LEADING CRITICAL RESEARCH

Three new CEE-led centers were established in 2016:

Air Pollution Research Center

With air pollution causing more deaths per year in the U.S. than drug use or road injuries, researchers work to address the nation's pressing need for better air quality. Funded by a $10 million Air, Climate and Energy grant from the Environmental Protection Agency.

Post-Disaster Data Collection Center

The collection of high-quality data in the aftermath of earthquakes and wind hazards, such as tornadoes and coastal storms, will be used to develop more resilient infrastructure. Funded by a $4.1 million Natural Hazards Engineering Research Infrastructure grant from the National Science Foundation.

Supply Chain and Transportation Research Center

To address pressing challenges associated with delivering goods across the region, researchers work closely with founding industry members Costco, Nordstrom and UPS, as well as the Seattle Department of Transportation, to test new solutions in urban goods delivery.

UW CEE PRIORITIES

From landslides to water quality to earthquake preparedness, the need for more resilient urban systems and infrastructure is more critical than ever. Though we are poised to lead the way in preparing engineers to address critical issues, student demand is quickly surpassing capacity. The following priorities will enable us to accommodate even more deserving students:

Facility improvements and expansion

Large-scale More Hall renovation plans are being developed to update labs, house more students, and help consolidate faculty and staff. To take pressure off existing facilities, discussions are underway regarding the construction of a new interdisciplinary engineering building to be shared among the 10 engineering programs.

Student support

With tuition costs rising dramatically in recent years, bolstering existing undergraduate scholarship and graduate fellowship endowments will enable UW CEE to continue to provide access to diverse communities and attract the best students.

Faculty recruitment and retention

UW CEE continues to hire new faculty members at a rate not seen in decades. Adding new professorships and endowed chairs will be key in keeping the department competitive and building the next generation of outstanding faculty.

CIVIL & ENVIRONMENTAL ENGINEERING
UNIVERSITY of WASHINGTON

Box 352700 • Seattle, WA 98195-2700
www.ce.washington.edu • (206) 543-2390

UNIVERSITY of WASHINGTON

CIVIL & ENVIRONMENTAL ENGINEERING

20% increase in demand for civil engineers by **2022***

650 civil engineering positions added per year in Washington state, more than any other engineering discipline*

12% job growth for environmental engineers by **2024**, more than the average for all occupations*

#14 ranked graduate program

#18 ranked College of Engineering undergraduate program according to *U.S. News & World Report*

**Bureau of Labor Statistics*

OUR MISSION

MEET THE RISING DEMAND FOR ENGINEERS

With aging infrastructure and rising water needs, as well as pressing global-scale environmental issues, the demand for civil and environmental engineers is expected to skyrocket in coming years. Nationally, enrollment increased 15 percent for civil and environmental engineering students from 2005-2014, according to the American Society for Engineering Education. However, the demand may still exceed supply. To help meet the pressing need, UW CEE's goal, set in 2010, is to increase the number of undergraduate and graduate degrees awarded by 30-40 percent by 2020. The department is on pace to achieve this growth target, but faces the challenge of fitting within the building footprint.

INCREASE COLLABORATION

Collaboration is key to the success of our students and faculty who work in partnership with researchers across campus, at other universities, and with government and industry partners. We maintain active labs in diverse subject areas including environmental science, air resources research, hydraulics, soils, microbiology and computational mechanics. Affiliated research centers include the Washington State Transportation Center and Pacific Northwest Transportation Consortium.

LEAD IN INNOVATION

Our students and alumni continue to impact not only the Northwest, but the world, with their innovative ideas. From the invention of the Finite Element Method of Analysis to engineering the infrastructure for the 2012 Olympic Games to leading the clean-up effort of the Hanford Nuclear Plant, CEE graduates are leaders in innovation and creative thinking. In 2016, a new start-up founded by CEE emeritus faculty member Mark Benjamin and alumnus Nathan Cai (Ph.D. '11) began operations. MicroHAOPS Incorporated is developing new technology based on Cai's research that greatly enhances the performance of membranes in water purification processes.

