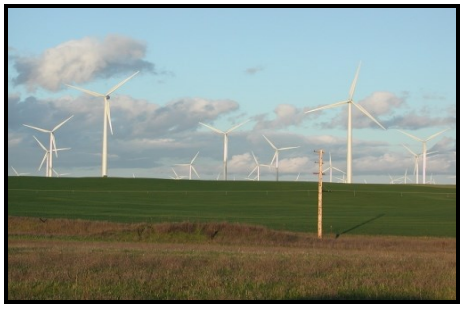
UCONN

Bachelor of Science in Civil Engineering



Civil and environmental engineers strive to plan and develop *sustainable infrastructure systems* that meet the evolving needs of humanity while maintaining and protecting the natural environment. We work in the natural and built environments and must account for the forces of nature in our designs while also seeking to minimize any adverse effects of our designs on the environment and society. We design and construct the physical infrastructure needed by society to insure a high quality of life. This includes the buildings in which we live and work, the highways on which we travel, the water we drink, as well as a multitude of other projects necessary for the well-being of life on planet Earth.

Civil and environmental engineers address some of the most important challenges that face our world today, including:

- Restoration and protection of the environment
- Sustainable energy and the environment
- Global warming and climate change
- Global water supply and flood and drought management
- Planning and design of sustainable transportation systems
- Safe, efficient and secure transportation for people and goods
- Structural monitoring and rehabilitation of aging infrastructure
- Infrastructure protection and natural hazards mitigation
- Design and construction of new infrastructure

Civil engineering is traditionally broken into several sub-disciplines including environmental engineering, geotechnical engineering, structural engineering, transportation engineering, water resources engineering and construction engineering.

WHY UCONN?

Excellent Faculty

- The quality of an academic program may be judged by the quality of its faculty members. Ours are truly outstanding.

- We currently have 30 faculty members whose expertise covers all areas of civil and environmental engineering. You can be assured that your classroom instructors are experts in their fields and will provide you the best education within a dynamic learning environment.

- In addition to being outstanding teachers, our faculty members are also actively engaged in cutting edge research and bring this rich experience to the classroom. Numerous opportunities exist for undergraduates to participate in research projects.

Excellent Facilities

- In addition to our outstanding faculty, the department has excellent laboratory facilities that complement our students' classroom learning experiences. Students in the Civil & Environmental Engineering program take laboratory courses in the following areas:

    - ◊ Concrete Materials & Structural Engineering
    - ◊ Hydraulics & Water Resources
    - ◊ Computer Aided Design
    - ◊ Soils Testing
    - ◊ Water Quality Engineering
    - ◊ Surveying and Geographic Information Systems

Students take a break from doing research in Thailand

Excellent Career Opportunities

- The demand for Civil & Environmental Engineers is very strong. Our graduates are actively recruited by engineering companies nationwide. ASCE holds a career fair every year with numerous companies attending specifically to hire our graduates.

- Most of our juniors, and many of our sophomores receive summer internships at civil engineering companies. These internships provide outstanding work experience during the summer.

- Students also enjoy exciting opportunities to pursue graduate degrees at the Master's and Ph.D. levels. Financial support in the form of a stipend, tuition waiver and health care benefits is available. Our department currently provides financial support to over 50 full-time graduate students.

Students performing field research in Ethiopia

Water Resources Laboratory

Bachelor of Science in Civil Engineering

FRESHMAN YEAR

CHEM 1127Q or 1147Q - General Chemistry (4)
MATH 1131Q - Calculus I (4)
ENGR 1000 - Orientation to Engineering (1)
CSE 1010 - Introduction to Computing (3)
ENGL 1010 *or* 1011 - Seminar in Writing (4)

CHEM 1128Q or 1148Q - General Chemistry (4)
MATH 1132Q - Calculus II (4)
ENGR 1166 - Foundations of Engineering (3)
General Education Requirement (3)
General Education Requirement (3)

SOPHOMORE YEAR

PHYS 1501Q - Physics for Engineers I (4)
MATH 2110Q - Multivariable Calculus (4)
CE 2110 - Applied Mechanics I (3)
CE 2410 - Geomatics & Spatial Measurement (4)

PHYS 1502Q - Physics for Engineers II (4)
MATH 2410Q - Differential Equations (3)
CE 3110 - Mechanics of Materials (3)
CE 2710 - Transportation Engineering (3)
PHIL 1104 - Philosophy and Ethics (3)

JUNIOR YEAR

CE 3510 - Soil Mechanics I (3)
ENVE 2310 - Environmental Engineering Fundamentals (3)
ENVE 3120 - Fluid Mechanics (4)
CE 2251 Probability & Statistics in CEE
General Education Requirement (3)

CE 3520 - Civil Engineering Materials (3)
or ENVE 3200 - Environmental Engrg. Lab (3)
CE 3610 - Basic Structural Analysis (3)
CE Professional Requirement (3)
Science Elective (3 or 4)
General Education Requirement (3)

SENIOR YEAR

CE 4900W - Civil Engineering Projects I (2)
CE Professional Requirement (3)
CE 2211 Engineering Economics I (1)
CE Professional Requirement (6)
General Education Requirement (3)

