CIVIL ENGINEERING

College of Engineering

The Civil Engineering Program prepares students to become planners, designers, constructors, stewards of environmental resources, technological innovators, risk managers and public policy decision makers. Students discover which area of civil engineering best suits them through close interaction with faculty members and through experiential learning and research opportunities. For example, the Kentucky Transportation Center provides research opportunities where students can focus on transportation, structural, construction and geotechnical engineering. Also, the Kentucky Water Resources Research Institute provides research opportunities and summer internships where students can study water resources and environmental engineering.

FOR MORE INFORMATION, VISIT THESE WEBSITES:

Civil Engineering: www.engr.uky.edu/ce

College of Engineering: www.engr.uky.edu

Visit Engineering: www.engr.uky.edu/visit

University of Kentucky: www.uky.edu

Admissions: www.uky.edu/admissions

Scholarships: www.uky.edu/financialaid/scholarships

CIVIL ENGINEERING CURRICULUM SAMPLE

This is a sample list of classes a student will take to pursue a degree in civil engineering. As part of the civil engineering curriculum, students must complete the pre-engineering requirements, major requirements and general education coursework, called UK Core.

Note: This sample contains several options while pursuing a civil engineering degree. Contact the Director of Undergraduate Studies or see departmental website for details on specific alternatives.

Freshman Year

Engineering Exploration I and II	3
Fundamentals of Engineering Computing	2
Calculus I and II	8
Composition & Communication I and II	6
Chemistry I and Physics I and Lab	9
UK Core Course	3
Total hours	**31**

Sophomore Year

Surveying	4
Chemistry II	3
Calculus III and IV	7
Physics II and Lab	5
Computer Graphics and Communication	3
Statics	3
Deformable Solids and Lab	4
Engineering Statistics Elective	3
Total hours	**32**

Junior Year

Intro to Construction Engineering	3
Intro to Fluid Mechanics	4
Civil Engineering Materials	3
Transportation Engineering	3
Intro to Environmental Engineering	3
Structural Analysis and Design	3
Principles of Physical Geology	4
Technical Writing	3
Engineering Science Elective	3
Math or Science Elective	3
Total hours	**32**

Senior Year

Water Resources Engineering	4
Soil Mechanics	4
Design Electives	6
Civil Engineering Seminar	1
Systems Design	3
Technical Electives	6
UK Core Courses	9
Total hours	**33**

PURSUING CIVIL ENGINEERING AT UK

Civil engineering students learn to be effective team members and implement interdisciplinary solutions to complex problems. Various concentration areas include construction engineering, construction project management, environmental engineering, geotechnical engineering, materials engineering, structural engineering, transportation engineering, water resources engineering, sustainable infrastructure and humanitarian engineering. In addition to preparing all of our students to become licensed professional engineers (passing the FE and PE exams), we help our students exceed the requirements of today's employers and tomorrow's careers.

CAREER PROSPECTS IN CIVIL ENGINEERING

Civil engineers are employed by a variety of industries and organizations, such as the construction industry, architectural firms, utility companies, energy companies, telecommunications businesses, manufacturing companies, engineering consulting firms, railroad companies, local, state & federal governmental agencies, and research agencies. The civil engineering profession provides stable, high paying jobs in a high-demand job market dedicated to meeting today's infrastructure needs and tomorrow's grand challenges.

UNDERGRADUATE EXPERIENCES IN CIVIL ENGINEERING

Through their involvement in undergraduate research, students have helped develop CatStrong, a lightweight carbon-fiber product that has been used to repair several Kentucky bridges. Others have engaged in water and environmental research to understand and improve the natural environment, advancing civil engineering best practices in Kentucky and the nation. Some students have used drones to study landslides and infrastructures, while others have worked on analysis of transportation network companies, automated vehicles and smart transportation systems. Students also participate in student organizations, such as ASCE, RailCats and Engineers Without Borders.

The University of Kentucky's civil engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Revised August, 2020. Information subject to change. For the most up-to-date information on the UK College of Engineering, visit www.engr.uky.edu.

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