

University Facts & Figures

2013-2014

Compiled by the Office of University Relations, Marketing and Publications
Virginia Polytechnic Institute and State University

Available online at www.vt.edu/about

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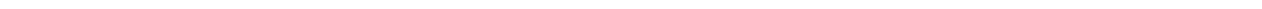


TABLE OF CONTENTS

STATEMENT OF MISSION AND PURPOSE.....	3
 UNIVERSITY OVERVIEW	
Background.....	4
Enrollment	4
Admissions	4
Full-time Instructional Faculty	4
Alumni.....	4
Board of Visitors.....	4
Instruction.....	4
Research.....	4
Special Academic Programs	5
Outreach and International Affairs	5
Off-campus Facilities.....	5
University Budget.....	6
Athletics.....	6
Virginia Tech Foundation	6
Extension.....	6
The University Shield.....	6
The University Seal.....	6
The Corps of Cadets Coat of Arms.....	7
University Mascot.....	7
Virginia Tech’s Benchmark Institutions.....	8
Senior Administrative Personnel.....	9
 STUDENT OVERVIEW	
2013-14 On-Campus Enrollment Profile	10
Enrollment by Race.....	10
Enrollment by Gender.....	10
Enrollment by College.....	10
2013-14 Off-Campus Enrollment Profile.....	10
Enrollment by Race	10
Enrollment by Gender.....	11
Enrollment by College	11
Percent Enrollment by Race.....	11
Residency of Undergraduates	11
Freshman Student Profiles.....	11
SAT Percentile Entering Freshmen	12
Class of 2017 Snapshot	12
Student Tuition and Fees, 2013-14	13
Combined Tuition and Fees* History	14
Membership in the Corps of Cadets.....	14
Historical Highlights of the Corps of Cadets.....	15

FINANCIAL OVERVIEW

Consolidated University Operating Budget, 2013-14.....	16
Virginia Tech Foundation Endowment Trend Analysis	16

FACULTY/STAFF OVERVIEW

Average Full-time Instructional Faculty Salaries	17
Salaried Personnel	17

MEASURES OF EXCELLENCE

University Rankings	18
Undergraduate	18
Graduate.....	19
General Information	19
Research.....	20
Colleges	23
College of Agriculture and Life Sciences	23
College Architecture and Urban Studies.....	25
College of Engineering.....	27
College of Liberal Arts and Human Sciences	30
College of Natural Resources and Environment.....	32
Pamplin College of Business.....	35
College of Science	37
Virginia-Maryland Regional College of Veterinary Medicine.....	39
National Capital Region.....	41
Outreach and International Affairs	42

More facts and figures about Virginia Tech can be found at these websites:

Office of Institutional Research and Effectiveness — www.ir.vt.edu
Budget and Financial Planning — www.obfp.vt.edu
Virginia Tech history — www.vt.edu/about
Guide to library archives — <http://spec.lib.vt.edu/archives/guide>

STATEMENT OF MISSION AND PURPOSE

Virginia Polytechnic Institute and State University is a public land-grant university serving the Commonwealth of Virginia, the nation, and the world community. The discovery and dissemination of new knowledge are central to its mission. Through its focus on teaching and learning, research and discovery, and outreach and engagement, the university creates, conveys, and applies knowledge to expand personal growth and opportunity, advance social and community development, foster economic competitiveness, and improve the quality of life.

*Mission Statement approved by the Virginia Tech Board of Visitors, 6/4/01; revised in 2006.

University Overview, 2013-14

Background

Dedicated to its motto, *Ut Prosim* (That I May Serve), Virginia Tech takes a hands-on, engaging approach to education, preparing scholars to be leaders in their fields and communities. As the commonwealth's most comprehensive university and its leading research institution, Virginia Tech offers 225 undergraduate and graduate degree programs to 31,000 students and manages a research portfolio of \$454 million. The university fulfills its land-grant mission of transforming knowledge to practice through technological leadership and by fueling economic growth and job creation locally, regionally, and across Virginia.

Founded in 1872, Virginia Tech has more than 125 campus buildings, a 2,600-acre main campus, off-campus educational facilities in six regions, a study-abroad site in Switzerland, and a 1,800-acre agriculture research farm near the main campus. The campus proper is located in the Town of Blacksburg in Montgomery County in the New River Valley and is 38 miles southwest of Roanoke.

Enrollment

29,071 on-campus; 82.4 percent undergraduate; 17.6 percent graduate; 58.2 percent male; 41.8 percent female. Total enrollment on and off campus is 31,205.

Admissions

Virginia Tech received 19,323 applications for the fall 2013 freshman class. Cumulative SAT reasoning test scores had a middle range of 1160 to 1340.

Full-time Instructional Faculty

1,422; 61.1 percent are tenured.

Alumni

More than 230,000 living alumni from every state and more than 100 countries.

Board of Visitors

A board of visitors, appointed by the governor of Virginia, is composed of 13 members, headed by a rector. Current board of visitors members are Michael Quillen, rector; Deborah Petrine, vice rector; Nancy V. Dye; James L. Chapman IV; William D. Fairchild III; Cordel L. Faulk; B. Keith Fulton; William B. Holtzman; John C. Lee IV; Suzanne S. Obenshain; John G. Rocovich Jr.; J. Thomas Ryan; and Dennis H. Treacy. The president of the state Board of Agriculture and Consumer Services (Steve Sturgis) serves as an ex-officio member. The presidents of the Faculty Senate (Joe Merola) and the Staff Senate (Sue Teel) are also ex-officio, non-voting representatives. Each year, an undergraduate student (Erica Wood) and a graduate student (Nick Warrington) are selected through a competitive review process to serve as non-voting representatives to the board. Kim O'Rourke is the board secretary.

Instruction

The university offers about 65 bachelor's degree programs through its seven undergraduate academic colleges: Agriculture and Life Sciences (which also offers an associate degree in agricultural technology), Architecture and Urban Studies, Engineering, Liberal Arts and Human Sciences, Natural Resources and Environment, Pamplin College of Business, and Science. On the postgraduate level, the university offers approximately 160 master's and doctoral degree programs through the Graduate School and a professional degree from the Virginia-Maryland Regional College of Veterinary Medicine.

Research

The university generated \$454 million for research programs in fiscal year 2012, and ranked 41st in the nation (in 2011), according to the National Science Foundation. Each year, the university receives thousands of awards to conduct research from an ever-expanding base of sponsors. Researchers pursue new discoveries in agriculture, biotechnology, information and communication technology,

human health transportation, energy management (including leadership in fuel-cell technology and power electronics), security, sustainability, and a wide range of other engineering, scientific, social science, and creative fields. This research led to 36 patents and 17 license and option agreements in fiscal year 2013.

The Virginia Tech Corporate Research Center (CRC) offers opportunities for businesses to establish close working relationships with the university and nurtures entrepreneurs pursuing new inventions and developments. Located on 230 acres adjacent to the main campus, the center consists of 29 buildings housing more than 150 companies with approximately 2,700 employees.

Special Academic Programs

In the university's Cooperative Education Program, sophomores and juniors can alternate semesters of study with semesters of professional work. The University Honors Program helps qualified students expand their intellectual powers through special sections of regular classes, seminars, and independent study. The Study Abroad Program consists of academic programs, tours, and independent travel, often conducted in conjunction with overseas universities and institutions. Students enrolled in the corps of cadets are eligible for the Army, Air Force, and Navy ROTC programs. Virginia Tech established its first residential college in fall 2011 and added a second in 2012.

Outreach and International Affairs

Outreach and International Affairs, which spearheads the university's outreach mission, encompasses a number of university-wide programs and facilities. These include the Center for European Studies and Architecture in Switzerland; Commonwealth Campus Centers in Southwest Virginia, Hampton Roads (Virginia Beach and Newport News), Richmond, and Roanoke; the Office of Economic Development; the Office of International Research, Education, and Development, including Education Abroad and applied research programs in developing countries; Outreach Fellows; Southside outreach programs, including the Reynolds Homestead in Patrick County; The Hotel Roanoke & Conference Center; and The Inn at Virginia Tech and Skelton Conference Center. Programs under the Office of Engagement include the Center for Organizational and Technological Advancement, Continuing and Professional Education, the Language and Culture Institute, VT Engage, and Upward Bound and Talent Search.

Off-campus Facilities

Virginia Tech has facilities located across the commonwealth and one in Europe. These include the Marion duPont Scott Equine Medical Center in Leesburg; several locations in the Virginia Tech National Capital Region, including the newly opened Virginia Tech Research Center — Arlington; Hampton Roads Center, Virginia Beach, and Hampton Roads Center, Newport News; Virginia Tech Roanoke Center; Virginia Tech Richmond Center; and Virginia Tech Southwest Center in Abingdon. The Virginia Tech Foundation owns and maintains the Center for European Studies and Architecture in Riva San Vitale, Switzerland, which is part of the university's study-abroad program. The Virginia Tech Foundation also owns The Hotel Roanoke & Conference Center, which it uses for academic programs, continuing education, seminars, and conferences.

University Budget

Virginia Tech's operating budget in 2013-14 is \$1.28 billion and is comprised of two state agencies — the University Division and the Cooperative Extension/ Agricultural Experiment Station division — and five major programs. The state appropriates a portion of the funds, but most originates from student tuition and fees, grants and contracts, sales and services, federal sources, user fees, and other sources.

Athletics

Virginia Tech is a member of the Atlantic Coast Conference. NCAA Division I-A men's varsity sports at Tech are football, basketball, baseball, soccer, indoor and outdoor track, swimming and diving, wrestling, tennis, golf, and cross country. Women's varsity sports are basketball, tennis, volleyball, swimming and diving, indoor and outdoor track, soccer, softball, lacrosse, and cross country. An extensive intramural program offers opportunities for participation in more than 20 recreational activities. The university also participates in intramural sports and club-sports programs that allow students to compete against programs from other colleges and universities across the country.

Virginia Tech Foundation

As of June 30, 2013, the Virginia Tech Foundation's assets and managed funds — including gifts and bequests — totaled more than \$1.3 billion. The total endowment owned and managed by the university was \$660.3 million. Endowment value per student was \$21,435.

Extension

Virginia Cooperative Extension is a dynamic organization that stimulates positive personal and societal change leading to more productive lives, families, farms, and forests, as well as a better environment. Extension responds to the needs of individuals, families, groups, and organizations with educational programs in three broad areas: agriculture and natural resources, family and consumer sciences, and 4-H youth development.

Extension, operated jointly in the commonwealth by Virginia Tech and Virginia State University, has been helping people improve their economic, cultural, and social well-being for almost 100 years. While Extension has a long history of helping make America's agricultural powerhouse more productive and economical, it also does important work in the state's urban and rural areas — from helping expectant mothers learn healthy nutritional practices to counseling families in financial distress. With offices, professionals, and volunteers positioned around the commonwealth, Extension's nonformal education benefits more than 1 million participants annually. Extension has touched virtually every life in the state in some way.

Extension is a product of cooperation among local, state, and federal governments in partnership with thousands of citizens who, through local Extension Leadership Councils, help design, implement, and evaluate Cooperative Extension's needs-driven programs.

The University Shield

The shield embodies Virginia Tech's motto — *Ut Prosim* (That I May Serve) — by incorporating an image of the university's War Memorial Pylons, where this motto is etched in stone.



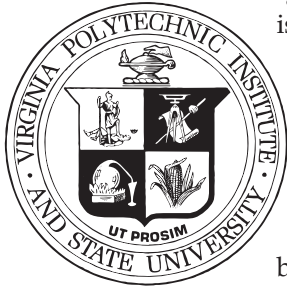
The shield's shape also reflects the collegiate heritage of all universities, and the numerals "1872" recognize the year the university was founded and reinforce the traditions of long-standing service to the Commonwealth of Virginia.

The shield was adopted in May 1991.

The University Seal

The four quadrants of the shield on the seal depict the obverse side of the Great Seal of the Commonwealth of Virginia, the surveyor's level and

leveling rod superimposed over a scroll, a partially husked standing ear of corn, and a chemical retort and graduate. Above the shield



is the left side of the flaming lamp of learning with a right hand suspended above it.

The seal, created in 1896 and officially adopted by The Board of Visitors in 1963, has remained unchanged

(with the exception of the name of the institution and the alteration of the commonwealth portion) for more than 11 decades and reflects the agricultural/mechanical emphasis in the Virginia Tech curriculum during its first century.

