Graduate Student Handbook

2017-2018

Civil Engineering M.S./Ph.D.
Geoengineering M.S.

Department of Civil, Environmental, and Geo- Engineering
University of Minnesota
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Introduction

The Department of Civil, Environmental, and Geo-Engineering is dedicated to educating graduate students in the diverse disciplines represented within its degree programs of civil engineering and geoengineering. Graduate study enables a student to develop in-depth knowledge in one or more specialized fields, to reach the frontiers of current knowledge, and to expand those frontiers by doing original research. More than that, graduate study should teach students how to work independently and think critically about one’s own work and that of others. The faculty in this department helps graduate students reach these goals by offering challenging courses, organizing research seminars, encouraging informal discussions, and providing guidance during all stages of a student’s research and coursework.

Information in this handbook applies to all students admitted to the graduate degree programs in the Department of Civil, Environmental, and Geo-Engineering (i.e. civil engineering and geoengineering). This handbook describes requirements graduate students must satisfy to complete a degree and the facilities available in the department for graduate studies. Any errors, ambiguities, inconsistencies or omissions in this document should be brought to the attention of the Director of Graduate Studies so future editions may be improved. Regulations and programs change over time, and students should consult the latest edition of this handbook. In addition, regulations in the Graduate School Catalog (http://www.catalogs.umn.edu/index.html) supersede policies described in this document, which is essentially a record of departmental practice. Students should read the Graduate School Catalog regarding the M.C.E, M.GeoE, M.S., and Ph.D. degree programs.

The Department of Civil, Environmental, and Geo-Engineering at the University of Minnesota offers specialization in the areas listed below. However, graduate students can, and often do, conduct research in topics that span more than one of these areas and/or involve other departments in CSE or other colleges at the University of Minnesota. Current administrative areas for research in the department include:

- Environmental
- Geomechanics
- Structures
- Transportation and
- Water Resources

The information in this handbook and other University catalogs, publications, or announcements is subject to change without notice. University offices can provide current information about possible changes.
### Department Directory

**Department of Civil, Environmental, and Geo- Engineering**

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### Department Administration

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### Questions

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<td>Student related Questions?</td>
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<td>Payroll Questions?</td>
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<td>Purchasing Questions?</td>
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<td>Sponsored Account Questions?</td>
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Mission Statement and Program Educational Objectives

Civil, Environmental and Geo- Engineering
Mission Statement

We learn concepts and methods, discover solutions and processes, and transform the world by addressing critical challenges in designing and protecting our infrastructure, environment, water and earth resources.

Learn – We offer rigorous undergraduate degree programs that prepare students for a professional career or advanced study. Our graduate programs challenge the frontier of knowledge.

Discover – We develop and design solutions using analytical, numerical, and physical models. Our original ideas, diverse perspectives, and international collaborations take advantage of the Minneapolis-St. Paul urban laboratory and the Minnesota landscape.

Transform – We connect with and serve as a resource for the local community, profession, and society. We include, listen to, and support people with different backgrounds and perspectives.

The educational objectives are such that the graduates of civil engineering or geoengineering will:
• pursue academic careers or gain entry into post-graduate or professional programs
• practice technical proficiency and adaptability, and participate in life-long learning to meet the challenges in academia, industries, or government agencies
• exhibit strong communication, interpersonal, and management skills as leaders and team members in the profession
• embody the role of ethical professionals that protect and sustain human health, welfare, and the environment

Similarly, graduate programs have defined sets of Student Learning Outcomes (SLO), describing the expected skillset for a graduate student. Specifically, graduates will have the ability to:
• demonstrate knowledge and scholarship in a recognized area of endeavor
• use research and methodology skills that are timely and pertinent
• communicate to intended audiences effectively
• provide service, exemplify citizenship, and convey professionalism
• practice pedagogy to be successful educators and life-long learners
• function on and lead multi-disciplinary teams for collaborative work
• apply or teach knowledge for engineering practice
• understand ethical norms in research and practice
Definitions and Descriptions

**Academic Year:** The nine month academic year has two terms: fall and spring semesters (September to May). The University also has a summer session. The Department of Civil, Environmental, and Geo- Engineering normally does not offer graduate lectures or formal laboratory courses during summer. However, graduate students may find courses in other departments and colleges to take in the summer. Please speak with your advisor on summer courses.

**Advanced Doctoral Student Status:** Students who have finished all coursework listed on their Graduate Degree Plan, have passed the prelim oral and written exams, and have met all thesis credit requirements are eligible for Advanced Status by filling out the “Application for Advanced Doctoral Status.” The completed form, including adviser’s signature, should be turned in to the department.

**Advanced Master’s Student Status:** Students who have finished all coursework listed on their Graduate Degree Plan and have met all thesis credit requirements are eligible for Advanced Status by filling out the “Application for Advanced Master’s Status.” The completed application, including the adviser’s signature, should be turned in to the department to forward to the Graduate School after DGS approval.

