University of Virginia

School of Engineering & Applied Science

GRADUATE ENGINEERING

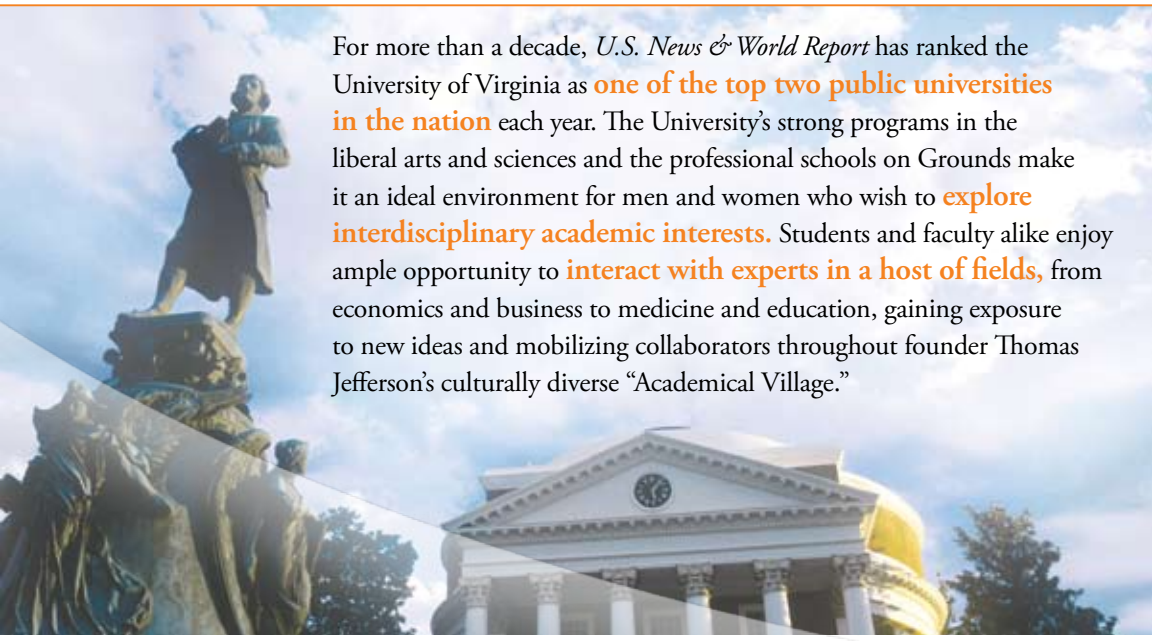
University of Virginia ENGINEERING

Developing Leaders of Innovation

Our mission at the School of Engineering and Applied Science is to prepare leaders with the engineering knowledge; the analytical skills; and a broad, global perspective to address the challenges the world confronts, from health care to climate change.

A Superlative Engineering School

Within One of the Nation's Very Best Public Universities



For more than a decade, *U.S. News & World Report* has ranked the University of Virginia as **one of the top two public universities in the nation** each year. The University's strong programs in the liberal arts and sciences and the professional schools on Grounds make it an ideal environment for men and women who wish to **explore interdisciplinary academic interests.** Students and faculty alike enjoy ample opportunity to **interact with experts in a host of fields,** from economics and business to medicine and education, gaining exposure to new ideas and mobilizing collaborators throughout founder Thomas Jefferson's culturally diverse "Academical Village."

We Have a Distinctive Vision of Engineering for the Common Good

U.Va. Engineering students and faculty are purifying our groundwater, advancing cardiovascular research, making our computer data secure and making child seats safer. In collaboration with the U.Va. Institute for Aging, they are developing wireless sensors to help monitor our aging population so that seniors can maintain their independence. Through the Center for Applied Biomechanics, they are reducing the severity of driver and pedestrian injuries as a result of traffic accidents. **U.Va. engineers have the tools — and the desire — to solve many of the world's most pressing problems.**

The Engineering School is the Right Size

With approximately 700 graduate students and 2,200 undergraduate students, 180 full-time teaching and research faculty and 85 full-time research professionals, the Engineering School is small enough to have an underlying sense of community and purpose and large enough to **achieve international stature in graduate and undergraduate research,** facilities and strong faculty–student relationships.