CE 4920W - Civil Engineering Projects II (2)
CE Professional Requirement (3)
CE Professional Requirement (3)
CE Professional Requirement (3)
General Elective (5 or 6)

PROFESSIONAL REQUIREMENTS

CONSTRUCTION MANAGEMENT
CE 4210 - Operations Research in CEE

ENVIRONMENTAL ENGINEERING
ENVE 3220 - Water Quality Engineering
ENVE 3230 - Air Pollution
ENVE 4310 - Environmental Modeling

GEOTECHNICAL ENGINEERING
CE 3530 - Engineering and Environmental Geology
CE 4510 - Foundation Design
CE 4530 - Geoenvironmental Engineering
CE 4541 - Advanced Soil Mechanics
CE 4542 - Earthquake Engineering

SURVEYING/GEODETIC
CE 4410 - Computer Aided Site Design

STRUCTURAL ENGINEERING
CE 3610 - Basic Structural Analysis
CE 3630 - Design of Steel Structures
CE 3640 - Design of Reinforced Concrete Structures
CE 4610 - Advanced Structural Analysis

TRANSPORTATION ENGINEERING
CE 4710 - Case Studies in Transportation Engineering
CE 4720 - Street and Highway Design
CE 4730 - Transportation Planning
CE 4740 - Traffic Engineering Characteristics
CE 4750 - Pavement Design

HYDRAULIC/WATER RESOURCES ENGINEERING
ENVE 4810 - Engineering Hydrology
ENVE 4820 - Hydraulic Engineering

CIVIL & ENVIRONMENTAL ENGINEERING FACULTY

Amvrossios Bagtzoglou, Professor & Department Head
Water Resources
Ph.D., University of California, 1990

Michael Accorsi, Professor
Structural Engineering
Ph.D., Northwestern University, 1986

Alexander Agrios, Associate Professor
Environmental Engineering
Ph.D., Northwestern University, 2003

Emmanouil Anagnostou, Professor
Water Resources
Ph.D., University of Iowa, 1997

Marina Astitha, Assistant Professor
Environmental Engineering
Ph.D., University of Athens, 2007

Amy Burnicki, Assistant Professor in Residence
Transportation Engineering
Ph.D., University of Michigan, 2008

Richard Christenson, Professor
Structural Engineering
Ph.D., University of Notre Dame, 2002

Maria Chrysochoou, Associate Professor
Environmental Engineering - Geomechanics
Ph.D., Stevens Institute of Technology, 2006

William Clarkson, Visiting Professor
Environmental Engineering
Ph.D., Cornell University, 1986

Arash Esmaili Zaghi, Assistant Professor
Structural Engineering
Ph.D., University of Nevada Reno, 2009

Norman Garrick, Associate Professor
Transportation Engineering
Ph.D., Purdue University, 1986

John Ivan, Professor
Transportation Engineering
Ph.D., Northwestern University, 1994

Eric Jackson, Associate Research Professor
Transportation Engineering
Ph.D., University of Connecticut, 2008

Shinae Jang, Assistant Professor in Residence
Structural Engineering
Ph.D., University of Illinois at Urbana-Champaign, 2010

Jeong-Ho Kim, Associate Professor
Structural Engineering
Ph.D., University of Illinois at Urbana-Champaign, 2003

Christine Kirchhoff, Assistant Professor
Water Resources
Ph.D., University of Michigan, 2010

Nicholas Lownes, Associate Professor & Associate Department Head
Transportation Engineering
Ph.D., University of Texas at Austin, 2007

Karthik Konduri, Assistant Professor
Transportation Engineering
Ph.D., Arizona State University, 2012

Baikun Li, Professor
Environmental Engineering
Ph.D., University of Cincinnati, 2002

Lanbo Liu, Professor
Geomechanics
Ph.D., Stanford University, 1993

Ramesh Malla, Professor
Structural Engineering
Ph.D., University of Massachusetts, 1986

Jonathan Mellor, Assistant Professor
Water Resources
Ph.D., University of Virginia, 2013

Sarira Motaref, Assistant Professor in Residence
Structural Engineering
Ph.D., University of Nevada, 2011

Worku Mulat, Assistant Research Professor
Environmental Engineering
Ph.D., University College Cook, 2001

Efthymios Nikolopoulos, Assistant Research Professor
Environmental Engineering
Ph.D., University of Connecticut, 2010

Rebecca Townsend, Professor in Residence
Technical Communications
Ph.D., University of Massachusetts, Amherst, 2004

Timothy Vadas, Assistant Professor
Environmental Engineering
Ph.D., Cornell University, 2008

Guiling Wang, Professor
Water Resources
Ph.D., Massachusetts Institute of Technology, 2000

David Wanik Assistant Research Professor
Water Resources
Ph.D., University of Connecticut, 2015

Kay Wille, Associate Professor
Structural Engineering
Ph.D., University of Leipzig, 2008

Wei Zhang, Assistant Professor
Structural Engineering
Ph.D., Louisiana State University, 2012

For more information contact: Civil & Environmental Engineering, 261 Glenbrook Road, Unit 3037, Storrs, CT 06269-3037
Phone: (860) 486-2992; Fax (860) 486-2298; Email: ceeinfo@engr.uconn.edu; Web Site: www.engr.uconn.edu/cee