

Programs of Study	<p>The Department of Civil Engineering at the University of Toledo (UT) offers the Master of Science in Civil Engineering (M.S.C.E.) and Doctor of Philosophy (Ph.D.) in engineering degrees. These programs are designed to provide students an advanced understanding of traditional civil engineering in environmental, geotechnical, transportation, or structural engineering, as well as application-oriented multidisciplinary education and research.</p> <p>The M.S. in Civil Engineering program is designed to prepare students for research and advanced engineering careers. The program requires the completion of 30 semester hours beyond the bachelor's degree for the thesis or project option.</p> <p>The Ph.D. program is designed for those planning research-oriented industrial or academic careers to pursue professional civil engineering practice for the advancement of science, engineering, and technology. The program requires a qualifying examination, a minimum of 90 semester credit hours (60 semester credit hours beyond the master's degree) of course work and dissertation, and a successful oral defense of the dissertation work.</p>	
Research Facilities	<p>Civil engineering research is supported by eight state-of-the-art research laboratories and fifteen engineering computing laboratories. Civil engineering laboratories and graduate student offices are all housed in Nitschke Hall, which was built in 1995. The Department of Civil Engineering has overall research expenditures of nearly \$1 million per year from grants and contracts.</p> <p>In addition to teaching laboratories that support conventional testing, the following facilities are available to researchers in the Department of Civil Engineering: the Air Pollution Laboratory, where current research projects are in geographical distribution of radon concentrations, pollution prevention, and environmental information technology; the Bituminous Materials Laboratory, which is equipped with a freeze/thaw chamber, pulse velocity tester, gyratory compactor, and all conventional pavement-testing equipment, and ongoing research includes freeze/thaw behavior of chemically stabilized subgrades and geographic variations in pavement performance; the Environmental Geotechnology Laboratory/Banyas Soil Mechanics Laboratory, which has facilities for the full range of geotechnical testing, plus unique equipment for unsaturated triaxial and permeability tests, extreme temperature shear behavior, geosynthetic pullout resistance, and in situ environmental monitoring, and current research projects include the monitoring and study of instrumented subgrade soils and geosynthetic behavior in walls and lined landfills; and the Environmental Systems Laboratory, which provides a full range of analytic equipment for chemical and biological waste treatment studies, and research includes BMP assessments for low-concentration municipal wastes, with specialized analytic facilities available in chemical engineering and a central instrumentation center.</p> <p>In addition, the excellent research facilities at the University include the following: the Infrastructure Information Systems Research Laboratory, which has state-of-the-art data collection, analysis, mapping capabilities for pavement and asset management, and instrumented vehicle for mechanical and digital visual monitoring of pavement condition, with outstanding computational capabilities for life-cycle predictions; the Laboratory for Composite Materials in Structures/Construction Materials Laboratory, with strong floor and 80 K, fatigue-rated reaction frame with multiaxial 30 gpm servohydraulic loading system and multichannel, high-speed data collectors, and current research projects include FRP repair of beam/column connections, column enhancements, and dynamic behavior of cable stays; the Stress Analysis Laboratory/Intentional Blast Mitigation Research Center, which are unique testing facilities used to simulate impulse loads on flat structural elements and glazing, and research projects include structural response to blasts and other intense loads, and additional capabilities in strain gauging and instrumentation for structural monitoring, with ongoing research of post-tensioned, segmental-concrete, and cable-stayed bridges; and lastly, the Transportation Laboratory, which contains vehicle speed-, volume-, and characterization-monitoring equipment; and computer-program-assisted simulation modeling of real-time traffic flow to aid in policy decisions, with current research projects including urban transportation studies, intermodal system modeling, and the Upper Midwest Corridor Multi Modal Freight Study.</p>	
Financial Aid	<p>Most full-time civil engineering graduate students receive some financial support. Fellowships and teaching and research assistantships, which include a stipend and a tuition waiver, are available for qualified students on a competitive basis.</p>	
Cost of Study	<p>The graduate tuition rate for the 2004–05 academic year was \$347.14 per semester credit hour for in-state students and \$714.29 per semester credit hour for out-of-state students. Additional fees are required and include the general fee, technology fee, and mandatory insurance.</p>	
Living and Housing Costs	<p>Students can find affordable, high-quality housing within easy walking distance of the campus. Monthly apartment rents and expenses average \$412 per student. The University offers shuttle bus service to many off-campus apartment complexes.</p>	
Student Groups	<p>There are approximately 21,000 students at the University of Toledo. Approximately 3,000 are graduate students. Of these, approximately 400 are graduate students in the College of Engineering. The University has a rich diversity of student organizations. Students join groups that are organized around common cultural, religious, athletic, and educational interests.</p>	
Location	<p>The University of Toledo has several campus sites in the city of Toledo. All engineering graduate students take classes on the Bancroft campus, which is located in suburban western Toledo. With a population of more than 330,000, Toledo is the fiftieth-largest city in the United States. It is located on the western shores of Lake Erie within a 2-hour drive of Cleveland and Detroit.</p>	
The University and The College	<p>The University of Toledo was founded by Jessup W. Scott in 1872 as a municipal institution and became part of the state of Ohio's system of higher education in 1967. The College of Engineering was founded in 1931 and began offering graduate degrees in 1947. The College of Engineering is housed in a modern five-building complex, which is composed of Nitschke Hall, Palmer Hall, Westwood Annex, The Lois and Norman Nitschke Auditorium, and North Engineering. Recently opened facilities include a new multimedia auditorium and state-of-the-art studio/classroom complex for computer-aided instruction and distance-learning initiatives.</p>	
Applying	<p>Students with a Bachelor of Science in engineering or one of the physical, mathematical, or biological sciences are encouraged to apply. Applicants should have a minimum of a 3.0 grade point average (on a 4.0 scale), but exceptions are made for those who demonstrate ability for graduate study. Applications should be completed by March 1 for full consideration for the fall semester. Admission materials can be obtained from the graduate school office or from the Web site.</p>	
Correspondence and Information	<p>Graduate Director Department of Civil Engineering 3006 Nitschke Hall, MS 307 University of Toledo Toledo, Ohio 43606 Telephone: 419-530-8117 E-mail: utcivil@uoft02.utoledo.edu</p>	<p>Office of Research and Graduate Studies College of Engineering 1014 Nitschke Hall, MS 310 University of Toledo Toledo, Ohio 43606 Telephone: 419-530-7391 E-mail: gradoff@eng.utoledo.edu World Wide Web: http://www.eng.utoledo.edu/civil</p>