**Adviser:** The faculty member that guides the student in selection of coursework, completion of research, or both, that leads to a graduate degree. The adviser must be a member of the graduate faculty in the program the student is majoring in.

**Director of Graduate Studies (DGS):** The DGS is the faculty member responsible for operation of the departmental graduate programs in civil engineering and geological engineering and chairs the departmental Graduate Studies Committee. The DGS is appointed by the Civil, Environmental, and Geo- Engineering Department Head and approved by the CSE Dean. The DGS is not an officer of the Graduate School.

**Doctoral Candidate:** This refers to a student who has passed the preliminary written and oral exams for the Ph.D. degree. To minimize confusion, students admitted to a Ph.D. program are referred to in this document as “students in the Ph.D. program,” whether or not they have become Doctoral Candidates.

**Full-time and Part-time Graduate Students:** Students registered for six or more course and/or thesis credits are full-time students. Students registered for fewer than six course and/or thesis credits are part-time students. Tuition for full-time students is assessed for 6-14 credits. Tuition is on a per credit basis for 1-5 credits or greater than 14 credits. For exceptions to these guidelines, see Advanced Student Status definitions above.

**Graduate Assistants:** Students who hold appointments (i.e. receive monetary stipends) that require service in return for financial support. Titles and compensation vary. Examples are Research Assistant (RA) and Teaching Assistant (TA).

**Graduate Fellows:** Students who hold appointments that do not require any services. Titles and stipends of graduate fellows vary. Primary examples are CSE Fellows, Sommerfeld Fellows, and CEGE Fellows. It is expected that graduate fellows will carry out research towards the
completion of a Ph.D. dissertation.

Graduate Studies Committee (GSC): The GSC is a committee consisting of five graduate faculty members in Civil, Environmental, and Geo-Engineering representing the five core areas of the department (Environmental, Geomechanics, Structural, Transportation, and Water Resources Engineering) that is responsible for administration and oversight of the graduate programs in the department. The GSC makes decisions regarding graduate admissions, fellowship awards, and travel grants. In addition, the GSC is responsible for developing/reviewing and implementing all programmatic changes including: (1) addition, removal, or alteration of graduate degree programs and program requirements and (2) review of new or significantly altered graduate courses. The members of the GSC are appointed by the Civil, Environmental, and Geo-Engineering Department Head. The DGS serves as the (non-voting) chairperson of the committee.

International Student: Any student who is not a citizen or permanent resident of the United States. International students usually hold a passport bearing a student entry visa to the United States.

Resident: Residents of Minnesota pay tuition at the in-state tuition rate. Any Graduate Assistant who has at least a 25%-time appointment as a graduate assistant or graduate fellow, regardless of residency status, also qualifies for the in-state rate. If you have questions about your residency status, you should consult the Resident Classification and Reciprocity Office, 240 Williamson Hall, 612-625-6330. For residents of North Dakota, South Dakota, Wisconsin, or Manitoba who qualify for reciprocity privileges, tuition rates are lower than for nonresidents and are, in some cases, comparable to resident rates.

Thesis Research: This includes research to satisfy requirements for a M.S. Plan A degree or the Ph.D. degree.
Welcome to the Department of Civil, Environmental, and Geo-Engineering at the University of Minnesota. We are delighted that you have joined the CE/GeoE family, and we hope that you take advantage of the many opportunities here.

**Statement of General Purpose and Policies**
This handbook contains essential information for all graduate students in the Department of Civil/Geo Engineering. All students are responsible for understanding and following the information and policies contained in this document.

**The Start of Graduate Study**
Most graduate students find that the coursework of the first semester is demanding. You will not be alone if you feel a bit overwhelmed. The faculty will assume you are familiar with material covered in your undergraduate CEGE courses as well as mathematics, physics, and chemistry.

If you encounter problems, or are concerned that you are having problems, you should consult with your advisor, the representative to the GSC for your area, or the DGS. It is important to remember that they are here to help you make it through graduate school. The DGS will monitor your academic progress. Like students before you, you will find that Tiffany Ralston is an invaluable source of information.
Graduate Degree Program Requirements

General Requirements
The requirements for the graduate degrees in civil engineering and in geoengineering are listed in the Graduate School Catalog. After you have read the pertinent sections in that Catalog, the following text will provide you with additional information concerning the various degree programs and how to satisfy all degree requirements.

The Department of Civil, Environmental, and Geo-Engineering offers several forms of the Master's degree in civil engineering and geoengineering and also a PhD in civil engineering. If a minor is declared, the student must obtain approval and select courses in consultation with the DGS of the minor field, as well as with his/her CEGE faculty adviser. The “related fields” arrangement is more flexible. Courses are chosen from other departments in consultation only with the CEGE faculty adviser. Courses offered in other departments may also be included in the major program if approved for that purpose by the faculty adviser and the DGS.