The Corps of Cadets Coat of Arms

Designed in 1965 by the late Col. Harry D. Temple (industrial engineering '34) when he was commanding officer of the Army's Institute of Heraldry, the coat of arms was granted to the Virginia Tech Corps of Cadets by the U.S. Army. The symbols are as follows:



Flaming grenade = preparation for war

Four gold stars = four major wars in which Tech cadets had fought before 1965 (Spanish-American War, World War I, World War II, and Korean War)

Laurel wreath = the presidential citation given to the cadet band for Spanish-American War service

Color red = strength and courage

Sword = command

University Mascot

The HokieBird, the university mascot, evolved from a live turkey paraded on the playing field to a hand-sewn costume with a papier-mâché head to today's professionally manufactured outfit. A costumed mascot, which eventually evolved into HokieBird, first took the field in the fall of 1962.

In 1913, Floyd Meade, a local resident nicknamed "Hard Times," who was chosen by the student body to serve as the team's mascot, trained a large turkey that he could make gobble on command at games. Although the nickname "Gobblers" had been used sporadically for about 10 years, fans and sports writers enthusiastically began to use it regularly.



The term "Hokie" was coined by O.M.

Stull (Class of 1896) when he wrote the "Old Hokie" spirit yell, first used in the fall of 1896 ("Hoki, Hoki, Hoki, Hy / Techs!

Techs! VPI"). Fans started

calling Tech teams "Hokies" as well as "Fightin' Gobblers," but the latter nickname prevailed.

In the 1980s, a football coach who didn't like the gobbler image encouraged the use of the nickname Hokies, and the two names evolved into the HokieBird.

Virginia Tech's Benchmark Institutions

For the purpose of salary comparisons, the State Council of Higher Education for Virginia identifies institutions with academic profiles similar to Virginia Tech's.)

University of California, Berkeley
University of California, Davis
University of Colorado, Boulder
Cornell University, Ithaca, N.Y.
University of Florida, Gainesville
University of Illinois, Urbana-Champaign
Iowa State University, Ames
University of Maryland, College Park
University of Michigan, Ann Arbor
Michigan State University, East Lansing
University of Minnesota, Twin Cities
University of Missouri, Columbia
North Carolina State University, Raleigh
The Ohio State University, Columbus
Pennsylvania State University, University Park
University of Pittsburgh
Purdue University, West Lafayette, Ind.
Rutgers, The State University of New Jersey, New Brunswick
State University of New York at Buffalo
University of Southern California, Los Angeles
Stony Brook University, State University of New York
Texas A&M University, College Station
University of Texas at Austin
University of Washington, Seattle
University of Wisconsin, Madison

Senior Administrative Personnel

President.....	Charles W. Steger
Senior Vice President and Provost.....	Mark G. McNamee
Vice President for Administration.....	Sherwood G. Wilson
Vice President for Alumni Relations.....	Thomas C. Tillar
Vice President for Development and University Relations.....	Elizabeth A. Flanagan
Vice President for Diversity and Inclusion.....	William T. Lewis
Vice President for Finance and Chief Financial Officer.....	M. Dwight Shelton Jr.
Vice President and Dean for Graduate Education.....	Karen P. DePauw
Vice President for Information Technology.....	Scott F. Midkiff
Interim Vice President and Executive Director, National Capital Region.....	James R. Bohland
Vice President for Outreach and International Affairs.....	Guru Ghosh
Vice President for Research.....	Robert Walters
Vice President for Student Affairs.....	Patricia A. Perillo
Dean, College of Agriculture and Life Sciences.....	Alan Grant
Dean, College of Architecture and Urban Studies.....	A. Jack Davis
Dean, College of Engineering.....	Richard Benson
Dean, College of Liberal Arts and Human Sciences.....	Sue Ott Rowlands
Dean, College of Natural Resources and Environment.....	Paul Winistorfer
Dean, Pamplin College of Business.....	Robert T. Sumichrast
Dean, College of Science.....	Lay Nam Chang
Dean, Virginia-Maryland Regional College of Veterinary Medicine.....	Gerhardt Schurig
Dean, University Libraries.....	Tyler Walters
University Legal Counsel.....	Kay Heidbreder

Virginia Tech Foundation

Chief Executive Officer.....	John E. Dooley
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Student Overview

2013-14 On-campus Enrollment Profile

	Undergraduate	Graduate	Professional	Total
Enrollment by Race				
American Indian or Alaska Native	37	4	0	41
Asian	2,026	142	9	2,177
Black or African American	827	171	8	1,006
Hispanics of any race	1,223	123	9	1,355
Native Hawaiian or other Pacific Islander	31	1	1	33
White	17,179	2,360	343	19,882
Two or more races	965	77	15	1,057
Not reported	699	31	60	790
Nonresident alien	989	1,738	3	2,730
Total	23,976	4,647	448	29,071

Enrollment by Gender

Men	14,064	2,763	106	16,933
Women	9,902	1,876	337	12,115
Not reported	10	8	5	23

Enrollment by College

Agriculture & Life Sciences	2,482	382	0	2,864
Architecture & Urban Studies	1,337	302	0	1,639
Business	3,729	233	0	3,962
Engineering	7,199	1,864	0	9,063
Liberal Arts & Human Sciences	3,199	694	0	3,893
Natural Resources & Environment	740	177	0	917
Science	3,707	593	0	4,300
Veterinary Medicine	0	168	448	616
Intercollege	1,583	234	0	1,817

2013-14 Off-campus Enrollment Profile

	Undergraduate	Graduate	Professional	Total
Enrollment by Race				
American Indian or Alaska Native	1	3	0	4
Asian	4	158	0	162
Black or African-American	7	184	0	191
Hispanics of any race	3	84	0	87
Native Hawaiian or other Pacific Islander	0	2	0	2
White	35	1,395	0	1,430
Two or more races	1	40	0	41
Not reported	7	92	0	99
Nonresident alien	0	118	0	118
Total	58	2,076	0	2,134

	Undergraduate	Graduate	Professional	Total
Enrollment by Gender				
Men	27	1,085	0	1,112
Women	31	965	0	996
Not reported	0	26	0	26

Enrollment by College				
Agriculture & Life Sciences	10	45	0	55
Architecture & Urban Studies	1	275	0	276
Business	4	229	0	233
Engineering	10	216	0	226
Liberal Arts & Human Sciences	15	570	0	585
Natural Resources & Environment	2	96	0	98
Science	14	4	0	18
Veterinary Medicine	0	1	0	1
Intercollege	2	640	0	642

Percent Enrollment by Race (Total enrollment of undergraduate, graduate, and professional students on and off campus)

American Indian or Alaska Native students	0.1%
Asian students	7.5%
Black or African-American students	3.8%
Hispanic students of any race	4.6%
Native Hawaiian or Pacific Islander	0.1%
White students	68.3%
Two or more races	3.5%
Not reported	2.8%
Nonresident alien	9.1%

Residency of Undergraduate Students

Virginia undergraduate students	17,528
Nonresident undergraduate students (includes international)	6,506
Undergraduate students living in residence halls	8,908

Freshman Student Profiles

Freshmen applications received	19,112
Freshmen enrolled	5,364
Enrolled freshmen in top 10% of high school class	41.5%
Enrolled freshmen in top 25% of high school class	83.5%
Enrolled freshmen in top 50% of high school class	98.4%
2003 freshmen returning fall 2004	87.6%
2004 freshmen returning fall 2005	88.0%
2005 freshmen returning fall 2006	88.6%
2006 freshmen returning fall 2007	93.2%
2007 freshmen returning fall 2008	91.1%
2008 freshmen returning fall 2009	90.9%
2009 freshmen returning fall 2010	91.9%
2010 freshmen returning fall 2011	91.1%
2011 freshmen returning fall 2012	92.6%
2012 freshmen returning fall 2013	91.4%

SAT Percentile Entering Freshmen

Year	25th Percentile		75th Percentile		Average	
	Math	Verbal*	Math	Verbal*	Math	Verbal*
2005	570	540	660	630	615	588
2006	570	530	660	630	617	584
2007	570	530	670	630	617	586
2008	570	540	670	630	618	586
2009	570	540	670	640	621	590
2010	580	540	680	640	626	591
2011	570	540	670	640	622	592
2012	570	540	680	640	625	587
2013	580	540	680	640	628	592

*Verbal is now called Critical Reading

Class of 2017 Snapshot

Top five home states of out-of-state freshmen:

1. Maryland
2. New Jersey
3. Pennsylvania
4. North Carolina
5. New York

Number of states and territories represented (including the District of Columbia): 43

Countries represented: 43

Most popular majors for incoming freshmen in fall 2013:

- General Engineering*
- University Studies (undeclared)
- Biological Sciences
- Business (undecided)
- Human Nutrition, Foods, and Exercise
- Physics

*Non-degree major; students move into more specific disciplines, including computer science

2013-14 Student Tuition and Fees

	Undergraduate		Graduate	
	In-state	Out-of-state	In-state	Out-of-state
Academic year tuition	\$9,617	\$24,769	\$11,185	\$22,146
Fees*	\$1,838	\$2,442	\$1,838	\$2,442
Total tuition and fees	\$11,455	\$27,211	\$13,023	\$24,588
Room and board**	\$7,650	\$7,650	\$7,650	\$7,650

*Includes academic, athletic, technology, student activity, health, bus, recreational sports, and student services fees. Out-of-state students also pay a capital and equipment fee. Students in various disciplines also pay supplemental fees not included here.

**Room and board varies depending on the student's place of on-campus residence, single or double occupancy, and the student's meal plan.

Source: Office of Budget and Financial Planning

Veterinary Medicine (Virginia and Maryland residents)

Tuition	\$18,708
Fees*	\$3,008
Total tuition and fees	\$21,796

Veterinary Medicine (other states)

Tuition	\$43,766
Fees*	\$3,692
Total tuition and fees	\$48,628

*Includes academic, athletic, technology, student activity, health, bus, recreational sports, and student services fees. Out-of-state students also pay a capital and equipment fee.

Source: Office of Budget and Financial Planning

Combined Tuition and Fees* History

	Undergraduate		Graduate	
	In-State	Out-of-State	In-State	Out-of-State
2004-05	\$5,838	\$16,581	\$7,512	\$11,682
2005-06	\$6,378	\$17,837	\$7,977	\$12,835
2006-07	\$6,973	\$19,049	\$8,540	\$14,057
2007-08	\$7,397	\$19,775	\$8,986	\$15,351
2008-09	\$8,198	\$20,825	\$9,735	\$16,866
2009-10	\$8,605	\$21,878	\$10,228	\$17,928
2010-11	\$9,459	\$23,217	\$10,933	\$19,957
2011-12	\$10,509	\$24,480	\$11,705	\$21,723
2012-13	\$10,923	\$25,915	\$12,413	\$23,266
2013-14	\$11,455	\$27,211	\$13,023	\$24,588

*All mandatory fees required of all students; does not include specialized program fees or room and board

Source: Office of Budget and Financial Planning

Membership in the Corps of Cadets

(as of the beginning of fall session)

Year	Male	Female	Total
2004	644	120	764
2005	642	104	746
2006	634	98	732
2007	618	92	710
2008	614	90	704
2009	657	112	769
2010	737	120	857
2011	815	138	953
2012	908	158	1,066
2013	918	153	1,071

Historical Highlights of the Corps of Cadets

- 1872: Virginia Tech established as Virginia Agricultural and Mechanical College, corps organized as one battalion of two companies.
- 1899: Corps petitions governor for active military service during the Spanish-American War. Bandsmen and director enlist as Regimental Band, 2nd Virginia Infantry Regiment Exposition.
- 1919: Band first called “Highty-Tighties.” Tech designated one of the nation’s “Distinguished Military Colleges.”
- 1922: Virginia Tech Corps of Cadets (VTCC) organized as regiment.
- 1923: Corps petitions governor for active military service during national rail strike.
- 1924: Corps made mandatory only for a cadet’s first two years.
- 1934: First Ring Dance (Class of 1935).
- 1942: VTCC organized as brigade of two regiments.
- 1953: First African-American student enrolls (Cadet Irving L. Peddrew III).
- 1958: First African-American student graduates (Cadet Charlie L. Yates).
- 1964: Corps becomes voluntary.
- 1973: Women admitted into corps of cadets (except the Regimental Band) and organized into L Squadron.
- 1975: Women accepted into Regimental Band.
- 1981: Cadet barracks become first co-ed dorms on campus.
- 1985: First African-American regimental commander (Derek Jeffries ‘86).
- 1987: First female regimental commander (Denise Shuster ‘88).
- 1996: VTCC Center for Leader Development is established.
- 1997: VTCC initiates Caldwell March, which becomes semi-annual event.
- 2005: First African-American female regimental commander (Christina Royal ‘06).
- 2012: Corps enrollment tops 1,000 for the first time since the late 1960s.

