

CornellEngineering

School of Civil and Environmental Engineering

CIVIL ENGINEERING UNDERGRADUATE DEGREE PROGRAM

Civil engineers are innovators, creators, and entrepreneurs. They design and build buildings, bridges, dams, roller coasters, space structures, and sound stages for rock concerts. They devise complex systems, such as transportation and water-supply networks, or information systems for design and management of engineering projects. They also design water treatment and wastewater treatment systems and hazardous waste remediation projects that protect the environment.

If you enjoy science and math and would like an opportunity to serve society by creating, maintaining, and upgrading the infrastructure we all rely on, this is a field you should investigate. Civil engineers know how to evaluate risk and ensure the high reliability of their designs. Any creator of a stadium, suspension bridge, wind farm, or drinking water system will tell you that failure is not an option.

**BREAK
THE RULES to
FIND SIMPLICITY
in the COMPLEX**

As a civil engineering student at Cornell, you will work with some of the world's top engineering faculty and fellow students. You will not only learn engineering theory and how to apply it, you will also learn to navigate the ins and outs of today's complex business and regulatory arenas. Many civil engineering graduates go on to take leadership positions in established companies or start their own firms. You may also decide to continue on for an additional year to participate in Cornell's graduate-level management program, which is taught by Civil and Environmental Engineering (CEE) faculty members.

Civil engineers strive for harmony and balance between the constructed human environment and the natural world. At Cornell, you'll have the opportunity to specialize in one or more areas of civil engineering, including: environmental fluid mechanics; geotechnical engineering; hydrology; structural engineering; transportation engineering; environmental processes; and water resources. If you are most interested in environmental engineering, there is a degree program devoted to that specialty area (see the environmental engineering flyer), or you can work with an advisor to plan a more general civil engineering program that suits your interests.

You will have ample opportunity to participate in community activities by joining the award-winning chapter of the American Society of Civil Engineers (ASCE). Every year the ASCE chapter participates in national competitions to build and race a concrete canoe and to design and build a steel bridge. The group also sponsors community service projects. In addition, ASCE hosts several intramural teams, organizes social outings, and sets up study sessions for the professional-licensing exam. Students can also participate in the multi-disciplinary program AguaClara, which involves students in the design of sustainable water treatment systems for underdeveloped countries. Systems designed by Cornell students currently provide safe drinking water to more than 50,000 people in Honduras, Nicaragua, and India.

CEE REQUIRED COURSES

CEE 3040	Uncertainty Analysis in Engineering
CEE 3230	Engineering Economics and Management
CEE 3310	Fluid Mechanics
CEE 3410	Introduction to Geotechnical Engineering
CEE 3610	Introduction to Transportation Engineering
CEE 3710	Structural Modeling and Behavior
CEE 4780	Structural Dynamics and Earthquake Engineering
ENGRD 2020	Statics and Mechanics of Solids
ENGRD 2510	Engineering Processes for Environmental Sustainability
ENGRD 3200	Engineering Computation

CIVIL ENGINEERING



SOME AREAS OF FACULTY RESEARCH

civil engineering materials

contaminant transport, behavior and treatment

engineering management

geotechnical engineering

remote sensing

structural engineering

structural mechanics

transportation engineering and planning

transportation systems

MASTER OF ENGINEERING DEGREE PROGRAM

The School of Civil and Environmental Engineering offers a master of engineering (M.Eng.) degree in civil and environmental engineering and in engineering management. The M.Eng. in civil and environmental engineering allows students to deepen their understanding of one of the field's specialty areas and is excellent preparation for a career with an engineering firm.

Engineering management is for students who seek leadership positions in management of projects, people, and organizations. It combines engineering competency with managerial skills to bring about the efficient development of technology. Engineering managers play a key role in advancing technology through strategic and operational decision-making. They guide the development of technology with high-level expertise and a broad perspective on how technology impacts economies, enhances social structures, and affects the larger global environment.

CEE SAMPLE ELECTIVE COURSES

CEE 1160	Modern Structures
CEE 3510	Environmental Quality Engineering
CEE 3720	Intermediate Solid Mechanics
CEE 4110	Remote Sensing for Environmental Resource Inventory
CEE 4350	Coastal Engineering
CEE 4370	Experimental Methods in Fluid Dynamics
CEE 4400	Foundation Engineering
CEE 4410	Retaining Structures and Slopes
CEE 4450	Soil Dynamics and Geotechnical Earthquake Engineering
CEE 4530	Laboratory Research in Environmental Engineering
CEE 4520	Sustainable Safe Water on Tap
CEE 4565	Waste Water Processes and Resources Recovery
CEE 4620	Analysis and Control of Transportation Systems and Networks
CEE 4640	Transportation Systems Design
CEE 4730	Design of Concrete Structures
CEE 4740	Introduction to Behavior of Metal Structures
CEE 4750	Concrete Materials and Construction
CEE 4780	Structural Dynamics and Earthquake Engineering

CEE By the Numbers

Civil engineering undergraduate students	95
Civil engineering graduate students	75

Starting salaries of B.S. civil engineering graduates (for 2018)

Low	\$45,000
Median	\$65,000
High	\$75,000