To receive credit toward graduate degree requirements, courses must be at the 4XXX level or higher and NOT included as a required course for undergraduate majors in Civil Engineering or Geoengineering. For example, CE 4502 Water and Wastewater Treatment is a required course for undergraduate CE majors and cannot be taken for graduate credit. Graduate students are usually permitted and may even be required to take undergraduate courses (4XXX or lower) to fulfill gaps in their academic background. The grades from such courses will count toward the overall graduate grade point average (GPA), but should not be included on the graduate degree plan.

The upper limit for acceptable 4XXX courses included on the Graduate Degree Plan is two which can total up to 9 course credits.

These courses will not count towards your civil engineering graduate degree:
CEGE 4102W – Capstone Design
CEGE 4301 – Soil Mechanics II
CEGE 4401 – Steel and Reinforced Concrete
CEGE 4501- Hydrological Design and
CEGE 4502 – Water and Wastewater Treatment
CEGE 4522 – Fluid Mechanics

These courses will not count towards your geoengineering graduate degree:
CEGE 4104W – Capstone Design
CEGE 4121 – Computer Applications in Civil Engineering II
CEGE 4311 – Rock Mechanics
CEGE 4351 – Groundwater Mechanics
ESCI 4501 – Structural Geology and
ESCI 4971W – Field Hydrogeology

Each research area in the department has a 1-credit seminar course each semester in which primarily graduate students present their research. M.S./M.C.E./M.GeoE. students can count up to 1 credit and Ph.D. students up to 2 credits of seminar toward their coursework requirements.

Although there is no graduate school rule about the number of incomplete courses, the recommended departmental limit is 2.

Finally, the Graduate School limits the number S/N (pass/fail) credits to one third of the credit total.
Consult with your adviser and the DGS concerning coursework questions.

A student may transfer graduate course credits into his/her degree program from other universities, non-degree seeking registrations at the University of Minnesota, and credits from other University of Minnesota units that were obtained in pursuit of graduate-level degrees that were not awarded. Credits appearing on a student’s undergraduate transcript cannot be transferred into the graduate program, even if those credits were taken in excess of the B.S. degree requirements. For further details, refer to the Graduate School Catalog. The Graduate School limits transfer of credits to 40% of the total course credits in master’s programs. For the Ph.D. program, there is no official limit on the number of credits transferred from other graduate programs at recognized institutions or from a Master's program at the University of Minnesota. There are, however, restrictions on the transfer of credits from non-degree seeking registrations at the University of Minnesota; for details, refer to the Graduate School Catalog.

The transfer of graduate credits is accomplished by listing the courses on the Graduate Degree Plan, which must be approved and signed by the adviser(s) and DGS. The department does not grant graduate credit by special examination.

Students with undergraduate preparation in disciplines other than civil engineering are frequently admitted for graduate study in the department. If you are in this category, most likely you will be required to take additional course work at the undergraduate level to compensate for specific deficiencies in your undergraduate preparation. These courses will not be included in your degree plan but will appear on your transcript and are included in the calculation of your GPA. Initially, the DGS and admissions committee determine the additional courses that a student is required to take at the time a student is recommended for admission to the graduate program. You should have been informed of these requirements in a separate letter from the graduate studies representative in your area, the DGS, or your adviser. Nevertheless, additional courses may be added at a later time if it becomes evident that a candidate has a weakness in a relevant topic area.

**Graduate Degree Plan and Examining Committees**

The Graduate Degree Plan, which describes the course work and other details of your degree program, must be completed, reviewed/signed by your adviser(s) and the DGS, and submitted to the Graduate School by the end of your second semester of graduate study. The DGS recommends that you complete the form as soon as possible after beginning graduate study to avoid potential problems concerning course selection and meeting degree requirements. The Graduate Degree Plan can be online at: [http://policy.umn.edu/forms/otr/otr198.pdf](http://policy.umn.edu/forms/otr/otr198.pdf). You should fill out the form as completely as possible in consultation with your adviser, who must approve and sign it. The completed form should be given to the Secretary of Graduate Studies who will then provide it to the DGS for approval and send it to the Graduate School. Final approval of the Graduate Degree Plan is done by the Graduate School. After approval by the Graduate School, this becomes your official program, and all items listed on the degree plan must be fulfilled before the degree will be awarded. A revised degree plan may be submitted at a later date if a number of changes are required, but only if approved by the adviser(s) and DGS. If only minor changes are necessary, a petition form should be used. In addition, petition forms can be obtained online at [http://policy.umn.edu/forms/otr/otr190.pdf](http://policy.umn.edu/forms/otr/otr190.pdf).

The Graduate Degree Plan (GDP) milestone must be on your student record before you are eligible to access the committee workflow. This means the GDP must be approved by the college and/or program in addition to central data entry completed by Graduate Student Services & Progress (GSSP) and the Office of the Registrar (OTR).


**Examining Committee**

The graduate examining committee consists of the adviser(s) and other faculty from both in and out of the department. The committee serves two purposes: 1) to provide guidance to the student during the graduate program and 2) to evaluate the quality of the work performed by the student by reading/approving the thesis and by questioning the student during a final oral exam (i.e. thesis defense). A student is allowed only one committee request in the workflow at a time.

