

***ENVIRONMENTAL DYNAMICS HANDBOOK***

**HANDBOOK OF GRADUATE PROGRAM POLICIES**

**ENVIRONMENTAL DYNAMICS (ENDY) Ph.D. PROGRAM**

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## **ENVIRONMENTAL DYNAMICS HANDBOOK**

### **TABLE OF CONTENTS**

I. Introduction.....	4
A. Description of the Environmental Dynamics Program.....	5
1. Purpose and Goals of the Environmental Dynamics Program.....	5
2. Dissertation Titles Completed in the Environmental Dynamics Program.....	5
B. Appropriate Students for the Environmental Dynamics Program.....	6
C. Administrative Structure and Contacts.....	6
D. Example Program Schedule.....	8
II. Admissions Requirements and Procedures.....	9
A. The University of Arkansas Graduate School.....	9
1. Admissions Requirements.....	9
2. Application Procedure.....	9
3. Forms.....	10
B. Environmental Dynamics Program.....	10
1. Admissions Requirements.....	11
2. Application Deadlines.....	11
3. Application Procedure.....	12
C. Financial Assistance.....	12
1. Graduate Assistantships.....	13
2. Research Assistantships.....	13
3. Doctoral Fellowships.....	13
4. Summer Research/Internships.....	14
5. Other Forms of Financial Assistance.....	14
III. Core Curriculum and Elective Courses.....	14
A. Declaration of Intent.....	14
B. Faculty Advisor and Advisory Committee.....	15
C. Residency Requirement.....	15
D. Coursework Beyond the Master's Degree.....	16
E. Doctoral Dissertation credits.....	17
F. Required Courses.....	17
1. ENDY 5053 Quaternary Environments.....	17
2. ENDY 6013 Environmental Dynamics.....	17
3. ENDY 5113 Global Change.....	17
4. ENDY 6991 Environmental Dynamics Seminar.....	18
G. Elective Courses.....	18
H. Example Schedule of Coursework.....	18
IV. Qualifying Examinations.....	19
A. Written Comprehensive Examinations.....	19
1. Comprehensive Examination Committee.....	19
2. Structure of the Written Comprehensive Examination.....	20
B. Defense of the Dissertation Proposal.....	20
1. Structure of the Defense of the Dissertation Proposal.....	21

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

V. Doctoral Dissertation Research.....	21
A. Purpose of the Dissertation.....	22
B. Dissertation Committee.....	22
C. Structure and Composition of the Dissertation.....	23
VI. Final Examination.....	23
A. Structure and Composition of the Dissertation Defense.....	23
VII. Submitting the Completed Dissertation.....	24
VIII. Graduation.....	24
A. Participation in Commencement Ceremony.....	24
B. Deadline For Name to be Included in Commencement Program.....	24
C. Dissertation Titles in Commencement Program.....	25
IX. Annual Review of Graduate Student Progress.....	25
A. Annual Review Procedure.....	25
B. Failure to Progress.....	28
X. Academic Probation Policy.....	29
A. Policies in Effect for Students Admitted Prior to Fall 2002.....	29
B. Policies in Effect for Students Admitted Fall 2002 and After.....	29
XI. Miscellaneous Information.....	30
A. Grievance Procedure.....	30
B. Teaching Opportunities.....	30
C. Publishing Experience.....	30
1. Refereed Journals, Proceedings, Books, Etc.....	30
2. Professional Meetings.....	30
D. Service Opportunities.....	31
E. Office/Laboratory Space.....	31
F. Continuing Graduate Credit and Transfer Credits.....	32
G. Graduate Student Representation on ENDY Steering Committee.....	32

# **ENVIRONMENTAL DYNAMICS HANDBOOK**

## **I. INTRODUCTION**

As part of the University of Arkansas Graduate School, the Environmental Dynamics (ENDY) Program offers a Doctor of Philosophy (Ph.D) degree in Environmental Dynamics. This handbook describes admissions and degree requirements, and includes an example schedule as a guide to earning the degree. You are expected to be familiar with the handbook contents as they apply to your program of studies.

This handbook supplements the *University of Arkansas Graduate School Catalog* that lists all courses approved for graduate credit, as well as requirements for all campus graduate programs and the *University of Arkansas Graduate School Handbook* containing similar information. Each of these documents is available online and can be accessed via the Internet at:

*University of Arkansas Graduate Catalog*

<http://www.uark.edu/depts/gradinfo/prospective/catalog/index.html>

*University of Arkansas Graduate Handbook*

<http://www.uark.edu/depts/gradinfo/current/handbooktoc.html>

Additional information regarding student life, responsibilities, and University of Arkansas Policies governing student conduct can also be obtained by reading the Code of Student Conduct online at:

*University of Arkansas Code of Student Conduct*

<http://www.uark.edu/depts/dbcafls/studentguide03-code.html>

Finally, information related to the University of Arkansas Graduate School and its policies and procedures can be obtained from the Graduate School website at:

*University of Arkansas Graduate School*

<http://www.uark.edu/depts/gradinfo/>

or you may choose to contact the Graduate School directly at:

The Graduate School  
119 Ozark Hall  
University of Arkansas  
Fayetteville, AR 72701  
Phone: (479) 575-4401 Voice

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

### **A. Description of the Environmental Dynamics Program**

The Environmental Dynamics program focuses on the study of complex human and environmental interactions. It stresses interdisciplinary regional analysis of geophysical, biological, climatic, and sociocultural interactions and changes, including natural and social impacts of such dimensions as global climate change, human demography, pollution, landscape evolution and degradation, earthquakes, and groundwater depletion. The program stresses the application of appropriate methodologies such as GIS, GPS, remote sensing, computer modeling, and cartography to environmental problems. The research approach integrates the power, efficiency, and economy of advanced computer-based technologies into the study of human-environmental interactions within recent Earth history.

For more information about the University of Arkansas Environmental Dynamics Program, see our website at:

*Environmental Dynamics Program*

<http://www.endy-ua.org>

or contact the Director of the Environmental Dynamics Program at:

113 Ozark Hall  
University of Arkansas  
Fayetteville, AR 72701  
Phone: 479-575-6603 Voice  
479-575-3469 FAX

e-mail: [sboss@uark.edu](mailto:sboss@uark.edu)

#### **1. Purpose and Goals of the Environmental Dynamics Program**

The ENDY Program emphasizes original doctoral research at the interface between physical, biological, and sociocultural disciplines. This often requires creative formulation of problem solving between established scientific disciplines. Attention is given to both theoretical and applied issues. Each student is expected to develop an original, innovative research program in consultation with appropriate faculty members who serve as mentors and supervisors of the research, to successfully complete core course requirements and elective courses, and to complete a distinctive dissertation that significantly advances human knowledge. The ENDY program allows students to focus on a program leading to diverse careers in academia, international organizations, federal and state agencies, or private sector consulting careers.

#### **2. Dissertation Titles Completed in the Environmental Dynamics Program**

The table below provides the titles of doctoral dissertations completed in the Environmental Dynamics Program since its inception in 1998. Abstracts of these dissertations can be read on the Environmental Dynamics Program website listed above. A review of these titles reveals the breadth and depth of investigations in Environmental Dynamics at the University of Arkansas. Further, this list illustrates the diversity of interdisciplinary topics within the domain of Environmental Dynamics.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

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**Table 1. Dissertations Completed in the Environmental Dynamics Program**

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### **2001**

1. Dixon, Barnali Mitra, Applications of Fuzzy Logic to the Prediction of Potential Soil Erosion in a Large Watershed.
2. Fisher-Carroll, Rita Louise, Environmental Dynamics of Drought and its Impact on Sixteenth-Century Indigenous Populations in the Central Mississippi Valley.
3. Garner, Michael E., Effects of Anthropogenic Activities upon Land Cover Change in Johnson County, Arkansas.
4. Gould, Dorianne Abra, An Interdisciplinary Study of the Creation of Perceptual Map Layers for Predictive Modeling in a Geographic Information System (GIS): A Case Study of the Roman Roads in the Eastern Desert of Egypt.
5. Weiss, Elizabeth, A Cross-Cultural Study of Humeri: Environmental Causes of Morphology.

