN, Oklahoma State (Oklahoma City), 1980; PhD, Texas (Austin), 1993

Sharon A. Brown, RN, *Professor*
BS, Missouri, 1974; MN, Kansas Health Sciences Center, 1980; PhD, Texas (Austin), 1987

Patricia A. Carter, RN, *Associate Professor*
BSN, California State (Fullerton), 1992; MN, California (Los Angeles), 1994; PhD, 1999

Angela P. Clark, RN, *Associate Professor*
BSN, Spalding College, 1970; MSN, Texas Woman's, 1973; PhD, 1983

Evelyn M. Clingerman, RN, *Assistant Professor*
BSN, Old Dominion, 1986; MSN, 1989; DNS, The Catholic University of America, 2001; PhD, 2006

Carol L. Delville, *Assistant Professor*
ADN, Albany Medical Center School of Nursing, 1980; BSN, Texas (Austin), 2001; MSN, 2003; PhD, 2008

Sharon Dormire, RN, *Associate Professor*
BSN, Indiana University of Pennsylvania, 1982; MSN, Virginia Commonwealth, 1986; PhD, Florida, 1992

Eileen R. Fowles, RN, *Assistant Professor*
Diploma, Evangelical School of Nursing, 1971; BS, Elmhurst College, 1980; MSN, Loyola of Chicago, 1988; PhD, 1994

Nina M. Fredland, RN, *Assistant Professor*
BS, Niagara, 1970; MS, Pennsylvania, 1976; PhD, Johns Hopkins, 2006

Alexandra A. Garcia, RN, *Associate Professor*
BSN, Notre Dame, 1990; MSN, Maryland (Baltimore), 1995; PhD, Texas (Austin), 2002

Tracie Harrison, RN, *Assistant Professor*
BSN, Texas (Austin), 1993; MSN, Texas A&M (Corpus Christi), 1999; PhD, Texas (Austin), 2004

Sharon D. Horner, RN, *Professor*
BSN, Armstrong State College, 1980; MSN, Medical College of Georgia, 1984; PhD, 1992

Eun-Ok Im, RN, *Professor*
BSN, Seoul National, 1989; MPH, 1993; MSN, California (San Francisco), 1995; PhD, 1997

Regina Johnson, RN, *Associate Professor*
BSN, Texas (Arlington), 1991; MSN, 1995; PhD, Texas Health Science Center (Houston), 2002

Eileen K. Kintner, *Associate Professor*
BSN, Northern Michigan, 1979; PhD, Arizona (Tucson), 1996

Graham J. McDougall, RN, *Professor*
BSN, William Carey College, 1977; MN, Louisiana State University Medical Center, 1981; PhD, Texas (Austin), 1991

SCHOOL OF NURSING

Alexa K. Stuijbergen, *Interim Dean*

PROFESSORS EMERITUS

Billye J. Brown, RN, *Professor Emeritus*
BSNEd, Texas, 1953; MSN, Saint Louis, 1958; EdD, Baylor, 1975

Helen L. Erickson, RN, *Professor Emeritus*
BSN, Michigan (Ann Arbor), 1974; MS, 1976; PhD, 1984

R. LaVerne Gallman, RN, *Professor Emeritus*
BSNEd, Texas, 1949; MEd, 1957; PhD, Texas (Austin), 1970

Susan Grobe, RN, *Professor Emeritus*
BSEd, State University of New York (Plattsburgh), 1963; MSN, Wayne State, 1967; PhD, Texas (Austin), 1977

Marilyn M Pattillo, *Associate Professor*
PhD, Texas (Austin), 1983

Donna Lynn Rew, RN, *Professor*
BSN, Hawaii, 1968; MSN, Northern Illinois, 1975; EdD, 1979

Roberta J. Ruiz, *Associate Professor*
MSN, Texas Women's, 1990; PhD, Texas Health Science Center (San Antonio), 1999

Dolores Sands, RN, *Professor*
BSN, Wayne State, 1952; MSN, 1963; PhD, Arizona State, 1979

Alexa K. Staufbergen, RN, *Professor*
BSN, Creighton, 1977; MSN, Texas (El Paso), 1981; PhD, Texas (Austin), 1988

Gayle M. Timmerman, RN, *Associate Professor*
BSN, Florida, 1983; MSN, Ohio State, 1986; PhD, 1994

Deborah Volker, RN, *Associate Professor*
BSN, Columbia, 1977; MA, 1981; PhD, Texas (Austin), 1999

Lorraine O. Walker, RN, *Professor*
BSN, Dayton, 1963; MSNEd, Indiana (Indianapolis), 1965; EdD, 1971

Linda H. Yoder, RN, *Associate Professor*
BSN, Maryland (Baltimore), 1978; MSN, Texas Health Science Center (San Antonio), 1985; PhD, Pennsylvania, 1992

ADJUNCT PROFESSORS

Leslie Aiello, *Adjunct Associate Professor*
BS, Otterbein College, 1968; MD, Ohio State, 1972

Cynthia Brinson, *Adjunct Assistant Professor*
BA, Texas (Austin), 1985; MD, Texas Tech, 1990

Mark S. Hernandez, *Adjunct Associate Professor*
BA, St. Thomas, 1999; MD, Baylor College of Medicine, 2003

Lauren B. Kacir, *Adjunct Assistant Professor*
BA, Bryn Mawr College, 1985; MD, Albert Einstein College of Medicine, 1989

Dilip Karnik, *Adjunct Associate Professor*
MD, Bombay, 1976

Marta M. Katalenas, *Adjunct Assistant Professor*
MD, Universidad de Oviedo, 1982

Wei-Ann Lin, *Adjunct Assistant Professor*
BS, Texas A&M (College Station), 1986; MD, Texas Health Science Center (San Antonio), 1990

Robert M. Milman, *Adjunct Associate Professor*
BS, Brown, 1982; MD, Texas A&M (College Station), 1986

Dennis M. Perrotta, *Adjunct Associate Professor*
BA, St. Mary's, 1973; MS, Texas (San Antonio), 1977; PhD, Texas Health Science Center (Houston), 1982

Stuart A. Rowe, *Adjunct Professor*
BS, Stanford, 1973; MD, Johns Hopkins, 1981

John D. Walker, *Adjunct Associate Professor*
BA, Williams College, 1976; MD, Baylor College of Medicine, 1982

David Wright, *Adjunct Associate Professor*
BA, California (San Diego), 1973; MD, Texas (Medical Branch), 1980

COLLEGE OF PHARMACY

Miles Lynn Crismon, *Dean*

PROFESSORS EMERITUS

Creed W. Abell, *Professor Emeritus*
BSCh, Virginia Military Institute, 1956; MSCh, Purdue, 1958; PhD, Wisconsin, 1962

James T. Doluisio, *Professor Emeritus*
BSPhr, Temple, 1957; MS, 1959; PhD, Purdue, 1962

Jerry Fineg, *Professor Emeritus*
BS, Agricultural and Mechanical College of Texas, 1949; DVM, 1953; MS, Southern California, 1964

Louis C. Littlefield, *Professor Emeritus*
BA, California State (Northridge), 1963; PharmD, Southern California, 1967

Robert S. Pearlman, *Professor Emeritus*
BS, Illinois (Urbana-Champaign), 1970; PhD, Michigan (Ann Arbor), 1975

Charles Anthony Walton, *Professor Emeritus*
BSPhr, Auburn, 1949; MS, Purdue, 1950; PhD, 1956

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Jamie C. Barner, *Associate Professor*
BSPhr, Texas (Austin), 1991; MS, Purdue, 1994; PhD, 1998

Shawn B. Bratton, *Associate Professor*
BSBio, Texas (Austin), 1992; PhD, 1999

Carolyn M. Brown, *Professor*
BSPhr, Xavier University of Louisiana, 1989; PhD, Florida, 1994

Henry I. Bussey, *Professor*
BS, Georgia, 1971; PharmD, Texas (Austin)/Texas Health Science Center (San Antonio), 1978

Cris Cabello de Martinez, *Senior Lecturer*
BA, Universidad de Guanajuato, 1981; MA, Texas (Austin), 1985; PhD, 1993

Alan Brooks Combs, *Professor*
BSPhr, University of the Pacific, 1962; MS, 1964; PhD, California (Davis), 1970

David P. Crews, *Ashbel Smith Professor*
BA, Maryland (College Park), 1969; PhD, Rutgers (Newark), 1973

Miles Lynn Crismon, *Professor*
BS, Oklahoma, 1974; PharmD, Texas (Austin)/Texas Health Science Center (San Antonio), 1979

Maria Croyle, *Associate Professor*
BSPhr, Pittsburgh, 1992; MS, Michigan, 1994; PhD, 1997

Zhengrong Cui, *Associate Professor*
BS, Beijing, 1995; MS, Wisconsin Colleges (Madison), 1999; PhD, Kentucky (Lexington), 2002

Kevin N. Dalby, *Associate Professor*
BS, Leeds, 1988; PhD, Cambridge, 1992

Patrick J. Davis, *Distinguished Teaching Professor*
BSPhr, Iowa, 1973; PhD, 1976

John DiGiovanni, *Professor*
BS, Washington (Seattle), 1974; PhD, 1978

Christine Duvauchelle, *Associate Professor*
BA, Hawaii (Manoa), 1984; PhD, California (Santa Barbara), 1991

Carlton K. Erickson, *Professor*
BSPhr, Ferris State College, 1961; MS, Purdue, 1963; PhD, 1965

Roger P. Farrar, *Professor*
BS, Tufts, 1967; PhD, Massachusetts (Amherst), 1976

Walter Fast, *Associate Professor*
BS, Wheaton College, 1992; PhD, Northwestern, 1998

Christopher R. Frei, *Assistant Professor*
PharmD, Texas (Austin), 2001; MSPhr, 2003

Rueben A. Gonzales, *Professor*
BSPhr, Texas (Austin), 1977; PhD, 1983

Francisco Gonzalez-Lima, *Professor*
BS, Tulane, 1976; BA, 1977; PhD, Puerto Rico (Medical Sciences Campus), 1980

Andrea Gore, *Professor*
BA, Princeton, 1985; PhD, Wisconsin (Madison), 1990

Adron Harris, *Professor*
BS, New Mexico State, 1967; MS, Arizona, 1970; PhD, North Carolina (Chapel Hill), 1973

Stephen D. Hursting, *Professor*
BA, Earlham College, 1980; MPH, North Carolina (Chapel Hill), 1984; PhD, 1992

John L. Ivy, *Professor*
BS, Old Dominion, 1970; MA, Maryland (College Park), 1974; PhD, 1976

Sean M. Kerwin, *Associate Professor*
BS, Notre Dame, 1984; PhD, California (Berkeley), 1989

Kimberly Kline, *Professor*
BA, Texas (Austin), 1971; PhD, 1985

W. Arlyn Kloesel, *Distinguished Senior Lecturer*
BSPhr, Texas, 1962

Jim M. Koeller, *Professor*
BS, Wisconsin (Madison), 1977; MS, 1979

John G. Kuhn, *Professor*
BSPhr, Texas (Austin), 1972; PharmD, Texas (Austin)/Texas Health Science Center (San Antonio), 1977

Kenneth A. Lawson, *Associate Professor*
BSPhr, Texas (Austin), 1975; MSPhr, 1989; PhD, 1992

Seongmin Lee, *Assistant Professor*
BS, Seoul National, 1992; MS, 1994; PhD, Purdue, 2004

Steven W. Leslie, *Executive Vice President and Provost; Professor*
BSPhr, Purdue, 1969; MS, 1972; PhD, 1974

Louis C. Littlefield, *Professor*
BA, California State (Northridge), 1963; PharmD, Southern California, 1967

Hung-Wen (Ben) Liu, *Professor*
BSCh, Tunghai, 1974; MA, Columbia, 1977; MPhil, PhD, 1981

Jason T. McConville, *Assistant Professor*
BS, Coventry, 1994; PhD, Strathclyde, 2002

James W. McGinity, *Professor*
BPhr, Queensland, 1967; PhD, Iowa, 1972

S. J. Mihic, *Professor*
BSc, Toronto, 1984; MSc, 1988; PhD, 1992

Edward M. Mills, *Assistant Professor*
BA, Franklin College, 1991; PhD, Purdue, 1997