Financial Overview

Consolidated University Operating Budget 2013-14

Educational and General

University Division:

General Fund	\$149,324,763
Tuition and Fees	\$382,793,681
All Other Income	\$31,172,533
Subtotal	\$563,290,977

CE/AES Division

General Fund	\$64,675,829
Federal Funds	\$14,521,000
All Other Income	\$839,500
Subtotal	\$80,036,329

Total Educational and General	\$643,327,306
Auxiliary Enterprises	\$285,245,595
Financial Assistance for E&G Programs	\$329,738,140
Student Financial Aid	\$19,705,847
All Other Programs	\$6,303,991
Total	\$1,284,320,879

Virginia Tech Foundation Endowment Trend Analysis

Year (as of June 30)	Market Value (\$)	\$ Per Student
2004	\$370,811,010	\$13,962
2005	\$408,560,308	\$15,310
2006	\$447,404,748	\$16,447
2007	\$524,731,181	\$18,972
2008	\$527,629,109	\$18,216
2009	\$451,744,223	\$15,130
2010	\$502,379,593	\$16,646
2011	\$600,647,830	\$19,619
2012	\$594,776,124	\$19,536
2013	\$660,340,421	\$21,435

Faculty/Staff Overview

Average Full-time Instructional Faculty Salaries

(Dollars in Thousands)

Rank	2008-09	2009-10	2010-11	2011-12	2012-13
Professor	\$116.8	\$115.9	\$116.7	\$121.7	\$122.1
Associate Professor	\$84.6	\$82.9	\$82.0	\$84.4	\$85.0
Assistant Professor	\$70.4	\$70.4	\$70.9	\$73.3	\$73.2
Instructor	\$45.5	\$45.3	\$45.0	\$46.8	\$47.6
All Ranks	\$88.0	\$87.4	\$86.2	\$89.1	\$89.4

Notes:

- The figures for this table are taken from an Integrated Postsecondary Education Data System report titled "Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty."
- Lecturers, research associates, and administrators above the department level are excluded.
- All salaries have been reported on an academic-year-equivalent basis. The salaries of 12-month faculty members have been converted by a factor of nine-elevenths.

Salaried Personnel

Faculty/Staff	2008-09	2009-10	2010-11	2011-12	2012-13
Full-Time Instructional Faculty	1,369	1,364	1,306	1,368	1,422
Other Faculty & Research Associates	1,761	1,913	1,826	1,954	2,083
P14s (instructional only)	229	224	273	264	249
Support Staff	3,816	3,603	3,461	3,449	3,509
Total Faculty & Support Staff	7,175	7,104	6,866	7,035	7,263
Percent of Instructional Faculty Tenured	61.9	62.8	61.9	61.7	61.1

Notes:

- Faculty data are based on full-time instructional faculty paid 50 percent or more from instructional funds.
- Percent tenured is based on full-time instructional faculty who are tenured (does not include those on tenure track).

Measures of Excellence

University Rankings

Undergraduate

U.S. News & World Report's "America's Best Colleges 2014" (fall 2013)

- Virginia Tech ranked 25th among national public universities, the university's first time in the top 25. Among all national universities, including such private institutions as Harvard and Yale, Virginia Tech ranked 69th.
- The Virginia Tech College of Engineering undergraduate program ranked 15th in the nation (tied with Texas A&M) among all accredited engineering schools that offer doctorates. The program ranked sixth among engineering schools at public universities.
- The Pamplin College of Business ranked 43rd among the nation's undergraduate business programs and 26th among public institutions. Pamplin's overall ranking places it in the top 10 percent of the 445 U.S. undergraduate programs accredited by the Association to Advance Collegiate Schools of Business International.
- The College of Engineering's Department of Engineering Science and Mechanics and Grado Department of Industrial and Systems Engineering ranked eighth in the nation. Other notable placements: The Department of Biological Systems Engineering (also a part of the College of Agriculture and Life Sciences) ranked 11th. The Charles E. Via Jr. Department of Civil and Environmental Engineering's two programs ranked 10th and 11th, respectively. The departments of Aerospace and Ocean Engineering and Mechanical Engineering each ranked 14th; the Bradley Department of Electrical and Computer Engineering came in at 15th for each part of its program; and the Department of Chemical Engineering was 20th.

The university's undergraduate landscape architecture program in the College of Architecture and Urban Studies' School of Architecture + Design was ranked second in the nation in the 2013 America's Best Architecture & Design Schools study conducted by the journal DesignIntelligence. The school's program in industrial design ranked third, the interior design program ranked sixth, and the architecture program ranked seventh.

The Princeton Review ranked Tech first for Their Students Love These Colleges; No. 3 for Town-Gown Relations are Great; No. 4 for Best Campus Food; No. 5 for Best Quality of Life; No. 7 for Happiest Students; and No. 17 for Students Pack the Stadiums.

Kiplinger's Personal Finance magazine again ranked Virginia Tech among the best values in public education.

See www.vt.edu/about/index.html for more rankings.

Graduate

U.S. News & World Report's "America's Best Graduate Schools 2014" (spring 2013)

- The College of Engineering's overall graduate program ranked 24th among all schools of engineering for the third consecutive year.
- Three departments within the College of Engineering finished in the top 10 of their respective category. The Charles E. Via Jr. Department of Civil and Environmental Engineering ranked seventh among civil engineering programs, and the Grado Department of Industrial and Systems Engineering also ranked seventh among industrial/manufacturing programs. The biological systems engineering department, also part of the College of Agriculture and Life Sciences, ranked ninth in the nation among biological/agricultural programs.
- The Pamplin College of Business ranked 34th among the nation's best part-time M.B.A. schools.
- The public affairs program in the College of Architecture and Urban Studies' School of Public and International Affairs ranked 37th in the nation.
- The paleontology program in the College of Science's geosciences department ranked ninth.

DesignIntelligence ranked the graduate landscape architecture program second in the nation; the graduate architecture program was ranked 18th.

General Information

With more than 23,900 undergraduate students, approximately 7,100 graduate students, and more than 3,500 faculty members and researchers, Virginia Tech offers more degree programs and awards more diplomas than any other university in the Commonwealth of Virginia.

Virginia Tech's library contains more than 2.3 million volumes, an array of specialized collections, and numerous electronic databases.

Virginia Tech consistently ranks among the top 15 schools in the nation in number of patents received.

Virginia Tech is one of only three public universities in the United States to support both a military and a nonmilitary student lifestyle (the others are Texas A&M and North Georgia College and State University). Membership in the Corps of Cadets was mandatory for all able-bodied males until 1964, when it became optional. The corps preceded the federal service academies by first admitting women in 1973.

Virginia Tech is among the top 100 schools in PayScale.com's comparison of earnings for graduates.

Virginia Tech ranks first in the state for college license plate sales; in fact, the university ranks first, second, and third (three versions of the Tech plate are available). The Commonwealth of Virginia sells more Tech college plates than the other top 10 Virginia schools combined.

For the second time in as many years, Blacksburg was named the most family-friendly community in the country by Homes.com.

The Center for Digital Government named Blacksburg the sixth-most technologically advanced town in the nation among urban areas with a population of 30,000 to 74,999.

In 2011, Bloomberg's Businessweek ranked Blacksburg as the Best Place in the U.S. to Raise Kids. Educational and economic information, crime rates, amenities, air quality, and diversity were factors considered in the nationwide ranking.

In May 2012, the Blacksburg-Christiansburg-Radford Metropolitan Statistical Area made Forbes' list of the best small cities to find employment. The list was developed using statistical data from the Bureau of Labor Statistics.

Research

With a research portfolio of \$454 million in fiscal year 2012, Virginia Tech marked its 13th consecutive year of research growth under President Charles W. Steger.

At No. 41, Virginia Tech is the only Virginia institution in the top 50 of the National Science Foundation rankings for research expenditures. It is No. 23 among public universities and its more than \$450 million in research expenditures (in 2011) ranks it in the top 5 percent of more than 900 research universities and colleges.

Each year, the university receives significant external support from an ever-expanding base of sponsors for research, instruction, and outreach projects. In fiscal year 2012, the university received more than \$260.9 million from external sources to conduct research.

Under Virginia Tech's latest strategic plan, "A Plan for a New Horizon 2012-2018," four discovery theme areas guide the expansion of research — various dimensions of national and local security; the resiliency of systems, organizations, communities, and ecosystems; the evolving health and medical enterprise; and local, regional, and global sustainability. An important hallmark of such research is that it is translational, or geared toward practical applications.

To draw upon established strengths in engineering, science, and the life sciences, Virginia Tech has created seven university-level research institutes to grow the discovery enterprise:

- Fralin Life Science Institute
- Institute for Creativity, Arts, and Technology
- Institute for Critical Technology and Applied Science
- Institute for Society, Culture, and Environment
- Virginia Bioinformatics Institute
- Virginia Tech Carilion Research Institute
- Virginia Tech Transportation Institute

University-level Research Institutes

The Virginia Bioinformatics Institute and the Virginia Tech Transportation Institute are the largest research institutes.

- The Virginia Tech Transportation Institute (VTTI), with more than 350 employees and more than \$125 million in active research awards, has a mission to save lives, save time, save money, and protect the environment. It is the second largest university-level transportation institute in the United States, and the largest group of driving safety researchers in the world. Facilities include the 2.2-mile, two-lane, fully instrumented Virginia Smart Road; connected-vehicle test beds in Southwest and Northern Virginia; more than 83,000 square feet of office and laboratory space; the VTTI/Center for Injury Biomechanics Crash Sled Lab; and the National Tire Research Center in Southern Virginia. Since 1996, VTTI has provided more than 1,400 student-years of funding, and more than 100 students annually gain hands-on experience at the institute to become the next generation of researchers. VTTI has pioneered groundbreaking naturalistic driving studies made possible by internally developed data acquisition systems that allow drivers to be observed in real-world conditions. To date, these systems have been installed in nearly 4,000 vehicles deployed nationally and internationally.
- The Virginia Bioinformatics Institute, with more than 200 employees and more than \$109 million in active research awards, combines information technology, medicine, and biology to solve problems in the biomedical, environmental, and agricultural sciences. Projects include a science portal that connects pathogen databases around the world for genetic and genomic research, mathematical modeling of living organisms through systems biology to unravel the genetic mechanisms of diseases, and personalizing medicine so medical treatments can be tailored to match the patient's unique genetic makeup.

- Fralin Life Science Institute researchers investigate vector-borne disease, infectious disease, obesity, molecular plant sciences, and cancer biology. The institute was formed in August 2008 and represents an administrative merger of the Fralin Biotechnology Center and the Institute for Biomedical and Public Health Sciences.
- Sitting at the nexus of the arts, design, engineering, and science, the Institute for Creativity, Arts, and Technology is forging a pathway between transdisciplinary research and art, educational innovation, and scientific and commercial discovery. Uniquely partnered with the Center for the Arts at Virginia Tech, the institute works to foster the creative process to create new possibilities for exploration and expression through learning, discovery, and engagement. This includes preparing students in kindergarten through 12th grade and higher education environments to succeed in a world that demands teamwork and collaboration of science, technology, engineering, and math disciplines.
- The Institute for Critical Technology and Applied Science is building capacity at the intersection of engineering, science, biology, and the humanities. Thrust areas include nanoscale science and engineering, nano-bio interface, sustainable energy, safe and sustainable water, national security, cognition and communication systems, renewable materials, and emerging technologies. Researchers from across the university are taking advantage of the Nanoscale Characterization and Fabrication Laboratory and building partnerships as they use the resources of two new buildings — one in the university's engineering corridor and one in the life sciences corridor.
- The Institute for Society, Culture, and Environment strengthens the university's competitive position in the social sciences, humanities, and the arts. The institute provides organizational, technical, and financial support for targeted creative, interactive, multidisciplinary, and interdisciplinary research endeavors that address issues of social and individual transformation. The Global Issues Initiative is researching trade policies and poverty in Pakistan and the Philippines and the implications of agricultural subsidies in eight countries, among other issues. A Center for Public Health Practice and Research has been established to foster interdisciplinary, collaborative public health practice and research activities at Virginia Tech and among external public health agencies, organizations, practitioners, and researchers.
- Since its creation in 2009, the Virginia Tech Carilion Research Institute has made significant progress in efforts to understand and address the fundamental processes of human health and disease, and to develop new approaches to diagnosis, treatments, prevention, and cures. It is becoming a premier institute of interdisciplinary and translational research within the medical sciences. Research emphasis areas include brain function of children and adults in health as well as in neurological and psychiatric disorders; molecular studies of cancer and heart development; infectious diseases in children; addiction and substance abuse; development of novel neurorehabilitation strategies for traumatic brain injury, PTSD, depression, and seizure disorders; and early life educational interventions for children at risk.