The M.S. examining committee for the final oral exam should be entered after the degree plan is submitted and approved. Examining committees are established formally by the Dean of the Graduate School, but the DGS recommends a committee to the Dean. Students submit committee members for review via the following website: [http://www.grad.umn.edu/students/examiningcommitteesnew/index.html](http://www.grad.umn.edu/students/examiningcommitteesnew/index.html). Students can also use this website to update members of the examining committee. Students will receive a confirmation email once their committee has been approved.

The student and his/her adviser suggest committee members deemed appropriate based on the topic of research for the student's thesis. Examining committees for master's degrees must have at least three members: two from the major field (including the student's adviser) and one from the minor or related programs outside of the department. Committee members must be graduate faculty within the University, with the exception of external committee members (see next paragraph). Students should take at least one course from each of their committee members, but there is no requirement that they must do so. Prior to submitting the names of the suggested committee members to the DGS, students must contact the faculty they intend to have on their committee and determine their willingness to serve.

Occasionally there is not sufficient expertise among the faculty to examine a student with a very narrow or specific research focus. In these instances, the college may consider a request for an expert outside the University of Minnesota to serve as a member of the student's examining committee. Students interested in including an external committee member on his or her examining committee should discuss the possibility with his or her adviser and the DGS.

The Ph.D. examining committee is also formed right after the degree plan is submitted and approved, and serves as the committee for the preliminary oral exam and the final exam (thesis defense). Ph.D. committees have at least four members: three from the student's major field (one not in the immediate research area) and one from the minor or supporting program (outside the Department of Civil Engineering).

Unlike the M.S. committee, where the adviser serves as the chair, a doctoral student’s adviser cannot serve as chair on the Ph.D. examining committee. Students must assign committee members at least one month prior to the exam. Students assign their examining committee members by going to the Graduate School website [http://www.grad.umn.edu/students/examiningcommitteesnew/index.html](http://www.grad.umn.edu/students/examiningcommitteesnew/index.html). If you want to update your examining committee members you will also need to change it at this website. For further details on committee selection, see the above paragraph dealing with master's degree committees.
Master of Science (M.S.)

The M.S. degree is offered with three plan options: Plan A emphasizes research and preparation of a thesis; Plan B emphasizes a project; and Plan C is a coursework only option.

M.S. Plan A
The M.S. Plan A degree is the research option and requires completion of a master’s thesis. The Plan A requires a minimum of 30 credits, which includes at least 20 course credits plus 10 credits of thesis research. If a minor is desired, a minimum of 6 credits must be taken in a single field outside the major field. (Minor requirements in some departments exceed this minimum.) The Graduate School and the department interpret “outside the major” as “outside the department”; for example, it generally is not possible for a civil engineering major to minor in geoengineering or vice versa. Any student who wishes to pursue an internal minor should discuss this with the DGS before taking the proposed minor courses.

A thesis must be written on a research project carried out by the student in consultation with a faculty adviser. The topic for the Plan A research project is normally derived from a student’s duties as a graduate research assistant and hence, originates from a funded proposal idea developed by the graduate adviser. Students can also propose an independently conceived research idea and then develop and refine the research plan in consultation with the graduate adviser. The M.S. thesis, while not of the length or complexity of a Ph.D. thesis, must represent an original contribution to the field. M.S. thesis research typically results in one or more peer-reviewed journal publications. Two unbound copies of the thesis must be presented to the Graduate School, and one bound copy to the adviser. Some research areas may require an additional (i.e. fourth) copy. The adviser may also request an electronic version of the thesis. The M.S. Plan A degree is typically completed in 21 to 24 months of full-time study.

M.S. Plan B
The M.S. Plan B degree is the project option and is typically pursued by students intending to continue on for a Ph.D. degree. The Plan B option requires a minimum of 30 credits, which includes at least 27 course credits. The course work is selected in consultation with a faculty adviser. In addition, the student must demonstrate ability to work independently and present the results of such work effectively by completing one or more project papers. The number of Plan B projects, not to exceed three, is determined in consultation with the faculty adviser. A wide variety of studies, including computer modeling projects, literature reviews, and the analysis of applied engineering problems have been submitted as Plan B projects. Plan B project reports should be written in a similar format as the M.S. Plan A thesis, but are not required to be archived in the University Library. Students may, if they desire, gift one to the Library to be catalogued in MNCAT as is done with full dissertations.

Collectively, the Plan B papers should represent at least 120 hours (three nominal workweeks) of effort. This does not include the time associated with assistantship duties (if the Plan B papers are based on work done as a research assistant), nor does it include time and effort associated with coursework (if the Plan B papers are an extension of papers written for a course). A maximum of 3 credits (toward the minimum 30 credits in Plan B program) may be taken as CEGE
8094 (Civil Engineering Research) for the Plan B project(s). The remaining 27 credits must be for regularly scheduled course work.