- Richard A. Morrisett**, *Professor*
BS, Hampden-Sydney College, 1982; PhD, Alabama (Birmingham), 1987
- Nicolas Peppas**, *Professor*
Diploma, National Technical University of Athens, 1971; DSC, Massachusetts Institute of Technology, 1973
- Karen L. Rascati**, *Professor*
BSPHr, Florida, 1979; PhD, 1986
- Joanne F. Richards**, *Senior Lecturer*
BA, Wisconsin, 1966; MS, Iowa State, 1973; PhD, 1975
- John H. Richburg**, *Associate Professor*
BS, Northeastern, 1987; PhD, Rutgers, 1993
- Bob G. Sanders**, *Professor*
BS, Concord College, 1954; MA, Pennsylvania State, 1958; PhD, 1961
- Marvin D. Shepherd**, *Professor*
BSPHr, Ferris State College, 1975; MS, Rhode Island, 1978; PhD, Purdue, 1980
- Hugh D. Smyth**, *Assistant Professor*
BS, Otago, 1995; PhD, 2000
- Waneen Wyrick Spirduso**, *Professor*
BSPED, Texas, 1969; MED, North Carolina (Greensboro), 1958; EdD, Texas, 1966
- Salomon A. Stavchansky**, *Professor*
Lic, Universidad Nacional Autónoma de México, 1969; PhD, Kentucky, 1974
- Scott A. Strassels**, *Assistant Professor*
BS, Arizona, 1988; PharmD, 1989; PhD, Washington (Seattle), 2005
- Robert L. Talbert**, *Professor*
BSPHr, Kentucky, 1971; PharmD, 1974
- Carla L. Van Den Berg**, *Associate Professor*
BS, Colorado (Boulder), 1989; PharmD, Texas (Austin), 1991
- Christian P. Whitman**, *Professor*
BS, Connecticut, 1979; PhD, California (San Francisco), 1984
- Nathan P. Wiederhold**, *Assistant Professor*
BA, Texas (Austin), 1996; PharmD, 2000
- Richard E. Wilcox**, *Assistant Dean; Professor*
BA, Butler, 1968; MS, Southern Illinois, 1974; PhD, 1976
- Robert O. Williams III**, *Professor*
BS, Texas A&M, 1979; BSPHr, Texas (Austin), 1981; PhD, 1986
- James P. Wilson**, *Associate Professor*
BSPHr, Philadelphia College of Pharmacy and Science, 1970; PharmD, 1971; MS, Purdue, 1985; PhD, 1986
- Casey W. Wright**, *Assistant Professor*
BS, Kansas State, 1996; PhD, 2003
- Zhiwen Zhang**, *Assistant Professor*
BS, Nanjing, 1989; MS, Toronto, 1994; PhD, Texas (Austin), 2001
- ADJUNCT PROFESSORS**
- Lydia Aguilera**, *Adjunct Assistant Professor*
BS, Houston, 1980; PharmD, Florida (Gainesville), 2008
- Grant W. Armstrong**, *Adjunct Assistant Professor*
BS, Baylor, 2001; PharmD, Texas (Austin), 2007
- Colleen A. Barthol**, *Adjunct Assistant Professor*
PharmD, Missouri (Kansas City), 2008
- Tawny L. Bettinger**, *Adjunct Assistant Professor*
PharmD, Illinois (Chicago), 1998
- Roland A. Bodmeier**, *Adjunct Associate Professor*
Apotheker, Ludwig-Maximilians-Universität München, 1981; PhD, Texas (Austin), 1986
- Phillip D. Bowman**, *Adjunct Assistant Professor*
BA, Stanford, 1969; PhD, California (Santa Cruz), 1976
- Patricia B. Chon**, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2008
- Claudia S. Colombo**, *Adjunct Assistant Professor*
BS, St. Louis, 2001; PharmD, 2002
- Claudio J. Conti**, *Adjunct Professor*
DVM, Universidad de Buenos Aires, 1968; PhD, 1983
- Joseph F. Dasta**, *Adjunct Professor*
BS, West Virginia, 1974; MS, Ohio State (Columbus), 1976
- Jennifer L. Defilippi**, *Adjunct Assistant Professor*
BS, Rutgers (New Brunswick), 1997; PharmD, 1997
- Heather H. Dobie**, *Adjunct Assistant Professor*
BS, North Carolina (Chapel Hill), 1996; PharmD, 1997
- Kathryn E. Dzintars**, *Adjunct Assistant Professor*
PharmD, Pittsburgh, 2003
- Richard R. Espinosa**, *Adjunct Assistant Professor*
BSPHr, Texas (Austin), 1992; PharmD, 2001
- Kristin R. Fiebelkorn**, *Adjunct Associate Professor*
BA, Williams College, 1992; MD, Johns Hopkins, 1996
- Susan M. Fischer**, *Adjunct Professor*
BS, High Point College, 1969; MS, Wyoming, 1971; PhD, 1974
- Ana C. Franco**, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2007
- Alan Frazer**, *Adjunct Professor*
BS, Philadelphia College of Pharmacy and Science, 1964; PhD, Pennsylvania, 1969
- Conrado D. Gamboa III**, *Adjunct Assistant Professor*
BS, Texas (Austin), 1985
- David B. Garcia**, *Adjunct Professor*
BSPHr, Texas (Austin), 1972; PhD, 1977
- Stephen J. Gore**, *Adjunct Assistant Professor*
BS, Texas (Austin), 1994; PharmD, Oklahoma (Norman), 1996
- Jodi L. Grabinski**, *Adjunct Assistant Professor*
PharmD, Drake, 2001; MS, Texas (Health Science Center at San Antonio), 2005
- Roberta L. Grant**, *Adjunct Assistant Professor*
BSZoo, Texas (Austin), 1976; PhD, 1995
- Belinda K. Green**, *Adjunct Assistant Professor*
BS, Howard Payne, 1998; BS, Texas (Austin), 1990
- Reed C. Hall**, *Adjunct Assistant Professor*
PharmD, Midwestern University, 2007
- Jon D. Herrington**, *Adjunct Associate Professor*
BS, St. Louis College of Pharmacy, 1991; PharmD, 1992
- John K. Huang**, *Adjunct Assistant Professor*
BS, Texas (Austin), 1996; PharmD, 2003
- Darrel W. Hughes**, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2006
- David G. Johnson**, *Adjunct Associate Professor*
BA, Texas (Austin), 1985; PhD, Texas (Southwestern Medical Center at Dallas), 1991
- Melissa A. Johnson**, *Adjunct Assistant Professor*
BS, Texas A & M (College Station), 1991; PharmD, Texas (Austin), 1997
- Nicole R. Keller**, *Adjunct Assistant Professor*
BS, Tennessee (Knoxville), 2001; PharmD, 2005
- John J. Koleng Jr.**, *Adjunct Assistant Professor*
BS, Texas (Austin), 1994; PhD, 2002
- Phillip H. Lai**, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2007
- Michael C. Macleod**, *Adjunct Professor*
BS, California Institute of Technology, 1969; PhD, Oregon, 1974
- Brian Masek**, *Adjunct Professor*
BA, Kearney State, 1980; PhD, California Institute of Technology, 1986
- April A. Messett**, *Adjunct Assistant Professor*
BA, Austin College, 1998; PharmD, Texas (Austin), 2007
- Troy A. Moore**, *Adjunct Assistant Professor*
PharmD, New Mexico (Albuquerque), 2003
- Clarissa Moreno**, *Adjunct Assistant Professor*
BA, Texas – Pan American, 1996; PharmD, Texas Tech Health Sciences Center, 2003
- Jenny S. Ngo**, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2008
- John T. O'Neill**, *Adjunct Assistant Professor*
LDCD, Texas Commission on Alcohol and Drug Abuse; NCAC, National Association of Alcohol and Drug Abuse
- Ian W. Pace**, *Adjunct Assistant Professor*
PharmD, The University of Texas at Austin, 1999
- Margie E. Padilla**, *Adjunct Assistant Professor*
BA, Our Lady of the Lake, 1998; PharmD, Texas (Austin), 2005
- Neil C. Pan**, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2005
- Deepali S. Parikh**, *Adjunct Assistant Professor*
PharmD, Pittsburgh, 1999
- Wayne R. Patterson**, *Adjunct Associate Professor*
MS, Michigan State (East Lansing), 1979; BS, United States Air Force Academy, 1986; PhD, Michigan State (East Lansing), 1986
- Liza J. Paul**, *Adjunct Assistant Professor*
PharmD, University of Florida, 2004
- Elizabeth F. Perz**, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 1995
- Jay I. Peters**, *Adjunct Professor*
BA, Tulane, 1973; MD, Baylor College of Medicine, 1976
- Gloria S. Pinto**, *Adjunct Assistant Professor*
BA, Texas – Pan American, 1993; MA, 1996
- Isidro Ramirez Jr.**, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2003
- Augustus J. Rush**, *Adjunct Professor*
BA, Princeton, 1964; MD, Columbia, 1968
- Paula G. Rychlik**, *Adjunct Assistant Professor*
BS, Texas A&M (College Station), 2001; PharmD, Texas (Austin), 2005
- William P. Sharp**, *Adjunct Assistant Professor*
BA, Texas (Austin), 1973; BS, 1976
- Scott A. Soefje**, *Adjunct Assistant Professor*
BS, Texas (Austin), 1985; PharmD, Texas Health Science Center (San Antonio), 1992
- Dean G. Tang**, *Adjunct Associate Professor*
MS, Wuhan University School of Medicine, 1989; PhD, Wayne State, 1994

Holli L. Temple, *Adjunct Assistant Professor*
BS, Texas A & M, 1992; BS, Texas (Austin), 1994; PharmD, 1999

Kenneth J. Utz, *Adjunct Assistant Professor*
PharmD, Oklahoma Health Sciences Center, 2006

John F. Villanacci, *Adjunct Associate Professor*
BA, Queens College, City University of New York, 1976; MS, Michigan, 1978; PhD, 1983

Leticia R. Villela, *Adjunct Assistant Professor*
BA, Texas (Austin), 1999; PharmD, 2003

Cheryl L. Walker, *Adjunct Professor*
BA, Colorado (Boulder), 1977; PhD, Texas Health Science Center (Dallas), 1984

Mark Wong, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2004

Stephanie R. Younts, *Adjunct Assistant Professor*
PharmD, Texas (Austin), 2005

SCHOOL OF SOCIAL WORK

Barbara W. White, *Dean*

PROFESSORS EMERITUS

Ronald C. Bounous, *Professor Emeritus*
BA, Minnesota (Minneapolis-St. Paul), 1956; MSW, 1958; PhD, 1965

W. Joseph Heffernan Jr., *Professor Emeritus*
BS, Virginia Polytechnic Institute, 1953; MA, Duke, 1955; MSSW, Michigan, 1959; PhD, North Carolina (Chapel Hill), 1964

George K. Herbert, *Professor Emeritus*
BA, Louisville, 1949; MA, Chicago, 1951; JD, Cleveland State, 1957; PhD, Tulane, 1970

Laura Lein, *Professor Emeritus*
BS, Swarthmore College, 1969; MA, Harvard, 1970; PhD, 1973

John McNeil, *Professor Emeritus*
BA, Storer College, 1948; MSW, Atlanta, 1951; DSW, Southern California, 1964

Ruth G. McRoy, *Distinguished Teaching Professor Emeritus*
BA, Kansas, 1968; MSW, 1970; PhD, Texas (Austin), 1981

Jack Otis, *Professor Emeritus*
BA, Brooklyn College, 1946; MSW, Illinois, 1948; MEd, 1955; PhD, 1957

Guy E. Shuttlesworth, *Professor Emeritus*
BS, Stephen F. Austin State College, 1957; MS, Texas College of Arts and Industries, 1962; MSW, Worden School of Social Service, 1962; PhD, Pittsburgh (Main Campus), 1970

Martha S. Williams, *Professor Emeritus*
BA, Texas, 1957; MA, 1962; PhD, 1963

PROFESSORS, INSTRUCTORS, AND SENIOR LECTURERS

Jemel P. Aguilar, *Assistant Professor*
BA, Empire State College, 1996; MSW, Minnesota (Minneapolis-St. Paul), 2000; PhD, 2006

Marilyn P. Armour, *Associate Professor*
BA, Bard College, 1965; MSW, Minnesota (Minneapolis-St. Paul), 1968; PhD, 2000

Noel B. Busch, *Associate Professor*
BA, High Point, 1988; MSW, South Carolina (Columbia), 1993; MPA, 1996; PhD, 2000

Namkee G. Choi, *Professor*
BA, Ewha Women's, 1976; MA, 1979; MSW, Minnesota (Minneapolis-St. Paul), 1983; PhD, California (Berkeley), 1987

Catherine Cubbin, *Associate Professor*
BA, Pennsylvania, 1991; PhD, Johns Hopkins, 1998

King E. Davis, *Professor*
BSW, California State, 1964; MSW, 1966; PhD, Brandeis, 1971

Diana M. DiNitto, *Distinguished Teaching Professor*
BA, Barry College, 1971; MSW, Florida State, 1974; PhD, 1980

Michael J. Ferguson, *Associate Professor*
BS, Arizona, 1987; MA, 1990; MSW, PhD, Washington (Seattle), 1999

Rowena Fong, *Professor*
BA, Wellesley College, 1974; MSW, California (Berkeley), 1977; EdD, Harvard, 1990