>>Visit *www.seas.virginia.edu/general.php* for more information.

Graduate Study at the U.Va. Engineering School

Unsurpassed Opportunities for Personal Advancement and Career Growth

High-Profile Research

Over the years, the Engineering School has developed **world-class expertise in a number of critical, fast-growing areas.** Our centers for excellence are breaking new ground in such fields as spintronics, photodiodes, grid computing, cardiovascular bioengineering, catalysis, highway planning, and nano- and microscale materials for electronics and medicine. **Our graduate students drive the process of discovery** in these key areas.

>>**Visit *www.seas.virginia.edu/researchdirectory* for more details.**

Financial Support

We believe that every student with the talent and desire to attend graduate school should have the opportunity to do so. Approximately **96 percent of Master of Science and Ph.D. students in the Engineering School receive tuition, health insurance and a monthly stipend** for serving as either a research or teaching assistant. Several graduate students are also recipients of prestigious national fellowships; still more are funded by their employers, U.S. military services or foreign governments during their studies.

Cross-Grounds Collaboration

With strong medical and business schools on Grounds, the U.Va. Engineering School is particularly well suited for **cross-disciplinary research and education.** Our engineering graduate students hone skills in their field while learning best practices in entrepreneurship and innovation from experts at U.Va.'s Darden School of Business and while working alongside the U.Va.'s School of Medicine specialists to develop new technologies for health care.

For the Common Good

Our graduate students make a difference across Grounds, throughout our local community and internationally. Not only do our engineering graduate students serve as role models for engineering undergraduates interested in academia, but they also serve on search committees, pan-University boards and student self-governance organizations that affect the infrastructure of our institution. In addition, our graduate students are acutely aware of the problems that exist beyond Grounds. Opportunities to **apply engineering knowledge and skill sets internationally** are ever-present; for example, a select group of our engineering graduate students traveled to Nicaragua in 2006 to assist in economic development.

Programs for Working Professionals

Not everyone has the opportunity to study in Charlottesville, Va. Through the Commonwealth Graduate Engineering Program, we **broadcast distance learning courses to students throughout the region.** The curriculum for this program results in a Master of Engineering degree. In addition, our Accelerated Master's Program in Systems Engineering provides the opportunity for students to travel to Grounds on weekends over a one-year period and enroll in courses taught by Engineering School and Darden Graduate School of Business faculty. These innovative programs are designed to help professionals complete their degree requirements while continuing to work and to raise their families.

>>**Visit *www.cgep.virginia.edu* for more information.**

Professional Development

U.Va. is one of only a handful of engineering schools in the country to have a **career development office solely focused on serving engineering undergraduate and graduate students.** More than 150 companies actively compete for U.Va. Engineering students each year at Engineering School-specific recruitment fairs.