**M.S. Plan C**

The M.S. Plan C degree is the coursework-only option and is recommended for working professionals who wish to pursue a Master’s degree on a part-time basis but can also be used by students intending to continue on for a Ph.D. degree. The Plan C requires completion of a minimum of 30 course credits. At least 2 courses at the 8XXX level must be completed. The student must complete a minimum of 100 hours of project work in increments of 40 hours per project or greater. The projects are to be performed as part of specific courses in civil engineering and geoengineering that comply with the M.S. Plan C project requirements. See Appendix A (Plan C Requirement List). In addition, the student must deliver at least one oral presentation of no less than 10 minutes in length. The oral presentation typically concerns one or more of the completed projects and can be completed in selected courses or seminars. Details concerning specific course requirements can be obtained from the graduate studies representative for your area of interest or your adviser. Students enrolled in the M.S. Plan C option must also complete two hours of Ethics training before they graduate.
B.C.E./M.S., B.Env.E./M.S., or B.GeoE./M.S.

The department offers a combined degree program that allows students to complete both a Bachelor's and Master's-Plan B degree in a total of five years. It is exclusively available to students in the Civil, Environmental, and Geo-Engineering Undergraduate Program here at the University of Minnesota.

- 125 credits to fulfill Undergraduate Program Requirements
  - Civil Engineering
  - Environmental Engineering
  - Geoengineering

- 30 Graduate Credits to fulfill Masters Requirements
  - Plan A – 20 course credits plus 10 thesis credits
  - Plan B – 27 course credits plus 3 CE Research Credits
  - Plan C – 30 course credits

**The combined degree program offers several advantages:**

- Having a Master's degree will make graduates more competitive for higher-paying positions in industrial design.

- Students can work toward their undergraduate and graduate degrees simultaneously, which means that they can finish the Master's degree and enter the job market a full year earlier than students in conventional two-year Master's programs.

- Students save money because they are able to complete graduate credits (up to 16 graduate credits) at the undergraduate tuition rate during their senior year.

**Prerequisites/Criteria for Admission**

- Only current students in the Civil, Environmental, and Geo-Engineering Undergraduate Program at the University of Minnesota are eligible to apply for this program. (Students from other programs or universities should visit the How to Apply page for instructions on how to apply for our MS and PhD programs.)

- Students apply after their second semester of their junior year. Students who are current students in their senior year are not eligible to apply.

- Students must have a faculty advisor selected prior to admission.

- GRE is not required
How to Apply
Go to the University of Minnesota online application Applyyourself
http://www.cege.umn.edu/prospective/graduate/how-to-apply.html

Complete all the required fields:
- Personal Information
- Application information
- Educational Background
- Languages
- Awards and Activities
- Employment/Residence Information
- Financial Support
- Applicant Statement # 1 or Statement of Purpose
- One letter of recommendation
  - If doing a Plan A or B, the letter should come from your Masters adviser
  - If doing a plan C, the letter should come from your upper division adviser
- Civil Engineering Department/Program Form (within application)
  - For degree sought select:
    - BCE/MS
    - EnvE/MS
    - GeoE/MS
- Program Supplementary Information
- Course Planning Worksheet (Appendix)
  - Must be completed and uploaded into online application
- Unofficial Transcripts

Deadlines
Fall Admission
The deadline to submit the application form is June 1 after the end of the junior year. All grades should be posted by that time and must be included on the application form. Late applications will not be accepted. (If June 1 falls on a weekend or University holiday, the applications will be due on the following business day.)

Applicants will be notified of their admission status by July 1.

Spring Admission
The deadline to submit the application form is January 2 after fall semester of the junior year. All grades should be posted by that time and must be included on the application form. Late applications will not be accepted. (If January 2 falls on a weekend or University holiday, the applications will be due on the following business day.)

Applicants will be notified of their admission status by January 10.

Financial Support
Departmental support is typically not offered to students in the Combined Degree Program. Students are encouraged to seek external financial aid (scholarships, loans, etc.).
**FAQS**

- Courses applied towards your bachelor’s degree cannot be used towards your Master’s degree.

- Graduate courses taken while you’re an undergrad need to appear in your APAS in the courses currently not used in this program.

- The courses taken for your master’s degree while you are an undergraduate will stay on your undergraduate transcript.

- To “transfer” the courses to your master’s degree, you will need to fill out a graduate degree plan. You will fill out this graduate degree plan after you graduate with your bachelor’s degree and start your first semester as a grad student. All graduate classes you intend to use for your degree must be on this form including the ones taken as an undergrad and signed by your master’s adviser. You can find the graduate degree plan on grad.umn.edu

- All combined degree students must attend graduate orientation and complete the ethics training before fall semester starts either when you get admitted into the combined program or when you start your first semester as a grad student.
Dual Degree Programs

**MS/MURP**

The Department of Civil, Environmental, and Geo-Engineering and the Humphrey Institute of Public Affairs sponsor a dual degree program that allows students to complete a M.S. degree in civil engineering (MSCE) and a master of urban and regional planning (MURP) in approximately three years. The program gives in-depth training in both disciplines. Within the civil engineering program, students can elect to specialize in either environmental engineering or transportation engineering and planning.