### **2002**

6. Alakkam, Abdulla Ahmed, Climate Change and Archaeological Site Distribution during the Past Four Millennia in Northern Jordan Utilizing Oxygen Isotope Analysis of Human Tooth Enamel and Geographic Information Systems.
7. Campbell, Sean William, Landscape Geochemistry of Karkevagge, Swedish Lapland.
8. Fye, Falko, Analyses of Decadal Moisture Anomalies in the USA, 1500-1978.
9. McGinnis, Shelley Rene, Factors Affecting Surface-Water and Ground-Water Quality within Tribal Lands of Eastern Nebraska.
10. Holt, David Harms, Did Extreme Climate Conditions Stimulate the Migrations of the Germanic Tribes in the 3<sup>rd</sup> and 4<sup>th</sup> Centuries AD? An Examination of Historical Data, Climate Proxy Data, and Migration Events.
11. Odhiambo, Ben K., Bathymetry, Sedimentation, Watershed Physiography and Historical Water Quality of Two Arkansas Lakes, Lake Shepherd Springs and Lee Creek Reservoir: A Geographical Information System (GIS) Approach.

### **2003**

12. Therrell, Matthew D., Tree-Rings, Climate, and History in Colonial Mexico.
13. Frentz, Irene C., Human Population Growth and Public Lands
14. Fye, Falko K., Analyses of North American Moisture Anomalies, 1500-1978.
15. Al Neimi, Mohamed R., Population Growth and Water Management Analysis in the United Arab Emirates from 1975 to 2000 by Using Geographical Information Systems

### **2004**

16. McClennahan, Patricia L., Subsistence-Settlement Patterns on the Central Alaska Peninsula, Alaska.
17. Schubert, Blaine. Dental Microwear, Paleodiets, and a Paleoenvironmental Reconstruction for the Makapansgat Cave fauna, Mpumalanga Province, South Africa

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### **B. Appropriate Students for the Environmental Dynamics Program**

The Environmental Dynamics Program seeks qualified, highly-motivated students interested in interdisciplinary research that embraces the complex interactions of human

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

populations with their natural world through time. As such, the academic discipline and background of prospective students is open. Graduates and current candidates within the ENDY Program have experience and degrees in Anthropology, Atmospheric Sciences, Biology, Computer Sciences, Engineering, Forestry, Geosciences, Geography, History, Hydrology, Landscape Architecture, Soil Science, Water Resources, and others.

### **C. Administrative Structure and Contacts**

The ENDY faculty consists of regular faculty from the Department of Anthropology and Department of Geosciences, and cooperating faculty from these and other departments and colleges across the University of Arkansas. In addition, faculty from the Departments of Agricultural Economics and Agribusiness, Rural Sociology, Biological Sciences, Biological and Agricultural Engineering, Chemistry and Biochemistry, Crop, Soil, and Environmental Sciences, History, and Landscape Architecture make up the current ENDY faculty. The ENDY program began in 1998 with 22 regular faculty and 32 cooperating faculty. An up-to-date listing of current faculty is provided on the ENDY web page: <http://www.endy-ua.org>.

The program has an organizational structure of a Director, two Associate Directors, and a Steering Committee of 7 additional faculty members and unit directors (see table below). A number of faculty from the Arkansas Archeological Survey, both on campus and at different research stations throughout the state, participate in mentoring and supervising ENDY students as well.

The Environmental Dynamics Program maintains strong associations with the several University of Arkansas research units including the Center for Advanced Spatial Technologies (CAST), the Arkansas Water Resource Center (AWRC), and the U. S. Geological Survey and the U.S. Department of Agriculture, National Water Management Center. In addition, ENDY faculty and students collaborate with other interdisciplinary degree programs at the University of Arkansas such as the Public Policy Program and the Arkansas-Oklahoma Center for Space and Planetary Sciences.

The table below provides the names, and contact addresses of the director, associate directors, and Environmental Dynamics Steering Committee members.

**Table 2. Organizational Structure of the Environmental Dynamics Ph.D. Program**

**Director: Dr. Stephen K. Boss**

Associate Professor, Dept. of Geosciences  
113 Ozark Hall  
Fayetteville, AR 72701  
e-mail: sboss@uark.edu

**Steering Committee: Dr. Malcolm Cleaveland**

Professor, Dept. of Geosciences  
113 Ozark Hall  
Fayetteville, AR 72701  
e-mail: mcleavel@uark.edu

**Associate Director: Dr. John C. Dixon**

Professor, Dept. of Geosciences  
113 Ozark Hall  
Fayetteville, AR 72701  
e-mail: jcdixon@uark.edu

**Steering Committee: Dr. Ralph Davis**

Professor, Dept. of Geosciences  
113 Ozark Hall  
Fayetteville, AR 72701  
e-mail: ralphd@uark.edu

**Associate Director: Dr. George Sabo, III**

Professor, Department of Anthropology  
334 Old Main

**Steering Committee: Dr. Fred Limp**

Director, CAST  
012 Ozark Hall

## ENVIRONMENTAL DYNAMICS HANDBOOK

Fayetteville, AR 72701  
e-mail: gsabo@uark.edu

**Steering Committee: Dr. Marvin Kay**  
Chair, Department of Anthropology  
330 Old Main  
Fayetteville, AR 72701  
e-mail: mkay@uark.edu

**Steering Committee: Dr. Indrajeet Chaubey**  
Assistant professor, Biological/Agricultural Eng.  
203 Engineering Hall  
Fayetteville, AR 72701  
e-mail: chaubey@uark.edu

Fayetteville, AR 72701  
e-mail: fred@cast.uark.edu

**Steering Committee: Dr. J. Van Brahana**  
Dept. of Geosciences  
113 Ozark Hall  
Fayetteville, AR 72701  
e-mail brahana@uark.edu

**Steering Committee: Student Representative**  
To be selected by vote of ENDY students.

### D. Example Program Schedule

The table below provides a schematic illustration of a typical program of study for students admitted to the ENDY program. This table assumes the schedule for a student initially admitted for the fall semester of the academic year. Students entering the ENDY program during the spring semester of the academic year would ordinarily expect this schedule to be shifted by one semester.

The information presented below is intended to serve as a general guide to the sequencing of events during the student's tenure in the ENDY program. However, individual circumstances may result in slight modifications to this proposed scheme. The ENDY program and its faculty are committed to helping students progress through the program efficiently, but recognize the value of maintaining some flexibility to accommodate individual needs in consultation with the student's advisory committee.

#### SEMESTER

#### ENDY PROGRAM TARGET MILESTONES

- |        |  |
|--------|--|
| 1      | Enter program, establish Advisory Committee, complete required courses and 1 <sup>st</sup> semester of ENDY Seminar, initiate discussions with potential dissertation advisors to identify appropriate dissertation research topic.  |
| 2      | Complete required core course work and 2 <sup>nd</sup> semester of ENDY Seminar, finalize discussions with potential dissertation advisor regarding dissertation research project, initiate development of dissertation proposal including library research and writing of grant proposals to support dissertation research in consultation with dissertation advisor and Advisory Committee, complete Annual Review of Graduate Student Progress. |
| Summer | Conduct preliminary research with objective of finalizing dissertation proposal, initiate discussions with ENDY faculty to assemble Comprehensive Examination Committee and Dissertation Committee, make preparations for Written Comprehensive Examinations, to include compilation of reading list.  |
| 3      | Continue with completion of elective coursework and 3 <sup>rd</sup> semester of ENDY Seminar, finalize dissertation proposal, assemble Comprehensive Examination Committee, complete Written Comprehensive Examination (typically early to mid-November), select final Dissertation Committee members, schedule and  |



## **ENVIRONMENTAL DYNAMICS HANDBOOK**

- present Oral Defense of Dissertation Proposal.
- 4 Continue with completion of elective coursework, conduct research related to dissertation project, complete Annual Review of Graduate Student Progress.
- Summer Conduct research related to dissertation project and initiate writing of dissertation.
- 5 Conduct research related to dissertation project and writing of dissertation.
- 6 Complete dissertation, schedule and present public defense of dissertation, complete Annual Review of Graduate Student Progress, graduate.