Dawnovise N. Fowler, *Assistant Professor*
BA, Spelman College, 1993; AM, Chicago, 1998; PhD, Howard, 2003

Cynthia G. Franklin, *Professor*
BSW, Texas Woman's, 1980; MSSW, Texas (Arlington), 1981; MA, Spalding, 1986; PhD, Texas (Arlington), 1989

Dorie J. Gilbert, *Associate Professor*
BBA, Texas (Austin), 1983; MSSW, 1992; PhD, 1996

Darlene Grant, *Associate Professor*
BA, Wittenberg, 1982; MSSA, Case Western Reserve, 1984; PhD, Tennessee (Knoxville), 1993

Roberta Greene, *Professor*
BA, Michigan State, 1960; MSW, 1962; PhD, Maryland (College Park), 1980

Lori Kay Holleran, *Associate Professor*
BA, Duke, 1987; MSW, Pennsylvania, 1989; PhD, Arizona State (Tempe), 2000

Barbara L. Jones, *Assistant Professor*
BA, Albany, 1989; MSW, 1993; PhD, 2004

Michael L. Lauderdale, *Professor*
BA, Oklahoma, 1963; MS, 1964; PhD, 1967

Talia M. McCray, *Assistant Professor*
BA, Bennett College, 1990; BS, North Carolina Agricultural and Technical State, 1990; MS, Northwestern, 1992; PhD, Michigan (Ann Arbor), 2001

Kelly S. Mikelson, *Assistant Professor*
AB, Harvard, 1993; MPP, 1998; PhD, Texas (Austin), 2008

Elizabeth Mueller, *Assistant Professor*
BSFS, Georgetown, 1981; MCityP, California (Berkeley), 1984; PhD, 1992

Yolanda C. Padilla, *Professor*
BA, BSW, Texas (Austin), 1979; MSSW, 1980; MA, Michigan, 1990; PhD, 1992

Elizabeth Pomeroy, *Professor*
BA, North Carolina (Asheville), 1980; MSW, North Carolina (Chapel Hill), 1984; PhD, Texas (Austin), 1994

Michele A. Rountree, *Assistant Professor*
BA, Arizona, 1989; MSW, Boston, 1992; PhD, Arizona State, 2005

Allen Rubin, *Professor*
BS, Pennsylvania State, 1965; MSW, Pittsburgh (Main Campus), 1969; PhD, 1976

A. James Schwab, *Professor*
BA, North Texas State, 1969; MSSW, Texas (Austin), 1971; PhD, 1981

Clayton T. Shorkey, *Professor*
BA, Michigan, 1964; MSW, 1966; PhD, 1968

David W. Springer, *Distinguished Teaching Professor*
BA, Florida State, 1990; MSW, 1992; PhD, 1997

Calvin L. Streeter, *Professor*
BS, Kearney State College, 1982; MSW, Washington (St. Louis), 1983; PhD, 1989

Sanna Thompson, *Associate Professor*
BS, Weber State, 1992; MSW, Washington (St. Louis), 1993; PhD, 1998

Dnika J. Travis, *Assistant Professor*
BA, Hampton, 1995; MSW, Michigan (Ann Arbor), 1996; PhD, Southern California, 2006

Mary M. Velasquez, *Professor*
BS, Houston (Clear Lake), 1986; MA, 1988; PhD, Texas (Health Science Center at Houston), 1997

Kirk L. von Sternberg, *Assistant Professor*
BS, Houston, 1992; MSW, 1996; PhD, Texas Health Science Center (Houston), 2005

Barbara W. White, *Professor*
BS, Florida Agricultural and Mechanical, 1964; BS, Florida State, 1974; MSW, 1975; PhD, 1986

ADJUNCT PROFESSORS

Allison H. Benesch, *Adjunct Professor*
JD, Southern Methodist, 1985

Robert T. Maxson, *Adjunct Associate Professor*
BS, Texas A&M (College Station), 1986; MD, Texas (Medical Branch at Galveston), 1990

Appendix A: Texas Common Course Numbering System

To help students transfer credit from one institution to another, Texas community colleges employ a statewide numbering system for their courses. The Texas Common Course Numbering system (TCCN) is a standard set of four-character abbreviations for academic disciplines and four-digit course numbers. The first digit of the number represents the academic level of the course (0 for subfreshman, 1 for freshman, and 2 for sophomore); the second represents the semester credit hour

value of the course. Texas public universities, and some private ones, cross-reference their courses with TCCN.

Listed below are TCCN course designations and their University transfer credit evaluations. In the University's three-digit numbering system, the first digit indicates the semester credit hour value of the course. The suffixes *A* and *B* indicate the first and second parts of a course; credit for each part is half the value indicated by the first digit.

TCCN COURSE	UT AUSTIN EVALUATION
ACCT 2301	ACC 311
ACCT 2302	ACC 312
ACCT 2401	ACC 411 ¹
ACCT 2402	ACC 412 ¹
ANTH 2301	ANT 301
ANTH 2302	ANT 304
ANTH 2351	ANT 302
ANTH 2401	ANT 401 ¹
ARAB 1311	ARA 306 ³
ARAB 1312	ARA 307 ³
ARAB 1411	ARA 406 ³
ARAB 1412	ARA 407 ³
ARAB 1511	ARA 506
ARAB 1512	ARA 507
ARAB 2311	ARA 312K ³
ARAB 2312	ARA 312L ³
ARCH 1301	ARC 318K
ARCH 1302	ARC 318L
ARCH 1311	ARC 308 ⁷
ARTS 1301	ARH 301
ARTS 1303	ARH 302
ARTS 1304	ARH 303
ARTS 1311	ART 304K
ARTS 1312	ART 304L
ARTS 1316	ART 303K
ARTS 1317	ART 315K
ARTS 2316	ART 311K
ARTS 2323	ART 316K
ARTS 2326	ART 313K

TCCN COURSE	UT AUSTIN EVALUATION
ARTS 2341	ART 314K
ARTS 2346	ART 310K
ARTS 2356	ART 317K
ASTR 1103	AST 103L
ASTR 1104	AST 1 LAB
ASTR 1303	AST 301
ASTR 1304	AST 309
ASTR 1403	AST 301 + 103L
ASTR 1404	AST 309 + 1 LAB
BCIS 1305	MIS 310
BCIS 1405	MIS 410 ¹
BIOL 1106	BIO 105L ²
BIOL 1107	BIO 106L ²
BIOL 1108	BIO 1 LAB ²
BIOL 1109	BIO 1 LAB ²
BIOL 1111	BIO 1 LAB ²
BIOL 1113	BIO 1 LAB ²
BIOL 1306	BIO 311C ²
BIOL 1307	BIO 311D ²
BIOL 1308	BIO 301L ²
BIOL 1309	BIO 301M ²
BIOL 1311	BIO 3 FRMN ²
BIOL 1313	BIO 3 FRMN ²
BIOL 1322	NTR 306
BIOL 1406	BIO 311C + 105L ²
BIOL 1407	BIO 311D + 106L ²
BIOL 1408	BIO 301L + 1 LAB ²
BIOL 1409	BIO 301M + 1 LAB ²
BIOL 1411	BIO 4 FLAB ²

Notes are given on page 733.

TCCN COURSE	UT AUSTIN EVALUATION	TCCN COURSE	UT AUSTIN EVALUATION
BIOL 1413	BIO 4 FLAB ²	COSC 1437	C S 405J ¹
BIOL 2101	BIO 1 LAB ²	COSC 2436	C S 407 ¹
BIOL 2102	BIO 1 LAB ²	CZEC 1311	CZ 306 ³
BIOL 2120	BIO 1 LAB ² MIC 116L ⁴	CZEC 1312	CZ 307 ³
BIOL 2121	BIO 1 LAB ² MIC 119K ⁴	CZEC 1411	CZ 406 ³
BIOL 2301	BIO 316K ^{3,4}	CZEC 1412	CZ 407 ³
BIOL 2302	BIO 316L ^{3,4}	CZEC 1511	CZ 506
BIOL 2320	BIO 3 SOPH ² MIC 316 ^{1,4}	CZEC 1512	CZ 507
BIOL 2321	BIO 3 SOPH ² MIC 319 ⁴	CZEC 2311	CZ 312K
BIOL 2401	BIO 416K ⁴	CZEC 2312	CZ 312L
BIOL 2402	BIO 416L ⁴	DANC 1141	T D 112F ³
BIOL 2420	BIO 4 SLAB ² MIC 316 ^{1,4} + 116L ⁴	DANC 1142	T D 112F ³
BIOL 2421	BIO 4 SLAB ² MIC 319 ⁴ + 119K ⁴	DANC 1145	T D 112C ³
CHEM 1111	CH 204A ³	DANC 1146	T D 112C ³
CHEM 1112	CH 204B ³	DANC 1151	T D 112P
CHEM 1311	CH 301	DANC 1152	T D 112P
CHEM 1312	CH 302	DANC 1241	T D 212F ³
CHEM 1411	CH 301 + 204A ³	DANC 1242	T D 212F ³
CHEM 1412	CH 302 + 204B ³	DANC 1245	T D 212C ³
CHEM 2123	CH 110K	DANC 1246	T D 212C ³
CHEM 2125	CH 110L	DANC 1251	T D 212P
CHEM 2223	CH 210K ¹	DANC 1252	T D 212P
CHEM 2225	CH 210L ¹	DANC 1341	T D 312F
CHEM 2323	CH 310M	DANC 1342	T D 312F
CHEM 2325	CH 310N	DANC 1345	T D 312C
CHEM 2423	CH 310M + 110K	DANC 1346	T D 312C
CHEM 2425	CH 310N + 110L	DANC 1351	T D 312P
CHIN 1311	CHI 306 ³	DANC 1352	T D 312P
CHIN 1312	CHI 307 ³	DANC 2141	T D 112G ³
CHIN 1411	CHI 406 ³	DANC 2142	T D 112G ³
CHIN 1412	CHI 407 ³	DANC 2145	T D 112D ³
CHIN 1511	CHI 506	DANC 2146	T D 112D ³
CHIN 1512	CHI 507	DANC 2151	T D 112P
CHIN 2311	CHI 312K ³	DANC 2152	T D 112P
CHIN 2312	CHI 312L ³	DANC 2241	T D 212G ³
COMM 1307	RTF 305	DANC 2242	T D 212G ³
COMM 1316	J 316	DANC 2245	T D 212D ³
COMM 1335	RTF 316	DANC 2246	T D 212D ³
COMM 2302	J 310	DANC 2251	T D 212P
COMM 2311	J 315	DANC 2252	T D 212P
COMM 2316	CMS 316L	DANC 2341	T D 312G
COMM 2366	RTF 314	DANC 2342	T D 312G
COSC 1337	C S 305J	DANC 2345	T D 312D
COSC 2336	C S 307	DANC 2346	T D 312D
		DANC 2351	T D 312P
		DANC 2352	T D 312P
		DRAM 1120	T D 114P ³
		DRAM 1121	T D 114P ³
		DRAM 1220	T D 214P ³
		DRAM 1221	T D 214P ³

TCCN COURSE	UT AUSTIN EVALUATION
DRAM 1310	T D 301
DRAM 1320	T D 314P
DRAM 1321	T D 314P
DRAM 1323	T D 314P
DRAM 1330	T D 314C
DRAM 1351	T D 313C
DRAM 1352	T D 313D
DRAM 2120	T D 114P ³
DRAM 2121	T D 114P ³
DRAM 2220	T D 214P ³
DRAM 2331	T D 314M
DRAM 2336	T D 303C
DRAM 2351	T D 313E
DRAM 2361	T D 317C
DRAM 2362	T D 317D
DRAM 2366	RTF 314
ECON 2301	ECO 304L
ECON 2302	ECO 304K
EDUC 1100	EDP 110 (Topic 1)
EDUC 1200	EDP 210 (Topic 1)
EDUC 1300	EDP 310 (Topic 1)
ENGL 1301	RHE 306
ENGL 1302	RHE 309K
ENGL 1306	RHE 306Q
ENGL 2311	RHE 317 ⁴
ENGL 2321	E 316K
ENGL 2322	E 316K
ENGL 2323	E 316K
ENGL 2326	E 316K
ENGL 2327	E 316K
ENGL 2328	E 316K
ENGL 2331	E 316K
ENGL 2332	E 316K
ENGL 2333	E 316K
ENGL 2351	E 314V (Topic 3)
ENGR 2301	E M 306
ENGR 2302	E M 311M
ENGR 2332	E M 319
ENGR 2401	E M 406 ¹
ENGR 2402	E M 411M ¹
ENGR 2432	E M 419 ¹
FREN 1311	FR 306 ³
FREN 1312	FR 307 ³
FREN 1411	FR 406 ³
FREN 1412	FR 407 ³
FREN 1511	FR 506
FREN 1512	FR 507
FREN 2311	FR 312K
FREN 2312	FR 312L
GEOG 1301	GRG 301C