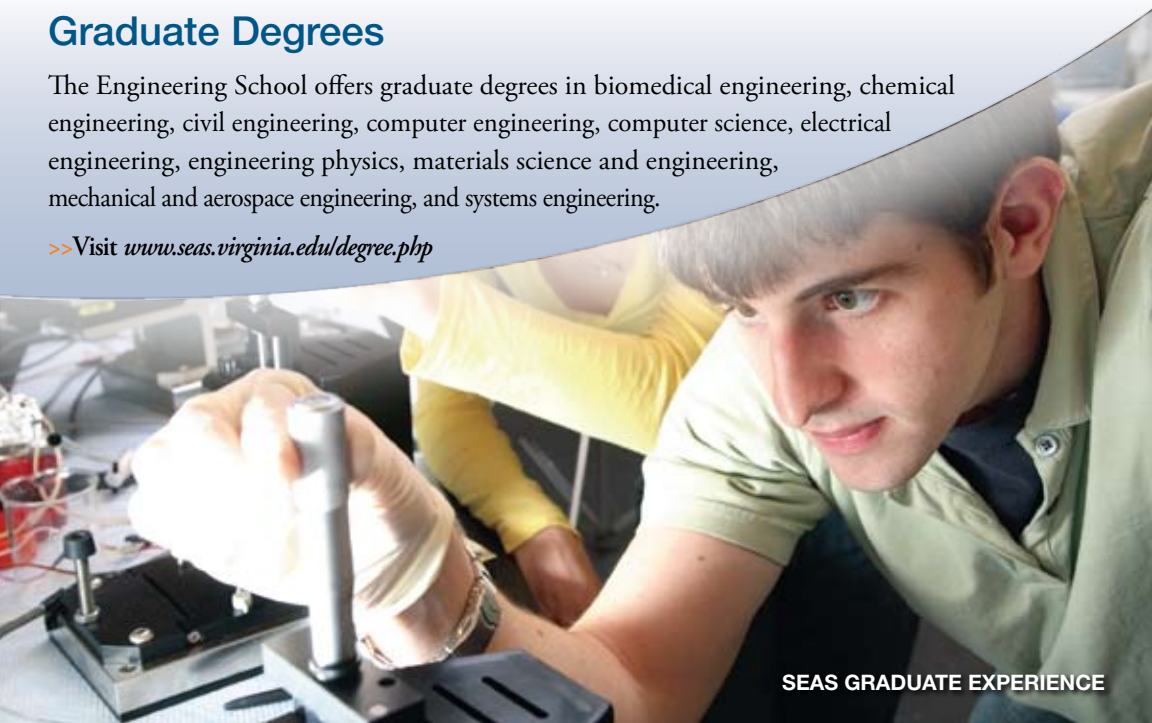
In addition, the University's Teaching Resource Center helps prepare Ph.D. students for academic positions.

>>**Visit *www.seas.virginia.edu/careerdevelopment* and *www.trc.virginia.edu* for more information.**

Graduate Degrees

The Engineering School offers graduate degrees in biomedical engineering, chemical engineering, civil engineering, computer engineering, computer science, electrical engineering, engineering physics, materials science and engineering, mechanical and aerospace engineering, and systems engineering.

>>**Visit *www.seas.virginia.edu/degree.php***



Engineering Faculty's Distinctive Qualities

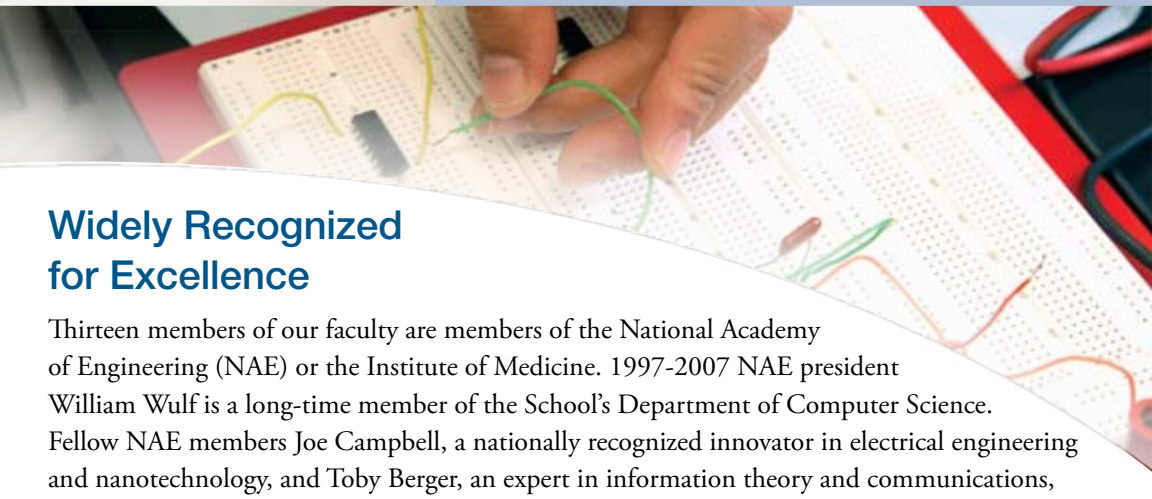
An Exceptionally Able Faculty Who Are Deeply Committed to Teaching, Research and Public Service