## **II. ADMISSIONS REQUIREMENTS AND PROCEDURES**

### **A. The University of Arkansas Graduate School**

Admission to the Graduate School is a co-requisite for admission to the ENDY program. Admission procedures and requirements are outlined in detail in the *Graduate School Catalog*. Application forms and catalogs can be obtained from the ENDY office or from the Graduate School:

Graduate School Admissions Office  
119 Ozark Hall  
University of Arkansas  
Fayetteville, AR 72701  
(479) 575-4401  
toll-free 1-866-234-3957

#### **1. Admissions Requirements**

The general requirements for regular admission to graduate standing within the University of Arkansas Graduate School and acceptance in a program of study leading to a graduate degree are:

##### **A Masters Degree**

a cumulative grade-point average of 2.70 or better (A=4.00) on all course work taken prior to receipt of a baccalaureate degree from a regionally accredited institution of higher education, or

a grade-point average of 3.2 or better on the last 60 hours of course work taken prior to receipt of the baccalaureate degree from a regionally accredited institution of higher education, or

a grade-point average between 2.50 and 3.2 on all course work taken prior to receipt of a baccalaureate degree from a regionally accredited institution of higher education and a satisfactory score on the Graduate Record Examinations general test, the Miller Analogies Test, or a similar test acceptable to the Graduate Dean, or

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

conferral of a post-baccalaureate graduate degree (excluding professional degrees) from a regionally accredited institution.

Additional details regarding admissions and categories of graduate admission are available in the *Graduate School Catalog*. Prospective applications are encouraged to refer to the *Graduate School Catalog* for any additional information they may require.

### **2. Application Procedure**

To apply for admission to the Graduate School, obtain the forms indicated below and return directly to the Graduate School office.

Obtain an application form from the Graduate School, 119 Ozark Hall, University of Arkansas, Fayetteville, 72701 or download an application form from the Graduate School web-site: <https://www2.uark.edu/servlet/edu.uark.emgt.admissions.Application>.

Fill out the form, or answer the questions on the on-line application, and send together with a processing fee to the Graduate School. For on-line applications, the fee may be sent by credit card.

Applicants must also arrange for two copies of official transcripts to be sent from every college or university you have attended.

Finally, applicants are required to forward results of the Graduate Record Examination (GRE) or equivalent standardized examination to the Graduate School for inclusion in their application file.

The [International Programs & Services Office](#), located in Dickson Street Annex, (170 DICX), provides evaluation services as part of the Graduate School for all international graduate applicants. International Applicants should refer to the web site of the [International Programs & Services Office](#) for specific information related to the application procedure for international students.

The [International Programs & Services Office](#) may require all international applicants to successfully complete the TOEFL exam (550 or above on the written exam). International students who teach courses at the University of Arkansas must have received a score of 50 on the TSE or SPEAK exam before they begin their teaching duties.

### **3. Application Forms**

All necessary application forms may be obtained from the Graduate School, 119 Ozark Hall, University of Arkansas, Fayetteville, 72701 or downloaded from the Graduate School web-site

The current [Graduate Catalog](#) of the University of Arkansas should be consulted for information regarding deadlines for application.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

### **B. Environmental Dynamics Program**

Admission to the University of Arkansas Graduate School does not automatically confer admission into the Environmental Dynamics Program. Admission to the Environmental Dynamics Program is decided by the ENDY Steering Committee following review and evaluation of application materials submitted by prospective students.

Normally, applicants will be accepted or declined based on review of submitted application materials. However, in considering applications, the ENDY Steering Committee may evaluate not only the applicant's academic record, but also the applicant's stated intentions and their relevance to the ENDY program, the availability or potential for extramural funding support for the applicant's research, and the availability of faculty with requisite expertise to supervise the dissertation research.

In special circumstances, a conditional admittance may be decided upon, with some stipulations specified regarding the special circumstances of the admission process. All applicants will be informed in writing about admissions decisions.

Once admitted to the ENDY program, the student must comply with policies and procedures of both the Graduate School and the ENDY program. The student is responsible for adhering to regulations outlined in the Graduate School Catalog, the Code of Student Life, and ENDY policies and procedures as set forth in this handbook.

#### **1. Admissions Requirements**

To be considered for admission to the ENDY program, in addition to regular admission status conferred by the Graduate School, students must meet the following criteria:

The applicant must have an MA or MS or equivalent graduate degree;

- while the applicant may apply to the ENDY program while still working on a master's degree, all requirements for that degree must be completed by the beginning of the first semester of ENDY course work;
- in cases where BA/BS (or equivalent) students with especially strong and ENDY-related academic backgrounds apply to the program, we may admit these students to the program conditional upon first completing an MS/MA degree;

The applicant must have a 3.2 or better GPA for MS/MA work (or for BS/BA work if applying prior to completing the MS/MA degree);

If the applicant is currently (or recently has been) a graduate student at the University of Arkansas, it is not necessary to reapply to the Graduate School. It is, however, necessary to apply to the ENDY program for admission to the program.

#### **2. Application Deadlines**

Normally, the regular admission cycle begins in January for fall admission, with a funding application deadline set in March (check our homepage for the deadline: (<http://www.endy-ua.org>)). For students not applying for financial support, the admission

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

committee will consider applications at any time. However, we strongly encourage persons to apply by the March deadline to ensure full consideration of submitted applications materials.

To be considered for admission to the fall semester of the academic year (typically beginning in late-August), applicants should arrange for all necessary application materials for the Graduate School and the ENDY program to be submitted no later than the March deadline.

For students applying for financial support through a competitively-awarded graduate assistantship, applicants should arrange for all necessary application materials for the Graduate School and the ENDY program to be submitted on or before the March deadline of the year in which admission is desired.

Students may also be admitted to the ENDY program for the spring semester of the academic year (typically beginning in early January). In these cases, applicants should be aware that graduate assistantships likely will not be available and therefore, the applicant may be required to demonstrate their ability to be financially self-sufficient or identify alternative funding sources. Students desiring admission for the Spring semester should arrange for all necessary application materials for the Graduate School and the ENDY program to be submitted no later than 30 September of the year immediately preceding the January admission date.

### **3. Application Procedure**

To complete an application for admission to the ENDY program, applicants must complete and submit all materials necessary for admission into the University of Arkansas Graduate School as outlined previously (i.e. admission form, transcripts, and GRE scores should be returned to the Graduate School and not the ENDY office). The Graduate School will process these forms and forward their evaluation of your records to the ENDY office.

In addition to these forms, and in order to further evaluate the qualifications of prospective ENDY students, the ENDY program requires the following application materials to be submitted as a package directly to the ENDY office:

Three letters of recommendation from individuals familiar with the applicant's academic or work history who can give candid assessments of the applicant's ability to perform at the Ph.D. level;

A three-page statement of intent including the applicant's reasons for pursuing a doctoral degree in ENDY, relevance of prior academic or work experience, current research interests or employment that bears on the degree, special skills, fieldwork experience, familiarity with interdisciplinary work, if any, and future career goals;

A writing sample, such as a publication, report, major term paper, undergraduate honors thesis, chapter of an M.A. or M.S. thesis, or similar document that demonstrates the applicant's organizational skills, ability to conduct meaningful research, familiarity with the body of research literature, ability to report clearly on academic topics, and general writing skills (note: please send a copy, not an original, of a thesis or term paper; this sample will not be returned);

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

Any other relevant information that would assist the Steering Committee in selecting applicants;

For students requesting consideration for a graduate assistantship, a completed University of Arkansas Graduate School Assistantship form should also be submitted.

### **C. Financial Assistance**

Financial assistance is available for qualified applicants in the form of limited numbers of graduate assistantships, research assistantships, doctoral fellowships, and other scholarships made available through the University of Arkansas, private foundations, and public resources.

#### **1. Graduate Assistantships**

The ENDY program has a limited number of graduate assistantships available to assist highly qualified individuals defray some of the costs of their graduate education. Graduate assistantships are awarded annually on a competitive basis following review of application materials.

As a general rule, graduate assistantships are awarded for the academic year in which admission to the ENDY program is desired. Each award carries a stipend for the nine-month academic year during which the awardee is expected to assist with various duties within the ENDY program and the home department sponsoring the student. These duties usually involve assistance with classroom teaching and laboratory teaching, but may also involve assistance with departmental research, grant writing, or other departmental service activities where there is a need.

In addition to the stipend associated with the graduate assistantship, for purposes of tuition, awardees are considered residents of Arkansas and therefore eligible for in-state resident tuition rates. However, the assistantship carries a tuition waiver for the duration of the award up to 21 hours per year of graduate credit. Students with graduate assistantships are required to pay various university fees (e.g. activity fee, parking fee, technology fee, etc.).