Other areas of research achievement and investigation throughout the university include high-performance computing; advanced materials; wireless telecommunication; housing; human and animal health; cognition, development, and behavior; the environment; and energy, including power electronics, biofuels, fuel cells, and solar-powered building structures. In the social sciences, scholarship and creative work include cultural expression and literature; interactions between ideas, technology, and people; and performing arts.

The university is affiliated with two human medical schools, each with a significant research component. The Virginia Tech–Wake Forest University School of Biomedical Engineering and Sciences integrates the capabilities of the Virginia Tech College of Engineering, Wake Forest University School of Medicine, and the Virginia-Maryland Regional College of Veterinary Medicine. Virginia Tech's research includes biomechanics, cellular transport, computational modeling, biomaterials, bioheat and mass transfer, biofluid mechanics, instrumentation, ergonomics, and tissue engineering.

The Virginia Tech Carilion School of Medicine recently welcomed its fourth class in 2013 and in doing so, reached another milestone: full capacity. The school opened its doors to its first class in August 2010.

Members of that cohort will graduate in May 2014. Nearly 2,900 students applied to be part of the Class of 2017, and the school accepted less than 2 percent. Curriculum value domains are basic sciences, clinical sciences, research, and interprofessionalism. Students and clinicians will be partners in the research enterprise.

Virginia Tech has 744 faculty members devoted strictly to research — research scientists concentrating on creating new knowledge and solving problems. In addition, Virginia Tech has about 1,600 tenured and teaching faculty, and many of them conduct research.

Virginia Tech Intellectual Properties Inc. (VTIP) was established as a nonprofit corporation in 1985 to support the research mission of the university by protecting and licensing intellectual properties that result from research performed by Virginia Tech faculty and staff members and students. During fiscal year 2013, Virginia Tech Intellectual Properties licensed six startup companies, processed 219 patent applications, signed 17 license and option agreements, and received 16 U.S. and 20 foreign patents.

The Virginia Tech Applied Research Corporation (VT-ARC), a private nonprofit corporation affiliated with Virginia Tech, was established in fall 2010. With offices in Northern Virginia and Blacksburg, VT-ARC will foster applied research and development, and management of large contract research projects. It will apply Virginia Tech's basic and scholarly research achievements, expertise, and collaborations across multiple disciplines to solve complex national challenges in intelligence, cyber and information technology, national security, energy, and health.

Colleges

College Of Agriculture and Life Sciences

Noted Accomplishments/Honors

The College of Agriculture and Life Sciences' Department of Biological Systems Engineering was ranked ninth among biological and agricultural programs in the country in U.S. News & World Report's America's Best Graduate Schools 2014.

The college's research programs are growing. Annual grant expenditures increased by 14 percent last year to reach a total of \$45.7 million.

Virginia Tech's financial planning program was listed among the top 25 programs in Financial Planning magazine and cited as one of the top two programs in Financial Advisor magazine. The College of Agriculture and Life Sciences' financial planning program is one of four specializations in finance. Students receive a bachelor's degree in either finance or applied economic management when they complete their studies.

Virginia Cooperative Extension, in partnership with the Virginia Department of Agriculture and Consumer Services and local feed retailers across the commonwealth, established the Animal Health Network. This service connects underserved populations of noncommercial livestock and poultry owners with vital, animal-disease-related alerts and information from the state veterinarian.

Participants in the Virginia Agricultural Leaders Obtaining Results, or VALOR, program traveled to Washington, D.C., and Northern Virginia to gain insight into meeting supply-chain challenges for farmers. This year, participants also met with policymakers, including Virginia Gov. Bob McDonnell, and other agriculture-related community members.

Virginia Tech researchers are assessing honeybee colony health in Virginia, funded by the Virginia Department of Agriculture and Consumer Services' Office of Pesticide Services. A team is gathering data about pesticide use and exposure of bee colonies to common-use pesticides and the health risks associated with these exposures.

Extension ebooks continued to be added to the library of epublications. Newer titles include groundcover, boxwoods, and food storage guidelines.

The Governor's Agriculture Trade Conference, held in Richmond, highlighted the importance of Virginia Tech research and Extension education in keeping agriculture the top industry in the commonwealth. Gov. Bob McDonnell and Virginia Tech President Charles W. Steger spoke at the trade conference.

The environmental sciences major in the Department of Crop and Soil Environmental Sciences celebrated its 20-year anniversary.

The College of Agriculture and Life Sciences and the College of Engineering celebrated the opening of The Kentland Experimental Aerial Systems Laboratory, a shared laboratory that will be key to developing advanced technology for unmanned aerial and underwater vehicles, or drones. The 2,000-square-foot facility affords space for students and faculty members in both colleges to conduct research that will examine everything from the spread of airborne plant pathogens to the creation of high-tech submarines.

Outstanding Faculty

Percival Zhang, an associate professor in the Department of Biological Systems Engineering, and his team discovered a way to extract large quantities of hydrogen from any plant, a breakthrough that has the potential to introduce a low-cost, environmentally friendly fuel source to the world. Zhang's team also succeeded in turning cellulose into starch, a project that could help feed a global population expected to swell to 9 billion by 2050. Beyond food systems, the starch could be used in the manufacture of edible, clear films for biodegradable food packaging and even serve as a high-density hydrogen storage carrier.

Dennis Dean, the Stroobants Professor of Biotechnology and director of life sciences at Virginia Tech, was named a Fellow of the American Association for the Advancement of Science.

Researchers in the College of Agriculture and Life Sciences continued to make discoveries in how mosquitoes spread disease. Building upon research conducted by associate professors in entomology, Kevin Myles and Zach Adelman, their most recent project studied the effect of weather anomalies on the immune system and found that mosquitoes raised in cooler temperatures were more sickly and more likely to spread diseases to the human population.

W. Lee Daniels, professor of crop and soil environmental sciences, was honored with a lifetime achievement award from the American Society of Mining and Reclamation. Daniels was given the William T. Plass Award for his work in the reclamation and rehabilitation of lands impacted by mining, waste disposal, road building, and other disturbances.

The American Farm Bureau Federation presented its highest honor, the Distinguished Service to Agriculture Award, to Ambassador Richard T. Crowder, former U.S. chief agricultural trade negotiator and professor of agricultural and applied economics.

Entomologist Peter Schultz, director of Virginia Tech's Hampton Roads Agricultural Research and Extension Center, received the Distinguished Service Award from the Research Center Administrators Society of the United States. This award recognized Schultz's dedicated service, leadership, and outstanding contributions to the society over an extended period.

Ozzie Abaye, professor in the Department of Crop and Soil Environmental Sciences, was recognized with the Mentor Award by the Women in Agronomy, Crops, Soils, and Environmental Sciences. Abaye has served as a role model for numerous young people as both an instructor and an advisor.

Ruth Lytton, professor of agricultural and applied economics, received the 2012 Heart of Financial Planning Award from the Financial Planning Association.

Student/Student Group Achievers

Austin Larrowe, a double major in applied economic management and agricultural sciences, became Virginia Tech's first presidential fellow. He was part of a group of students that met with policymakers in Washington, D.C., and worked on a group food-security project that sought answers to closing the gender gap in agriculture.

A team of seven geography and forestry graduate students brought home Virginia Tech's second consecutive title in the national GeoLeague Challenge at the American Society for Photogrammetry and Remote Sensing conference.

Dairy science students placed second in the 12th annual North American Intercollegiate Dairy Challenge. The team tested its skills against 223 competitors from 37 colleges and universities across the United States and Canada. Historically performing well at this event, Virginia Tech teams have taken first or second place in eight of the previous 12 contests.

College Of Architecture and Urban Studies

Noted Accomplishments/Honors

American-Architects recognized the Masonic Amphitheater in Clifton Forge, Va., as 2012 Building of the Year. The amphitheater was designed and built by third-year architecture students in the design/buildLAB led by Marie and Keith Zawistowski.

In the 2013 edition of the America's Best Architecture & Design Schools report produced by the journal DesignIntelligence, both the undergraduate and the graduate program in landscape architecture in the School of Architecture + Design ranked No. 2 in the nation. The undergraduate program in interior design ranked No. 6 and was recognized in a survey of deans as one of the five most admired undergraduate interior design programs for "its leadership and consistently strong and innovative program." The undergraduate industrial design program ranked third in a survey of professional design firms that were asked, "In your firm's hiring experience in the past five years, which schools are best preparing students for success in the profession?" In a survey of deans and department heads, the program also ranked third among the most admired undergraduate industrial design programs and was noted for its "strengths in cross-disciplinary teamwork, design, and prototyping."

The architecture program was recognized by DesignIntelligence editors for brand strengths in the categories of Crystal Clear Vision, Making a Strong Global Statement, Environmental Stewardship, and Strong Integrator of Design Disciplines.

The public affairs program in the School of Public and International Affairs ranks 37th in the nation for the fourth year in a row, tying with Cornell University, University of Arizona, University of Delaware, and University of Illinois-Chicago, in the 2013 Best Graduate Schools survey. The Center for Public Administration and Policy, also in the School of Public and International Affairs, ranked 17th.

A multidisciplinary team of faculty and students spanning three colleges, including the College of Architecture and Urban Studies, won the national Casey Trees Master Plan Design Competition. The team was led by Paul Kelsch, an associate professor of landscape architecture at the Washington-Alexandria Architecture Center, and included additional faculty and students from the architecture and landscape programs in Alexandria and Blacksburg.

"Lost Communities of Virginia" by Terri Fisher and Kirsten Sparenborg, a project of the College of Architecture and Urban Studies' Community Design Assistance Center, received three distinguished honors: the Library of Virginia's People's Choice Award for Nonfiction, Preservation Virginia's 2012 Outstanding Historic Preservation Research Effort Award, and a Leadership in History Award from the American Association for State and Local History.

Two programs within the School of Architecture + Design and the faculty members directing them were listed in the top 100 for public interest design. Among an elite group of leaders and influencers, including recognizable names like Bill Clinton and Brad Pitt, named in the Public Interest Design 100, both the CHICAGO STUDIO and the design/buildLAB are programs that embody a hands-on, minds-on approach to education through real-world design projects that benefit others.

Outstanding Faculty

Robert Dunay, the T.A. Carter Professor of Architecture in the School of Architecture + Design and director of the Center for Design Research, was named a Most Admired Educator by DesignIntelligence for a record fourth time.

The Association of Collegiate Schools of Architecture recognized Marie Zawistowski and Keith Zawistowski with a 2012-13 Design Build Award. Professors of practice in the School of Architecture + Design, the Zawistowskis were among four individuals and teams to be recognized for best practices in design-build education and are among the first to receive this national recognition. While the association has presented educational awards for many years, 2012-13 was the inaugural year for the Design Build Award, honoring best practices in school-based design-build projects.

The Association of Collegiate Schools of Architecture recognized Donna Dunay, G.T. Ward Professor of Architecture, with the 2012-13 Distinguished Professor Award.

Assistant Professor Ralph Hall and Assistant Professor Shalini Misra, both in urban affairs and planning in the School of Public and International Affairs, and Michael Garvin, an associate professor in construction engineering and management in the Myers-Lawson School of Construction, won a grant from the Obama-Singh 21st Century Knowledge Initiative to create a new international program to promote collaborative research on sustainable infrastructure development. As a result, Virginia Tech and the Indian Institute of Technology in Kanpur have formed the Partnership for Sustainable Infrastructure Development.

Aki Ishida, an assistant professor and an affiliated faculty member with the Institute for Creativity, Arts, and Technology, led a team of Virginia Tech students and faculty to create a digitally interactive audio-visual lantern field installation at the Smithsonian's Freer Gallery of Art during the National Cherry Blossom Festival.

Derek Hyra, an associate professor in the Department of Urban Affairs and Planning in the School of Public and International Affairs, has been appointed by the Alexandria (Va.) City Council to a four-year term on the city's planning commission.

Associate Professor Terry Clements in the landscape architecture program was named a Fellow by the American Society of Landscape Architects.

"City Cycling," coedited by Ralph Buehler, assistant professor in the School of Public and International Affairs, appeared in a session in Great Britain's House of Commons, where a motion to "Get Britain Cycling" gained momentum, garnering 125 supportive signatures from members of Parliament.

Jack Davis, Reynolds Metals Professor of Architecture and dean of the College of Architecture and Urban Studies, was named a Senior Fellow of the Design Futures Council.

