

Graduate Programs in

Civil Engineering

ARMOUR COLLEGE OF ENGINEERING AT ILLINOIS TECH

The Department of Civil, Architectural, and Environmental Engineering has a hundred-year-long tradition of educating engineers who are stewards of the systems that are the foundation of human environment. Civil engineering faculty and students are making significant contributions to the profession, working in areas of high-impact innovation including bridge engineering, construction engineering and management, public works policy, transportation systems analysis, rehabilitation and construction of civil infrastructures, infrastructure reliability, stochastic modeling, simulation of intelligent transportation systems, and more. Our central Chicago location provides graduate students access to a diverse range of opportunities to conduct research and explore professional and cultural pursuits.

Degrees Offered

Master of Engineering in Construction Engineering and Management

Master of Engineering in Structural Engineering

Master of Engineering in Transportation Engineering

Master of Public Works (Infrastructure Engineering and Management)

Master of Science in Civil Engineering

Doctor of Philosophy in Civil Engineering

Specializations

- Architectural Engineering
- Construction Engineering and Management
- Geoenvironmental Engineering
- Geotechnical Engineering
- Structural Engineering
- Transportation Engineering

Degree Program Curricula

Master of Engineering in Construction Engineering and Management (M.A.S.)

The Master of Engineering in Construction Engineering and Management provides students with the knowledge and background that is essential to making decisions at site, company, industrial, and sector levels. Students learn how to plan and schedule projects, estimate and control costs, make economic decisions, administer contracts, organize construction sites, manage construction equipment, analyze productivity, optimize construction activities, plan and manage real estate developments, and address legal problems.

Master of Engineering in Structural Engineering (M.A.S.)

The Master of Engineering in Structural Engineering provides students with the knowledge needed to design the built environment. Students learn how buildings and bridges may be designed to resist the forces imposed upon them by external loads, gravity, wind, and earthquakes. Up-to-date computer-aided design techniques and the latest national building codes dealing with steel, reinforced concrete, pre-stressed concrete, and masonry structures are treated.

Degree Program Curricula *(continued)*

Master of Engineering in Transportation Engineering (M.A.S.)

With a Master of Engineering in Transportation Engineering degree, a student will be a qualified transportation planner, traffic engineer, and traffic safety engineer. Additionally, the student will be trained to understand and evaluate the socioeconomic impacts of transportation and infrastructure engineering projects.

Master of Public Works (Infrastructure Engineering and Management) (M.P.W.)

The Master of Engineering in Public Works (M.P.W.) degree is the most widely recognized educational credential for professionals engaged in public works and infrastructure engineering and management. This program is offered in cooperation with Illinois Tech's Master of Public Administration program.

Master of engineering (M.A.S.) programs are course-only, professionally oriented degree programs that permit a concentration in preparation for engineering practice. Admission requirements to these programs are the same as those for the master of science program. No thesis or comprehensive examination is required for completion of the M.A.S. degrees.

Master of Science in Civil Engineering (M.S.)

Six technical areas (architectural, construction, geoenvironmental, geotechnical, structural, and transportation engineering) allow students to specialize in an area of interest to them. An oral defense of the thesis constitutes the comprehensive examination, and no additional written comprehensive examination is required.

Doctor of Philosophy in Civil Engineering (Ph.D.)

The doctoral degree in civil engineering is awarded upon demonstration of an ability to make substantial creative contributions to knowledge in architectural, construction, geotechnical, structural, or transportation engineering. The full-time doctoral program generally consists of at least two complete years of academic preparation, followed by at least one year of full-time research in residence at the university.

Research Focus and Strengths

Center for Work Zone Safety and Mobility

The Center for Work Zone Safety works to provide long-term solutions to work zone safety-related problems by building a consortium of major work zone stakeholders including transportation agencies, road contractors, the trucking industry, and the insurance industry. The center's initiatives focus on developing highway work zone safety audit guidelines, discovering/developing/transferring new technologies and measures for improving work zone safety, reducing its negative impacts on private industries and the national economy, and providing work zone safety training and education to the transportation community and the public.

Laboratories and Research Space

Air Resources Laboratory—Graduate research laboratory that houses a respirator setup conducting soil carbon sequestration experiment

Engineering Graphics and Computer Lab—Used to teach the full range of engineering graphics, from technical drawing through advanced 3-D digital modeling

GIS Workstation Laboratory—Completely up to date and accessible workstation that has access to all the latest GIS software and supporting tools, as well as several legacy applications

Models Laboratory—Houses courses devoted to the experimental study of building and bridge structures; state-of-the-art equipment includes three professional-grade polariscopes, a Moire apparatus, a steel framed prototyping bench, and computer-aided electric resistance strain gage recorders

Admission Requirements

- **GRE:** M.A.S. and M.S.: 304 (Quantitative + Verbal), 2.5 (Analytical Writing); Ph.D.: 304 (Quantitative and Verbal), 3.0 (Analytical Writing)
- **GPA:** M.A.S. and M.S.: 3.0/4.0; Ph.D.: 3.5/4.0

Contact

If you have questions regarding admission to Illinois Tech, contact Graduate Admissions at grad.admission@iit.edu.

Learn more about application fee waivers, and how to schedule a campus tour and meet with faculty, at https://admissions.iit.edu/graduate/visit.

For more information about the Civil Engineering program, including additional program and course requirements, visit http://engineering.iit.edu/caee.

ILLINOIS TECH