

Degrees Available at SIUE

- Bachelor of Science in Civil Engineering

Civil Engineering at SIUE

The Department of Civil Engineering offers a curriculum that provides students with a solid background in mathematics, physical science and civil engineering. Elective courses are available in environmental, geotechnical, structural, transportation and water resources engineering. Laboratory facilities in the School of Engineering are available for conducting basic environmental analyses, hydraulic experiments, material tests, soil mechanics procedures and transportation studies. Baccalaureate graduates are prepared to assist public and private employers, or to pursue graduate study. All seniors are strongly encouraged to complete the Fundamentals of Engineering Examination as a first step towards achieving licensure as a professional engineer.

Professional Engineering Licensure

As a civil engineer, it is important to obtain your professional engineer (PE) license. For structural engineers, it is also important to obtain your structural engineer (SE) license. To help you along the road to your PE and SE, the Civil Engineering program is accredited by the Engineering Accreditation Commission of ABET. By completing your degree with us and by passing the Fundamentals of Engineering (FE) exam in your senior year, you will be on the road to earning your license. You can find information about registering for the exam in Illinois and Missouri on the National Council of Examiners for Engineering and Surveying website, and the Illinois Society of Professional Engineers website.

Career Opportunities

Civil engineers work in a wide range of fields in both technical and managerial positions. Job opportunities can be found in consulting companies, industry and government agencies. Civil engineers work in offices and on job sites. They design, build, inspect, maintain, rehabilitate, and preserve buildings, bridges, treatment systems, roads — all the essential infrastructure for society. Due to the nature and importance of the profession, civil engineers are always needed.

Employment Training Grants

The civil engineering program is eligible for federal funding for qualified students who are displaced, unemployed, underemployed, veterans or economically disadvantaged. Funding sources include the Workforce Innovation and Opportunity Act (WIOA), Trade Adjustment Assistance (TAA) and Dislocated Worker Programs. Most federal funding programs may be utilized for up to two years.

To determine eligibility, students should contact their county Employment and Training Department.

- Madison County Employment and Training Department (includes Bond County), 618-296-4445
- Workforce Development Group (St. Clair, Monroe, Randolph, Clinton and Washington Counties), 618-825-3259

Hands-On Learning

Many civil engineering courses include hands-on activities designed to help students learn core concepts. These include student projects and laboratories where students can learn first-hand about the behavior of civil engineering materials. Students are also encouraged to participate in one or the more than 25 student organizations in the School of Engineering. These organizations help students strengthen their understanding of engineering design, create a network of fellow engineering students, and have fun. Students use state-of-the-art equipment during their classes and labs to prepare for the variety of careers that await their graduation.

Many faculty members in the Department of Civil Engineering participate in the Undergraduate Research and Creative Activities (URCA) program. Students are encouraged to engage with faculty members and participate in research opportunities. The Department of Civil Engineering also keeps students up-to-date on internship and career opportunities.



Faculty

Rohan Benjankar, PhD

2009, University of Idaho

Brad Cross, PhD, PE, SE

1992, Johns Hopkins University

Ryan Fries, PhD, PE

2007, Clemson University

Jianwei Huang, PhD, PE

2010, Syracuse University

Susan Morgan, PhD, PE

1995, Clemson University

Abdolreza Osouli, PhD, PE

2010, University of Illinois at Urbana-Champaign

Nader Panahshahi, PhD

1987, Cornell University

Yan Qi, PhD, PE

2010, Louisiana State University

Brent Vaughn, MS, PE

1999, Southern Illinois University Edwardsville

Jianpeng Zhou, PhD, PE, BCEE

2003, University of British Columbia

Sample Four-Year Curriculum

	Fall Semester	Spring Semester
Year 1	IE 106 Engineering Problem Solving 3 CHEM 131 Engineering Chemistry (BPS) 4 CHEM 135 Engineering Chemistry Lab (EL) 1 ENG 101 English Composition I 3 MATH 150 Calculus I (FQR) 5 Total Credits 16	ENG 102 English Composition II 3 MATH 152 Calculus II (BPS) 5 PHYS 141 Physics I for Engineering (BPS) 3 PHYS 151L University Physics Lab I (EL) 1 ACS 103 Interpersonal Communication Skills (EUSC) 3 Total Credits 15
Year 2	CE 204 Engineering Graphics & CAD 3 CE 240 Statics 3 MATH 250 Calculus III (BPS) 4 PHYS 142 Physics II for Engineering (BPS) 3 PHYS 152L University Physics Lab II (EL) 1 Total Credits 14	CE 206 Civil Engineering Surveying 2 CE 242 Mechanics of Solids 3 MATH 305 Differential Equations I 3 ME 262 Dynamics 3 Breadth Life Science (BLS) 3 ECON 111 Macroeconomics (BSS) 3 Total Credits 17
Year 3	315 Fluid Mechanics 3 CE 342 Structural Engineering 3 CE 330 Engineering Materials 2 CE 330L Engineering Materials Lab 1 ME 310 Thermodynamics 3 CE 354 Geotechnical Engineering (offered in fall) 3 CE 354L Geotechnical Engineering Lab 1 Total Credits 16	CE 343 Structural Engineering II 3 CE 376 Transportation Engineering 3 CE 380 Environmental Engineering 3 STAT 380 Statistics for Applications (BICS) 3 Breadth Fine & Performing Arts (BFPA) 3 Interdisciplinary Studies (IS)/Global Cultures (EGC) 3 Total Credits 18
Year 4	CE 416 Engineering Hydrology or or CE 455 - Foundation Design 3 CE 460 Municipal Infrastructure Design 3 CE Elective I 3 ECE 210 Electrical Circuits 3 PHIL 323 Engineering, Ethics, & Professionalism (BHUM) 3 Preparation for Fundamental of Engineering Exam 0 Total Credits 15	CE 415L Applied Fluid Mechanics Lab 1 CE 493 Engineering Design 3 CE Elective II 3 CE Elective III 3 IE 345 Engineering Economic Analysis 3 Health Experience (EH) 0-2 Total Credits 13-15

Transfer Students To maximize your transfer experience, complete the **bolded** courses/requirements pre-transfer **AND** satisfy either the Illinois Articulation Initiative (IAI) General Ed Core or receive an AA, AS, or AAT (early childhood, special ed or math) degree from an IAI community college. If 'Minor' requirements are shown, discuss careful course selection with the academic advising contact listed. Transfer Credit Equivalency Guides are located at siue.edu/transfer.

Admission Requirements

To be admitted to the Bachelor of Science program, students must:

- Complete all Academic Development courses required by the University.
- Complete any courses required to address high school deficiencies.
- Complete MATH 120, College Algebra (or high school equivalents) with a grade of C or better.
- Attain a cumulative grade point average (GPA) of at least 2.0 on a 4.0 scale.

Graduation Requirements

- Cumulative grade point average (GPA) of 2.0 or higher on a 4.0 scale is required for courses taught in the School of Engineering.
- Cumulative GPA of 2.0 or higher on a 4.0 scale is required for civil engineering courses numbered above 299.
- Students must complete a senior assignment included as part of CE 493 Engineering Design.
- In addition to fulfilling department requirements, students must complete all University requirements for graduation.

Contact Information

Department of Civil Engineering
 School of Engineering
 Phone: 618-650-2533