Brian Kleiner, director of Myers-Lawson School of Construction and the Center for Innovation in Construction Safety and Health, has subcontracted with the Royal Melbourne Institute of Technology University in Melbourne, Australia, in an effort to reduce U.S. construction injuries. The partnership is providing insights into how Australia operates differently from the U.S. in construction. Andrew McCoy, an assistant professor in the Department of Building Construction, is the co-principal investigator on the project.

Student/Student Group Achievers

A team of three industrial design students in Assistant Professor Akshay Sharma's second-year studio won Silver for an innovative accessibility solution for cellphones in the 2013 International User Experience Awards. They were the only student team recognized in the competition.

Xie Xin, of Shanghai, China, a graduate student in interior design, won an interior design competition sponsored by the Bienenstock Furniture Library. She received \$10,000 to continue her studies in interior design.

Interior Design student Rachel Brennan, of Falls Church, Va., won the 2013 Sustainable Hospitality Design Competition sponsored by the Network of Executive Women in Hospitality.

Amelia Liarakos, of Fairfax, Va., won a student gold ADDY Award in the Elements of Advertising — Visual category from the American Advertising Federation for her work, “North by Northwest Titles.” Liarakos graduated in May 2013 with a bachelor of fine arts in visual communication design.

Nicholas Onopa, of Wausau, Wis., a senior majoring in public and urban affairs with minors in international studies and business leadership, was named the 2013 Virginia Tech Undergraduate Man of the Year.

A team of six students from Virginia Tech’s Myers-Lawson School of Construction competed in the Associated Schools of Construction National Sustainable Building and LEED (Leadership in Energy and Environmental Design) Competition and finished in first place, recording the event’s highest-ever total score.

College Of Engineering

Noted Accomplishments/Honors

The 2011-12 American Society for Engineering Education survey — the most recent available — ranked the College of Engineering sixth for the number of full-time teaching faculty, eighth for the number of tenured/tenure-track women faculty, 16th for the number of African-American faculty, 11th for the number of Asian faculty, and sixth for the number of Hispanic faculty. For bachelor’s degrees awarded, Virginia Tech ranked seventh in the nation; for master’s degrees awarded, 26th; and for doctoral degrees, 12th. In total enrollment, the college ranked seventh in the nation for undergraduates with 6,878 students, and 14th in the nation for graduate students with 2,278.

In U.S. News & World Report’s “America’s Best Colleges 2014” survey, the undergraduate engineering program ranked 15th among all undergraduate engineering programs that also offer the Ph.D., and sixth among those at public universities. The college’s Department of Engineering Science and Mechanics and Grado Department of Industrial and Systems Engineering ranked eighth in the nation. Other notable placements: The Department of Biological Systems Engineering (also a part of the College of Agriculture and Life Sciences) ranked 11th. The Charles E. Via Jr. Department of Civil and Environmental Engineering’s two programs ranked 10th and 11th, respectively. The departments of Aerospace and Ocean Engineering and Mechanical Engineering each ranked 14th; the Bradley Department of Electrical and Computer Engineering came in at 15th for each part of its program; and the Department of Chemical Engineering was 20th.

U.S. News & World Report’s 2014 graduate school report ranked the college 24th overall. The Grado Department of Industrial and Systems Engineering ranked seventh among industrial/manufacturing programs. The Charles E. Via Jr. Department of Civil and Environmental Engineering ranked seventh among civil engineering programs, with environmental engineering ranked 13th. The biological systems engineering department, also part of the College of Agriculture and Life Sciences, ranked ninth among biological/agricultural programs. Aerospace engineering ranked 15th, electrical and computer engineering each ranked 19th, and mechanical engineering ranked 17th.

The National Science Foundation (NSF) is a major contributor of grants to the college. Research expenditures during fiscal year 2011 totaled \$194.8 million, placing the college 10th in the nation among hundreds of engineering colleges, according to the NSF. The figure represents an increase of some \$42 million from 2008.

In the summer of 2013, the State Council of Higher Education for Virginia approved Virginia Tech's request to award master's and doctoral degrees in nuclear engineering.

For fall 2005, 4,800 prospective students applied for admission to the College of Engineering. For fall 2013, 7,414 applied, a 54 percent increase. Starting with fall 2010, the target size for the freshman engineering class was raised from 1,200 to 1,300, an 8 percent increase. In 2005, the entering engineering freshman class was 15.6 percent female, 2.1 percent African American, and 1.8 percent Hispanic. By comparison, the 2013 entering engineering freshman class was 22.3 percent female. Members of the underrepresented population make up 11.5 percent; discrete numbers no longer directly correlate because students now identify with more than one segment of the population.

U.S. News & World Report again honored Virginia Tech's online master of information technology degree program as one of the nation's best distance-learning courses. The program — offered by the College of Engineering and the Pamplin College of Business — ranked third behind the University of Southern California and Sam Houston State University in Texas.

The School of Biomedical Engineering and Sciences' research is growing exponentially. From the school's birth in 2000, with almost no research spending, the numbers had climbed to more than \$16 million by 2011 (latest reported number). In approximately a decade, the school's unranked status rose to 39th in the latest U.S. News & World Report rankings. In addition, a new undergraduate minor was launched in January 2013.

Virginia Tech's Department of Computer Science is one of 2013's new participants in the National Center for Women and Information Technology's program, Pacesetters, which seeks to radically increase the number of women in technology and computing. Pacesetters is a fast-track, two-year program in which senior leaders from companies and universities publicly commit to increasing the number of women in the computing and technology workforce in the U.S.

Thirteen current or emeritus faculty are members of the prestigious National Academy of Engineering.

Ten current or emeritus faculty are University Distinguished Professors; three are Alumni Distinguished Professors.

Outstanding Faculty

Padma Rajagopalan, the Robert H. Hord Faculty Fellow and associate professor of chemical engineering, accepted an invitation from the Center for Scientific Review at the National Institutes of Health to serve as a member of the Biomaterials and Biointerfaces study section. Her term extends from July 1, 2013, to June 30, 2017.

Corina Sandu, associate professor of mechanical engineering, received the 2013 Society of Automotive Engineers International's Forest R. McFarland Award. The director of the Advanced Vehicle Dynamics Laboratory, Sandu focuses her research on multibody dynamics modeling, uncertainty quantification and propagation, parameter estimation, soil and terrain modeling, on-road and off-road vehicle dynamics, tire and track modeling, and terramechanics.

Douglas Nelson, professor of mechanical engineering, received the National Science Foundation Outstanding Long-Term Faculty Advisor Award. This award is presented to the faculty advisor who best promotes the goals, objectives, and activities related to EcoCAR at their universities, including its incorporation into the undergraduate engineering curriculum. Nelson has previously received this award three times.

David A. Dillard, who holds the Virginia Tech Adhesive and Sealant Science Professorship endowed by the Adhesive and Sealant Council, received the 2013 Wake Memorial Medal at the Society for Adhesion and Adhesives' international conference. The Wake Medal is awarded triennially to a person in the field of adhesion or adhesives who has made outstanding contributions over a substantial period of time. There are only eight previous recipients.

Chao Wang, assistant professor of electrical and computer engineering, received a three-year Office of Naval Research Young Investigator Program grant for up to \$510,000 to develop methods and software tools that can detect security vulnerabilities in concurrent software that runs on a modern multi-core computer.

Douglas P. Holmes, assistant professor of engineering science and mechanics, was the 2013 recipient of the Ferdinand P. Beer and E. Russell Johnston Jr. Outstanding New Mechanics Educator Award. The Beer-Johnston award is given annually to no more than two individuals who have shown a strong commitment to mechanics education.

The State Council of Higher Education for Virginia named Stephen Edwards, associate professor of computer science, as a 2013 Virginia Outstanding Faculty Award winner. The award is the commonwealth's highest honor for university faculty.

Brian Kleiner, director of the Myers-Lawson School of Construction, was awarded a \$1 million, five-year grant by the National Institute of Safety and Health in 2013 to study how the U.S. construction industry can reduce work-related injuries and deaths among construction workers.

Six assistant professors have received National Science Foundation CAREER awards during the past two years. The awards are for five years each and range from \$400,000 to \$480,000, with monetary support distributed on a per-year basis. The latest recipients are Rafaella DeVita and Shane Ross of engineering science and mechanics; Joseph Baker and Chao Wang of electrical and computer engineering; Holly Matusovich of engineering education; and Christopher Williams of the mechanical engineering and engineering education departments. Additionally, since 2012, five new faculty joined the college, bringing their CAREER awards with them. Sixty-eight current faculty members have received this prestigious honor.

Student/Student Group Achievers

Two College of Engineering teams advanced to the second phase of the futuristic Robotics Challenge sponsored by the Defense Advanced Research Projects Agency, or DARPA, a subsidiary of the U.S. Department of Defense dedicated to high-tech research. The goal is to create rescue robots that can easily maneuver disaster scenes and save lives.

A Department of Aerospace and Ocean Engineering student team took first place in the 2013 Revolutionary Aerospace Systems Concepts-Academic Linkage, or RASC-AL, competition. The team captured first place in the Human-Focused Mars Mission Systems and Technologies category, the undergraduate level competition, and the overall competition award. The design competition tasks university students with solving the myriad quandaries — environmental factors, choice of vehicle, fuel source and usage, and return trip home — associated with a human-based mission to Mars.

A doctoral student was one of 10 contestants on the Discovery Channel's reality-television competition, "Big Brain Theory: Pure Genius," which focused on using logic and design to crack different engineering-related challenges each week. Amy Elliott, of Fayetteville, Tenn., a doctoral student in the Department

of Mechanical Engineering, was one of 10 contestants on the eight-week show that aired in 2013. Elliott advanced to the finals to go head-to-head with one other remaining contestant in a challenge to build a deployable bridge.

Virginia Tech's Chem-E-Car team earned second place in the 2013 American Institute of Chemical Engineering student event held at Rutgers University. Teams representing 13 prestigious universities competed to test their ability to control a chemically powered vehicle that was designed, built, and tested by undergraduate team members. The team's juniors will head to the national competition in San Francisco.

A team of College of Engineering students won first place at the 2013 Collegiate Aerial Robotics Exhibition held in Milwaukee, Wis., dominating a sporting-like competition in which unmanned model-sized quad copters and ground-based robots collected and launched tennis balls at set targets.

In spring 2013, a research team consisting of graduate students and Shashank Priya, professor of mechanical engineering, unveiled a life-like, autonomous robotic jellyfish the size and weight of a grown man: 5 feet, 7 inches in length and weighing 170 pounds. The prototype robot, nicknamed Cyro, is a larger model of a robotic jellyfish unveiled in 2012 by the same team. Both robots are part of a nationwide, multi-university \$5 million project funded by U.S. Naval Undersea Warfare Center and the Office of Naval Research. The goal is to place self-powering, autonomous machines in waters for the purposes of surveillance and monitoring the environment, in addition to such other uses as studying aquatic life, mapping ocean floors, and monitoring ocean currents.

College Of Liberal Arts and Human Sciences

Noted Accomplishments/Honors

The Virginia Tech Linux Laptop Orchestra (L2Ork), founded and directed by Ivica Ico Bukvic, has completed five tours (one international) and played at the Virginia State Fair. L2Ork is one of the signature initiatives of the Institute for Creativity, Arts, and Technology and its Integrative Mind & Performance through the Arts, Creativity, and Technology studio. L2Ork has spawned K-12 satellite orchestras in Ohio and Florida. Since its inception, L2Ork has helped start five new *Orks, with three of them coming online in this year alone, including Shawnee State University, Stetson University, and Santa Clara University.

The fifth volume of *Philologia*, the undergraduate journal in the College of Liberal Arts and Human Sciences, was published in the spring of 2013. Co-editors-in-chief were Kate Robertson, a junior communication and English major, and Michelle Sutherland, a junior political science and philosophy major who also served as the editor-in-chief of Virginia Tech's student-run newspaper, the *Collegiate Times*.

The Virginia Tech Symphonic Wind Ensemble made its Carnegie Hall debut on April 9 at the New York International Music Festival.

Outstanding Faculty

Twenty-nine CLAHS faculty members, including three individuals with two submissions, authored, co-authored, or edited books last year.

History professor E. Roger Ekirch, whose research on nocturnal life and insomnia has garnered worldwide acclaim, was awarded his fourth National Endowment for the Humanities Fellowship for work on his next project, an examination of a mutiny in the history of Britain's Royal Navy.