Our Faculty Mentor

Our faculty take seriously their charge to prepare students today for lives of **discovery, innovation, leadership and citizenship** in our continually changing world. In an age when many engineering schools compartmentalize teaching and research, our faculty are dedicated to excellence in both. In fact, engineering graduate student research and teaching assistants are mentored by faculty members in both areas and, as a result, contribute significantly to the research productivity of the University and **gain considerable experience in pedagogy and instructional methods.**

Collaborative Researchers

Our faculty pursue **important intellectual questions** of great importance to the economy and welfare of our nation and world, forming **cross-disciplinary partnerships** in some instances and deepening our **specialized expertise** in others. While the national average for research grants funded is 25 percent, U.Va. Engineering faculty have reached a prominent position among faculty nationally with 58 percent of their research proposals funded.



Widely Recognized for Excellence

Thirteen members of our faculty are members of the National Academy of Engineering (NAE) or the Institute of Medicine. 1997-2007 NAE president William Wulf is a long-time member of the School's Department of Computer Science. Fellow NAE members Joe Campbell, a nationally recognized innovator in electrical engineering and nanotechnology, and Toby Berger, an expert in information theory and communications, joined the faculty in 2006.

Our faculty members are active in professional organizations; approximately 30 percent are Fellows of professional societies.

>>**Visit *www.seas.virginia.edu/departments.php* for more information.**

What is It Like to Learn, Live and Work Here?

The Possibility to Advance Knowledge in a Historic Setting

Superior Engineering Facilities

In recent years, the Engineering School has experienced vigorous growth. Funding from the Whitaker Foundation has helped enable the Department of Biomedical Engineering to build a spacious new facility that contains laboratories, offices and classrooms, while a private and state coalition fueled the creation of Wilsdorf Hall, the School's 99,000-square-foot building for collaborative research in materials science and engineering, chemical engineering and nanotechnology.

The Rice Hall Information Technology Building — scheduled for occupancy in Spring 2011 — will provide leading edge facilities for collaborative researchers throughout the Engineering School and across Grounds. The building will facilitate research in areas such as high-performance computing, computer visualization, information assurance, computer security, energy conservation, wireless communications, telemedicine, virtual reality, distributed multimedia and distance learning.

An Exceptional University Environment

Thomas Jefferson conceived of the University as an "Academical Village." He recruited the best available faculty and students and created a suite of buildings meant to promote the exchange of ideas and to transmit knowledge to future generations.

The community Jefferson created to nurture the life of the mind still endures, as does the beautifully proportioned Lawn that he designed. In 1987, it was selected as a World Heritage Site. Today, Jefferson's University is populated with men and women from myriad backgrounds and cultures, creating a diverse community of scholars from which everyone benefits.

