Innovation. It’s the Washington Way.

Our classrooms and labs are developing our future leaders. As we face mounting environmental and infrastructure issues on a global scale, the impact of civil and environmental engineering is evident in our communities and around the world. From earthquake engineering to air and water quality research, from building bridges to designing transit systems, faculty and students of the Department of Civil & Environmental Engineering are working to find solutions to everyday problems that affect our quality of life.

**OUR MISSION: LAUNCHING CAREERS**

Educating tomorrow’s leaders is our highest priority. Our engineering students master the core fundamentals, explore the future of research and technology, and go on to work in fields of design, construction, teaching, research, and management. Our curriculum provides hands-on learning, interdisciplinary work and real-world problem solving to prepare students for successful futures in a global economy.

**ACCOMPLISHMENTS IN INNOVATION**

The students and alumni of the Department of Civil & Environmental Engineering have had a major impact here in the Northwest and around the globe. From the invention of the Finite Method of Analysis, to engineering the infrastructure for the 2012 Olympic Games, to leading the clean-up effort of the Hanford Nuclear Plant, our graduates are shaping the face of engineering through innovation and creative thinking, coupled with analytical skills and technical expertise.

**CROSSING BOUNDARIES**

Interdisciplinary work is fundamental to our success. Our students and faculty work in a collaborative environment, with partnerships across labs, across campus, 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. Our affiliated research centers, including the Washington State Transportation Center and Transportation Northwest, contribute to our overall strength.
Civil & Environmental Engineering Education

**DEGREE PROGRAMS**
- Bachelor of Science (BSCE) – prepares students for diverse careers in engineering, industry, or graduate work
- Master of Science in Civil Engineering (MSCE) – a program designed for students with undergraduate training in civil and environmental engineering
- Doctor of Philosophy (PhD) – intensive research prepares students for advanced-level professional careers in academia and industry

**PROFESSIONAL MASTER’S PROGRAM (PMP)**
- Master of Science in Civil Engineering – Construction Engineering
- Master of Science in Sustainable Transportation
- Master of Science in Supply Chain Transportation and Logistics – coming 2013

**ONLINE PROGRAMS**
- Master of Science in Civil Engineering - Construction Engineering
- Master of Science in Supply Chain Transportation and Logistics – coming 2013

**GRADUATE LEARNING**

**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

**STUDENT DEMOGRAPHICS**
- 88 Masters, 7 PhDs awarded in 2010-2011
- 256 current graduate students: 33% women, 3% underrepresented minorities

**EXCELLENCE**
- AVRA Washington Chapter Fellowship
- Helen M. Overly Memorial Graduate Scholarship
- Society of Women Engineers Outstanding Female Student Award
- Council of University Transportation Centers Outstanding Student of the Year
- ASCE Western Region Outstanding Young Civil Engineer Award
- 2011 NASA Graduate Student Researchers Program Award
- AGU Outstanding Student Paper Award
- 2011 James H. Kell RFP Competition Winner
- Region X KYTE Student of the Year Award
- ITE Western District Student Paper Award
- North American Lake Management Society Outstanding Student

**FACULTY**

**COMPOSITION**
- 31 tenured and tenure-track teaching and research faculty
- 9 non-tenure-track and research faculty
- 14 faculty joint or adjunct with other UW engineering and science departments
- 39 affiliate faculty representing industry and outside research and educational institutions
- 20 postdoctoral research associates

**ACHIEVEMENTS**
- 2 NAE Members
- 2010 American Society of Civil Engineers (ASCE) Howard Award
- 2011-12 American Institute of Steel Construction (AISC) T.R. Higginbotham Lectureship Award
- 2012 University of Washington Distinguished Teacher Award
- 2012 Honorary American Concrete Institute (ACE) Member

**AREAS OF DEPARTMENTAL EXPLORATION**

**Environmental Engineering**
- Air quality (management aspects)
- Atmospheric chemistry
- Removal of contaminants from drinking water and wastewater
- Development and design of novel water/wastewater treatment systems
- Effects of pollutants on the functioning of natural water systems
- Microbial ecology, evolution and systematics
- Ambient air quality modeling and measurement

**Geotechnical Engineering**
- Geotechnical earthquake engineering
- Soil structure interaction
- Constitutive modeling and numerical analysis
- Earth retaining structures
- Seismic hazard analysis

**Hydrology and Hydrodynamics**
- Climate/environmental change impacts on hydrologic systems
- Observation and prediction of western U.S. snowpack dynamics
- Sustainable development and management of water resources
- Drought prediction and mitigation
- Remote sensing applications to hydrology
- Coastal and estuarine processes

**Structural Engineering & Mechanics**
- Earthquake engineering
- Bridge engineering
- Numerical simulation
- Design for rapid construction
- Structural monitoring
- Design for sustainability

**Transportation**
- Intelligent Transportation Systems
- Freight Transportation and Logistics
- Transportation Planning and Public Transportation
- Human Factors and Transportation
- Travel behavior analysis
- Road User Safety

**Construction**
- Pavement materials, design and management
- Roadway Infrastructure
- Renewable energy infrastructure
- Sustainability
- Commercial implementation

**Research & Innovation**

**UW CIVIL & ENVIRONMENTAL RESEARCH EXPENDITURES FY 2011**

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Science Foundation (NSF)</td>
<td>$2,694,203</td>
<td>24</td>
</tr>
<tr>
<td>Department of Transportation</td>
<td>2,013,948</td>
<td>18</td>
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<tr>
<td>State Government</td>
<td>1,093,988</td>
<td>10</td>
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<tr>
<td>Department of Energy</td>
<td>1,082,135</td>
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<tr>
<td>Department of Defense</td>
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</tr>
<tr>
<td>NASA</td>
<td>848,793</td>
<td>8</td>
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<tr>
<td>Diverse Non-Federal</td>
<td>537,962</td>
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<tr>
<td>Industry</td>
<td>374,709</td>
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<tr>
<td>Diverse Federal</td>
<td>352,987</td>
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<tr>
<td>National Institutes of Health (NIH)</td>
<td>278,065</td>
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<tr>
<td>Department of Agriculture</td>
<td>270,836</td>
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<tr>
<td>Local Government</td>
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<tr>
<td>Environmental Protection Agency</td>
<td>188,836</td>
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<tr>
<td>Department of Commerce (NDAA)</td>
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<tr>
<td>Department of the Interior</td>
<td>144,756</td>
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</table>

TOTAL | 11,253,575 |

**FY 2011 Expenditures**

- NSF
- NASA
- Department of Transportation
- State Government
- Department of Energy
- Dept. of Defense
- Dept. of Energy
- Dept. of Health
- Mic 0% of less per grant