THE FACULTY AND THEIR RESEARCH

Douglas Nims, Associate Professor of Civil Engineering and Interim Chair; Ph.D., Berkeley. Bridge instrumentation, segmental concrete structures, elastomeric bridge bearings, passive seismic control of buildings.

Defne Apul, Assistant Professor of Civil Engineering; Ph.D., New Hampshire. Fate and transport of chemicals in water and soils, environmental risk assessment.

Eddie Chou, Professor of Civil Engineering; Ph.D., Texas A&M. Transportation facilities design, systems analysis, engineering material properties, pavement performance evaluation, infrastructure management.

Cyndee Gruden, Assistant Professor of Civil Engineering; Ph.D., Michigan. Bioremediation, waste water, water supply.

Jiwan Gupta, Professor of Civil Engineering and Graduate Program Director; Ph.D., Waterloo. Transportation planning and facility design, transportation system management and economics.

Andrew Heydinger, Professor of Civil Engineering; Ph.D., Houston. Foundation engineering, laboratory testing, field instrumentation and mathematical modeling, analysis of deep foundations, geoenvironmental engineering, testing of pavement base and subbase materials.

Ashok Kumar, Professor of Civil Engineering; Ph.D., Waterloo. Air pollution, risk analysis, pollution prevention and environmental information technology.

Naser Mostaghel, Professor of Civil Engineering; Ph.D., Berkeley. Structural mechanics, earthquake engineering, base isolation and impulse loaded structures.

Azadeh Parvin, Associate Professor of Civil Engineering; D.Sc., George Washington. Composite applications in structural engineering and finite element analysis.

Mark Pickett, Professor of Civil Engineering; Ph.D., Connecticut. Extreme load safety analysis of structures and mechanical components, masonry structures, and earthquake forensics.

Brian Randolph, Chairperson and Professor of Civil Engineering; Ph.D., Ohio State. Subsurface instrumentation, geosynthetics, soil testing, flow modeling.