

Graduate Student Handbook

University of Notre Dame

Department of Civil & Environmental Engineering
& Earth Sciences

2024-2025 Academic Year



Table of Contents

1. Introduction	2
2. Requirements of the Master's Programs	2
3. Requirements of the Ph.D. Program	3
4. Award of Master's degree to a doctoral student	4
5. Graduate student rights and responsibilities	5

1. Introduction

This handbook describes the policies relating to graduate studies in the Department of Civil and Environmental Engineering and Earth Sciences (CEEES) at the University of Notre Dame. It sets forth the academic requirements and milestones toward completion of the doctoral (PhD) and research-based master's degrees (MS), and summarizes information most students will need on a frequent basis. It supplements, but does not replace, the [Graduate School Bulletin of Information](#). All students are required to obtain a copy of the *Bulletin* and become familiar with its requirements and policies. It can be found online at: https://graduateschool.nd.edu/assets/281218/gb_bulletin_most_recent.pdf. Except where departmental requirements are stricter, should a contradiction be found between this guide and the Graduate School's Bulletin, *the Bulletin takes precedence*.

The student's primary contact for all graduate program matters is the faculty member who serves as the student's research advisor. For issues about policies and procedures or grievances, the student should reach out to the Director of Graduate Studies (DGS); for issues regarding paperwork, the student's academic record, or other administrative questions, the student should reach out to the Program Administrator. Important contacts include:

Department Chair: Diogo Bolster (dbolster@nd.edu)
Associate Department Chair: Kyle Bibby (kbibby@nd.edu)
Director of Graduate Studies (DGS): Alex Taflanidis (ataflani@nd.edu)
Academic Program Administrator (APA): Valerie McCance (vmccance@nd.edu)

2. Requirements of the Master's Programs

CEEES offers three research-based MS programs: Master of Science in Civil Engineering (MSCE), Master of Science in Earth Science (MSErSc), and Master of Science in Environmental Engineering (MSEnvE). Students must fulfill the following requirements within five (5) years of matriculation. Failure to complete any of the Graduate School or Departmental requirements within the prescribed period results in forfeiture of degree eligibility.

- a) **Coursework.** Students must register for and complete at least 30 credit hours with a cumulative GPA greater than 3.0. The credits may include any combination of formal courses, directed studies, and research, but must include at least 16 credits of technical courses at the 60000 level or above. Thus, research credits may total from 6 to 14 credit hours. With the approval of the DGS, courses numbered 40000 through 49999 and 50000 through 59999 may be taken to satisfy up to six (6) hours of graduate credit requirements. Students are expected to complete all required coursework within three semesters of matriculation.
- b) **Thesis Proposal.** The thesis proposal is a 15-page document, not including bibliography, that outlines the literature pertaining to the student's research area, the hypothesis (hypotheses) to be addressed in the research, the techniques to be employed, and a projection of the time requirements to complete the research. The master's thesis proposal should be approved by the student's advisor and sent to the DGS prior to the end of the second semester of study. In consultation with the student's advisor, the DGS will invite one (1) teaching or research faculty member to review the thesis proposal and provide any recommendations to the student.
- c) **Thesis and defense.** The thesis should follow the [formatting guidelines and timelines](#) on the Graduate School's website. The thesis advisor indicates his or her approval of the thesis and its readiness for the readers by signing the thesis. The candidate must submit an electronic version of the thesis to the DGS for approval at least three (3) weeks in advance of the defense date and must receive approval for the thesis and committee members. Approval is also required before the student invites a committee member from outside the teaching and research faculty of the Department. The request should be accompanied

by a rationale for having an external member. Once all approvals have been received, the candidate is responsible for setting a date and time for the defense and must work with the Academic Program Administrator to ensure the necessary paperwork is initiated.

The open part of the defense consists of a ~ 35-minute formal technical presentation of key aspects of the candidate's thesis followed by audience Q&A. During the subsequent closed part of the defense, the committee members will examine the candidate in depth based on the presentation, the thesis or paper, and the background needed for the research. The committee members vote pass/fail on the candidate's ability to respond to questioning and on the student's mastery of the subject. The exam is passed if the committee vote, by majority, is "pass".

- d) Admission to Candidacy.** Once the thesis has been successfully defended, the student must apply for Admission to Master's Degree Candidacy. Completion of this form is a prerequisite to receiving the Master's degree. It is the responsibility of the student to apply for candidacy admission by contacting the Academic Program Administrator to begin the process.

3. Requirements of the Ph.D. Program

Students must fulfill the following requirements within eight (8) years from the time of matriculation in order to obtain their PhD. Failure to complete any of the Graduate School or Departmental requirements within the prescribed period results in forfeiture of degree eligibility.