TCCN COURSE	UT AUSTIN EVALUATION
GEOG 1303	GRG 305
GEOL 1303	GEO 301 ³
GEOL 1304	GEO 305 ³
GEOL 1345	GEO 307
GEOL 1347	GRG 301K
GEOL 1403	GEO 401
GEOL 1404	GEO 405
GEOL 1445	GEO 407 ¹
GEOL 1447	GRG 401K ¹
GERM 1311	GER 306 ³
GERM 1312	GER 307 ³
GERM 1411	GER 406 ³
GERM 1412	GER 407 ³
GERM 1511	GER 506
GERM 1512	GER 507
GERM 2311	GER 312K
GERM 2312	GER 312L
GOVT 2301	GOV 310L ⁵
GOVT 2302	GOV 312L ⁵
GOVT 2305	GOV 3 US ⁵
GOVT 2306	GOV 3 TX ⁵
GOVT 2311	MAS 312
GREE 1311	GK 306 ³
GREE 1312	GK 307 ³
GREE 1411	GK 406 ³
GREE 1412	GK 407 ³
GREE 1511	GK 506
GREE 1512	GK 507
GREE 2311	GK 311
HECO 1320	TXA 305 ¹
HECO 1322	NTR 306
HIST 1301	HIS 315K
HIST 1302	HIS 315L
HIST 2311	HIS 309K
HIST 2312	HIS 309L
HIST 2313	HIS 304K
HIST 2314	HIS 304L
HIST 2327	HIS 317L
HIST 2328	HIS 314K
HIST 2381	HIS 317L
HUMA 1305	MAS 310
HUMA 1315	F A 310
ITAL 1311	ITL 306 ³
ITAL 1312	ITL 307 ³
ITAL 1411	ITL 406 ³
ITAL 1412	ITL 407 ³
ITAL 1511	ITL 506
ITAL 1512	ITL 507
ITAL 2311	ITL 312K
ITAL 2312	ITL 312L

TCCN COURSE	UT AUSTIN EVALUATION	TCCN COURSE	UT AUSTIN EVALUATION
JAPN 1311	JPN 306 ³	MATH 2313	M 308K ³ or 308N ³
JAPN 1312	JPN 307 ³	MATH 2314	M 308L ³ or 308S ³
JAPN 1411	JPN 406 ³	MATH 2315	M 308M ³
JAPN 1412	JPN 407 ³	MATH 2318	M 311 ⁴
JAPN 1511	JPN 506	MATH 2320	M 327K ³
JAPN 1512	JPN 507	MATH 2342	M 316
JAPN 2311	JPN 312K ³	MATH 2412	M 405G ¹
JAPN 2312	JPN 312L ³	MATH 2413	M 408K or 408N
KINE 1151	PED 102G	MATH 2414	M 408L or 408S
KINE 1152	PED 102G	MATH 2415	M 408M
KINE 1153	KIN 113 (Topic 3 or 4) ³	MATH 2417	M 408C
KINE 1206	KIN 213 (Topic 1)	MATH 2418	M 411 ^{1, 4}
KINE 1253	KIN 213 (Topic 3 or 4)	MATH 2419	M 408D
KINE 1306	KIN 313 (Topic 1) ¹	MATH 2420	M 427K
KINE 1308	KIN 319K ¹	MATH 2442	M 416 ¹
KINE 1309	KIN 319K ¹	MATH 2513	M 508K ¹ or 508N ¹
KINE 1321	KIN 319K ¹	MUAP	Applied music performance courses transfer as generic semester hour credit in an appropriate instrument. Degree and prerequisite applicability for music majors is determined by the Butler School of Music.
KINE 1322	KIN 319K ¹	MUEN	Music ensemble courses transfer with appropriate University course numbers where applicable, otherwise as generic semester hour credit in ensemble (ENS).
KINE 1331	KIN 314	MUSI 1161	MUS 219A ³
KINE 2155	KIN 113 (Topic 2) ³	MUSI 1166	MUS 101G
KINE 2255	KIN 213 (Topic 2)	MUSI 1167	MUS 101G
KINE 2355	KIN 313 (Topic 2) ¹	MUSI 1168	MUS 101G
KINE 2356	KIN 312 (Topic 2)	MUSI 1181	MUS 101M ³
KORE 1311	KOR 306 ³	MUSI 1182	MUS 101N ³
KORE 1312	KOR 307 ³	MUSI 1183	MUS 101G
KORE 1411	KOR 406 ³	MUSI 1184	MUS 101G
KORE 1412	KOR 407 ³	MUSI 1188	MUS 101G
KORE 1511	KOR 506	MUSI 1190	MUS 101G
KORE 1512	KOR 507	MUSI 1192	MUS 101G
KORE 2311	KOR 312K ³	MUSI 1193	MUS 101G
KORE 2312	KOR 312L ³	MUSI 1211	MUS 405A ³
LATI 1311	LAT 306 ³	MUSI 1212	MUS 405B ³
LATI 1312	LAT 307 ³	MUSI 1286	MUS 214C
LATI 1411	LAT 406 ³	MUSI 1287	MUS 214C
LATI 1412	LAT 407 ³	MUSI 1306	MUS 302L
LATI 1511	LAT 506	MUSI 1310	MUS 307
LATI 1512	LAT 507	MUSI 1311	MUS 605A
LATI 2311	LAT 311	MUSI 1312	MUS 605B
MATH 1314	M 301	MUSI 1386	MUS 314C ¹
MATH 1316	M 304E ⁴	MUSI 2116	MUS 211A ³
MATH 1324	M 303D	MUSI 2117	MUS 211B ³
MATH 1325	M 303K ^{3, 4}		
MATH 1332	M 302		
MATH 1342	M 316		
MATH 1350	M 316K		
MATH 1351	M 316L		
MATH 1414	M 401 ¹		
MATH 1425	M 403K ⁴		
MATH 1442	M 416 ¹		
MATH 2312	M 305G		

TCCN COURSE	UT AUSTIN EVALUATION
MUSI 2161	MUS 219B ³
MUSI 2167	MUS 101G
MUSI 2168	MUS 101G
MUSI 2181	MUS 110J ³
MUSI 2182	MUS 110K ³
MUSI 2183	MUS 101G
MUSI 2184	MUS 101G
MUSI 2188	MUS 101G
MUSI 2190	MUS 101G
MUSI 2192	MUS 101G
MUSI 2193	MUS 101G
MUSI 2211	MUS 412A ³
MUSI 2212	MUS 412B ³
MUSI 2216	MUS 411A
MUSI 2217	MUS 411B
MUSI 2286	MUS 214C
MUSI 2311	MUS 612A
MUSI 2312	MUS 612B
MUSI 2386	MUS 314C ¹
PHED 1151	PED 102G
PHED 1152	PED 102G
PHED 1153	KIN 113 (Topic 3 or 4) ³
PHED 1206	KIN 213 (Topic 1)
PHED 1253	KIN 213 (Topic 3 or 4)
PHED 1306	KIN 313 (Topic 1) ¹
PHED 1308	KIN 319K ¹
PHED 1309	KIN 319K ¹
PHED 1321	KIN 319K ¹
PHED 1322	KIN 319K ¹
PHED 1331	KIN 314
PHED 2155	KIN 113 (Topic 2) ³
PHED 2255	KIN 213 (Topic 2)
PHED 2355	KIN 313 (Topic 2) ¹
PHED 2356	KIN 312 (Topic 2)
PHIL 1301	PHL 301
PHIL 2303	PHL 312
PHIL 2306	PHL 318
PHIL 2307	PHL 318K
PHIL 2316	PHL 301K
PHIL 2321	PHL 305
PHYS 1101	PHY 102M
PHYS 1102	PHY 102N
PHYS 1105	PHY 1 LAB
PHYS 1107	PHY 1 LAB
PHYS 1111	AST 103L
PHYS 1112	AST 1 LAB
PHYS 1301	PHY 302K
PHYS 1302	PHY 302L
PHYS 1305	PHY 309K
PHYS 1307	PHY 309L

TCCN COURSE	UT AUSTIN EVALUATION
PHYS 1311	AST 301
PHYS 1312	AST 309
PHYS 1401	PHY 302K + 102M
PHYS 1402	PHY 302L + 102N
PHYS 1405	PHY 309K + 1 LAB
PHYS 1407	PHY 309L + 1 LAB
PHYS 1411	AST 301 + 103L
PHYS 1412	AST 309 + 1 LAB
PHYS 2125	PHY 103M ⁶
PHYS 2126	PHY 103N ⁶
PHYS 2325	PHY 303K ⁶
PHYS 2326	PHY 303L ⁶
PHYS 2425	PHY 303K + 103M ⁶
PHYS 2426	PHY 303L + 103N ⁶
PORT 1311	POR 306 ³
PORT 1312	POR 307 ³
PORT 1411	POR 406
PORT 1412	POR 407
PORT 1511	POR 506 ¹
PORT 1512	POR 507 ¹
PORT 2311	POR 312K
PORT 2312	POR 312L
PSYC 1100	EDP 110 (Topic 1)
PSYC 1200	EDP 210 (Topic 1)
PSYC 1300	EDP 310 (Topic 1)
PSYC 2301	PSY 301
PSYC 2308	PSY 304
PSYC 2316	PSY 309
PSYC 2317	PSY 317
PSYC 2319	PSY 319K
RUSS 1311	RUS 306 ³
RUSS 1312	RUS 307 ³
RUSS 1411	RUS 406 ³
RUSS 1412	RUS 407 ³
RUSS 1511	RUS 506
RUSS 1512	RUS 507
RUSS 2311	RUS 312K ³
RUSS 2312	RUS 312L ³
SGNL 1301	ASL 306 ³
SGNL 1302	ASL 307 ³
SGNL 1401	ASL 406 ³
SGNL 1402	ASL 407 ³
SGNL 1501	ASL 506
SGNL 1502	ASL 507
SGNL 2301	ASL 312K
SGNL 2302	ASL 312L
SOCI 1301	SOC 302
SOCI 1306	SOC 308
SOCI 2326	PSY 319K
SOCI 2339	SOC 318

TCCN COURSE	UT AUSTIN EVALUATION	TCCN COURSE	UT AUSTIN EVALUATION
SOCW 2361	S W 310	SPCH 2145	CMS 110 ³
SPAN 1311	SPN 306 ³	SPCH 2316	CMS 316L
SPAN 1312	SPN 307 ³	SPCH 2333	CMS 310K
SPAN 1411	SPN 406 ³	TECA 1303	HDF 304
SPAN 1412	SPN 407 ³	TECA 1311	ALD 3 HRS
SPAN 1511	SPN 506	TECA 1318	KIN 3 HRS
SPAN 1512	SPN 507	TECA 1354	HDF 313
SPAN 2311	SPN 312K	VIET 1311	VTN 306 ³
SPAN 2312	SPN 312L	VIET 1312	VTN 307 ³
SPCH 1144	CMS 110 ³	VIET 1411	VTN 406 ³
SPCH 1145	CMS 110 ³	VIET 1412	VTN 407 ³
SPCH 1315	CMS 305 ⁴	VIET 1511	VTN 506
SPCH 1318	CMS 315M	VIET 1512	VTN 507
SPCH 1321	CMS 306M	VIET 2311	VTN 312K ³
SPCH 2144	CMS 110 ³	VIET 2312	VTN 312L ³

1. This is a modified course number with a higher credit value than is normally offered at the University. The higher value does not affect the course's applicability toward degree requirements.
2. Lower-division biology courses may transfer as generic credit, without a specific University course number. The terms "FLAB" and "SLAB" identify freshman- and sophomore-level combined lecture and laboratory credit; "FRMN" and "SOPH," freshman- and sophomore-level lecture credit; and "LAB," lower-division laboratory credit. For students in the School of Biological Sciences, such credit is applicable toward degrees only with department approval. For students in other degree plans that require specific biology courses, such credit is applicable toward degrees only with the approval of the student's academic dean.
Introductory major-track lecture credit (TCCN BIOL 1406, 1407, 1306, or 1307) generally transfers as BIO 311C and 311D. Major-track laboratory credit (TCCN BIOL 1106, 1107, or the lab components of 1406 and 1407) generally transfers with the modified course numbers BIO 105L, 106L, or 108L to reflect a lower credit value than is normally offered at the University.
Nonmajor lecture credit (TCCN BIOL 1408, 1409, 1308, or 1309) generally transfers as BIO 301L and 301M. Nonmajor laboratory credit (TCCN BIOL 1108, 1109, or the lab components of 1408 and 1409) transfers generically, because the University does not offer nonmajor lab courses.
3. This is a modified course number with a lower credit value than is normally offered at the University. In many cases, such transfer credit may be counted toward degree requirements in place of the higher-value University course; however, such substitution is at the discretion of the student's academic dean.
4. This is a course no longer offered at the University but still used in awarding transfer credit and still applicable toward certain degree requirements. For students in the School of Nursing, BIOL 2420, 2421, 2320, 2321, 2120, and 2121 transfer as retired microbiology courses.
5. Courses offered to fulfill the legislative requirement in government are not uniform in content and sequencing among schools. GOVT 2301 and 2302 transfer as GOV 310L and 312L; GOVT 2305 and 2306 transfer as generic credit. It is strongly recommended that students complete the required two-course sequence, either GOVT 2301 and 2302 or GOVT 2305 and 2306, at one institution.
6. At most Texas community colleges, calculus-based physics is offered in a two-semester sequence represented by the TCCN designations PHYS 2425 (or 2325 and 2125) and 2426 (or 2326 and 2126), which transfer as indicated. However, a few community colleges add a third course, PHYS 2427. In such cases, PHYS 2425 transfers to the University as PHY 301 and 101L; PHYS 2426 transfers as PHY 316 and 116L; and PHYS 2427 transfers either as PHY 315 and 115L or as generic physics credit.
7. For School of Architecture students, ARCH 1311 transfers as generic architecture credit and ARC 308 must be taken in residence.