Anthony Peguero, assistant professor of sociology, was the recipient of the National Institute of Justice W.E.B. DuBois Fellowship, which bestows a \$100,000 award. The fellowship's objective is "to provide talented researchers with an opportunity, early in their career, to elevate independently generated research and ideas to the level of national discussion." Peguero is using that funding to examine social bonds across generations of immigrant families.

Anisa Zvonkovic, professor and head of the Department of Human Development, and Joyce Arditti, professor of human development, both achieved Fellow status in the National Council on Family Relations (NCFR). The NCFR awards fellow status to few living members, 3 percent or less, who have made outstanding and enduring contributions to the field of the family in the areas of scholarship, teaching, outreach, or professional service.

Mark Barrow, professor and chair of the history department, was awarded the Watson Davis and Helen Miles Davis Prize for Best Book for a General Audience by the History of Science Society. Barrow was recognized for "Nature's Ghosts: Confronting Extinction from the Age of Jefferson to the Age of Ecology."

Karen Hult, professor of political science, received the Career Service Award from the American Political Science Association, which has more than 20,000 members. The award is bestowed on one individual every fourth year and recognizes the body of significant research produced by a scholar of the presidency and executive politics.

Karen Roberto, director of the Center for Gerontology and the Institute for Society, Culture, and Environment, received the 2012 Distinguished Mentorship in Gerontology Award from the Gerontological Society of America.

Emily Satterwhite, associate professor in the Department of Religion and Culture, was recognized for her work in Appalachian Studies. Her book, "Dear Appalachia: Readers, Identity, and Popular Fiction since 1978," won the Weatherford Award for best non-fiction work illuminating the Appalachian South.

Josaih Tlou, professor emeritus in the School of Education/Office of Education Research and Outreach, was recognized by the National Council for the Social Studies with its Distinguished Global Scholar Award. He planted seeds for intercontinental partnerships when he worked to develop a social studies curriculum in Malawi from 1996-98. Since then, Tlou has embarked on a series of teaching-and-learning collaborations for the School of Education that have extended into Ghana, Kenya, Zambia, and South Africa, resulting in almost \$5 million in grants to improve active learning, critical thinking, participatory and interactive teaching-learning techniques, increased use of the Internet, and community service learning.

Gary Downey, Alumni Distinguished Professor of Science and Technology in Society, was elected 20th president of the Society for Social Studies of Science and begins his two-year term in 2013. Downey is recognized internationally as the founder of the interdisciplinary field called engineering studies and has served as an advocate for the study of engineering in society.

University Distinguished Professor of English Nikki Giovanni played host to Sheer Good Fortune: Celebrating Toni Morrison in a packed Burruss Hall in October. Maya Angelou was also in attendance along with dozens of other prominent poets and authors.

Student/Student Group Achievers

Named the outstanding graduating senior, Sarah Pelham majored in philosophy with concentrations in Chinese and English studies and will be attending law school at the University of Virginia. A member of the University Honors program and a Phi Beta Kappa honor society inductee, she earned numerous scholarships for academic merit and also received an undergraduate research award.

Outstanding graduate student Jon Catherwood-Ginn earned his M.F.A. studying directing and public dialogue and nonprofit and nongovernmental organization management. He now serves as the partnerships and engagement manager at the Center for the Arts at Virginia Tech.

Named the college's outstanding doctoral student, Christian Matheis has completed the course work for his Ph.D. in the Alliance for Social, Political, Ethical, and Cultural Thought. His professional history includes work as a community organizer, human relations facilitator, university faculty, and consultant.

Both the undergraduate and graduate representatives to the 2013-14 Board of Visitors are from the College of Liberal Arts and Human Sciences. Erica Wood, a junior international studies major, and Nick Warrington, a master's degree student in the School of Education, will serve one-year terms.

Chris Bonelli, now a senior communication major, was elected vice president for chapter development of the Public Relations Student Society of America (PRSSA). The first Virginia Tech student to win a national office in this organization, Bonelli is responsible for programming and leadership training at the 2013 PRSSA National Conference and the 2014 national assembly, fundraising programs for chapters, and community service initiatives.

College Of Natural Resources and Environment

Noted Accomplishments/Honors

The National Science Foundation ranked the university's agricultural science and natural resources research program in the top five among the nation's universities and colleges since 2007. This ranking includes reporting from the colleges of Agricultural and Life Sciences, Natural Resources and Environment, and Veterinary Medicine.

The college's forestry, fisheries, and wildlife programs have consistently ranked among the top in the nation. In its most recent ranking of doctoral programs, the National Research Council rated Virginia Tech's graduate program in forestry as one of the country's best. The college's program in sustainable biomaterials is now the largest of its kind in North America.

The college's first-year experience course, Invent the Sustainable Future, has become known across the university for its quality and appeal to students.

Virginia Tech planted a clone of the historic sycamore tree that was removed in 2010 from Henderson Lawn on the west side of campus. Two forestry professors rooted and grew the clone from one of 300 cuttings taken from the original tree before it had to be cut down for safety reasons. University and municipal officials and guests gathered for a town-gown tree-planting celebration in honor of Earth Day on April 22.

The college's Leadership Institute develops leadership abilities in some of its top undergraduate students to prepare them for managing natural resources for sustainability and biodiversity. In this two-semester special-study sequence, selected students with demonstrated leadership skills and academic ability strengthen their talents through in-class discussion and hands-on leadership projects.

The college's Freshwater Mollusk Conservation Center, in collaboration with state and federal partners, released more than 7,000 juvenile mussels into the Powell River, the largest release of endangered mussels in the history of the river restoration project. The partnership has led to land purchases to protect riparian habitats along the banks of the Powell River, research to improve mussel propagation technology, and the rearing of baby mussels at Virginia Tech's mollusk center and a state facility near Marion, Va. Tech's mussel restoration techniques serve as a model and are replicated by fisheries agencies in other parts of the country.

Alumni Distinguished Professor John Seiler and laboratory specialist John Peterson released the third edition of “Woody Plants of North America,” an interactive multimedia tutorial containing 23,000 photographs and 920 different plant species to assist identification. Seiler and Peterson also worked with a programmer to develop a free Android smartphone app, Virginia Tech Tree Identification. Just three months after its release, the app was the most downloaded tree identification app available from Google Play.

The college and sponsoring partners hosted a national conference to explore the future of diversity in natural resources disciplines and careers. The focus was the development of a future workforce and leaders with diverse backgrounds who can prepare the country’s population to deal with pressing environmental problems. Speakers included Mamie Parker, former assistant director of the U.S. Fish and Wildlife Service, and James H. Johnson Jr., director of the Urban Investment Strategies Center at the University of North Carolina at Chapel Hill.

Through a partnership with the Virginia Department of Forestry, faculty members at the Virginia Geospatial Extension Program, based in the college, developed the Urban Tree Canopy Mapper. Residents and policymakers from 26 communities across Virginia can use this specially developed digital tool to view and access the tree canopy covering their own city or neighborhood.

To leverage its growing international programs and broadening inclusiveness of global sustainability, the college established the Center for Leadership in Global Sustainability. The center houses the college’s graduate programs in the National Capital Region, including the master of natural resources; the executive master of natural resources; a forthcoming global master of natural resources; and a series of graduate, certificate, and professional programs, clinics, and workshops.

The college created the Center for Natural Resources Assessment and Decision Support to address the question, “Are we using our forest resources in a sustainable manner?” The center will provide datasets of forest resource conditions; computer models designed for use by industry, government, and policymakers; and assistance in adapting models and data for specific applications.

Outstanding Faculty

University Distinguished Professor Harold Burkhart, the Thomas M. Brooks Professor of Forestry, was named Virginia’s Outstanding Scientist of 2013.

Kathleen Alexander, associate professor of wildlife, received the 2013 Alumni Award for Excellence in International Outreach. Alexander continues to stay at the forefront of research on the human-wildlife interface. In research published this year, she identified banded mongoose in Botswana as being infected with the pathogen that causes leptospirosis, the world’s most common disease transmitted to humans and a significant health threat. Her research with banded mongoose also found that humans are passing antibiotic resistance to wildlife, especially in protected areas where humans are limited. She is working with the Botswana government to develop sustainable approaches to the protection of human, wildlife, and ecosystem health.

Jeffrey Kirwan, professor emeritus of forestry, received the Virginia Department of Forestry’s Crown Award, the agency’s highest civilian honor.

Eric Wiseman, associate professor of urban forestry and arboriculture, was named the 2012 Early Career Scientist by the International Society of Arboriculture.

Tom Fox, professor of forest soils and silviculture, was named a Fellow in both the Society of American Foresters and the Soil Science Society of America.

Jeff Marion, adjunct professor of natural resource recreation, received the Distinguished Service Medal from the Boy Scouts of America for his dedication to advancing Leave No Trace education and training within the organization.

Jim Fraser, professor of wildlife, received the Mitchell A. Byrd Award for outstanding achievement in ornithology from the Virginia Society of Ornithology.

Jennifer Gagnon, a project associate who coordinates the Virginia Forest Landowner Education Program, received the 2013 Alumni Award for Excellence in Extension.

Michael Schwarz, adjunct assistant professor and an aquaculture specialist at the Virginia Seafood Agricultural Research and Extension Center, is president of the World Aquaculture Society.

Randolph Wynne, professor of forest remote sensing, was selected by the U.S. Geological Survey and NASA to be a member of the Landsat Science Team, joining a group of scientists and engineers who will provide technical and scientific input for the interagency Landsat satellite program.

Tom Hammett, professor of sustainable biomaterials, was selected to lead a new university program to help modernize international agricultural education systems. The venture, called InnovATE (Innovation in Agricultural Training and Education), is based in the Office of International Research, Education, and Development and is funded by a grant from the U.S. Agency for International Development.

Jason Holliday, assistant professor of forest genetics and biotechnology, was recognized by the FBI for using forensic botany to assist with a homicide investigation.

John Boyer's World Regions class arranged a Skype interview with former Australia Prime Minister Kevin Rudd. Boyer also launched a successful campaign on Kickstarter to raise \$23,000 to create a "Plaid Avenger" comic book and smartphone app about the drug cartel culture in Mexico.

A team of faculty and students from three different colleges — including Associate Professor John Munsell, Associate Professor Eric Wiseman, and master's degree student Taylor Chakurda from the College of Natural Resources and Environment — took first place in the Casey Trees Master Plan Design Competition. Teams had to develop a plan for the Casey Tree Farm that reflects best practices, introduces innovative land conservation concepts, and helps expand the Casey Trees Foundation's mission to "restore, enhance, and protect the tree canopy of the nation's capital."

Student/Student Group Achievers

Geography and meteorology senior Daniel Goff was the only undergraduate student selected to present at the TEDxVirginiaTech event in November 2012.

Master's student Elizabeth Moore received the Outstanding Young Scientist Award at the 2012 International Union of Forestry Research Organizations' Small-Scale Forestry Working Group Conference.

Haoyu Liu, a doctoral student in the macromolecular science and engineering program under the supervision of Professor Kevin Edgar, received the American Chemical Society's Cellulose and Renewable Materials Division Graduate Student Award. This prestigious international award, given to only one student each year, recognizes excellence in cellulose or renewable materials research.

A team of seven geography and forestry graduate students took home Virginia Tech's second consecutive title in the national GeoLeague Challenge at the American Society for Photogrammetry and Remote Sensing conference in Baltimore, Md.

Doctoral student Brandon Peoples won the American Fisheries Society's 2012 student writing contest, and master's degree student Shannon White received the society's John E. Skinner Memorial Scholarship.

The Eastern Golden Eagle Working Group, which includes geography graduate student David Kramar, was awarded the 2013 Wings Across the Americas Award in Research and Partnership from the U.S. Forest Service.

Yasmina Raya, a student in the executive master of natural resources program in the National Capital Region, received a scholarship from the Arab American Association of Engineers and Architects.

A four-student team won the Wood Science Bowl at the Forest Products Society conference in Washington, D.C.

Three students — junior Zoe Carroll, junior Leslie Beard, and senior Whitney Clark — earned top awards in the VOWA (Virginia Outdoor Writers Association)/Dominion Collegiate Undergraduate Writing Contest.

The team of Patrick Snellings, a senior fisheries science major, and Andrew Jackson, a sophomore agricultural technology major, won the National Guard FLW College Fishing Northern Conference event in Ohio.

Pamplin College of Business

Noted Accomplishments/Honors

U.S. News & World Report ranked the Pamplin College of Business undergraduate program 43rd overall among the nation's undergraduate business programs and 26th among public institutions.