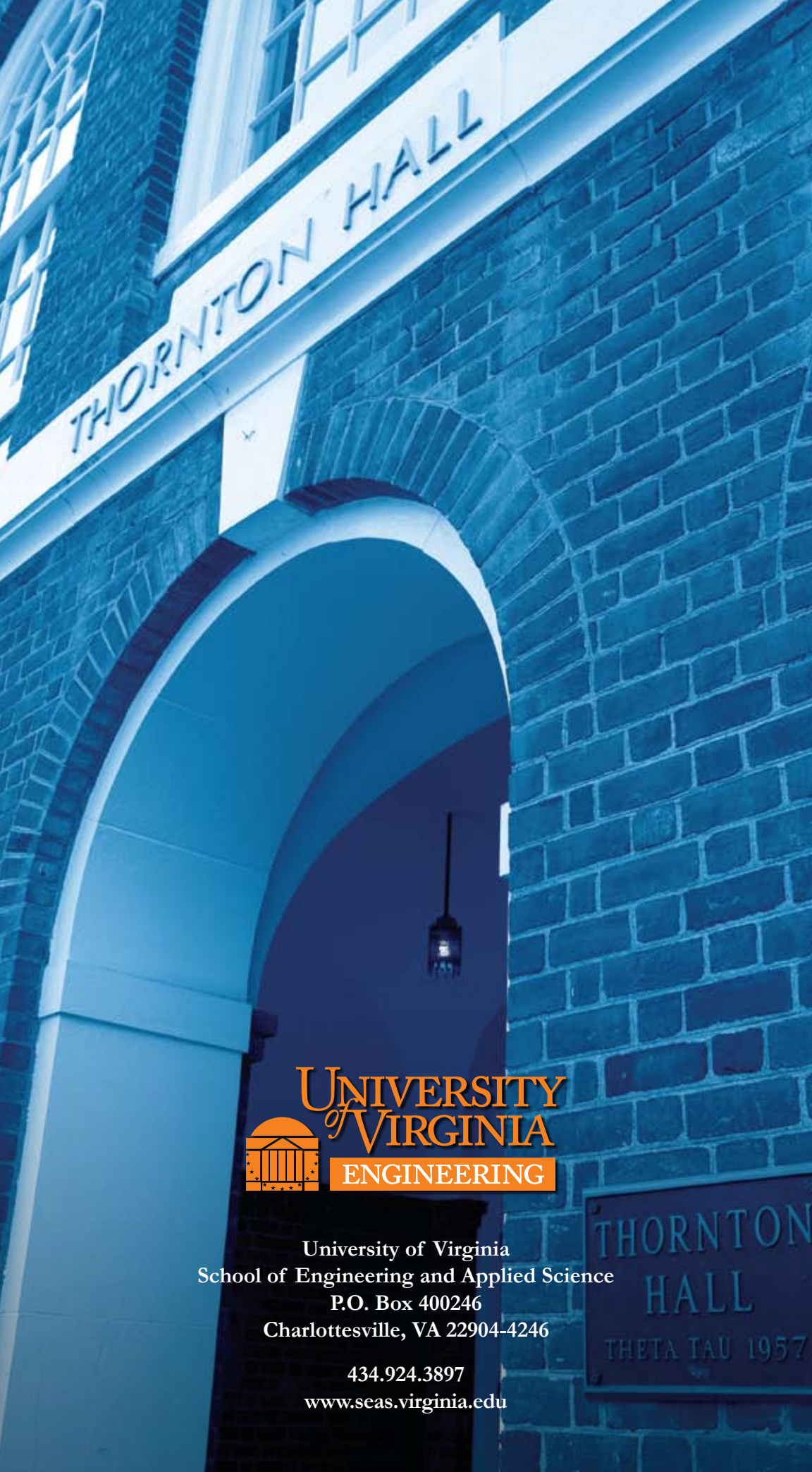
A Great Place to Live and Work

The Charlottesville area offers a way of life that seems increasingly out-of-reach for most communities; it has consistently been rated by various publications as among the best places to live in the United States. The workforce is well educated and highly skilled, and the public schools consistently rank among the best in the state. Crime is low, recreational and cultural attractions abound, and medical facilities are outstanding. With its graceful surroundings and cosmopolitan atmosphere, Charlottesville is, indeed, Jefferson's country.

What Now?

Join us. Contact Kathryn Thornton, associate dean of Engineering School graduate programs, at 434.924.3897 or kt4n@virginia.edu or visit us on the Web at *www.seas.virginia.edu/admissions.php*

SEAS GRADUATE EXPERIENCE



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ENGINEERING

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