Appendix B:

Course Abbreviations

The University offers courses in the following fields of study. The abbreviations in the second column are used in catalogs, course schedules, and student records. Some of the fields listed are offered only at the graduate level.

Accounting	ACC	Clarinet	CLA
Actuarial foundations	ACF	Classical civilization	C C
Advertising	ADV	Cognitive science	CGS
Aerospace engineering	ASE	Communication	COM
African and African American studies	AFR	Communication sciences and disorders	CSD
Air force science	AFS	Communication studies	CMS
American Sign Language	ASL	Community and regional planning	CRP
American studies	AMS	Comparative literature	C L
Ancient history and classical civilization	AHC	Computational and applied mathematics	CAM
Anthropology	ANT	Computer science	C S
Applied learning and development	ALD	Conducting	CON
Arabic	ARA	Core texts and ideas	CTI
Archaeology	ARY	Cultural studies	CLS
Architectural engineering	ARE	Curriculum and instruction	EDC
Architectural interior design	ARI	Czech	CZ
Architecture	ARC	Danish	DAN
Art education	AED	Design	DES
Art history	ARH	Developmental studies	DEV
Asian American studies	AAS	Double bass	D B
Asian studies	ANS	Drum set	DRS
Astronomy	AST	Dutch	DCH
Bassoon	BSN	Economics	ECO
Bengali	BEN	Educational administration	EDA
Biochemistry	BCH	Educational psychology	EDP
Biology	BIO	Electrical engineering	E E
Biomedical engineering	BME	Energy and earth resources	EER
Bridging disciplines	BDP	Engineering management	ENM
Business administration	B A	Engineering mechanics	E M
Chemical engineering	CHE	English	E
Chemistry	CH	English as a second language	ESL
Chinese	CHI	Ensemble	ENS
Civil engineering	C E	Environmental science	EVS
		Euphonium	EUP
		European studies	EUS
		Finance	FIN
		Fine arts	F A
		Flute	FLU
		Foreign language education	FLE

French	FR	Mexican American studies	MAS
French civilization	F C	Middle Eastern studies	MES
French horn	F H	Military science	M S
General engineering	G E	Molecular biology	MOL
Geography	GRG	Music	MUS
Geological sciences	GEO	Natural sciences	NSC
German	GER	Naval science	N S
Germanic civilization	GRC	Neuroscience	NEU
Government	GOV	Norwegian	NOR
Graduate school	GRS	Nursing	N
Greek	GK	Nutrition	NTR
Guitar	GUI	Oboe	OBO
Harp	HAR	Opera	OPR
Harpichord	HSC	Operations management	O M
Health education	HED	Operations research and industrial engineering	ORI
Hebrew	HEB	Organ	ORG
Hindi	HIN	Percussion	PER
History	HIS	Persian	PRS
Human development and family sciences	HDF	Petroleum and geosystems engineering	PGE
Human ecology	H E	Pharmacy	PHR
Humanities	HMN	Philosophy	PHL
Information studies	INF	Physical education	PED
International business	I B	Physical science	P S
International relations and global studies	IRG	Physics	PHY
Islamic studies	ISL	Piano	PIA
Italian	ITL	Polish	POL
Italian civilization	ITC	Portuguese	POR
Japanese	JPN	Portuguese civilization	PRC
Jewish studies	J S	Psychology	PSY
Journalism	J	Public affairs	P A
Kinesiology	KIN	Public health	PBH
Korean	KOR	Public relations	P R
Landscape architecture	LAR	Radio-television-film	RTF
Latin	LAT	Real estate	R E
Latin American studies	LAS	Recorder	REC
Law	LAW	Religious studies	R S
Legal environment of business	LEB	Rhetoric and writing	RHE
Liberal arts	L A	Risk management	R M
Liberal arts honors	LAH	Russian	RUS
Linguistics	LIN	Russian, East European, and Eurasian studies	REE
Malayalam	MAL	Sanskrit	SAN
Management	MAN	Saxophone	SAX
Management information systems	MIS	Scandinavian	SCA
Manufacturing systems engineering	MFG	Science	SCI
Marine science	MNS	Science and technology commercialization	STC
Marketing	MKT	Science, technology, and society	STS
Materials science and engineering	MSE	Science-mathematics education	SME
Mathematical statistics	MST	Serbian/Croatian	S C
Mathematics	M	Slavic	SLA
Mechanical engineering	M E	Social science	S S
Medieval studies	MDV	Social work	S W

Sociology	SOC	Tutorial course	T C
Spanish	SPN	Undergraduate studies	UGS
Spanish civilization	SPC	Urban studies	URB
Special education	SED	Urdu	URD
Statistics	STA	UTeach-liberal arts	UTL
Statistics and scientific computation	SSC	UTeach-natural sciences	UTS
Studio art	ART	Vietnamese	VTN
Swahili	SWA	Vibraphone	VIB
Swedish	SWE	Viola	VIA
Tamil	TAM	Violin	VIO
Telugu	TEL	Violoncello	V C
Textiles and apparel	TXA	Visual art studies	VAS
Theatre and dance	T D	Voice	VOI
Trombone	TRO	Western civilization	WCV
Trumpet	TRU	Women's and gender studies	WGS
Tuba	TBA	Writing	WRT
Turkish	TUR	Yiddish	YID
		Yoruba	YOR

Index

A

- ABET requirements, 170
- Academic advising, 11
 - in the Cockrell School of Engineering, 163
 - in the College of Communication, 82
 - in the College of Education, 128
 - in the College of Fine Arts, 242
 - in the College of Liberal Arts, 316
 - in the College of Natural Sciences, 519
 - in the College of Pharmacy, 646
 - in the Jackson School of Geosciences, 290
 - in the McCombs School of Business, 47
 - in the School of Architecture, 29
 - in the School of Nursing, 622
 - in the School of Social Work, 666
 - in the School of Undergraduate Studies, 18
- Accounting courses, 65
- Accounting major (BBA), 54
- Accreditation
 - of the Bachelor of Science in Nursing, 627
 - of the College of Pharmacy, 634, 647
 - of the Didactic and Coordinated Programs in Dietetics, 557
 - of the School of Social Work, 661
 - of the University, 1
- Actuarial foundations courses, 603
- Actuarial science option (BSMath), 552
- Admission
 - to the applied movement science major, 137
 - to the Bachelor of Science in Athletic Training, 132
 - to the Cockrell School of Engineering, 161
 - to the College of Communication, 82
 - to the College of Fine Arts, 243
 - to the College of Natural Sciences, 516
 - to the College of Pharmacy, 640
 - to the Coordinated Program in Dietetics, 517
 - to the integrated BBA/MPA degree program, 56
 - to the integrated BSCS/MSCS degree program, 517
 - to the major in computer science, 517
 - to the McCombs School of Business, 49
 - to the Professional Development Sequence, College of Education, 129
 - to the School of Architecture, 27
 - to the School of Nursing, 621
 - to the School of Social Work, 664
 - to the sport management major, 136
 - to teacher certification programs, 129
 - to the textiles and apparel major, 518
 - to the Turing Scholars Program, 513
- Advertising courses, 105
- Advertising Honors Program, 83
- Advertising, Bachelor of Science in, 88
- Advising, academic. *See* Academic advising.
- Aerospace engineering courses, 208
- Aerospace Engineering, Bachelor of Science in, 172
- African and African American studies courses, 353
- African and African Diaspora Studies (BA), 331
- African and African Diaspora Studies Honors Program, 318
- Air Force ROTC, 483
- Air force science courses, 484
- All-level generic special education major (BSALD), 131
- All-level teacher certification. *See* Teacher certification programs.
- American Sign Language courses, 450
- American studies courses, 358
- American Studies Honors Program, 318
- American studies major (BA), 331
- Ancient history and classical civilization courses, 380
- Ancient History and Classical Civilization Honors Program, 318
- Ancient history and classical civilization major (BA), 331
- Anthropology courses, 361
- Anthropology Honors Program, 318
- Anthropology major (BA), 331
- Apparel design and conservation option (BSTA), 567
- Applied learning and development courses, 139
- Applied Learning and Development, Bachelor of Science in, 130
- Applied mathematics option (BSMath), 553
- Applied movement science major (BSKin&Health), 137
- Arabic courses, 453
- Arabic Language and Literature Honors Program, 319
- Arabic language and literature major (BA), 331
- Archaeology courses, 367
- Architectural engineering courses, 218
- Architectural Engineering, Bachelor of Science in, 175
- Architectural interior design courses, 42
- Architectural Studies, Bachelor of Science in, 38
- Architecture courses, 43
- Architecture, Bachelor of, 32
- Architecture, School of, 25
- Army ROTC, 484
- Art history courses, 265
- Art history major (BAArt), 261
- Art History Honors Program, 246
- Art, Bachelor of Arts in, 260
- Arts, Bachelor of, Plan I
 - College of Liberal Arts, 329
 - College of Natural Sciences, 525
- Arts, Bachelor of, Plan II, 343
- Asian American studies courses, 398
- Asian American studies concentration (BA), 335
- Asian American Studies Honors Program, 319
- Asian Cultures and Languages Honors Program, 319
- Asian cultures and languages major (BA), 332
- Asian studies courses, 368
- Asian Studies Honors Program, 319
- Asian studies major (BA), 332
- Astronomy courses, 570
- Astronomy Departmental Honors Program, 521
- Astronomy honors option (BSAst), 530
- Astronomy major (BA), 527
- Astronomy option (BSAst), 530
- Astronomy, Bachelor of Science in, 529
- Athletic Training, Bachelor of Science in, 132
- Attendance requirements
 - in journalism courses, 114
 - in radio-television-film courses, 118
 - in the Cockrell School of Engineering, 164
 - in the College of Fine Arts, 245
 - in the College of Pharmacy, 646
- Audiology specialization (BSCSD), 92

Audition for prospective music majors, 243

B

Bachelor of Architecture, 32
 Bachelor of Arts in Art, 260
 Bachelor of Arts in Geological Sciences, 292
 Bachelor of Arts in Music, 262
 Bachelor of Arts in Theatre and Dance, 262
 Bachelor of Arts, Plan I
 College of Liberal Arts, 329
 College of Natural Sciences, 525
 Bachelor of Arts, Plan II, 343
 Bachelor of Business Administration, 54
 Bachelor of Fine Arts, 251
 Bachelor of Journalism, 95
 Bachelor of Music, 254
 Bachelor of Science in Advertising, 88
 Bachelor of Science in Aerospace Engineering, 172
 Bachelor of Science in Applied Learning and Development, 130
 Bachelor of Science in Architectural Engineering, 175
 Bachelor of Science in Architectural Studies, 38
 Bachelor of Science in Astronomy, 529
 Bachelor of Science in Athletic Training, 132
 Bachelor of Science in Biochemistry, 531
 Bachelor of Science in Biology, 533
 Bachelor of Science in Biomedical Engineering, 178
 Bachelor of Science in Chemical Engineering, 183
 Bachelor of Science in Chemistry, 538
 Bachelor of Science in Civil Engineering, 187
 Bachelor of Science in Communication Sciences and Disorders, 91
 Bachelor of Science in Communication Studies, 93
 Bachelor of Science in Computer Science, 542
 Bachelor of Science in Electrical Engineering, 191
 Bachelor of Science in Environmental Science, 294, 316, 518
 Bachelor of Science in Geological Sciences, 295
 Bachelor of Science in Geosystems Engineering and Hydrogeology
 Cockrell School of Engineering, 197
 Jackson School of Geosciences, 298
 Bachelor of Science in Human Development and Family Sciences, 547
 Bachelor of Science in Interdisciplinary Science, 550
 Bachelor of Science in Interior Design, 40
 Bachelor of Science in Kinesiology and Health, 134
 Bachelor of Science in Mathematics, 552