- a) Coursework.** Students must register for and complete at least 72 credit hours with a cumulative GPA greater than 3.0. The credits may include any combination of formal courses, directed studies, and research, but must include at least 18 credits of technical courses at the 60000 level or above. With the approval of the DGS, courses numbered 40000 through 49999 and 50000 through 59999 may be taken to satisfy up to six (6) hours of graduate credit requirements. Students who have completed an MS degree may be able to transfer up to 24 credits towards their PhD. Interested students can contact the Academic Program Administrator to confirm eligibility and to start the process. Students are expected to complete all required coursework within three semesters of matriculation.
- b) Research Ethics Requirement.** All PhD students must receive at least three hours of Research Ethics training in order to graduate. In addition, according to federal policy, students funded by, or working on projects funded by, federal research sponsors such as the NSF and the NIH must complete eight hours of in-person research ethics training. More information and workshop details can be found here: <https://graduateschool.nd.edu/graduate-training/ethics/research-ethics-requirement/>.
- c) Qualifying exam (QE).** The qualifying exam consists of a literature review and requires two (2) components: a written document (1) and an oral examination before a committee of Notre Dame faculty (2). The oral exam is a closed presentation (30 min or less) by the student on the content of their literature review followed by questions from the committee (not to exceed two hours). Questions posed to the student by the committee will focus on the student's ability to meet these four criteria: (1) review and synthesize relevant literature; (2) critique that literature; (3) apply fundamental concepts from their coursework; (4) identify areas where further research is needed.

The exam has a committee of four (4) voting members chosen from the teaching and research faculty of the Department and includes the dissertation advisor plus three (3) additional faculty members. The DGS must approve any faculty member outside the Department or external to the University who is invited to serve on the QE committee. Students must complete the qualifying exams by the end of the fourth (4th) semester. Students eligible to take the QE should contact the Academic Program Administrator at the beginning of the third (3rd) semester to begin the process and to ensure both the Graduate School and Department requirements are met. Students must have a GPA of 3.0 to be eligible.

- d) Research Proposal and Oral Candidacy Exam (OCE).** The research proposal and OCE must be attempted no later than the end of the sixth (6th) semester. The research proposal is a 15-page document, not including bibliography, which outlines the literature pertaining to the student's research area, the hypothesis (hypotheses) to be addressed in the research, the techniques to be employed, and a projection of the time requirements to complete the research. A finalized version of the research proposal must be sent to the DGS for approval at least three (3) weeks prior to the intended OCE date.

The OCE exam will test the candidate's preparation for research in the chosen subject area, the quality of the proposed study plan, the ability of the student to relate course work and independent study to the research area, and the quality of the preliminary research performed. It is a closed event during which the student delivers a ~ 40 minute formal technical research presentation. The committee members will examine the candidate in depth based on the presentation, the research proposal, and the background needed for the research. The committee members vote pass/fail on the candidate's ability to respond to questioning and on the student's mastery of the subject. The exam is passed if the committee vote, by majority, is "pass".

The OCE exam has a committee of four (4) voting members chosen from the teaching and research faculty of the Department and typically include the dissertation advisor or co-advisors plus three (3) additional faculty members. The DGS must approve any faculty member outside the Department or external to the University who is invited to serve on the OCE committee. Students eligible to take the OCE should contact the Academic Program Administrator a minimum of four (4) weeks prior to begin the process and to ensure both the Graduate School and Department requirements are met. Once the OCE has been passed, the student must wait a minimum of 12 months before defense of the dissertation.

- e) Admission to Candidacy.** Once the OCE has been passed, the student must apply for Admission to Doctoral Degree Candidacy. Completion of this form is a prerequisite to receiving the Ph.D. degree. It is the responsibility of the student to apply for candidacy admission by contacting the Academic Program Administrator to begin the process.
- f) Dissertation and defense.** The dissertation should follow the [formatting guidelines and timelines](#) on the Graduate School's website. The dissertation advisor indicates his or her approval of the dissertation and its readiness for the readers by signing the dissertation. The candidate must submit an electronic version of the dissertation to the DGS for approval at least three (3) weeks in advance of the defense date and must receive approval for the dissertation and committee members. Approval is also required before the student invites a committee member from outside the teaching and research faculty of the Department. The request should be accompanied by a rationale for having an external member. Once all approvals have been received, the candidate is responsible for setting a date and time for the defense and must work with the Academic Program Administrator to ensure the necessary paperwork is initiated.

4. Award of Master's degree to a doctoral student

A doctoral student may receive the Master of Science degree without completing a master's thesis if the student has completed all three of the following:

- Completed the course requirement for the master's degree,
- Passed the university candidacy examination for the doctorate, and
- Has been first or second author on a research manuscript accepted for publication or published in a refereed technical/scientific journal. The publication must be based on work performed while the student has been a graduate degree candidate at Notre Dame but cannot be included in the student's doctoral dissertation.

The candidate will be required to present his or her research paper in a format similar to the MS thesis defense and subject to the same standards. Upon sustaining this exam, a master's degree will be awarded. In the event of failure, the student will forfeit eligibility for a master's degree without a thesis. This procedure must be completed

at least one month prior to the defense of dissertation. The student should contact the Academic Program Administrator to begin the process.