Additional information regarding graduate assistantships is available in the Graduate School Handbook or online at:

<http://www.uark.edu/depts/gradinfo/current/handbooktoc.html>

#### **2. Research Assistantships**

Research Assistantships are stipends paid from a grant/contract held by a faculty member or organizational unit on campus. Normally, the Graduate School does not award research assistantships; rather, these are paid by an individual department, faculty member, or organizational unit on campus. However the Dean of the Graduate School must approve all requests for new graduate assistant positions.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

Students desiring a research assistantship should contact individual faculty within the ENDY program or other organizational units on campus to determine the potential availability of these awards.

### **3. Distinguished Doctoral Fellowships**

As a result of a \$300 million gift to the University of Arkansas in 2002, the Graduate School has made available a number of Distinguished Doctoral Fellowships to the ENDY program. These fellowships are the most prestigious fellowships offered at the University of Arkansas and are reserved for applicants of exceptional ability and promise for advanced research. Distinguished Doctoral Fellowships carry a stipend of \$30,000 annually plus paid tuition. These fellowships are awarded for up to four years to qualified candidates. To qualify for the Distinguished Doctoral Fellowship, students must have minimum scores on the Graduate Record Examination of 1200 (combined verbal + quantitative), 5.5 (GRE Analytical Writing), and a cumulative graduate GPA of 3.8.

### **4. Doctoral Academy Fellowships**

As a result of a \$300 million gift to the University of Arkansas in 2002, the Graduate School has made available a number of Doctoral Academy Fellowships to the ENDY program. These fellowships are reserved for applicants of exceptional ability and promise for advanced research. Distinguished Doctoral Fellowships carry a stipend of \$15,000 annually plus paid tuition. These fellowships are awarded for up to four years to qualified candidates. To qualify for the Doctoral Academy Fellowship, students must have minimum scores on the Graduate Record Examination of 1100 (combined verbal + quantitative), 5.0 (GRE Analytical Writing), and a cumulative graduate GPA of 3.65.

### **5. Doctoral Fellowships**

The Graduate School also awards a limited number of Doctoral Fellowships each year. The fellowships are payable in two payments at the beginning of the fall and spring semesters. They are stipends paid to students of outstanding ability for recruitment to doctoral programs of proven strength and vigor. These fellowships may supplement other stipends and grants that the students receive. Contact the Graduate School for the specific amounts of these fellowships.

The fellowships will be granted for up to four years with annual renewal contingent upon superior academic performance and progress toward the degree

Additional details regarding doctoral fellowships can be obtained from the Graduate School Handbook or online at

<http://www.uark.edu/depts/gradinfo/current/handbook.html#doctfellow>

### **6. Other Forms of Financial Assistance**

Other forms of financial assistance may be available to students in the form of scholarships, foundation awards, student loans, or other grants of various kinds. Students

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

interested in obtaining financial assistance or identifying appropriate opportunities for financial assistance are directed to contact the University of Arkansas Office of Financial Aid:

Office of Financial Aid  
114 Silas Hunt Hall  
Fayetteville, AR 72701  
(479) 575-3806

or online at: <http://www.uark.edu/admin/fininfo/>

### **III. CORE CURRICULUM AND ELECTIVE COURSES**

#### **A. Declaration of Intent.**

Students who wish to become candidates for the degree of Doctor of Philosophy must file a statement of their intention to become doctoral candidates with the Dean of the Graduate School upon registration for their first semester of graduate work in the ENDY program. A student cannot satisfy any part of the residence requirement for the doctoral degree until after a Declaration of Intent has been filed with the Dean of the Graduate School.

Immediately after the student has filed a Declaration of Intent and indicated the major field of study, a Doctoral Program Advisory Committee will be appointed (with the approval of the Dean of the Graduate School) from the graduate faculty to evaluate the student's preparation and fitness for further graduate work.

#### **B. Faculty Advisor and Advisory Committee**

Upon entry into the ENDY program, all students will be assigned an advisor. Students must have an advisor to proceed in the program. The student may elect to change advisors (especially from the initial assigned advisor to a permanent one, once the student is part of the program).

Once a faculty advisor is selected, the student must assemble an Advisory Committee consisting of the faculty advisor and two additional faculty members selected by the student in consultation with his/her advisor. This committee must include persons representing two or more disciplines. Once the Advisory Committee is selected, the Advisory Committee form should be completed, signed, and submitted to the ENDY office and Graduate School for inclusion in the student's permanent file. It is important that students and faculty advisors recognize the importance of establishing the Advisory Committee as soon as possible following the student's entry into the ENDY program, and should endeavor to do so no later than the 4<sup>th</sup> week of the student's first semester.

The function of the Advisory Committee is to provide guidance to the student in selecting courses appropriate to completing the degree program. The committee will assist the student in selecting courses that balance the physical, social, and biological sciences based on discussion with the student regarding areas of interest and potential dissertation projects.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

### **C. Residency Requirement**

Residence requirements are intended to insure that every doctoral student has ample opportunity for the major intellectual development, which can result from a sustained period of intensive study and close association with other scholars in the intellectual environment of the University. The requirement recognizes that growth as an independent scholar is not merely a matter of class attendance, but rather involves a broader development of the intellect which comes about through intensive study, independent research, sustained association with faculty members and other colleagues who share common scholarly and professional interests, attendance at seminars and colloquia, intensive reading and familiarization with library resources, consultation with specialists in other disciplines and resource centers, and the opportunity for broadened exposure to current intellectual issues as they are revealed in various campus offerings.

After filing a Declaration of Intent to pursue the doctoral degree, a student must fulfill a residence requirement by completing a minimum of two consecutive semesters of full-time graduate study (nine hours or more per semester), either fall-spring, spring-fall, spring and a complete 12-week summer session, or a complete 12-week summer session and fall. This period of residence is independent of and in addition to that required for any other graduate degree. During this period of residence, the student must be continually involved on a full-time basis with the on-site academic, scholarly, and research activities of the academic department (or corresponding academic unit) in which the degree program is administered.

A student who does not concurrently hold appointment as a Graduate Assistant must satisfactorily complete a minimum of nine semester hours, including dissertation credits but exclusive of courses offered through the Division of Continuing Education, during each semester or summer counted in the residence period. For degree purposes, any graduate credit course offered by the University of Arkansas, Fayetteville, via distance education (regardless of class sites) will be counted as residence credit.

For students who hold appointments as Graduate Assistants this requirement is six semester hours per semester if the appointment is for 50 percent time and nine semester hours per semester if the appointment is for 25 percent time. A student not on an assistantship who intends to satisfy one semester of the residence period during the summer must satisfactorily complete a minimum of nine semester hours of such work during the summer. For a student holding a concurrent assistantship of 25 percent or 50 percent time in the summer, this requirement is three semester hours per any five- or six-week summer session.

Students who also hold University appointments, other than those of Graduate Assistant, for half time or more will be considered to contribute to the residence requirements only for semesters or 12 weeks in the summer during which all of the following criteria are met:

the duties of the appointment primarily involve degree-related academic or scholarly activities such as dissertation research;

the departmental chairperson (or corresponding administrator) and the student's Doctoral Program Advisory Committee certify that the duties of the appointment do not interfere



## **ENVIRONMENTAL DYNAMICS HANDBOOK**

with the appointee's regular participation as a student, on an essentially full-time daily basis, in the normal on site academic, scholarly, and research activities of the department and degree program and the associated scholarly demands thereof;

the student is enrolled, for each semester or summer session counted in the residence period in at least six semester hours in each semester or three hours in each of two consecutive five-or six-week summer sessions or 6 hours in an entire ten- or twelve-week summer session; and

file a plan for approval by the Graduate Dean in advance of satisfying residence requirements.

### **D. Coursework Beyond the Master's Degree**

Coursework totaling 24 hours beyond the master's degree is required of all students in the ENDY program.

In addition, students are required to register for 1 hour of ENDY 6991 (ENDY Seminar) each semester for the first 3 semesters of their tenure in the ENDY program.

Whereas 24 hours is the required minimum course work toward the ENDY degree, additional courses may be required to provide necessary background or skills to complete the degree program. The student, the dissertation advisor, the Advisory Committee, the Comprehensive Examination Committee, the Dissertation Committee, or some combination of these entities will ordinarily identify such additional course work.