Bachelor of Science in Mechanical Engineering, 199
 Bachelor of Science in Medical Laboratory Science, 556
 Bachelor of Science in Nursing, 628
 Bachelor of Science in Nutrition, 557
 Bachelor of Science in Petroleum Engineering, 204
 Bachelor of Science in Physics, 562
 Bachelor of Science in Psychology, 348
 Bachelor of Science in Public Health, 565
 Bachelor of Science in Public Relations, 99
 Bachelor of Science in Radio-Television-Film, 101
 Bachelor of Science in Textiles and Apparel, 567
 Bachelor of Social Work, 669
 Background check requirements
 in the School of Nursing, 624, 626
 for student pharmacist-interns, 635
 for teacher certification, 138
 Basic education requirements, 16
 Bassoon courses, 283
 Bassoon major (BMusic), 256
 Bengali courses, 372
 Bible courses and degree requirements
 in the College of Communication, 88
 in the College of Fine Arts, 251
 in the College of Liberal Arts, 328
 in the College of Natural Sciences, 525
 in the Jackson School of Geosciences, 292
 in the School of Social Work, 669
 Biochemistry courses, 582
 Biochemistry Departmental Honors Program, 521
 Biochemistry honors option (BSBioch), 532
 Biochemistry major (BA), 527
 Biochemistry option (BSBioch), 531
 Biochemistry, Bachelor of Science in, 531
 Biology courses, 572
 Biology Departmental Honors Program, 521
 Biology honors option (BSBio), 537
 Biology major (BA), 527
 Biology, Bachelor of Science in, 533
 Biomedical engineering courses, 212
 Biomedical Engineering, Bachelor of Science in, 178
 Blanton Museum of Art, 250
 Bridges to the Future Certificate, 201
 Bridging disciplines courses, 22
 Bridging Disciplines Programs, 19
 Broadcast news concentration (BJ), 98
 Business administration courses, 64
 Business Administration, Bachelor of, 54
 Business Foundations Program, 51
 Business Honors Program, 57
 Business, Red McCombs School of, 46

C

Career services
 for teacher certification students, 128
 in the Cockrell School of Engineering, 158
 in the College of Communication, 82
 in the College of Education, 128
 in the College of Fine Arts, 243
 in the College of Liberal Arts, 315
 in the College of Natural Sciences, 520
 in the College of Pharmacy, 639
 in the Jackson School of Geosciences, 290
 in the McCombs School of Business, 47
 in the School of Social Work, 663, 666
 Catalog eligibility, 13
 Cell and molecular biology option (BSBio), 536
 Certificate in International Engineering Studies, 158
 Certificate programs
 Bridges to the Future Certificate, 201
 Bridging Disciplines Programs, 19
 Business Foundations Program, 51
 Certificate in International Engineering Studies, 158
 Certificate of Recognition in Music Performance, 246
 Computational Science and Engineering, 8, 514
 Core Texts and Ideas, 313
 Elements of Computing, 514
 in the School of Information, 309
 Indigenous Studies, 313
 Scientific Computation, 514
 Texas IP curriculum, 314, 515
 See also Concentrations.
 Certificate of Recognition in Music Performance, 246
 Certificate, teaching. *See* Teacher certification programs.
 Change-of-major requirements. *See* Transfer within the University.
 Chemical engineering courses, 216
 Chemical engineering honors program, 184
 Chemical Engineering, Bachelor of Science in, 183
 Chemistry courses, 582
 Chemistry Departmental Honors Program, 522
 Chemistry honors option (BSCh), 541
 Chemistry major (BA), 528
 Chemistry option (BSCh), 539
 Chemistry, Bachelor of Science in, 538
 Chinese courses, 373
 Chinese specialization (BA), 332
 Civil engineering courses, 220
 Civil Engineering, Bachelor of Science in, 187
 Claiming a major, McCombs School of Business, 50

- Clarinet courses, 283
 Clarinet major (BMusic), 256
 Classical Archaeology Honors Program, 319
 Classical archaeology major (BA), 333
 Classical civilization courses, 381
 Classics Honors Program, 320
 Classics major (BA), 333
 Cockrell School of Engineering, 156
 Cognitive science course, 386
 College Scholars, 11
 Communication courses, 104
 Communication and Society Concentration, 85
 Communication sciences and disorders courses, 109
 Communication Sciences and Disorders Honors Program, 83
 Communication Sciences and Disorders, Bachelor of Science in, 91
 Communication studies courses, 111
 Communication Studies Honors Program, 84
 Communication Studies, Bachelor of Science in, 93
 Communication, College of, 81
 Community and regional planning course, 45
 Comparative literature courses, 386
 Comparative literature program, 312
 Composition major (BMusic), 257
 Composition major, Jazz (BMusic), 257
 Computation option (BSBioch), 532
 Computation option (BSCh), 540
 Computation option (BSPhy), 563
 Computational biology option (BSBio), 538
 Computer engineering curriculum (BSEE), 191
 Computer science courses, 586
 Computer Science Departmental Honors Program, 522
 Computer science honors option (BSCS), 544
 Computer science major (BA), 528
 Computer science option (BSCS), 543
 Computer Science, Bachelor of Science in, 542
 Concentrations
 Business Foundations Program, 51
 Communication and society concentration, 85
 Cultural studies concentration, 314
 Science, technology, and society concentration, 315
 United States Latino and Latin American studies concentration, 85
 Western civilization and American institutions concentration, 315
 See also individual degrees and majors.
 Concurrent enrollment and degree requirements
 in the Cockrell School of Engineering, 163, 168
 in the College of Communication, 88
 in the College of Education, 130
 in the College of Fine Arts, 251
 in the College of Liberal Arts, 328
 in the College of Natural Sciences, 520
 in the College of Pharmacy, 648
 in the Jackson School of Geosciences, 291
 in the McCombs School of Business, 54
 in the School of Social Work, 668
 Consent procedure
 for advertising courses, 89
 for public relations courses, 99
 for radio-television-film courses, 101
 Consulting and change management track (BBA), 62
 Cooperative Engineering Education Program, 159
 Coordinated Program in Dietetics (BSNtr), 517, 557, 558
 Copy editing and design sequence (BJ), 98
 Core curriculum, 16
 Core texts and ideas courses, 387
 Corporate communication track (BSCommStds), 95
 Corporate finance and investment banking track (BBA), 60
 Correspondence courses and degree requirements
 in the Cockrell School of Engineering, 163, 164, 168, 171
 in the College of Communication, 88
 in the College of Education, 130
 in the College of Fine Arts, 251
 in the College of Liberal Arts, 328
 in the College of Pharmacy, 648
 in the Jackson School of Geosciences, 291
 in the McCombs School of Business, 53
 in the School of Architecture, 31
 in the School of Nursing, 628
 in the School of Social Work, 668
 Courses offered, 734
 Course descriptions. *See* individual fields of study.
 Course load. *See* Quantity of work rule.
 Course prerequisites. *See* individual fields of study.
 Courses in a single field of study, restrictions on
 College of Liberal Arts, 329
 College of Natural Sciences, 525
 See also individual degrees and majors.
 Credit by examination and degree requirements
 Bachelor of Arts, Plan II, 343
 in the College of Fine Arts, 249
 in the School of Nursing, 626
 in the School of Social Work, 669
 Croatian courses. *See* Serbian/Croatian courses.
 Cultural studies courses, 388
 Cultural studies concentration, 314
 Curriculum and instruction courses, 140
 Czech courses, 489
 Czech Language and Culture Honors Program, 320
 Czech language and culture major (BA), 334
- ## D
- Dance courses. *See* Theatre and dance courses.
 Dance major (BFA), 253
 Dance, Bachelor of Arts in Theatre and, 262
 Danish courses, 416
 Dean's Honor List
 Engineering Scholars, 166
 in the College of Liberal Arts, 317
 Dean's Scholars Honors, College of Natural Sciences, 513
 Degree audits
 in the Cockrell School of Engineering, 167
 in the College of Communication, 86
 in the College of Education, 129
 in the College of Fine Arts, 248
 in the College of Liberal Arts, 327
 in the College of Natural Sciences, 524
 in the Jackson School of Geosciences, 291
 in the McCombs School of Business, 52
 in the School of Architecture, 30
 in the School of Nursing, 626
 in the School of Social Work, 668
 Degree requirements. *See* individual degrees and majors.
 Degrees offered, 2
 Departmental honors programs
 College of Communication, 83
 College of Liberal Arts, 318
 College of Natural Sciences, 521
 See also individual degrees and majors.
 Design courses, 267
 Design major (BFA), 252
 Developmental studies courses, 23
 Dietetics option (BSNtr), 558
 Discrimination, prohibition of, 1
 Distinguished College Scholars, 11
 Doctor of Pharmacy, 633
 Double bass courses, 283
 Double bass major (BMusic), 256
 Double bass major, Jazz (BMusic), 256
 Double majors. *See* Simultaneous majors.
 Drum set courses, 283
 Drum set major (BMusic), 256
 Dutch courses, 416
- ## E
- Early childhood option (BSHDFS), 548
 Early childhood through grade six generalist major (BSALD), 131
 Early practice experience in pharmacy, 646
 Ecology, evolution, and behavior option (BSBio), 534

Economics courses, 389
 Economics Honors Program, 320
 Economics major (BA), 334
 Education of the deaf/hearing-impaired specialization (BSCSD), 92
 Education, College of, 127
 Educational psychology courses, 143
 Electrical engineering courses, 223
 Electrical Engineering, Bachelor of Science in, 191
 Elementary education major. *See* Bachelor of Science in Applied Learning and Development.
 Elementary school teacher certification. *See* Teacher certification programs.
 Elements of Computing Program, 514
 Emerging Scholars Program, 512
 Employment limits for students
 in the College of Pharmacy, 645
 in the School of Architecture, 30
 in the School of Nursing, 623
 Energy finance track (BBA), 60
 Engineering Foundation, 160
 Engineering Honors Program, 166
 Engineering mechanics courses, 212
 Engineering route to the BBA, 58
 Engineering Scholars, 166
 Engineering, Cockrell School of, 156
 English courses, 392
 English Honors Program, 320
 English major (BA), 334
 Ensemble courses, 282
 Ensemble requirement for music majors, 248
 Entry-level majors in College of Natural Sciences, 516
 Environmental Science, Bachelor of Science in, 294, 316, 518
 Environmental science and sustainability option (BSGEH), 297
 Equal educational opportunity statement, 1
 Ethnic studies courses, 398
 Ethnic studies major (BA), 335
 Euphonium courses, 283
 Euphonium major (BMusic), 256
 European studies courses, 402
 European studies major (BA), 335
 Exercise science major (BSKin&Health), 135
 Extension courses and degree requirements
 in the Cockrell School of Engineering, 163, 164, 168, 171
 in the College of Communication, 88
 in the College of Education, 130
 in the College of Fine Arts, 251
 in the College of Liberal Arts, 328
 in the College of Natural Sciences, 520
 in the College of Pharmacy, 648
 in the Jackson School of Geosciences, 291
 in the McCombs School of Business, 53
 in the School of Architecture, 31
 in the School of Nursing, 628
 in the School of Social Work, 668

F

Facilities
 in the Cockrell School of Engineering, 157
 in the College of Communication, 81
 in the College of Education, 127
 in the College of Fine Arts, 241, 250
 in the College of Pharmacy, 633
 in the McCombs School of Business, 46
 in the School of Architecture, 26
 in the School of Nursing, 618
 in the School of Social Work, 662
 Families and personal relationships option (BSHDFS), 549
 Families and society option (BSHDFS), 549
 Fields of study offered, 734
 Film. *See* Radio-television-film.
 Finance courses, 68
 Finance major (BBA), 60
 Financial aid
 in the Cockrell School of Engineering, 159
 in the College of Communication, 82
 in the College of Education, 128
 in the College of Fine Arts, 242
 in the College of Liberal Arts, 312
 in the College of Natural Sciences, 516
 in the College of Pharmacy, 637
 in the Jackson School of Geosciences, 289
 in the McCombs School of Business, 46
 in the School of Architecture, 27
 in the School of Nursing, 618
 in the School of Social Work, 662
 Financial markets/banking track (BBA), 60
 Fine arts courses, 264
 Fine Arts Library, 250
 Fine Arts, Bachelor of, 251
 Fine Arts, College of, 241
 First-Year interest Groups (FIGS), 19
 Flag requirements, 18
 Flute courses, 283
 Flute major (BMusic), 256
 Foreign language requirement, 18
 See also individual degrees and majors.
 French courses, 405
 French civilization courses, 407
 French Honors Program, 320
 French horn courses, 283
 French horn major (BMusic), 256
 French major (BA), 336

