

**OPERATING PROCEDURES AND REGULATIONS
FOR THE PH.D. IN CIVIL ENGINEERING PROGRAM
OF THE DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING**

The procedures and regulations described below follow the spirit of, but are not limited to, those written in “A Proposal to Offer the Doctor of Philosophy Degree in Civil Engineering,” July, 1990 which has been approved. The current regulations of the MTU Graduate School take precedent over this document in areas in which it is silent and whenever Graduate School requirements are stricter than those herein.

The procedures and regulations contained herein were amended by a vote of the graduate faculty of the Department of Civil and Environmental Engineering on 06 November 2018 and will remain in effect until amended further. This document should be reviewed and updated at minimum once every 5 years.

DEFINITIONS

CEE Ph.D. Faculty – Those faculty members or adjunct faculty members of the Department of Civil and Environmental Engineering who are members of the MTU graduate faculty.

Program Chair – The Chair of the Department of Civil and Environmental Engineering. This person has overall responsibility for the internal management of this Ph.D. program.

Advisor – The CEE Ph.D. faculty member who has the primary responsibility to guide a student’s individual program and progress.

Advisory Committee – A committee composed of CEE Ph.D. faculty, members of the MTU graduate faculty, and, occasionally, a person or persons external to MTU. This committee is responsible for the student’s course plan, comprehensive examination, and dissertation proposal. As a minimum, this committee will consist of three members of the CEE Ph.D. faculty and one graduate faculty member from a cognate department. The advisor will act as chair of the Advisory Committee.

Qualifying Examination – An examination having a written component and possibly an oral component intended to evaluate the student’s knowledge and understanding of the specialty area and to determine the student’s ability to conduct a program of independent research. The Advisory Committee determines whether an oral component is necessary based on the outcome of the student’s written examination.

Doctoral Candidate – A student who has successfully completed the comprehensive examination.

Specialty Area – Any of the areas of concentration traditionally associated with civil engineering. They include, but are not limited to, construction engineering/management, environmental engineering, geotechnical engineering, water resources engineering, structural engineering, and transportation engineering.

Admission Committee – A group composed of CEE faculty in the specialty area chosen by the applicant, and any other CEE faculty who choose to review applications within that specialty area. The purpose of the Admissions Committee is to recommend to the Program Chair/Graduate Program Director whether or not applicants should be granted admission to the program.

Graduate Program Director – The Chair of the CEE Graduate & Research Committee. Primary point of contact for applicants to and students in the Civil Engineering PhD program.

Graduate Program Assistant – Provides administrative support to the Graduate Program Director.

Graduate Learning Outcomes (GLOs) – Represent the competencies expected of all graduates of the program; the minimum expectation of knowledge, skills and abilities our students should possess.

STUDENT-RELATED PROCEDURES

Admission Guidelines – Admission into this program is based on the applicant’s Graduate Record Exam, undergraduate and graduate GPA, and the TOEFL requirement consistent with MTU Graduate School requirements for applicants who do not possess a degree or academic history from a North American

institution. Significant weight will be placed on the content of reference letters, the applicant's statement of objectives, and post-baccalaureate professional experience.

Coursework Requirements – No formal coursework requirements are promulgated although about 40 semester credit hours of coursework beyond the B.S. degree will usually be necessary for a properly prepared engineering graduate. Residency and total credit requirements follow those of the MTU Graduate School.

Preliminary Study Program – Within the spirit of the coursework requirements stated above, the study program should show that the student will have mastered a significant portion of that body of knowledge associated with the specialty area and prepared adequately to undertake meaningful research.

Qualifying Examination – This examination is administered by the Advisory Committee. The entire Civil and Environmental Engineering faculty shall be invited to submit questions at least 30 days before the date of the exam. The invitation to submit questions must include a complete list of the graduate courses taken by the candidate to allow faculty to decide the appropriateness of questions they might submit. However, the final decision as to the use or non-use of any question is the decision of the Advisory Committee. The Advisor will coordinate the examination. Each Advisory Committee member must contribute questions for the exam. Since the Ph.D. is a specialized research degree, the exam should test the student on the principles of the specialty area in which the research will be performed. If the student fails the examination, he/she may retake all or a portion of the exam once with the majority approval of the committee. However, the reexam must occur within six months and these results are final. The exam and the student's response thereto must be filed with the Graduate Program Assistant to be made available upon request to the entire graduate faculty and the Dean of the Graduate School. Each member of the Advisory Committee must also complete and submit to the Program Chair the form for "PhD CE Program-Written Qualifying Exam GLO Assessment."

Dissertation (Research) Proposal – Immediately after successful completion of the comprehensive examination, the student will begin preparation of the dissertation proposal. The dissertation proposal is a substantial specific proposal and plan for the doctoral research project prepared with the aid of the Advisory Committee. The student must orally defend the proposed research project and, in doing so, demonstrate an in-depth knowledge of the subject material and related literature. At that time, each member of the Advisory Committee must complete and submit to the Program Chair the forms for “PhD CE Program-Written Research Proposal GLO” assessment and “PhD CE Program-Oral Research Proposal GLO” assessment. The proposal should normally be approved by the Advisory Committee no later than two semesters before the expected completion of the dissertation.

Final Examination and Dissertation Defense – A public, final, oral examination, primarily concerning the research and doctoral dissertation, will be given. The candidate should justify the validity of the methods and conclusions contained in the dissertation and should be familiar with the import of the particular investigations reported in the dissertation relative to the larger body of existing knowledge. The final examination shall be announced by the Graduate School to the general graduate faculty of MTU at least two weeks in advance. All MTU graduate faculty are invited to attend and participate in questions regarding the dissertation and its contribution to the field of civil and environmental engineering. The primary advisor should be physically present at the defense; situations in which this is not possible will require approval from the Program Chair. Concurrence of a majority of the Advisory Committee members is necessary for acceptance of the dissertation (e.g. maximum of one dissent in a standard committee of four). Each member of the Advisory Committee must also complete and submit to the Program Chair the forms for “PhD CE Program-Written Dissertation GLO Assessment” and “PhD CE Program-Oral Dissertation Presentation GLO” assessment.