

PH.D. IN ENGINEERING (CIVIL AND ENVIRONMENTAL ENGINEERING)

OVERVIEW

Our PhD program is geared towards students interested in an academic path or an advanced research based career. Most of our PhD students joining the program hold an MS degree and they are able to finish their program within three to four years. Many of our PhD students have published their research in peer reviewed journals and some have also obtained teaching skills to prepare them better for an academic position.

ADMISSIONS REQUIREMENTS

Background of students: Most students have a prior MS degree in engineering. Students applying for a PhD degree without an MS degree are typically admitted to the MS program and may later switch to the PhD program upon their interest and high level performance and approval of their advisor. Most students admitted have a strong GPA from a civil, environmental, or chemical engineering department and have a GRE quantitative score of 160. Students with non-engineering backgrounds can be admitted on a case-by-case basis after review of the applicants' transcripts and prior accomplishments.

Test scores: For all applicants from an accredited U.S. or Canadian university with an undergraduate GPA below 2.7 and for all international applicants from non-English speaking countries, GRE scores must be submitted with a quantitative GRE score of at least 150. For all international applicants from non-English speaking countries, an English test score is required. Minimum test scores should be TOEFL speaking score of 22 (total 81), IETLS Band 6.5 or Duolingo (105). Students not meeting these scores could be provisionally admitted by completing the GAP (<https://www.utoledo.edu/cisp/gap.html>) option.

Recommendation letters: The Department of Civil and Environmental Engineering requires two letters of recommendation but more will strengthen the application. The letters can be from professors, employers or workplace supervisors. Unless it has been a long time since the applicant was a student, at least one letter should be from a professor.

Statements of purpose: The applicant should indicate their area of interest (environmental, geotechnical, structural, or transportation) in the statement of purpose.

Application requirements:

- **Degree:** Applicants must hold a four-year bachelor's degree from a regionally accredited college or university
- **GPA:** Applicants must have at least a 3.0/4.0 grade point average from previous undergraduate coursework or a 3.3/4.0 for previous graduate coursework
- **Application:** UToledo application required

- **GRE:** Required for applicants whose degree is from a non-US institution.
- **Transcripts:** Required
- **Statement of Purpose:** Required (indicate area of interest: geotechnical, transportation, environmental, or structural engineering)
- **Letters of Recommendation:** 2
- **Proof of English language proficiency:** Required for students from non-English speaking countries. See University graduate admissions for minimum test score requirements and exceptions.

Application priority deadlines for admissions and funding decisions:

- **Fall:** January 15
- **Spring:** October 1
- **Summer:** Contact program

Review of the application: Once the application is deemed complete by the College of Graduate Studies, the application is made available to the Civil and Environmental Engineering Department. The admissions committee of the department considers the application as a whole, including statements of purpose and reference letters.

Admission to candidacy for the doctoral degree

To be formally admitted to candidacy for the doctoral degree, students must first pass the qualifying examination. The purpose of the qualifying exam is to determine whether a student possesses the necessary potential to complete doctoral degree requirements.

Students take the exam at the very beginning of the second year of their PhD program. If the student started in fall, they take the fall exam offered in the first week of September. If they started in spring, they take the spring exam offered in the first week of February. Deadline to apply for the qualifying exam is June 1 for the September exam and November 1 for the February exam.

The qualifying exam requires the student to formulate and defend a research plan. To this end, each examinee must: (1) plan a new study (on a topic selected by the student and approved by the advisor) that can result in a small research proposal; (2) submit a 7 – 10-page (excluding references) double-spaced proposal on their research idea/plan; and (3) deliver a 12 – 15 minute presentation on their proposal followed by 15 – 20 minutes of questions. Each proposal should be in the same field as the examinee's doctoral research but must be distinct from their dissertation project. Further, the advisor's role in the proposal and presentation preparation will be limited to approving the proposal topic (i.e., the advisor will not edit or provide feedback on the proposal before its submission/presentation to the faculty). To pass this exam, the candidate must demonstrate the ability to plan a study using appropriate research tools, be able to use civil and environmental engineering principles to defend their research proposal, and exhibit effective written

and oral communication skills. The grading rubric and other details of the exam are shared with students by email.

PROGRAM REQUIREMENTS

The doctoral degree requires a minimum of 90 credit hours, of which 45 credit hours are for course work and 45 credit hours are for dissertation research. To be formally admitted to candidacy for the degree, however, doctoral students must first pass a qualifying examination. All Ph.D. students should note that admission to the doctoral program does not constitute admission to candidacy. The doctoral program is normally a full-time program throughout all of the course work and the dissertation. The department of civil engineering does not encourage part-time studies in the Ph.D. program.

For the Ph.D. degree, a minimum of 60 graduate credit hours beyond the M.S.C.E. degree (90 credit hours beyond the B.S. degree) are required, of which at least 12 credit hours are for graduate course work (largely departmental), an additional three credit hours for graduate level mathematics course work, and 45 credit hours for dissertation research under the supervision of a full-time faculty member of the department of civil engineering. A minimum of 45 credit hours beyond the M.S. must be completed at The University of Toledo.

To be awarded the Ph.D. degree, the student must have at least a B average (minimum GPA of 3.0) for all credits in the program of study. Only credit hours obtained with a letter grade of "C" or higher, or an "S" grade for the limited number of classes offered on a satisfactory or unsatisfactory basis, will fulfill degree requirements. In addition, the student must be admitted to doctoral candidacy and pursue an original research problem. The research must be completed and the dissertation written and successfully defended in public before the Ph.D. degree is conferred.