Pamplin's other notable rankings:

- The undergraduate program ranked No. 52 overall, No. 24 by employers, according to Bloomberg Businessweek Best Undergraduate Business Schools.
- The evening M.B.A. program ranked No. 34, U.S. News & World Report.
- The master of information technology program ranked third in U.S. News & World Report's 2013 Best Online Education Programs.
- The management program ranked No. 24 for research productivity in a 2012 study by Texas A&M and University of Florida.
- Accounting and information systems was No. 20 for undergraduate and master's programs in accounting in the 2012 Public Accounting Report, 31st Annual Professor's Survey — schools with 22-plus full-time accounting faculty.
- Hospitality and tourism management: four faculty members among world's top 50 tourism scholars, Tourism Management, 2009.

Six Pamplin majors are routinely among the 10 majors most sought after by recruiters visiting campus.

Outstanding Faculty

Faculty members who received Fulbright awards are hospitality and tourism management Associate Professor Vince Magnini, business law Professor Janine Hiller, management Professor Richard Wokutch, accounting and information systems Professor France Belanger, hospitality and tourism management Professor Mahmood Khan, and management Professor Larry French.

Howard Feiertag, hospitality and tourism management instructor, was honored with two lifetime achievement awards: the 2012 Winthrop W. Grice Award for public relations excellence from the Hospitality Sales & Marketing Association International and the 2012 Virginia Society of Association Executives Lifetime Career Services Award. Feiertag has more than 50 years experience as a hospitality professional and an educator.

Zvi Schwartz, hospitality and tourism management associate professor, co-authored the article, "Hedonic motivations and the effectiveness of risk perceptions oriented revenue management policies," which was selected for the W. Bradford Wiley Memorial Best Paper of the Year award at the 2013 International Council on Hotel, Restaurant, and Institutional Education.

Hospitality and tourism management Professor Muzzo Uysal, doctoral student Mehmet Altin, and a third researcher co-authored the article, "Determinants of length of stay using a truncated binomial regression," which was selected as a conference best paper at the 2013 International Council on Hotel, Restaurant, and Institutional Education.

Mahmood Khan, hospitality and tourism management professor, was the keynote speaker at a fall 2012 international conference, "Universal Values and Cultural Diversity in the 21st Century: How Can Tourism Make a Difference?" Khan has been asked by the U.S. Agency for International Development to serve as a part-time consultant on curriculum development for four Armenian universities.

Julie Ozanne, marketing professor, serves as chair of the Association for Consumer Research's advisory committee on transformative consumer research, a movement within the association that seeks to "encourage, support, and publicize research that benefits consumer welfare and quality of life for all beings affected by consumption across the world."

Rajesh Bagchi, marketing associate professor, was selected as a Marketing Science Institute 2013 Young Scholar and attended the institute's Young Scholars Event in Park City, Utah, that aimed to promote research collaborations among scholars thought to be likely leaders of the next generation of marketing academics.

Pamplin faculty members are tackling major issues in industry, finance, management practice, and information technology, among other areas. Their research has contributed to greater understanding of business issues, has been cited in government hearings and court testimony, and has played a role in policymaking. Although sponsored research is not a central aspect of the research programs of business schools, several Pamplin faculty members have attracted national funding for their research while working as members of interdisciplinary teams. Based on publication in the leading academic journals in their fields, the college's departments are also regularly ranked among the nation's or world's top programs for scholarly productivity.

Pamplin's senior faculty members teach many of the required courses, and students learn from the professors who win teaching and research awards, write the books used in classrooms everywhere, serve as consultants to companies, or have worked in business and industry. The college has had 22 winners of the university's Wine Award for Teaching Excellence since the award was established in 1957.

Student/Student Group Achievers

Through two student-run investing groups, Pamplin students manage about \$10 million of Virginia Tech's endowment. SEED (Student-managed Endowment for Educational Development), which manages about \$5 million through stock investments, is believed to be the nation's largest student-run portfolio that is managed as an extracurricular activity. BASIS (Bond And Securities Investing by Students), which manages about \$5 million in bonds and other fixed-income securities, is one of a handful of bond-only student-investor programs in the nation. SEED's faculty advisors are finance professors John Pinkerton and Mike Kender; BASIS is advised by professors George Morgan and Derek Klock.

Pamplin students are overseeing and advancing the college's social media activities through a newly established organization, PRISM (Pamplin Reinventing Social Media), under the guidance of marketing instructor and faculty advisor Donna Wertalik. A team led by Wertalik received a 2012 CASE (Council for Advancement and Support of Education) District III Award of Excellence for the marketing department's redesigned website and social media platform.

Emily Moscato, a doctoral student in marketing, was a co-winner of the 2012 Association of Consumer Research/Sheth Foundation dissertation grant in cross-cultural or public-purpose consumer research. She received \$2,500 to support data collection for her dissertation, "Brand Communities and Well-being: Learning to Age in a Red Hat." Her study examines the impact of "brand communities" on older women and how they manage aging and ageism, transition into new social roles, and their physical and psychological health.

Eunju Woo, a doctoral student in hospitality and tourism management, received a Best Paper Award at the 18th Annual Graduate Education and Graduate Student Research Conference in Hospitality and Tourism.

Five case studies compiled by National Capital Region MBA students for an international case-study competition were selected for publication in the *Journal of Hospitality and Tourism Cases*. The students were enrolled in the restaurant franchising course taught by hospitality and tourism management professor Mahmood Khan. The cases received outstanding recommendations by referees in the blind review process.

Notable Alumni

The college is named in honor of alumni Robert B. Pamplin, the retired CEO of Georgia-Pacific who died in June 2009 at age 97, and businessman and philanthropist Robert B. Pamplin Jr. The college's notable alumni include David Calhoun, chairman and CEO of The Nielsen Company and former vice-chair of General Electric; Lance Smith, retired U.S. Air Force general and former commander of the U.S. Joint Forces Command; Terry Blevins, executive vice president and chief financial officer of Landmark Media Enterprises; Trish Cox, chief operating officer of Schwab Advisor Services; Lynne Doughtie, national managing partner of KPMG's U.S. advisory services; Shirley Edwards, audit and advisory services partner at Ernst & Young; C.E. Andrews, president and chief operating officer of RSM McGladrey, a subsidiary of H&R Block; Vahan Janjigian, vice president and executive director of the Forbes Investors Advisory Institute, Forbes chief investment strategist, and author of "Even Buffet Isn't Perfect: What You Can — and Can't — Learn from the World's Greatest Investor"; and Denman Zirkle, executive director of the Shenandoah Valley Battlefields Foundation.

College of Science

Noted Accomplishments/Honors

The biological sciences department hosted the first-ever International Conference on Computational Cell Biology in August 2013. More than 100 leading scientists from around the world traveled to Blacksburg to discuss the evolving interdisciplinary, systems-level approach to traditional biology.

The Integrated Science Curriculum continues to be a gateway for science majors and a vehicle to introduce emerging degrees in nanoscience, neuroscience, computational modeling and data analytics, and systems biology. A third class of 45 students entered in fall 2013.

The college's new science, technology, and law minor graduated its first six members in spring 2013. Under program director Anna-Marion Bieri, the program has continued to evolve from a selection of courses to a full minor open to all students.

The Academy of Integrated Science was established in summer 2013 to develop and house interdisciplinary, science-based degree programs, curricula, and minors, as well as to provide a multidisciplinary home for faculty whose teaching and research interests are associated with these programs. Among the goals of the academy are strengthening interdepartmental collaboration and fostering enhanced research opportunities in alignment with degree programs. Professor J.P. Morgan is the director of the academy.

The Kimballton Underground Research Facility hosted the first-ever facility-user group meeting in June. The facility is host to nine experimental groups from 13 universities and national laboratories. Researchers use the facility for a variety of experiments, including the search for dark matter, solar neutrino detection, neutrino-based reactor monitoring for national security, and studies of fluxes for underground detector development.

Outstanding Faculty

Patricia Dove, C.P. Miles Professor of Science in the Department of Geosciences, was elected a member of the National Academy of Sciences in April 2013 for sustained excellence in original scientific research. In addition, Dove was selected as a Virginia Scientist of the Year in May and named a University Distinguished Professor in June.

Fred Read, professor emeritus of geology, was selected to receive the Sloss Medal by the Geological Society of America (GSA). Named after prominent sedimentologist-stratigrapher Larry Sloss, the Sloss Medal is the premier award of the sedimentology division of the GSA.

Bud Brown, Alumni Distinguished Professor of Mathematics, received the Allendoerfer Award from the Mathematical Association of America for his paper, "Why Ellipses are not elliptic curves."

Jeffrey Walters, the Harold H. Bailey Professor of Biological Sciences, received the university's 2013 Alumni Award for Excellence in Research.

Diane Walker-Green, undergraduate program coordinator for the Department of Physics, received the university's 2013 President's Award for Excellence.

Joseph Merola, professor of chemistry, received the university's 2013 William E. Wine Award for Teaching Excellence, presented to three faculty members each year.

Linda Bland, retired grants specialist in the Department of Geosciences, received the university's 2013 Staff Career Achievement Award.

Bill Woodall, professor of statistics, was a co-recipient of the first annual Soren Bisgaard Award, which recognizes the paper in the American Society for Quality's journal, *Quality Engineering*, with the "greatest potential for advancing the practice of quality improvement." The co-recipient and co-author was the late George E.P. Box. Woodall also received the Box Medal in 2012.

James E. McGrath, University Distinguished Professor in polymer chemistry and director of the Materials Research Institute, received the Charles G. Overberger International Prize for Excellence in Polymer Science and Engineering, a biennial award that “recognizes and encourages accomplishments of unusual merit in the field of basic or applied polymer science.”

Student/Student Group Achievers

Shernita Lee, of Birmingham, Ala., a doctoral candidate with an interdisciplinary major in genetics, bioinformatics, and computational biology, was chosen as the 2013 Virginia Tech Graduate Woman of the Year.

Ryan Smith, of Hardyville, Va., a doctoral candidate in psychology, was selected as the 2013 Virginia Tech Graduate Man of the Year.

Darya Nesterova, of Fairfax, Va., a senior majoring in biological sciences with minors in psychology and in medicine and society, was named the Virginia Tech Undergraduate Woman of the Year.

Virginia-Maryland Regional College Of Veterinary Medicine

Noted Accomplishments/Honors

The Virginia-Maryland Regional College of Veterinary Medicine has seen gains in application numbers for its doctor of veterinary medicine program every year for the past several years. In 2012, a record-breaking 1,220 prospective students submitted applications to the college for its 120 available seats, representing the fourth-largest applicant pool in North America.

The Council on Education for Public Health awarded full accreditation to the master of public health program. Established in 2010 and housed in the veterinary college, the two-year professional degree program has the distinction of being the first to be accredited at a veterinary college in the United States.

Researchers in the college have made considerable advancements in the area of emerging and re-emerging viruses under the direction of Dr. X.J. Meng, University Distinguished Professor at Virginia Tech. The National Institutes of Health has funded recent efforts to better understand how hepatitis E virus causes chronic infections and crosses the species barrier. The Meng laboratory is one of the leading international research centers on hepatitis E virus, which causes an estimated 20 million liver infections each year.

Research in the Department of Biomedical Sciences and Pathobiology has found that a genetically engineered Newcastle disease virus — which harms chickens, but not humans — may hold promise as a treatment for prostate cancer. With support from the National Institutes of Health and the Department of Defense, Dr. Elankumaran Subbiah, associate professor of virology, and a team of researchers in the college have conducted innovative research on the virus’s potential against prostate cancer.

The Center for Public and Corporate Veterinary Medicine, based in College Park, Md., not only redesigned and expanded its curriculum to better prepare students for nontraditional careers in veterinary medicine, but also expanded its international reach. Students are spanning the globe to learn about international public health and veterinary medicine and contributing to improved animal and human health programs in Italy, Armenia, Trinidad, Liberia, Ghana, and the Dominican Republic.

The Marion duPont Scott Equine Medicine Center in Leesburg, Va., has made a number of advances in the field of regenerative medicine. Dr. Jennifer Barrett directs the center’s efforts to use equine patient’s own cells to promote healing. Much of this work focuses on utilizing stem cells to regenerate and repair tendons and ligaments where injuries can cause chronic lameness.

The Small Animal Hospital, one of two teaching hospitals that comprise the college's Veterinary Teaching Hospital, marked 25 years of accreditation with the American Animal Hospital Accreditation in 2013.

The Veterinary Teaching Hospital launched a new oncology program that provides a full range of care for patients with and without a cancer diagnosis, including biopsy, imaging, treatment, and surgery.