Students must fulfill all of the program requirements for each degree, however up to 18 credits in common can be applied to both degrees, thereby reducing the total number of credits required to complete the degrees independently. The dual-degree MSCE is the same degree as the M.S. described above and therefore has identical requirements in that 30 total credits are required. In addition, a thesis (Plan A) or project(s) (Plan B) and a final oral exam are required, except for the Plan C option. The MURP degree requires 48 credits (48 course credits for coursework only and 38.5 credits for Plan A). Students must take all required Humphrey and planning core courses, including two domain courses, and take a capstone workshop (3 credits). The MURP also requires completion of a thesis (Plan A) or professional paper (coursework only) and completion of an internship of at least 400 hours.

Completing the two degrees independently would require 78 total credits and approximately 4 years of time. The dual degree program, however, allows sharing of 18 credits to reduce the total load to 60 credits. For the MSCE degree, the 6 credits from outside the major field must come from a selected list of Public Affairs (PA) courses. In addition, twelve credits from civil engineering courses can be applied to the MURP degree. Students who wish to pursue a Plan A option in either program will be required to complete a thesis. Faculty and staff in both programs advise students on course selection so they can complete all degree requirements in approximately 3 years. If the Plan A option for either the MSCE or MURP degree is selected, then completion of all degree requirements will likely require longer than 3 years of study. The main advantage of pursuing a Plan A option, however, is that the student will likely be awarded a graduate assistantship for part or all of their graduate studies. A student currently enrolled in one program who decides to pursue both degrees may choose to do so, if admitted to the second program, at any point up to the time that their first degree is awarded.

For more information on MURP and the dual degree program, please see [http://www.hhh.umn.edu/degrees/dual/engineering.html](http://www.hhh.umn.edu/degrees/dual/engineering.html).

**MS/ISyE**

Students interested in industrial and systems engineering and civil engineering can combine their studies in a dual master's degree program sponsored by the Departments of Civil, Environmental, and Geo-Engineering and Industrial and Systems Engineering. The program allows students to complete a master's degree in civil engineering (MSCE) and a master’s degree in industrial and systems engineering (MS-ISYE). Students must fulfill all of the program requirements for each degree. However, students can apply up to fifteen credits in common to both degrees, thereby reducing the total number of credits needed to 45 credits. Faculty and staff in both programs advise students on course selection so they can graduate in approximately three years rather than four.

The combined program gives civil engineers a deeper technical background and exposure to
questions of interest to industry clients and industrial and systems engineer’s technical background in transportation and an opportunity to see questions of interest to the public sector. The dual master's degree prepares students for jobs at consulting firms and public agencies. Because of their broader skill set, graduates will be able to assume higher level jobs in the field than graduates with a single master's degree.

Each program maintains its own admissions criteria and students must meet the requirements of each to qualify for the dual degree program. Students must apply separately to both programs, but may begin in one program and apply to the other at a later date. If a student is admitted to one program before the other, the student will need to submit a change-of-status form to the Graduate School, rather than another full application, to be considered for admission to the second program.

For more information about the program contact: John Gardner, Student Personnel Worker, Graduate Program in Industrial and Systems Engineering, 612-625-2009
The Master of Engineering (M.E.) program is designed to provide additional training in civil engineering or geological engineering to prepare students for a higher level of engineering design work. Two degrees are offered under this program: Master of Civil Engineering (M.C.E.) and Master of Geoengineering (M.GeoE.). An A.B.E.T.-accredited four-year bachelor’s degree in engineering is required for admission into the M.E. program. The M.E. degree is considered a terminal degree. Students who intend to proceed to the Ph.D. program or think they may later wish to be admitted to the Ph.D. program should apply for the M.S. program.

There are two options for the M.E. degree. The first option is Plan A or “project”. It requires a minimum of 30 course credits plus 10 thesis credits for a design project. The emphasis in the choice of major courses is in engineering design rather than in engineering science, and the supporting program is intended to emphasize the societal implications of engineering practice. A design project is a major component of the Plan A M.E. program. Although the time required to complete the design project is about the same as that for a M.S. thesis, the character of the project is quite different. Emphasis is on engineering problem solving, based on design criteria typical of professional engineering practice. Performance must be of a professional caliber that can sustain the criticism of practicing engineers as well as University faculty. While the work must represent individual effort, it need not represent an original contribution to the field.

The Plan C or “coursework only” option requires completion of a minimum of 30 course credits consisting of at least 18 credits in the major area (each area of emphasis has certain required courses), and at least 6 credits in related fields. The remaining credits are to be selected in conjunction with the student’s adviser.