STUDENTS

UNDERGRADUATE EDUCATION

354 currently enrolled

124 BSCE degrees awarded in 2015-2016

18%
Transfer Students

10%
International Students

9%
Underrepresented Minorities

32%
Female Students

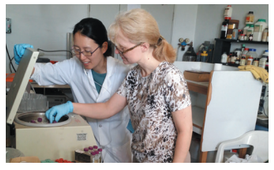
PROGRAM FEATURES

- Lab courses with fieldwork – comprehensive training results in over 90% passing rate on the Fundamentals of Engineering test for the Engineer in Training certificate. This is much higher than state and peer university rates.
- Research experience – senior capstone projects provide students with opportunities to solve real-world problems.

GRADUATE EDUCATION

387 currently enrolled

145 graduate degrees awarded in 2015-2016



35%
Female Students

18%
Underrepresented Minorities

34%
International Students

26%
Online Students

PROGRAM FEATURES

- Required courses and electives in the student's area of special focus
- Thesis or dissertation research – opportunities for leading-edge, interdisciplinary work
- On-campus and online professional programs with broad coverage of civil and environmental engineering disciplines

DEGREE PROGRAMS

Bachelor of Science (BSCE) – prepares students for diverse careers in engineering, industry, or graduate work

Master of Science in Civil Engineering (MSCE) – offers students the opportunity to choose between two Master's degree tracks: a research-intensive track and a coursework only track

Online Master's Degree Programs – three programs are offered online: Supply Chain Transportation and Logistics, Sustainable Transportation and Construction Engineering

Doctor of Philosophy (PhD) – intensive research prepares students for advanced-level professional careers in academia and industry

STUDENT EXCELLENCE

- Two 2016 NASA fellows
- 2016 Engineering Innovation Challenge grand prize
- 2015 Best Paper, Construction Specialty Conference
- 2015 Dean's Medal
- 2015 Undergraduate Research Mentor Award
- 2015 AMTA Student Best Paper Award
- 2015 Bonderman Travel fellow
- 28 2015 Washington Asphalt Pavement Association scholars
- Six 2015 Mary Gates scholars

FACULTY

To meet the demand for civil and environmental engineers, the department has recruited faculty members from top schools and research institutions. In the past seven years, 17 new faculty members have been hired.

COMPOSITION

49 core faculty

17 adjunct faculty

39 affiliate faculty

EXCELLENCE

- 2016 Nigel Priestley Prize
- 2016 Burwell Award
- 2015 Dennis L. Tewksbury Award
- 2015 Academic Engineer of the Year, Puget Sound Engineering Council
- 2015 Individual Distinguished Achievement Award, Pacific Northwest Clean Water Association
- 2015 AEESP Award for Outstanding Contribution to Environmental Engineering and Science Education
- 2015 Water Environment Federation fellow

RESEARCH

ENVIRONMENTAL ENGINEERING

Environmental engineers protect and preserve the environment through water quality research, air pollution control, wastewater management and more.

HYDROLOGY AND HYDRODYNAMICS

Hydrology research focuses on the quality and distribution of surface water, groundwater and water management in urban environments. Hydrodynamics explores the properties of fluids in motion.

STRUCTURAL ENGINEERING & MECHANICS

Structural engineers focus on evaluating the structural integrity of built structures such as buildings and bridges. They also design more resilient structures to withstand hazards such as earthquakes.

TRANSPORTATION ENGINEERING

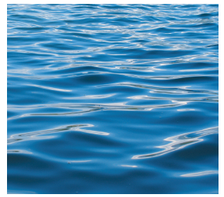
Transportation engineers solve transportation problems affecting all modes of travel, with a focus on intelligent transportation systems, infrastructure construction and freight and logistics.

CONSTRUCTION ENGINEERING

Construction engineers focus on the design and construction of infrastructure, from roadways to buildings to tunnels. They specialize in construction materials, sustainability and quality control.

GEOTECHNICAL ENGINEERING

Geotechnical engineers study the behavior of earth materials, focusing on geotechnical earthquake engineering, geologic hazards, soil mechanics, foundation engineering and reinforced soil systems.



CEE RESEARCH EXPENDITURES FY 2015

Source	Amount	Percent
US Department of Transportation	$2,755,046	24%
National Science Foundation	$2,303,704	20%
Department of Energy	$1,623,517	14%
NASA	$1,289,187	11%
Department of Defense	$811,173	7%
Washington State Department of Transportation	$560,889	5%
Diverse - non-federal	$558,774	5%
Industry	$478,823	4%
Other federal government	$399,273	3%
Local government	$252,243	2%
NOAA	$197,818	2%
National Institute of Health	$166,285	1%
Department of the Interior	$144,609	1%

TOTAL $11,541,340