The Veterinary Medicine Instruction Addition, which opened in 2012, includes a state-of-the-art clinical techniques laboratory for second- and third-year veterinary students, as well as new faculty offices, student seminar space, and small conference areas. The addition also received a Silver LEED (Leadership in Energy and Environmental Design) certification from the U.S. Green Building Council for its sustainable features.

Outstanding Faculty

Dr. Jennifer Barrett, associate professor of equine surgery, achieved diplomate status with the American College of Veterinary Sports Medicine and Rehabilitation with an equine specialty.

Dr. Sabrina Barry, clinical assistant professor of small animal surgery, achieved diplomate status with the American College of Veterinary Surgeons.

Travis Burns, farrier at the Veterinary Teaching Hospital, was named an associate in the Worshipful Company of Farriers and has earned a specialty "therapeutic" endorsement from the American Farriers Association. The college is one of only a handful of veterinary schools with an in-house farrier.

Dr. Marion Ehrich, professor of pharmacology and toxicology in the Department of Biomedical Sciences and Pathobiology, was named the Alumna of the Year at South Dakota State University.

Dr. Mark Freeman, assistant professor of community practice, was certified as a diplomate by the American Board of Veterinary Practitioners, specializing in canine and feline practice.

Dr. Thomas Inzana, professor of bacteriology in the Department of Biomedical Sciences and Pathobiology, was reappointed the Tyler J. and Frances F. Young Chair in Bacteriology.

Bradley Klein, associate professor of neurobiology in the Department of Biomedical Sciences and Pathobiology, served as editor-in-chief of the world's most widely published textbook on veterinary physiology.

Dr. X.J. Meng, professor of molecular virology in the Department of Biomedical Sciences and Pathobiology, was named a University Distinguished Professor at Virginia Tech. Meng's accomplishments include the discovery of two new viruses and the invention of the first fully licensed U.S. Department of Agriculture commercial vaccine against a deadly swine disease.

Dr. Bess Pierce, associate professor of community practice in the Department of Small Animal Clinical Sciences, is a senior veterinarian for the Public Health Command Region-Europe in the U.S. Army Reserve Veterinary Corps. In this role, she is one of the highest-ranking Army veterinarians stationed in Europe. Pierce also oversees the Veterinary Teaching Hospital's Small Animal Community Practice and the Center for Animal Human Relationships. In 2013, she earned diplomate status with the American College of Veterinary Sports Medicine and Rehabilitation with a canine specialty.

Dr. Megan Shepherd, assistant professor of clinical nutrition in the Department of Large Animal Clinical Sciences, earned diplomate status with the American College of Veterinary Nutrition.

Dr. William Dee Whittier, professor of production management medicine, received the 2013 Cattle Industry Service Award from the Virginia Cattleman's Association.

Student/Student Group Achievers

Kaitlyn Kramer Childs '14, doctor of veterinary medicine candidate, won second prize in the veterinary internal medicine category, and John Alex Teed '14, won a special prize in the same category at the Fourth International Clinical Case Presentation Conference held at Tamil Nadu Veterinary and Animal Sciences University in Chennai, India.

Carissa Doody, master of public health student, received the highest honor earned by Junior Holstein members — the Distinguished Junior Member finalist award — and was one of two college students to win the 2013 National Dairy Shrine Kildee Scholarship.

Alice Houk, graduate student in the Department of Biomedical Sciences and Pathobiology, was awarded the Byrd-Dunn Award for the best graduate student presentation at the Southeastern Society of Parasitologists meeting in Bowling Green, Ky.

María Cristina Villafranca Locher, a doctoral candidate in the Department of Large Animal Clinical Sciences, won a first place certificate for her poster at the XVII Congreso Veterinario de Leon conference in Leon, Mexico in 2013.

Yanyan Ni, a doctoral candidate in the Department of Biomedical Sciences and Pathobiology, won the best overall graduate student presentation award at the 93rd annual meeting of the Conference for Research Workers in Animal Diseases in 2012.

Dan Youngstrom, a doctoral candidate in the Department of Biomedical Sciences and Pathobiology, was selected to receive a research grant under the Fulbright U.S. Student Program. The grant allows Youngstrom to work in Latvia's capital city of Riga in the Cell Transplantation Center, a research laboratory where he is involved in the pre-clinical development of cell-based therapeutics to regenerate damaged cartilage in human patients with osteoarthritis. Youngstrom also received the Seventh Annual Storm Cat Career Development Award, designed as an early boost to an individual considering a career in equine research.

Other areas

National Capital Region

Derek Hyra, an associate professor in the Department of Urban Affairs and Planning, was appointed by the Alexandria City Council to a four-year term on the city's planning commission.

Saifur Rahman, Joseph R. Loring Professor of Electrical and Computer Engineering and director of the Virginia Tech Advanced Research Institute, received the Institute of Electrical and Electronic Engineers (IEEE) Power & Energy Society Outstanding Power Engineering Educator award.

Philip Spellerberg, of Manassas, Va., a retired laboratory specialist in the Charles E. Via Jr. Department of Civil and Environmental Engineering, received the university's 2013 Staff Career Achievement Award. Spellerberg, who retired from the university in 2012 after 30 years of service, spent the duration of his career at the Occoquan Watershed Monitoring Laboratory in Manassas, the university's first continuously operated research lab in the National Capital Region.

John Provo, director of Virginia Tech's Office of Economic Development; Margaret Cowell, assistant professor in the urban affairs and planning program in the National Capital Region; and Heike Mayer,

chair of economic geography at the University of Bern, Germany, completed a study recommending redevelopment options for St. Elizabeths, a former mental health facility on 300 acres of land in southeast Washington, D.C. The project was funded by the Economic Development Administration to support the federal government's plan to relocate and consolidate the Department of Homeland Security on the west campus of St. Elizabeths.

Sanjay Raman, professor of electrical and computer engineering and associate vice president for the National Capital Region, was named an IEEE Fellow for his leadership in adaptive microwave and millimeter-wave integrated circuits. The status of Fellow is bestowed upon less than one-tenth of one percent of the annual voting membership of IEEE.

Charles Clancy, director of the Ted and Karyn Hume Center for National Security and associate professor of electrical and computer engineering in the College of Engineering, was named the first L-3 Communications Cyber Faculty Fellow of Electrical and Computer Engineering by the Virginia Tech Board of Visitors.

Andrea Wittenborn, assistant professor of human development in the College of Liberal Arts and Human Sciences, and Hazhir Rahmandad, associate professor of industrial and systems engineering in the College of Engineering, received a \$420,000 Exploratory /Developmental Research Grant Award from the National Institutes of Health for a two-year project, "Modeling the dynamics of adult depression."

Joel Peters, professor of government and international affairs in the School of Public and International Affairs, co-edited "The Routledge Handbook on the Israeli-Palestinian Conflict," the first book to present an overview of different political perspectives in one volume. The handbook brings together a range of 26 experts from Israel, Palestine, Europe, and North America.

Christopher Barrett, scientific director of the Virginia Bioinformatics Institute, was awarded a prestigious Jubilee Professorship in Computer Science and Engineering from Chalmers University in Gothenburg, Sweden. As part of the professorship, Barrett will help develop new interdisciplinary projects with Chalmers University on topics related to sustainable cities, social and network science, and socially coupled systems.

Janet Abbate, an associate professor in the Department of Science and Technology in Society in the College of Liberal Arts and Human Sciences, authored "Recoding Gender," published by MIT Press. In the book, Abbate discusses how gender has shaped the culture of computing and offers a valuable historical perspective on today's concerns about women's underrepresentation in the field.

Outreach And International Affairs

Outreach and International Affairs' Continuing and Professional Education (CPE) provides valuable programs that connect the expertise of Virginia Tech to the local, state, national, and global needs of individuals, organizations, and communities. In fiscal year 2013, CPE delivered 239 programs that were attended by more than 20,000 participants.

In the first full year as the management entity responsible for operations of the Executive Briefing Center at the Virginia Tech Research Center — Arlington, CPE faculty and staff welcomed approximately 12,500 participants to the new building and generated bookings of \$407,750 from more than 250 events.

CPE is heading up Virginia Tech's role in a \$60 million, five-year grant project funded by the U.S. Army Education Outreach Program. Bringing together 10 national STEM (Science, Technology, Engineering, and Mathematics) outreach programs under one umbrella, the program has served more than 28,000 participants.

The Center for Organizational and Technological Advancement (COTA) generated \$1.1 million in gross sales revenue for The Hotel Roanoke & Conference Center in fiscal year 2013. Since 2004, COTA has generated more than \$46 million in gross sales at the hotel and conference center.

The Regency Room restaurant at The Hotel Roanoke & Conference Center marked its 75th anniversary in January 2013 with its first structural renovation since opening. The hotel itself has been recognized by Hilton Worldwide with eight consecutive PRIDE Awards for excellent customer satisfaction, an Excellence in Food & Beverage Award, and a Trip Advisor's Award of Excellence.

The Inn at Virginia Tech and Skelton Conference Center was named a top-10 meeting destination in a readers' choice survey by ConventionSouth. It was also named a top wedding vendor by Virginia Living Magazine. Inn and conference guests can enjoy golf packages at the nearby Pete Dye River Course of Virginia Tech, which was ranked among the 10 best campus courses by Golfweek magazine.

Virginia Tech has been named to the President's Higher Education Community Service Honor Roll as one of the nation's leading colleges in service for the past eight years; VT Engage: The Community Learning Collaborative is a university leader in implementing service efforts. In 2012-13, VT Engage offered 11 programs, including Get on the Bus and Remember Serve Learn, and delivered more than 30 capacity-building and informational programs for students, faculty, administrators, and community partners. A total of 4,152 undergraduate and graduate students, faculty members, administrators, and community members were direct recipients of VT Engage programs. The VT Engage VISTA Network earned a designation as an intermediary organization, allowing Virginia Tech to work directly with AmeriCorps.

The Language and Culture Institute (LCI) offers language-related programs and services for academic and professional development in Blacksburg and the National Capital Region. The LCI serves about 500 students from more than 50 countries each year. Sixty-eight LCI students were admitted to Virginia Tech during fiscal year 2013. The institute hosts the long-term English training program for the Hubert H. Humphrey Fellowship Program and has provided pre-academic training to more than 90 Fulbright scholars from around the world. The institute sponsors Phi Beta Delta scholarships for Virginia Tech students to help underwrite the costs of studying in other countries. In 2014, the LCI will open a new 12,500-square-foot campus in Fairfax, Va.

The Office of Economic Development is spearheading a \$1.7 million, three-year federal grant project aimed at creating new jobs in Southwest Virginia's transportation equipment manufacturing industry. Because of its track record in activities that help create jobs, the office also has been awarded a \$500,000 University Center grant to further its regional economic development efforts over the next five years. The U.S. Commerce Department's Economic Development Administration chose fewer than two dozen universities to receive the competitive grants.

Upward Bound and Talent Search provide services to more than 850 participants in Southwest and Central Virginia each year. Ninety-four percent of Upward Bound seniors enrolled in college; 90 percent of Talent Search seniors enrolled in college.

In the past year, the Virginia Tech commonwealth campus centers served more than 40,000 individuals through more than 270 programs. Situated in Richmond, Virginia Beach, Critz, Abingdon, and Roanoke, the centers provide professional development and corporate training in their regions. Most also provide graduate-level academic offerings. In August 2013, the university celebrated the grand opening of another center, the Virginia Tech Hampton Roads Center in Newport News, a center jointly operated with the University of Virginia.

The Catawba Sustainability Center, a 377-acre farm in the Catawba Valley, developed an agreement with the American Chestnut Foundation to establish a 600-tree breeding orchard.

The Office of International Research, Education, and Development (OIREED) works to support the university's international mission by leading projects that raise the standard of living in more than 20 developing countries, partnering with more than 80 universities and institutions around the world. With a research grant portfolio of more than \$104 million, OIREED manages projects involving Virginia Tech faculty, students, and staff in natural resource management, integrated pest management, sustainable agriculture, watershed management, capacity-building in education, and micro-enterprise development. Current project initiatives include building institutional capacity at universities in Senegal and South Sudan; promoting a holistic suite of environmentally friendly farming techniques in West Africa, South Asia, and Southeast Asia; and developing systems for conservation agriculture around the world.

OIREED oversees Virginia Tech's Women and Gender in International Development program, ensuring that every project incorporates gender as an integral part of the work.

In 2012-13, the Education Abroad office supported 1,236 university students who studied in 48 countries. The office also administered about \$100,000 in scholarships to support outbound study abroad.

To learn more about Virginia Tech, including more recent measures of success and notable announcements, visit www.vt.edu.