### **E. Doctoral Dissertation Credits**

In addition to required course work, the Graduate School requires 18 hours of dissertation credit to complete a doctoral degree. These hours are usually taken at the end of the student's course of study, upon the completion of regular course work and following successful assessment of competence as demonstrated by passing written and oral qualifying examinations, and while the student is conducting dissertation research.

Furthermore, the Graduate School requires all students who are candidates for a doctoral degree (students who have successfully completed their comprehensive examinations) to be continually enrolled, which means that during both semesters of the academic year and at least one session of summer school, the student must be signed up for one hour or more of dissertation credit.

### **F. Required Core Curriculum**

Students beginning the ENDY program starting fall semester 2002, are required to take the following three ENDY core courses:

<b>SEMESTER</b>	<b>COURSE #</b>	<b>COURSE NAME</b>
Fall	ENDY 5053	Quaternary Environments

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

Fall	ENDY 6013	Environmental Dynamics
Spring	ENDY 5113	Global Change

Collectively, these courses constitute 9 of the required 24 hours of graduate credit required to satisfy the ENDY coursework requirement. Students must receive a minimum '3.0' average GPA ('B' average grade) in the ENDY core courses. Failure to maintain a 3.0 average GPA in core courses may result in dismissal from the ENDY program.

### 1. ENDY 5053 – Quaternary Environments

Required course for ENDY doctoral candidates. An interdisciplinary study of the Quaternary Period including dating methods, deposits, soils, climates, tectonics and human adaptations. Prerequisite: graduate standing.

### 2. ENDY 6013 – Environmental Dynamics

Required course for ENDY doctoral candidates. Overview of Earth Systems: Lithosphere; Hydrosphere, Atmosphere, Biosphere, Cryosphere, and human interaction across Earth systems. Emphasis on understanding of processes within Earth systems and interactions across Earth Systems as they pertain to global self-regulation, secular variation, climate stability, development and sustainability of human societies. Prerequisite: graduate standing.

### 3. ENDY 5113 – Global Change

Required course for ENDY doctoral candidates. Examines central issues of global change including natural and human induced climate change, air pollution, deforestation, desertification, wetland loss, urbanization, and the biodiversity crisis. The U.S. Global Change Research Program is also examined. Prerequisite: graduate standing

If any of the courses above was taken to satisfy a master's degree requirement on this campus or another one, then the student, in consultation with the Advisory Committee, shall select a substitute course of the same general nature.

### 4. ENDY 6991 Environmental Dynamics Seminar

All ENDY students are required to register for 1 hour of ENDY 6991 (Environmental Dynamics Seminar) each semester for at least the first three semesters of tenure in the ENDY program or until they have successfully passed their qualifying examinations. The purpose of ENDY Seminar is to expose students to rigorous analysis of recently published research results and discussion of those results among faculty and students from different disciplines, to impress upon students the importance of engaging in active discourse on complex problems, to promote active consideration of the larger realm of Environmental Dynamics beyond the student's dissertation topic or research work group, and to promote the intellectual growth of doctoral candidates during their time in residence at the University of Arkansas.

This course does not apply towards satisfying required course hours.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

### **G. Elective Courses**

Elective courses totaling a minimum of 15 hours of graduate credit will satisfy the remaining coursework requirement for the ENDY doctoral degree.

Elective courses may be taken in any area pertinent to the student's program of research or to obtain additional technical skills relevant to future employment goals. However, the student should choose a program of study in consultation with the Advisory Committee and only take those courses that are approved by the committee or required by mandate of the faculty advisor, the Comprehensive Exam Committee, the Dissertation Committee, or a combination of those entities.

### **H. Example Schedule of Sequence of Coursework**

The example below provides an illustration of the typical sequence of course work for a student entering the ENDY program in the fall semester of the academic year on a 50% appointment as a graduate assistant.

<b>SEMESTER</b>	<b>COURSES</b>	<b>HOURS</b>
Fall	ENDY 5053 (required), ENDY 6013 (required), ENDY 6991	7
Spring	ENDY 5113 (required), Elective course, ENDY 6991	7
Fall	Elective courses, ENDY 6991	7
Spring	Elective courses, Dissertation	9 - 12
Fall	Dissertation	6
Spring	Dissertation	6

Note above that some dissertation credits or course work may be reserved for summer sessions to ensure continuous enrollment of the student during his/her tenure in the ENDY program.

## **IV. QUALIFYING EXAMINATIONS**

This section describes the nature and procedures used for ENDY qualifying examinations. This major set of examinations is referred to as the comprehensive examinations and is taken in the student's third semester. Requests to defer comprehensive examinations must be made in writing to the ENDY steering committee at least 3 months in advance. In addition, any requests for deferral must be accompanied by strong supporting justification from the student's primary doctoral advisor or advisory committee. However, requests for deferral of the comprehensive examinations will not be granted except under the most unusual circumstances.

The comprehensive examinations consist of two rigorous examinations: 1) a written comprehensive examination and 2) an oral defense of the dissertation proposal. Both examinations are intended to evaluate the level of scholarship of the student by assessing the student's command of information learned in required courses and determining the adequacy of the student's intellectual preparation to engage in significant research leading to completion of the dissertation. As such, successful completion of these examinations marks an important milestone in the student's progress toward the degree as she/he makes a transition from largely

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

classroom-oriented study to independent research that is the hallmark of the doctoral tradition of academic achievement.

### **A. Written Comprehensive Examinations**

Comprehensive Examinations are written only twice a year, approximately during the last third of the fall and spring semesters; all students writing exams during a particular semester write these during the same week. The exact dates of the written examinations are announced early each semester.

#### **1. Comprehensive Examinations Committee**

Prior to taking the written comprehensive exams, a Comprehensive Exam Committee will be formed. This committee consists of the advisor and at least four other faculty members who hold the rank of Faculty I and II on the Graduate Faculty and who represent two or more disciplines.

This committee is selected to reflect an understanding of the student's general research program, and its function is to prepare and grade the student's written comprehensive exams. Normally, there is some carryover between the Advisory Committee, the Comprehensive Examination Committee, and the Dissertation Committee. Further, these committee members are normally Fayetteville campus faculty members in order that they know the student and her/his work and interests.

The student's written examinations will tend to be tailored to the individual student, stressing that student's background, course work, dissertation interest, and other experiences that are relevant to the student's career goals. The committee will consult with the student, preferably during the early weeks of the semester during which the student plans to write his/her exams. The purpose of an early meeting with the student is to allow the committee members to decide the nature of the examination.

Once the general topics are selected between the student and the committee, the student will prepare reading lists of books, chapters, and journal articles that are appropriate for each of the topics. Those reading lists shall be modified and approved by the faculty members serving on the Comprehensive Examination Committee. These reading lists shall define the "universe" of material for which the student shall be responsible on the written exam.

#### **2. Structure of the Written Comprehensive Examination**

Each ENDY student will be examined on four subject areas:

Environmental Dynamics issues from the core curriculum and related courses,

Methods related to the students research topic;

Theory related to the students research topic;

Substantive material related to the students research topic.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

Normally, the exams are given in the order indicated above.

The student's Comprehensive Examination Committee will prepare the questions, grade the answers, and determine if the student has passed all the sections of the exam. All members of the student's committee will participate in these three tasks. In evaluating student performance on each section of the exam, there must be at least four favorable votes (of five) among the committee to confer successful completion of that part of the examination.

Exams will be written over four consecutive days, one part being written each day. The period for writing each exam will be approximately four hours per day. The advisor will be responsible for locating a suitable room in which the student may write the exam. Unless the committee agrees to a change in normal procedures, for a particular part of the exam, these exams are closed-book exams. Necessary preparations will be given to securing space and a neutral computer, to which the student does not normally have access. Exams may be computer-written or hand written depending upon the student's choice.

The exams may be passed in total or in parts; sections passed will not require retaking. If the student does not pass a section(s), a second opportunity to take and pass the section(s) may be arranged at the discretion of the Comprehensive Examination Committee. If the student fails to pass all sections of the exam in two attempts, he/she will be dismissed from the ENDY program. The committee has additional discretion to recommend, under special circumstances, that the student be permitted to take the exam for a third (and final) time. If a student needs to retake any part of the exam, that will occur during the following semester (at the next earliest opportunity) and the student must pass those remaining portions of the exam before proceeding further in the ENDY program.

If a student fails any portion(s) of the written comprehensive exam and declines an opportunity to retake the exam, the failing grade will stand and the student will be dismissed from the ENDY program.