5. Graduate student rights and responsibilities

Registration. During the academic year (August-May), students must register for a minimum of 9 credit hours and no more than 15 credit hours at the 60000 and 70000-level courses, each semester. During the summer session (May-August), all students are required to enroll and register for zero credit hour Independent Summer Research course, CE 67890.

Students who plan to graduate during the summer should also register for zero credits of research under the department chair. If a student wishes to take a course for credit offered only during the summer session, they will need to apply for a tuition scholarship before the first day of classes. Please contact the APA for any registration questions and information on summer tuition scholarship requirements and courses available.

Enrollment (ND Roll Call). In addition to registering for classes, all graduate students must complete ND Roll Call each spring, fall, and summer to maintain student status. If you fail to enroll during the semester, you may have to apply for re-admission. The only exception is for officially approved leaves of absence, which are described in the *Bulletin*.

Teaching Assistant (TA) requirements. The ability to communicate effectively is considered to be an essential skill of a graduate degree holder from CEEES. To facilitate the development of communication skills, all PhD and research-based MS students are required to participate in the Department's educational mission by serving as teaching assistants (TA). As a TA, the student may conduct labs, grade homework or exams, help develop new learning activities, or hold office hours to aid students. Within the first five (5) semesters, students must serve 28 TA hours, which are decided by the DGS in terms of 4- or 8-hr per week assignments each semester. To support in preparing for TA duties, all incoming students are required to attend a new TA Orientation session offered each year by the Kaneb Center. Students who receive TA assignments are expected to be available for the week prior to the start of classes through grade submission. Exceptions to this must be coordinated directly with the instructor of the course for which the student is serving as a TA as well as the student's research advisor.

Graduate Student Annual Progress Report. Each year, students are required to complete and submit an online Graduate Student Progress Report: <https://forms.gle/v9C38rGFmq6oPuUR8>. To complete the form, students should have the following information: cumulative GPA, formal coursework, TA assignments, dates of Qualifying Exams and Oral Candidacy Exam, if applicable. This information is available via Graduation Progress System (GPS), found in [InsideND](#). The DGS uses these progress forms to ensure each student is making timely degree progress and to identify any issues.

Funding. Research-based students in the department receive a minimum stipend of at least \$34,479 per year for MS students and \$40,000 per year for PhD students. This award is for full-time, degree-seeking students and requires the student to successfully perform in coursework and to participate in research and teaching. After the first year, the normal practice is to support students entirely on research grants. These provide full tuition and a similar stipend. Funding is contingent on maintaining full-time graduate student status in the department, pursuing a research-based degree option, and making satisfactory progress towards the degree. Funding ceases after the eighth (8) year for doctoral students and after the fifth (5) year for research-based master's students.

Vacation and Time Off. Students are allowed at least two weeks' paid vacation in addition to the following University holidays:

- the Wednesday before Thanksgiving, Thanksgiving Day, and the following Friday
- Christmas Eve through New Year's Day
- Martin Luther King Jr. Day
- Good Friday and Easter Monday

- Memorial Day
- Independence Day

Vacation plans must be approved by a student's advisor. Any extra vacation time during periods in which the student is receiving financial support must also be approved by the student's advisor.

Health Insurance. Health insurance is required of all international and full-time students. Research-based graduate students who are receiving a stipend are eligible for the health insurance subsidy, which covers the annual cost of the insurance premium for the student for the year. This will be applied annually, assuming the student is in good academic standing. Doctoral students must be in their first eight years of study to be eligible for a health subsidy. Masters' students must be in their first five years of study to be eligible for a health subsidy. . Students in a Graduate School degree program who are full-time and fully-funded receive a subsidy that pays 100% of the annual health insurance premium, and beginning in fall 2024, they will also receive a subsidy that covers 100% of the cost of the health insurance premium for their legal dependents. The University Counseling Center, located in the University Health Center, 631-7336, offers professional services to all graduate students and their families. Additional services are described in detail in the *Bulletin* and online at:

<https://uhs.nd.edu/insurance-billing/insurance-plans-rates/>

Departmental Resolution Process. Conflicts should be resolved at the lowest possible level (i.e., within the department). Appeals of decisions related to academic matters, grievances of course grades or conduct, conflicts between students and advisors, or other issues that affect a student's degree progress will be addressed by the DGS. Students wishing to file a formal grievance or appeal should do so in writing to the DGS or to the Department Chair. The student should indicate the nature of the problem, the date(s) the problem occurred, the grounds upon which the appeal is based, background information that the student considers important, and the relief requested. The matter will be considered by the DGS and Department Chair and acted on in no more than 15 working days. If the student feels the resolution is inadequate, they may appeal the decision to the Graduate School by following the formal procedures described in the *Bulletin*.

Additional support for students comes in the form of the Graduate School Ombudsperson, who serves as a neutral resource for graduate students to confidentially discuss progress issues, mentorship concerns, or seek guidance from a neutral party about their studies. More information can be found at:

<https://graduateschool.nd.edu/policies-forms/graduate-school-ombudsperson-speak-up/>.