**Final Exams for M.S. and M.E. Degrees**

M.S. Plan A, M.S. Plan B, and all M.E. candidates are required to pass a final oral exam in order to earn their degree. *(Note: There is no final oral exam for the M.S. Plan C option.)* The final oral exam is administered by the student’s examining committee, the composition of which is described in the Graduate School Catalog and in Section VII-B of this handbook: Graduate Degree Plans and Supervisory Committees ([http://www.catalogs.umn.edu/grad/gen/masters.html](http://www.catalogs.umn.edu/grad/gen/masters.html)). Prior to the exam, the student must complete all of the course requirements and the thesis or project(s) requirements. The thesis or project(s) are then submitted to the examining committee for review. The student must allow at least two weeks for the readers to review the thesis or project(s). For Plan A M.S. students, committee members must sign a Reviewers Report Form (available in the Graduation Packet) certifying that the thesis is ready for defense before the final exam can be scheduled.

The oral exam begins with a 30-45 minute presentation by the student. Following the presentation, which is open to the public, is a closed examination in which the candidate is questioned on the thesis, project work or presentation, and on material drawn from the candidate's course of study. The outcome of the exam (pass or fail) is decided by a vote of the committee members. If possible, final oral exams should be scheduled during the fall or spring semesters.
Doctor of Philosophy (Ph.D.)

Research performance, evidenced by preparation of a Ph.D. thesis on an independently pursued research topic, is the primary requirement for the Ph.D. degree. The research must represent an original contribution to the field and be suitable for publication in scholarly, peer-reviewed journals. Publications resulting from Ph.D. research are usually co-authored with the faculty adviser(s).

Coursework requirements are relatively modest. Each program is designed, in consultation with a faculty adviser, to meet the special needs of the student, and must be approved by the DGS. A typical program consists of 36 credits of coursework beyond the bachelor’s degree, plus 24 thesis credits in addition to the course credits. The Ph.D. program is designed to be completed in four to six years of full-time study from the bachelor’s degree.

The department has not set a rigid criterion on the number of credits of 8000-level coursework appropriate for Ph.D. programs because the availability of such courses varies among academic areas in the department. Nonetheless, students should be aware that the Ph.D. represents the highest level of scholarly achievement, and coursework should be selected accordingly. Ph.D. programs should thus include a strong representation of advanced-level courses in the student’s major field.

The department may not admit a student without a M.S. degree directly to the Ph.D. program. Students entering the graduate program with a bachelor’s degree typically are asked to complete the M.S. degree first before continuing on for the Ph.D. degree. The student’s performance in the M.S. program is often an important element in deciding whether to admit him or her to the Ph.D. program. Graduate course credits earned in the M.S. program may be used to meet the Ph.D. coursework requirements.

A student applying to the Ph.D. program who has completed a M.S. degree from another university or another department at the University of Minnesota initially may be admitted to the M.S. program (rather than the Ph.D. program) if the admissions committee believes that the completed M.S. degree was not equivalent in content or rigor to the departmental M.S. program in the desired area of specialization. In such cases, the student may be admitted to the Ph.D. program before receiving a second master's degree (e.g., after 1-2 semesters of graduate coursework and/or research) upon the recommendation of the faculty adviser and approval of the DGS.

The sequence of exams and related requirements for the Ph.D. is as follows:

**Preliminary written exam**
The preliminary written exam takes one of two forms: (1) the student solves problems in a traditional exam or (2) the student prepares a National Science Foundation-style proposal on a given topic. The exam should be taken as soon as coursework is completed or nearly completed. Students should consult their adviser at least one semester before they plan to take the written exam to obtain details on the date, format, and scope of the exam. Three decisions are possible regarding the exam: (1) the student has passed; (2) the student has failed and must terminate his or her studies in the department; or (3) the student has not passed but may retake the exam the next time it is offered. The exam can be taken at most twice.

The minimum duration of the traditional exam is a half-day. The exam is prepared, administered, and graded by the faculty in a given area, who subsequently make a decision on the outcome and inform the DGS accordingly. The traditional exam may be open or closed book or a mixture of the two, and its format (number of problems, length of problems, duration of exam, etc.) is variable. For the NSF proposal, the student is assigned a topic and given one month to prepare the proposal.
The student must review and cite the relevant literature as background information, develop hypotheses and objectives, and develop a research approach to address the objectives. The student submits the completed proposal to the examining committee who reviews it for originality, technical content, organization, and writing (style, grammar, etc.). If the written proposal is approved, the student must then defend the proposal before the committee in an oral exam format. The proposal defense is considered a part of the written exam and is not a substitute for the preliminary oral exam.

**Preliminary oral exam**

After passing the written examination, the preliminary oral examination is scheduled. The oral exam should be taken as soon as possible after the preliminary written exam is passed, but it should not be scheduled during summer session, unless there are compelling reasons. You must schedule your exam with the Graduate School at least one week in advance to clear for the exam. Scheduling forms may be found at [http://grad.umn.edu/students/forms/doctoral/index.html](http://grad.umn.edu/students/forms/doctoral/index.html).