### **B. Defense of the Dissertation Proposal**

Following completion of all parts of the Written Comprehensive Examination, the student will submit a dissertation proposal to the Comprehensive Examination Committee for review. This proposal will be a document of approximately 15 single-spaced pages and should include appropriate figures and references to pertinent literature. The proposal should be organized and written so that it could, in most cases, be submitted as a National Science Foundation doctoral dissertation research improvement or graduate fellowship proposal.

#### **1. Structure of the Defense of the Dissertation Proposal**

Once a proposal is submitted to the Comprehensive Examination Committee, it must be defended through a public oral presentation and examination in a venue open to the university community at large. During the defense, the student is expected to make a brief presentation outlining the proposed program of dissertation research, including background and justification for the proposed research, methods to be employed during the research, and the significance of the research with respect to the specific field of inquiry and the broader realm of Environmental Dynamics.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

At the conclusion of the student's presentation, members of the university community, the public, and the Comprehensive Examination Committee shall ask questions of the student in order to clarify the research agenda, probe the depth of the candidate's understanding of the proposed research, and further assess the adequacy of the candidate's preparation to proceed with research leading to the doctoral degree. The oral exam must be successfully passed before the student advances to candidacy and before the dissertation can be written. Failure to pass this important examination will result in dismissal from the ENDY program. At the discretion of the student's committee, the oral exam may be taken a second time if it is not passed the first time. All parts of the Written Comprehensive Examination and Defense of the Dissertation Proposal defense should be completed no later than the end of the student's second year (4<sup>th</sup> semester) in the program.

If a student fails the oral defense of the dissertation proposal and declines an opportunity to defend the proposal a second time, the failing grade will stand and the student will be dismissed from the ENDY program.

### **V. DOCTORAL DISSERTATION RESEARCH**

Each candidate in the ENDY program must complete a doctoral dissertation on some topic in the major field. The topic assignment shall be made and a title filed with the Dean of the Graduate School at least one year before the final examination, the specific problem and subject of the dissertation to be determined by the major adviser, the candidate, and the Advisory Committee. The completed dissertation must be a definite, scholarly contribution to the major field. This contribution may be in the form of new knowledge of fundamental importance, or of modification, amplification, and interpretation of existing significant knowledge.

Each candidate will formulate a research topic on which to focus during her/his tenure in the ENDY program. This research topic will be selected through consultation with the Advisory Committee. The research topic will be conveyed to the director during the first year of studies, who will affirm that the topic is compatible with ENDY principles of studying human-environmental interactions.

A statement of the student's research topic, once approved, will be signed by both the student and the dissertation advisor and placed in the student's permanent file. This research topic may be changed at any time while the student is in the program, but such changes must be approved in consultation with the Advisory or Dissertation Committee, and such approval documented in writing and included in the student's file.

In cases where a student has successfully passed qualifying examinations and desires to change the dissertation topic, the Dissertation Committee will have discretion to determine whether or not re-examination of all or parts of the candidate's qualifications is necessary or justified. It is expected that any decision to re-examine the candidate will be made with the consent of the candidate and the dissertation advisor. If a candidate desires to change dissertation topics but refuses to submit to re-examination, either all or part, the Dissertation Committee will have discretion to reject the proposed change or dismiss the student from the ENDY program. In addition, a change in dissertation topic may be accompanied by appointment

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

of a new Dissertation Committee composed of faculty better qualified to direct and advise the new topic.

Typewritten copies of the completed dissertation in the prescribed form must be presented to the candidate's advisory committee for approval at least six weeks before the degree is to be conferred. After approval by the committee and the Dean of the Graduate School, two copies must be deposited with the graduate school at least two weeks before the degree is to be conferred, together with two copies of an abstract, of not more than 350 words, approved by the major adviser as suitable for publication. The third copy of the dissertation shall be presented to the candidate's major department.

### **A. Purpose of the Dissertation**

The degree of Doctor of Philosophy is awarded in recognition of high scholarly attainment as evidenced by a period of successful advanced study with at least a 3.0 cumulative graduate grade point average, the satisfactory completion of certain prescribed examinations, and the development of a dissertation covering some significant aspect of a major field of learning.

The purpose of the dissertation is to engage the candidate in rigorous scholarship and research that contributes significantly to human knowledge. This requires active research on the candidate's chosen topic including a thorough review of previous works of a similar or related nature, formulation, testing, and validation of hypotheses through data gathering and analysis, and synthesis of results of experiments or observations in a substantial body of work that can be disseminated to the broader academic community through publication in refereed academic journals, proceedings, and books.

### **B. Dissertation Committee**

Upon successful completion of the written comprehensive examinations and the oral dissertation proposal defense, the student will assemble a Dissertation Committee to be charged with oversight of the dissertation. This committee consists of the student's advisor and a minimum of two additional faculty members. At least two disciplines must be reflected in the makeup of this committee.

The primary purpose of this committee is to guide the student while conducting original research for a dissertation. Therefore, faculty members who are knowledgeable about dimensions of the student's research should be selected to serve on this committee. In addition to at least three faculty members from the University of Arkansas, a student may select an external member from a non-University of Arkansas (Fayetteville) institution to serve on his/her committee provided the member is approved by the university for faculty status of adjunct on our campus. This fourth person, although not required, may add particular expertise in some dimension that is not reflected by other members of the committee. An example would be an expert who is very familiar with some subject matter treated by the student in his/her dissertation. All faculty who are providing major dissertation advising (significant substantive input) will normally be included on the dissertation committee.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

### **C. Structure and Composition of the Dissertation**

In consultation with the Dissertation Advisor and the Dissertation Committee, the student will develop an outline for the structure and composition of the dissertation. In general, faculty advisors and committee members encourage students to structure their dissertation in such a way that a minimum of three contributions to the scholarly literature may be extracted from the body of the dissertation.

Details regarding the most suitable format in which to achieve this objective are reserved for discussion among the candidate and her/his committee. It will be the role of the Dissertation Committee to approve the final format, structure, and composition of the dissertation. The Graduate School provides additional requirements for formatting of the dissertation in the Guide to Theses and Dissertations (<http://www.uark.edu/depts/gradinfo/current/ThesisGuide.html>). Students are expected to adhere to all requirements of the Graduate School and their respective dissertation committees in completing the final dissertation document.

## **VI. FINAL EXAMINATION**

A final examination (commonly referred to as the dissertation defense) of each candidate for the degree of Doctor of Philosophy will be organized as a public presentation (oral). ***The dissertation advisor will forward to the Dean of the Graduate School, not less than ten (10) business days before the date of the final oral examination, an abstract of the dissertation accompanied by a memorandum announcing the date, time, and place of the oral examination.*** The examination will be primarily concerned with the field of the dissertation, but may also include other aspects of the candidate's graduate work. The examining committee shall consist of the student's Dissertation Committee and others who may be included at the discretion of the dissertation advisor and the Dean of the Graduate School.

### **A. Structure and Composition of the Dissertation Defense**

The dissertation defense will be scheduled at a time and place accessible to any members of the university community and the public at large. Typically, the dissertation defense will begin with a presentation by the candidate outlining the general principles of the dissertation topic, the hypotheses that were investigated as part of the research project, discussion of research methodologies, and synthesis of results of the research.

Following the presentation, the dissertation advisor will serve as moderator of an open questioning period. During this time, it will be the responsibility of the dissertation advisor, as chair of the Dissertation Committee and moderator of the dissertation defense, to ensure that questions from either committee members or the public are relevant to the candidate's body of work as represented by the dissertation. It is recognized that free and open discourse during the dissertation defense is part of the centuries-old doctoral tradition, and while the questioning period can be intense, wide-ranging, highly focused, and introspective, it is expected that examination of the candidate throughout the dissertation defense will be conducted with professional decorum and in the long-standing spirit of academic inquiry.

## **VII. SUBMITTING THE COMPLETED DISSERTATION**



## **ENVIRONMENTAL DYNAMICS HANDBOOK**

Three typewritten copies of the completed dissertation in the prescribed form must be presented to the candidate's advisory committee for approval at least six weeks before the degree is to be conferred. After approval by the committee and the Dean of the Graduate School, two copies must be deposited in the Mullins Library at least two weeks before the degree is to be conferred, together with two copies of an abstract, of not more than 350 words, approved by the major advisor as suitable for publication. The third copy of the dissertation shall be presented to the candidate's major department.