G

Gender studies. *See* Women's and gender studies.
 General engineering courses, 207
 General geology option (BSGeoSci), 296
 General human development and family sciences honors option (BSHDFS), 550
 General management track (BBA), 62
 Geography courses, 409

Geography Honors Program, 321
 Geography major (BA), 336
 Geological sciences courses, 301
 Geological Sciences, Bachelor of Arts in, 292
 Geological Sciences, Bachelor of Science in, 295
 Geological Sciences Honors Program, 291
 Geophysics option (BSGeoSci), 296
 Geosciences, John A. and Katherine G. Jackson School of, 288
 Geosystems Engineering and Hydrogeology, Bachelor of Science in
 Cockrell School of Engineering, 197
 Jackson School of Geosciences, 298
 German courses, 416
 German Honors Program, 321
 German major (BA), 336
 Germanic civilization courses, 419
 Government courses, 425
 Government Honors Program, 321
 Government major (BA), 336
 Grade point average requirements. *See* Scholastic requirements.
 Grade requirements. *See* Scholastic requirements.
 Graduate courses and degree requirements, 10
 Graduation application
 in the Cockrell School of Engineering, 167
 in the College of Communication, 86
 in the College of Education, 129
 in the College of Fine Arts, 249
 in the College of Liberal Arts, 327
 in the College of Natural Sciences, 524
 in the Jackson School of Geosciences, 291
 in the McCombs School of Business, 52
 in the School of Nursing, 626
 in the School of Social Work, 667
 Graduation requirements, 12
 in the Cockrell School of Engineering, 167
 in the College of Communication, 86
 in the College of Education, 129
 in the College of Fine Arts, 247
 in the College of Liberal Arts, 327
 in the College of Natural Sciences, 523
 in the College of Pharmacy, 647
 in the Jackson School of Geosciences, 291
 in the McCombs School of Business, 52
 in the School of Architecture, 30
 in the School of Nursing, 626
 in the School of Social Work, 667
 Graduation under a particular catalog, 13
 Grammar, Spelling and Punctuation Test, 96
 Greek courses, 384
 Greek major (BA), 337
 Grievance procedures, School of Social Work, 667
 Guitar courses, 283

Guitar major (BMusic), 256
Guitar major, Jazz (BMusic), 256

H

Harp courses, 283
Harp major (BMusic), 255
Harpsichord courses, 283
Harpsichord major (BMusic), 255
Health education courses, 145
Health insurance requirements
 in the College of Pharmacy, 643
 in the School of Nursing, 624
Health professions, advising for, 8
Health promotion major (BSKin&Health), 136
Hebrew courses, 455
Hebrew Honors Program, 321
Hebrew language and literature major (BA), 337
Hindi courses, 374
Hindi/Urdu specialization (BA), 332
Hispanic linguistics concentration (BA), 342
Hispanic studies concentration (BA), 342
History courses, 431
History Honors Program, 321
History major (BA), 337
History
 of the Cockrell School of Engineering, 156
 of the College of Fine Arts, 241
 of the College of Pharmacy, 633
 of the McCombs School of Business, 46
 of the School of Architecture, 25
 of the School of Nursing, 617
 of the School of Social Work, 661
 of the University, 1
Honor code, iii
 of the College of Pharmacy, 646
 of the School of Nursing, 623
Honor societies, 21
 in the Cockrell School of Engineering, 166
 in the College of Education, 128
 in the College of Liberal Arts, 326
 in the College of Natural Sciences, 521
 in the College of Pharmacy, 638
 in the McCombs School of Business, 48
 in the School of Architecture, 26
 in the School of Nursing, 625
Honors Center, University, 21
Honors, 11
 in the Cockrell School of Engineering, 166
 in the College of Fine Arts, 245
 in the College of Liberal Arts, 317
 in the College of Natural Sciences, 513
 in the College of Pharmacy, 637, 647
 in the Jackson School of Geosciences, 291
 in the School of Architecture, 26
 in the School of Nursing, 625

Honors programs
 Art History Honors Program, 246
 Dean's Scholars Honors, College of Natural Sciences, 513
 Departmental honors programs
 College of Communication, 83
 College of Liberal Arts, 317
 College of Natural Sciences, 521
 See also individual degrees and majors.
 Engineering Honors Program, 166
 Geological Sciences Honors Program, 291
 in chemical engineering, 184
 Liberal Arts Honors Programs, Plan I, 317
 Nursing Honors Program, 625
 Pharmacy Honors Program, 647
 Plan II Honors Program, 343
 Senior Fellows Program, College of Communication, 83
 Turing Scholars Program, 513
Human biology option (BSBio), 534
Human development and family sciences courses, 592
Human Development and Family Sciences Departmental Honors Program, 522
Human development and family sciences honors option (BSHDFS), 550
Human Development and Family Sciences, Bachelor of Science in, 547
Human development option (BSHDFS), 548
Human ecology courses, 595
Human Ecology Departmental Honors Program, 522
Human ecology major (BA), 528
Human relations track (BSCommStds), 95
Humanities courses, 441
Humanities Honors Program, 322
Humanities major (BA), 337
Hydrogeology, Bachelor of Science in Geosystems Engineering and Cockrell School of Engineering, 197
 Jackson School of Geosciences, 298
Hydrogeology option (BSGeoSci), 297

I

IDA. *See* Degree audit.
In-residence coursework. *See* Residence rules.
Information courses, 309
Information, School of, 309
Insurance. *See* Health insurance requirements, Liability insurance requirements.
Integrated BBA/MPA degree program, 56
Integrated BSCS/MSCS degree program, 517, 542, 546
Interdisciplinary Science, Bachelor of Science in, 550
Interior Design, Bachelor of Science in, 40

International business courses, 78
International business major (BBA), 61
International nutrition option (BSNtr), 561
International relations and global studies courses, 442
International Relations and Global Studies Honors Program, 322
International relations and global studies major (BA), 338
Internship courses and degree requirements
 in the College of Communication, 88
 in the College of Liberal Arts, 328
Investment management track (BBA), 60
Islamic studies courses, 457
Islamic Studies Honors Program, 322
Islamic studies major (BA), 338
Italian courses, 407
Italian civilization courses, 409
Italian Honors Program, 322
Italian major (BA), 338

J

Jackson School of Geosciences, John A. and Katherine G., 288
Japanese courses, 375
Japanese specialization (BA), 332
Jazz composition major (BMusic), 257
Jazz performance major (BMusic), 256
Jewish studies courses, 443
Jewish Studies Honors Program, 322
Jewish studies major (BA), 339
Journalism courses, 114
Journalism Honors Program, 84
Journalism, Bachelor of, 95

K

Kinesiology courses, 146
Kinesiology and Health, Bachelor of Science in, 134
Korean courses, 376

L

Language teaching concentration, Spanish (BA), 342
Latin courses, 385
Latin American studies courses, 445
Latin American Studies Honors Program, 323
Latin American studies major (BA), 339
Latin major (BA), 339
Law courses, undergraduates in, 10
Legal environment of business courses, 70
Legislative requirement in history and government, 12
Length of degree programs
 in the Cockrell School of Engineering, 172
 in the School of Architecture, 28

See also individual degrees and majors.
 Liability insurance requirements
 in the College of Pharmacy, 643
 in the School of Nursing, 624
 in the School of Social Work, 664
 Liberal arts courses, 351
 Liberal arts honors courses, 352
 Liberal Arts Honors Programs, 317
 Liberal Arts, College of, 311
 Licensure
 as a professional engineer, 168
 as a professional nurse, 623, 626
 as a professional pharmacist, 634
 as a student pharmacist–intern, 643
 in audiology, 92
 in education of the deaf/hearing-impaired, 92
 in speech/language pathology, 92
 Linguistics courses, 451
 Linguistics Honors Program, 323
 Linguistics major (BA), 339
 Literature concentration, Spanish (BA), 342
 Longhorn Scholars Program, 21
 Lyndon B. Johnson School of Public Affairs, 660

M

Magazine writing and editing sequence (BJ), 98
 Majors offered, 3
 Malayalam courses, 376
 Malayalam specialization (BA), 332
 Management courses, 76
 Management information systems courses, 71
 Management information systems major (BBA), 62
 Management major (BBA), 62
 Marine and freshwater biology option (BSBio), 535
 Marine science courses, 600
 Marketing courses, 78
 Marketing major (BBA), 63
 Mathematical sciences option (BSMath), 553
 Mathematics courses, 604
 Mathematics Departmental Honors Program, 522
 Mathematics honors option (BSMath), 556
 Mathematics major (BA), 529
 Mathematics, Bachelor of Science in, 552
 McCombs School of Business, Red, 46
 Mechanical engineering courses, 230
 Mechanical Engineering, Bachelor of Science in, 199
 Medical Laboratory Science, Bachelor of Science in, 556
 Medical requirements
 in the College of Pharmacy, 643
 in the School of Nursing, 624
 Mexican American studies courses, 399

Mexican American studies concentration (BA), 335
 Mexican American Studies Honors Program, 323
 Microbiology option (BSBio), 535
 Middle Eastern studies courses, 459
 Middle Eastern Studies Honors Program, 323
 Middle Eastern studies major (BA), 339
 Middle grades teacher certification. *See* Teacher certification programs.
 Middle grades teaching in mathematics and science option (BSIntrdiscSci), 551
 Military science courses, 485
 Minor(s)
 in the Cockrell School of Engineering, 170
 in the College of Pharmacy, 648
 in the McCombs School of Business, 51
 in the School of Social Work, 669
 See also individual degrees and majors.
 Mission
 of the Cockrell School of Engineering, 156
 of the College of Communication, 81
 of the College of Education, 127
 of the College of Fine Arts, 241
 of the College of Liberal Arts, 311
 of the College of Natural Sciences, 511
 of the College of Pharmacy, 634
 of the Jackson School of Geosciences, 288
 of the McCombs School of Business, 46
 of the School of Architecture, 25
 of the School of Nursing, 627
 of the School of Social Work, 661
 of the School of Undergraduate Studies, 15
 of the University, iii
 Mortar Board, 21
 Multimedia journalism concentration (BJ), 98
 Multiple degrees, 13
 in the Cockrell School of Engineering, 168
 in the College of Communication, 87
 in the College of Education, 130
 in the College of Liberal Arts, 327
 Music courses, 276
 Music business major (BMusic), 259
 Music major (BAMusic), 262
 Music studies major (BMusic), 258
 Music, Bachelor of, 254

N

Natural sciences courses, 569
 Natural Sciences, College of, 511
 Naval ROTC, 486
 Naval science courses, 486
 Neurobiology option (BSBio), 536

Newspaper reporting and writing sequence (BJ), 98
 Norwegian courses, 422
 Nursing courses, 630
 Nursing Honors Program, 625
 Nursing, Bachelor of Science in, 628
 Nursing, School of, 617
 Nutrition courses, 596
 Nutrition Departmental Honors Program, 523
 Nutrition honors option (BSNtr), 561
 Nutrition in business option (BSNtr), 559
 Nutrition teaching option (BSNtr), 560
 Nutrition, Bachelor of Science in, 557
 Nutritional sciences option (BSNtr), 559

O

Oboe courses, 283
 Oboe major (BMusic), 256
 Operations management courses, 73
 Orchestral instrument performance major (BMusic), 256
 Organ courses, 283
 Organ major (BMusic), 255
 Ownership of student work
 in radio-television-film courses, 118
 in the College of Fine Arts, 245
 in the School of Architecture, 29

P

Pass/fail courses and degree requirements
 Bachelor of Arts in Geological Sciences, 292
 in the Cockrell School of Engineering, 165
 in the College of Communication, 88
 in the College of Education, 130
 in the College of Fine Arts, 251
 in the College of Liberal Arts, 328
 in the College of Natural Sciences, 525
 in the McCombs School of Business, 53
 in the School of Architecture, 31
 in the School of Social Work, 668
 Percussion courses, 282
 Percussion major (BMusic), 256
 Performance courses (music), 283
 Performance requirement, Department of Theatre and Dance, 284
 Performance restrictions, Butler School of Music, 245
 Persian courses, 463
 Persian language and literature major (BA), 340
 Persian Language and Literature Honors Program, 323
 Petroleum and geosystems engineering courses, 237
 Petroleum Engineering, Bachelor of Science in, 204
 Pharmacy courses, 652