One copy of a student's completed dissertation must be submitted to the ENDY office in addition to copies deposited in the library and with the student's advisor. This office copy may be printed on non-bond paper and it should be submitted as loose pages suitable for binding. Upon submission of the dissertation, the ENDY office will arrange for binding by the University of Arkansas Printing Services.

### **VIII. GRADUATION**

A student cannot be cleared for graduation until an application for the degree has been filed with the Registrar's Office and the appropriate graduation fee has been paid. The degree application card is obtained from the Graduate School Office and filed with the Registrar for the semester in which the student expects to receive the degree. If the student does not graduate in the indicated semester, the student must reapply for graduation by contacting the Registrar's Office. Please refer to the Master's Calendar or Doctoral Calendar for specific deadline dates.

Once a year, the University of Arkansas offers a number of ceremonies in the month of May for graduates who have completed graduation requirements within the academic year. Graduate students are recognized at the All-University Commencement ceremony which begins at 9:00 on the 2nd Saturday of May and runs approximately 2 hours. Additional information is made available in the spring semester.

#### **A. Participation in Commencement Ceremony**

Summer, fall, and spring Degree Recipients/Applicants are invited to participate in the All-University Commencement ceremony. Degree applicants for the future summer and fall semester MAY participate with approval of their advisor. A form is required and may be obtained from the Graduate School or our home page. An immediate family member (spouse, parent, child) who is a member of the academic faculty at the University of Arkansas, Fayetteville, may present your diploma. Please contact the Graduate School for arrangements.

#### **B. Deadline For Name to be Included in Commencement Program**

The Graduate School makes the effort to include as many graduate students in the Commencement Program as possible. Keep in mind that there are printing deadlines. We tell students that their name should be included if they apply for graduation by late February. All past degree recipients for the academic year are automatically included.

#### **C. Dissertation Titles in Commencement Program**

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

The dissertation title is included for doctoral recipients/candidates. Every effort to have an up-to-date title on file with the Graduate School by late February is appreciated.

### **IX. ANNUAL REVIEW OF GRADUATE STUDENT PROGRESS**

In accordance with the policies of the University of Arkansas Graduate School and the Graduate Council, it will be the policy of the Environmental Dynamics Program (ENDY) to conduct an annual review of progress toward the degree for each enrolled student. At a minimum, the review will examine progress:

- 1) Toward completing required course work with the minimum grade point average defined by the Graduate School;
- 2) In successfully completing all qualifying examinations required to be admitted to candidacy for the degree as required by the Environmental Dynamics Program and the Graduate School;
- 3) Toward completing dissertation requirements including but not limited to:
  - a) Establishing Advisory and Dissertation Committees as prescribed in the Environmental Dynamics Graduate Handbook;
  - b) Preparing a formal, written dissertation proposal as prescribed in the Environmental Dynamics Graduate Handbook;
  - c) Conducting an initial meeting with members of the Advisory and Dissertation committee as prescribed in the Environmental Dynamics Graduate Handbook;
  - d) Conducting research related to the dissertation;
  - e) Preparing manuscripts describing results of original research to be submitted to appropriate academic journals;
  - f) Writing the dissertation;
- 4) Toward completing other specified requirements for the degree (e.g. satisfactory evaluations of teaching, participation in ENDY or University of Arkansas service activities, etc.).

#### **A. Annual Review Procedure**

The annual review of graduate student progress to be enacted by the Environmental Dynamics Program will follow the procedure outlined below:

- 1) During the Spring semester of each academic year, the Director of the ENDY program will remind each student enrolled in the ENDY program to initiate a meeting with his/her advisor and at least one additional member of the student's advisory or dissertation committee for the purpose of evaluating student progress toward the degree. The student should plan sufficiently so that this review can be completed on or before 15 April each spring semester.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

- a) The annual progress review will consist of a face-to-face interview with the student and the committee member(s) selected to serve as reviewers. In situations where it may be impractical to meet the student face-to-face, the review may be conducted with the advisor and committee member(s) via telephone or e-mail correspondence, or other vehicle agreed to by the involved parties.
- 2) Upon completion of the review, the committee will articulate its assessment regarding progress toward the degree directly to the student by indicating that the student is making normal progress, adequate progress, or inadequate progress.
  - a) Normal progress is defined as a combination of the items listed below appropriate to the student's seniority within the ENDY program:
    - i) Student has established an Advisory or Dissertation Committee;
    - ii) Completing required ENDY core courses during the first year of enrollment and residence;
    - iii) Completing at least 18 hours of course work per academic year or comparable work towards completion of the degree;
    - iv) Maintaining a minimum grade point average of 3.20;
    - v) Student is on schedule to complete qualifying examinations during the 3<sup>rd</sup> semester of enrollment;
    - vi) Student has made significant progress toward defining a dissertation topic;
    - vii) Student is in the process of writing a formal dissertation proposal to be presented to advisory or dissertation committee;
    - viii) Student is working with advisor to secure funding for research leading to the dissertation.
    - ix) Student is conducting research related to the dissertation;
    - x) Student is preparing manuscripts detailing results of original research to be submitted to appropriate academic journals;
    - xi) Student is writing dissertation.
    - xii) Student is on pace to complete the PhD in 3 years (6 academic semesters);
    - xiii) Student has performed teaching duties satisfactorily.
  - b) Adequate progress toward the degree is defined as a combination of the items listed below appropriate to the student's seniority within the ENDY program:
    - i) Completing required ENDY core courses during first 3 semesters of enrollment;

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

- ii) Completing at least 12 hours of coursework per academic year or comparable work towards completion of the degree;
  - iii) Maintaining a minimum grade point average of 2.85;
  - iv) Student is on schedule to complete qualifying examinations during the 4<sup>th</sup> semester of enrollment;
  - v) Student has established an Advisory or Dissertation committee;
  - vi) Student has made significant progress toward defining a dissertation topic;
  - vii) Student is in the process of writing a formal dissertation proposal to be presented to advisory or dissertation committee;
  - viii) Student is on pace to complete the PhD in 4 years;
  - ix) Student is working with advisor to secure funding for research leading to the dissertation.
  - x) Student has performed teaching duties satisfactorily.
- c) Inadequate progress toward the degree is defined as a combination of the items listed below appropriate to the student's seniority within the ENDY program:
- i) ENDY core courses not completed during first 3 semesters of enrollment;
  - ii) Less than 12 hours of coursework per academic year or comparable work towards completion of the degree;
  - iii) Minimum grade point average falls below 2.85;
  - iv) Student not on schedule to complete qualifying examinations during the 4<sup>th</sup> semester of enrollment;
  - v) Student has not established an Advisory or Dissertation Committee;
  - vi) Student has not made significant progress toward defining a dissertation topic;
  - vii) Student has not written a formal dissertation proposal to be presented to advisory or dissertation committee;
  - viii) Student is not on pace to complete the PhD in 4 years;
  - ix) Student is not working with advisor to secure funding for research leading to the dissertation.
  - x) Student has not performed teaching duties satisfactorily.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

Following the review of student progress, the review form provided by the Graduate School will be completed to include written comments regarding the student's progress, as well as recommendations for continued progress or recommendations to remediate inadequate progress within a realistic time frame (since the review occurs during late spring semester, either end of summer or midway through fall semester might be a reasonable time frame).

At the conclusion of the review, the student and advisor will sign the review form, and copies will be distributed to the student, the advisor, and the Director of the ENDY program. The annual review forms will become part of the student's permanent file.

The Director of the ENDY program will report the progress of each student in the program to the ENDY Steering Committee, including necessary remediation steps for those students whose progress was evaluated as inadequate. The ENDY Steering Committee will make the final decision regarding student progress. Once this final decision is rendered, the Director of the ENDY program will forward the original signed review forms of all students to the Graduate School for inclusion in the students' permanent files.

Students who refuse to participate in the review process will be placed on short-term probationary status while reasons for their refusal are heard.

If adequate cause for by-passing the review cannot be determined and the student still refuses to participate in annual reviews of progress, a statement reporting the student's refusal to be reviewed will be forwarded to the Dean of the Graduate School and dismissal proceedings will be initiated by the Graduate School.

### **B. Failure to Progress**

If a student who receives an evaluation of inadequate progress fails to meet the minimum remedial steps specified by the review committee within the specified time frame, a Report-of-Non-Progress will be provided to the Director of the ENDY program by the chair of the student's evaluation committee (ordinarily the PhD advisor). This report will provide details of the failed steps.

- 1) The Report-of-Non-Progress will be treated as confidential information and will be forwarded to members of the ENDY Steering Committee for review. If a majority of ENDY Steering Committee Members agree with the findings of the Report-of-Non-Progress, this report will be forwarded to the Graduate School for additional action.
- 2) At each stage of this process, the student will be informed by the Director of the ENDY program what actions are being taken. The student may appeal decisions regarding inadequate progress in accord with guidelines of the Graduate School at the University of Arkansas through the formal grievance process.
- 3) In developing guidelines for the annual review of graduate student progress, the ENDY Steering Committee recognizes that extenuating circumstances of employment, research funding, or other relevant conditions may impact on students' progress. As such, the ENDY Steering Committee reserves the right to consider such circumstances on a case-by-case basis.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

### **X. ACADEMIC PROBATION POLICY**

The faculty of the ENDY program are committed to assisting students as they progress through the curriculum during their tenure in the ENDY program. Every effort is made to admit students of high academic achievement and motivation to help ensure success in obtaining the doctoral degree.

As such, the ENDY program holds the academic standards established by the University of Arkansas Graduate School in high esteem and expects students to perform at least to the minimum established standards. If, for any reason, student performance falls below these minimum standards such that the student is placed on academic probation, the ENDY program regards this as a serious matter. In these situations, the student should recognize that the first priority is to raise performance such that academic probation is lifted by the Graduate School. A student on academic probation will not be permitted to progress toward the doctoral degree until such time that academic performance improves to the point that academic probation is lifted.

The following policy regarding academic probation is that of the Graduate School, and is in effect in the ENDY program.

#### **A. Policies in Effect for Students Admitted Prior to Fall 2002**

If a graduate student has less than a 2.85 cumulative grade-point average on 12 or more semester hours or graded course work taken in residence for graduate credit, the student will be placed on academic probation. The student will subsequently be dismissed from the Graduate School if the cumulative GPA is not raised to 2.85 or above on the next nine hours of graded graduate course work.

Graduate assistants must maintain a cumulative grade point average of at least 2.85 on all course work taken for graduate credit. If a student's cumulative GPA falls below 2.85 on 12 or more hours of graduate work, notification will be sent to the student and his/her department. If the CGPA is below 2.85 at the end of the next semester, the department will not be allowed to appoint the student to an assistantship until such time as his/her CGPA has been raised to the required level.

#### **B. Policies in Effect for Students Admitted Fall 2002 and After**

Whenever a regularly-admitted graduate student earns a cumulative grade point average below 2.85 on graded course work taken in residence for graduate credit, he/she will be warned of the possibility of academic dismissal. When a graduate student has accumulated a minimum of 15 hours of graded course work taken in residence for graduate credit with a cumulative grade point average below 2.85, and has received at least one warning, he/she will be academically dismissed from the Graduate School.

Graduate teaching and research assistants and students on Lever, Doctoral, or Chancellor fellowships must maintain a cumulative grade point average of at least 2.85 on all course work taken for graduate credit. If a student's cumulative GPA falls below 2.85 on 6 or more hours of graduate work (one full-time semester), notification will be sent to the student and his/her department. If the CGPA is below 2.85 at the end of the next major semester (fall or spring), the

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

department will not be allowed to appoint the student to an assistantship until such time as his/her CGPA has been raised to the required level.

### **XI. MISCELLANEOUS INFORMATION**

#### **A. Grievance Procedure**

If at any time during the tenure in the ENDY program, the student wishes to appeal a decision rendered about the student's level of achievement, the student should (1) contact his/her advisor in writing about the nature of the problem. If the advisor cannot resolve the issue to the student's satisfaction, the student may (2) contact the ENDY Director in writing about the problem. If the Director cannot resolve the issue to the student's satisfaction, the student may (3) proceed through a formal appeal procedure as set forth in the Graduate School catalogue.

#### **B. Teaching Opportunities**

Although the Ph.D. is primarily a research degree, communication skills are critical to professional development. Therefore, the ENDY faculty places an emphasis on providing candidates an opportunity to teach at either the undergraduate or graduate level. ENDY assistantships are assigned to students to teach labs and classes, and therefore teaching experience normally comes from these assignments. For other students, the ENDY faculty will attempt to identify teaching opportunities by which classroom skills may be acquired.

#### **C. Publishing Opportunities**

Successful pursuit of the doctoral degree will include the candidate becoming a contributing member of the broader academic community by disseminating information and results of research through traditional media, primarily refereed academic journals and professional meetings. The ENDY faculty recognize the priority of demonstrating academic achievement through publication of research results in respected journals and will encourage candidates to do so at appropriate opportunities.

##### **1. Refereed Journals, Proceedings, Books, Etc.**

While the ENDY program advocates and actively promotes publication of student research results in appropriate academic media, it should be understood that the responsibility for the content of such publications resides solely with the student author and coauthors of the work.

In addition, it should be understood that any fees or page charges accrued in the process of publishing in the academic literature should be borne by either the student author or coauthors.

##### **2. Professional Meetings**

Students in the ENDY program are encouraged to become active professionals in organizations appropriate to their chosen fields of study, and are encouraged to disseminate results of their research at research symposia, national or international professional meetings, and regional professional meetings.

## **ENVIRONMENTAL DYNAMICS HANDBOOK**

While the principal costs associated with student participation in professional meetings and research symposia should be borne by the student or the dissertation advisor, very limited amounts of support may be applied for through the ENDY office. For details regarding the possible availability of funds, ENDY students should contact the Director of the ENDY program.

### **D. Service Opportunities**

Members of the ENDY faculty recognize that service to the University of Arkansas, the community of Fayetteville, state, and nation are required elements of successful tenure at the University of Arkansas. Further, the faculty recognize that the service of members of the university within the community provides necessary technical assistance, improves the living environment of the community, and creates a collegial atmosphere between the university and its host city.

As such, the ENDY faculty recognize engaging ENDY students in active service to the university and community is an essential part of the training of successful doctoral candidates. Therefore, all ENDY students are encouraged to participate in service-related opportunities as they arise. Examples of appropriate service activities are 1) participation in University Day events, 2) participation in local and regional science fairs, 3) participation in community public service events such as Stream Team clean-up days, Devil's Den highway clean-up, etc., 4) participation as representatives of the ENDY program and the University of Arkansas at community festivals such as Autumn Fest and Spring Fest, and 5) participation in educational outreach as representatives of the ENDY program and the University of Arkansas, such as speaking to public school classes.

While there is no formal requirement for service as an element of the ENDY degree, it is expected that ENDY students will provide assistance with various service-related projects as they are able.

### **E. Office/Lab Space**

The university offers very limited student space, but some functions deserve more space than others. All ENDY teaching assistants are normally assigned an office desk for the purpose of preparing lessons and meeting with students. Desk space for this purpose is assigned with Anthropology or Geoscience space in Old Main or Ozark Hall. ENDY students working on research projects funded under university grants also normally use lab space for that function. Less available is space for non-GA ENDY students or for doctoral student dissertation research. When asking to use space, be prepared to specify the size and kind of space requested, whether computer or other equipment connections are involved, the times of day the space is to be used, and similar details. Every attempt will be made to match student space needs with available facilities.

### **F. Continuing Graduate Credit and Transfer Credits**

The university does not permit the transfer of credits from other institutions to apply towards our doctoral programs. The Graduate Catalog specifies that: "For doctoral candidates, at the discretion of the advisory committee, the program of study may be adjusted in lieu of work



## **ENVIRONMENTAL DYNAMICS HANDBOOK**

taken at other colleges or universities and recognized by the candidate's committee, but it will not appear on the University of Arkansas academic record."

Up to 12 graduate credits may be taken to apply toward a doctoral degree such as the ENDY Ph.D. prior to the student being formally accepted into the degree program. This is about one semester's worth of course work.

### **G. Student Representation on the ENDY Steering Committee**

Beginning fall semester, 2002, ENDY students will be asked to select one of their group to serve on the ENDY Steering Committee, for the purpose of communicating student concerns and questions to the committee. Once chosen, this representative should be the conduit for expressing concerns, questions, and suggestions to the committee. This student representative shall be excused from meeting sessions at which personnel issues are evaluated or discussed. This representative is a voting representative except on faculty, personnel, and student issues.

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