- Pharmacy, Doctor of, 649
 Pharmacy Honors Program, 647
 Pharmacy, College of, 633
 Phi Beta Kappa, 21
 Phi Kappa Phi, 21
 Philosophy courses, 465
 Philosophy Honors Program, 323
 Philosophy major (BA), 340
 Photojournalism concentration (BJ), 98
 Physical activity courses and degree requirements
 in the Cockrell School of Engineering, 171
 in the College of Communication, 88
 in the College of Education, 130
 in the College of Fine Arts, 251
 in the College of Liberal Arts, 328
 in the College of Natural Sciences, 524
 in the College of Pharmacy, 648
 in the Jackson School of Geosciences, 292
 in the McCombs School of Business, 53
 in the School of Architecture, 31
 in the School of Social Work, 668
 Physical culture and sports major (BSKin&Health), 136
 Physical education courses, 152
 Physical education teacher certification. *See* Applied movement science major.
 Physical science courses, 610
 Physics courses, 610
 Physics Departmental Honors Program, 523
 Physics honors option (BSPhy), 565
 Physics major (BA), 529
 Physics option (BSPhy), 562
 Physics, Bachelor of Science in, 562
 Piano courses, 283
 Piano major (BMusic), 254
 Piano major, Jazz (BMusic), 256
 Placement in courses
 chemistry, 582
 French, 404
 Germanic languages, 415
 Greek, 380
 in the Cockrell School of Engineering, 161
 Italian, 404
 Latin, 380
 mathematics, 603
 music, 244
 Portuguese, 499
 rhetoric and writing, 481
 Slavic languages, 489
 Spanish, 499
 Plan II Honors Program courses, 469
 Plan II Honors Program, 343
 Plan II Honors Program: Special Honors, 324
 Plant biology option (BSBio), 536
 Polish courses, 490
 Political communication track (BSCommStds), 95
 Portuguese courses, 500
 Portuguese civilization courses, 499
 Portuguese Honors Program, 324
 Portuguese major (BA), 340
 Pre-law students, advising for, 9
 Pre-med students, advising for, 9
 Preparation for professional school, 8
 Prerequisites of courses. *See* individual fields of study.
 Professional Development Sequence for elementary and middle grades teacher certification, 129
 in UTeach-Natural Sciences, 516
 Professional organizations for students
 in the Cockrell School of Engineering, 166
 in the College of Education, 128
 in the College of Pharmacy, 638
 in the McCombs School of Business, 48
 in the School of Architecture, 26
 in the School of Nursing, 621
 Psychology courses, 470
 Psychology Honors Program, 324
 Psychology major (BA), 340
 Psychology, Bachelor of Science in, 348
 Public affairs courses, 660
 Public Affairs, Lyndon B. Johnson School of, 660
 Public Health, Bachelor of Science in, 565
 Public health courses, 581
 Public relations courses, 107
 Public Relations Honors Program, 84
 Public Relations, Bachelor of Science in, 99
 Pure mathematics option (BSMath), 554
 Purpose. *See* Mission.
- Q**
- Quantity of work rule
 in the Cockrell School of Engineering, 164
 in the College of Pharmacy, 645
 in the School of Architecture, 30
- R**
- Radiation physics option (BSPhy), 563
 Radio-television-film courses, 119
 Radio-Television-Film Honors Program, 84
 Radio-Television-Film, Bachelor of Science in, 101
 Real estate courses, 70
 Real estate track (BBA), 60
 Recital requirement for music studies majors, 248
 Recorder courses, 283
 Recording technology major (BMusic), 259
 Religious studies courses, 476
 Religious Studies Honors Program, 324
 Religious studies major (BA), 341
 Repetition of a course
 computer science courses, 586
 in the Cockrell School of Engineering, 164
 in the College of Communication, 86
 in the College of Liberal Arts, 317
 in the College of Natural Sciences, 519
 in the Jackson School of Geosciences, 291
 in the McCombs School of Business, 54
 in the School of Nursing, 623
 in the School of Social Work, 671
 music performance courses, 244
 pharmacy courses, 644
 Research opportunities, 20
 in the Cockrell School of Engineering, 160
 in the College of Natural Sciences, 512
 in the Jackson School of Geosciences, 289
 in the School of Architecture, 26
 Reservation of work for graduate credit, 10
 Residence rules
 in the Cockrell School of Engineering, 167
 in the College of Communication, 86
 in the College of Education, 129
 in the College of Fine Arts, 247
 in the College of Liberal Arts, 327
 in the College of Natural Sciences, 523
 in the College of Pharmacy, 647
 in the Jackson School of Geosciences, 291
 in the McCombs School of Business, 52
 in the School of Architecture, 30
 in the School of Social Work, 667
 See also individual degrees and majors.
 Retail merchandising option (BSTA), 568
 Rhetoric and writing courses, 481
 Rhetoric and writing major (BA), 341
 Risk management courses, 74
 ROTC courses and degree requirements
 in the Cockrell School of Engineering, 171
 in the College of Communication, 88
 in the College of Education, 130
 in the College of Liberal Arts, 328
 in the College of Natural Sciences, 525
 in the College of Pharmacy, 648
 in the Jackson School of Geosciences, 292
 in the McCombs School of Business, 53
 in the School of Architecture, 31
 in the School of Nursing, 628
 in the School of Social Work, 668
 ROTC courses, 483
 ROTC programs, 483
 Russian courses, 491
 Russian Language and Culture Honors Program, 325
 Russian language and culture major (BA), 341
 Russian, East European, and Eurasian studies courses, 487
 Russian, East European, and Eurasian Studies Honors Program, 325

Russian, East European, and Eurasian studies major (BA), 341

S

Sanskrit courses, 377
 Sanskrit specialization (BA), 332
 Saxophone courses, 283
 Saxophone major (BMusic), 256
 Saxophone major, Jazz (BMusic), 256
 Scandinavian courses, 423
 Scandinavian Studies Honors Program, 325
 Scandinavian studies major (BA), 342
 Scholarships. *See* Financial aid.
 Scholastic requirements
 in the Cockrell School of Engineering, 164, 165, 167
 in the College of Communication, 86
 in the College of Education, 129
 in the College of Fine Arts, 247
 in the College of Pharmacy, 644
 in the McCombs School of Business, 52, 54
 in the School of Architecture, 29
 in the School of Nursing, 622
 in the School of Social Work, 666
 See also individual degrees and majors.
 Science course, 153
 Science, technology, and society courses, 367
 Science, technology, and society concentration, 315
 Scientific computation specialization (BSMath), 554
 Second degrees. *See* Multiple degrees.
 Senior Fellows Program, College of Communication, 83
 Serbian/Croatian courses, 493
 Signature courses, 19
 Simultaneous majors, 7
 Slavic courses, 493
 Social science course, 469
 Social work courses, 673
 Social Work, Bachelor of Science in, 669
 Social Work Honors Program, 666
 Social Work, School of, 661
 Sociology courses, 494
 Sociology Honors Program, 325
 Sociology major (BA), 342
 Space sciences option (BSPhy), 564
 Spanish courses, 501
 Spanish Honors Program, 325
 Spanish major (BA), 342
 Special education courses, 154
 Special education major (BSALD), 131
 Speech. *See* Communication studies.
 Speech/language pathology specialization (BSCSD), 93
 Sport management major (BSKin&Health), 136
 Statistics courses, 75

Statistics and scientific computation courses, 614
 Statistics and Scientific Computation, Division of, 614
 Statistics, probability, and data analysis specialization (BSMath), 553
 Strategic Advising, Center for, 18
 Student conduct
 in the College of Pharmacy, 646
 in the School of Nursing, 623
 See also Honor code, Student responsibility.
 Student organizations
 in the Cockrell School of Engineering, 159
 in the College of Communication, 82
 in the College of Education, 128
 in the College of Fine Arts, 247
 in the College of Liberal Arts, 326
 in the College of Natural Sciences, 521
 in the College of Pharmacy, 638
 in the McCombs School of Business, 48
 in the School of Architecture, 26
 in the School of Nursing, 621
 in the School of Social Work, 664
 Student responsibility, 11
 in the Cockrell School of Engineering, 163, 167, 172
 in the College of Communication, 86
 in the College of Fine Arts, 248
 in the College of Liberal Arts, 327
 in the College of Natural Sciences, 524
 in the College of Pharmacy, 646
 in the McCombs School of Business, 47, 52
 in the School of Architecture, 30
 in the School of Nursing, 622
 in the School of Social Work, 667
 Student services
 in the Cockrell School of Engineering, 158
 in the College of Education, 128
 in the College of Fine Arts, 242
 in the College of Liberal Arts, 316
 in the McCombs School of Business, 47
 Studio art courses, 268
 Studio art major (BAArt), 260
 Studio art major (BFA), 251
 Study abroad
 in the Cockrell School of Engineering, 158
 in the College of Fine Arts, 242
 in the College of Natural Sciences, 516
 in the School of Architecture, 26
 Supply chain management major (BBA), 63
 Swedish courses, 424

T

Tamil courses, 377
 Tamil specialization (BA), 332
 Teacher certification programs, 10
 All-level, 138

Applied movement science major, 137
 Bachelor of Science in Applied Learning and Development, 130
 Bachelor of Science in Interdisciplinary Science, 550
 in the College of Communication, 86
 in the College of Fine Arts, 249
 Middle grades, 138
 Secondary, 138
 UTeach-Liberal Arts, 312
 UTeach-Natural Sciences, 289, 512, 515
 See also Teaching option.
 Teaching option (BSBio), 537
 Teaching option (BSCh), 540
 Teaching option (BSGeoSci), 298
 Teaching option (BSMath), 554
 Teaching option (BSPhy), 564
 Technical area options in engineering, 169
 See also individual engineering degrees.
 Television. *See* Radio-television-film.
 Telugu courses, 378
 Texas Common Course Numbering System equivalencies, 728
 Texas Creative Program, 89
 Texas Interdisciplinary Plan, 512
 Texas IP certificate
 College of Liberal Arts, 314
 College of Natural Sciences, 515
 Texas Media Program, 89
 Texas Performing Arts, 241
 Textiles and apparel courses, 598
 Textiles and Apparel Departmental Honors Program, 523
 Textiles and Apparel, Bachelor of Science in, 567
 Theatre and dance courses, 284
 Theatre and Dance, Bachelor of Arts in, 262
 Theatre studies major (BFA), 253
 Transfer admission
 to the Cockrell School of Engineering, 161
 to the College of Fine Arts, 244
 to the McCombs School of Business, 49
 to the School of Architecture, 28
 Transfer credit, 728
 in the Cockrell School of Engineering, 161
 in the College of Fine Arts, 244, 251
 in the School of Architecture, 28
 in the School of Social Work, 665
 Transfer within the University
 in the Cockrell School of Engineering, 163
 in the College of Fine Arts, 244
 in the McCombs School of Business, 49
 in the School of Architecture, 28
 Trombone courses, 283
 Trombone major (BMusic), 256
 Trombone major, Jazz (BMusic), 256
 Trumpet courses, 283
 Trumpet major (BMusic), 256
 Trumpet major, Jazz (BMusic), 256
 Tuba courses, 283
 Tuba major (BMusic), 256

Turing scholars honors option (BSCS), 543
 Turing Scholars Program, 513
 Turkish courses, 464
 Turkish Language and Literature Honors Program, 326
 Turkish language and literature major (BA), 343
 Tutorial course courses, 469

U

Undergraduate Research, Office of, 20
 Undergraduate studies courses, 24
 Undergraduate Studies, School of, 15
 United States Latino and Latin American Media Studies Concentration, 85
 University Honors List, 11
 University Honors, Graduation with, 11
 University of Texas System, 2
 Urban studies courses, 414
 Urban Studies Honors Program, 326
 Urban studies major (BA), 343
 Urdu (Hindi/Urdu) specialization (BA), 332

Urdu courses, 378
 UTeach-liberal arts courses, 505
 UTeach-Liberal Arts, 312
 UTeach-natural sciences courses, 616
 UTeach-Natural Sciences, 289, 512, 515

V

Vibraphone courses, 283
 Vibraphone major (BMusic), 256
 Vietnamese courses, 379
 Viola courses, 283
 Viola major (BMusic), 256
 Violin courses, 283
 Violin major (BMusic), 256
 Violoncello courses, 283
 Violoncello major (BMusic), 256
 Visual art studies courses, 273
 Visual art studies major (BFA), 252
 Voice courses, 276
 Voice major (BMusic), 254

W

Western civilization and American institutions concentration, 315
 Women in Engineering Program, 160
 Women's and gender studies courses, 506
 Women's and gender studies major (BA), 343
 Writing requirement. *See* individual degrees and majors.

Y

Yiddish courses, 424
 Yoruba courses, 357
 Youth and community studies major (BSALD), 132

**EDITORIAL AND
PRODUCTION WORK**

Ed Anderson
Jeannette Cook
Kristen G. Dockray
Patrick M. Jones
Laura Kobler
S. Terry Reyes
Brenda A. Schumann
Daniel J. Szymczak

PHOTOGRAPHY

*Jennifer Trost, Office of
Admissions*

The University of Texas at Austin USPS 652-360

Send address changes to
The University of Texas at Austin
Office of the Registrar
1 University Station Stop M5506
Austin TX 78712-0636

Periodicals
Austin TX