The examination usually begins with a 20-30 minute presentation by the student on the proposed research. After questions on the research topic, the examination is broadened to general questions on the student’s major and minor (related) fields. The outcome of the exam (pass, fail, or fail with approval to retake) is determined by a vote of the examining committee members. If the preliminary oral exam is passed, the student officially becomes a Ph.D. Candidate in the Graduate School and is then eligible to take thesis credits the following term. Failure to pass the preliminary oral exam may result in a recommendation to repeat the exam, convert to another program, or discontinue Ph.D. study.

**Preparation of thesis**

Begin to write parts of your thesis before you finish collecting all of your data. Literature reviews, theoretical developments, and methods sections can and should be written while you are doing your research rather than waiting to finish your experiments or statistical work. It also is a good idea to write about the results of experiments as the data are obtained. Even though it is likely that early drafts will need to undergo substantial revision later, you will find that it is much easier to make revisions than write first drafts months (or years) after you have done an experiment. In most cases, a thesis is the most complicated and lengthy document a student has had to prepare. Begin by preparing a detailed outline and start with relatively straightforward sections such as the description of experimental methods.

Theses vary greatly in style, length, and content, and advisers have varying preferences. It often is helpful to examine a few theses of students who preceded you within your research group to gain perspective on your adviser's preferences in writing style, format, and content. Advisers also have different ways of providing advice on writing theses and reviewing thesis drafts. It is to your advantage to discuss these matters with your adviser before you begin to prepare the thesis. Students should expect to have to revise drafts of theses substantially in response to constructive criticism from their adviser. Do not be dismayed by vigorous criticism. Although advisers often are willing (or even prefer) to review portions of theses rather than receiving a completed draft; the other readers on your committee should not be expected to do so. Readers should be presented with a finished and complete draft of the thesis. It should be proofread, paginated, and contain legible tables and figures. The latter do not need to be in final form, but you should recognize that readers are less likely to have major criticisms if your thesis is in good form. The Graduate School suggests that you allow one month for the readers to review your Ph.D. thesis. Thesis/dissertation formatting guidelines are available in 160 Williamson Hall or online at: [http://www.grad.umn.edu/prod/groups/grad/@pub/@grad/documents/content/gs_16_preparing_d](http://www.grad.umn.edu/prod/groups/grad/@pub/@grad/documents/content/gs_16_preparing_d)
Final oral exam
The final oral exam, if possible, should be scheduled during the academic year. The final oral exam is open to the public and the first part consists of a 45-minute seminar, at which you present your major findings. After the seminar, the audience is invited to ask questions related to the presentation. The chair of the committee then asks the audience to leave the room, and the committee continues further questioning during a closed session. The outcome of the exam (pass or fail) is determined by a vote of the examining committee members.

After the final exam, the examining committee members typically provide comments and suggested revisions for the thesis. These revisions must be made before the thesis is submitted to the adviser for approval and signature and then submitted to the Graduate School. Students are required to submit one electronic copy of the dissertation and abstract to the Graduate School. See the Graduate School website at http://www.grad.umn.edu/students/ThesisSubmission/index.html for more information. This copy of the dissertation will then be made available through the University Library catalogue system. Another copy of the revised final thesis is required for the adviser, although the adviser may request a copy in electronic form. It is also recommended to submit a copy to each member of your committee.

Graduate School Commencement Ceremony
Post-baccalaureate, masters and doctoral students may participate in the Arts, Sciences, and Engineering Graduate Commencement Ceremony. For approval to be granted the academic adviser and the DGS must certify that the student has successfully defended their project or dissertation, if applicable to the student’s plan, and that the final examination has been passed or scheduled to take place at least one week prior to commencement.

Eligible students must register online by February 2018 in order to attend the commencement ceremony scheduled for Friday, May 4, 2018. For more information contact Jill Johnson, College of Science and Engineering, 612-625-0721, asecommencement@umn.edu or look here https://sites.google.com/a/umn.edu/ase/home
**Graduate School Summary of Procedures**

**Master of Science – Plans A, B, and C (M.S.)**

1. Choose a research advisor for the Plan A/B/C soon after beginning study. The advisor should be a member of the CEGE graduate faculty and should be chosen no later than the end of the first semester of full-time graduate registration (or second semester of part-time graduate registration). Once an advisor has been chosen, notify Tiffany Ralston, the DGS assistant.

2. Complete the Graduate Degree Plan with adviser approval and submit it to the DGS Assistant. The form is due after one full-time academic semester or after completing 10 credits.

   [http://policy.umn.edu/forms/otr/otr198.pdf](http://policy.umn.edu/forms/otr/otr198.pdf)

   Complete all blanks on the program form: courses, major/minor-related field, ethics seminar, calendar time taken, credits, etc. Attach a transcript.

   If a student wants to change their approved degree plan, file a petition form, available at:

   [http://www.grad.umn.edu/current_students/forms/gs59.pdf](http://www.grad.umn.edu/current_students/forms/gs59.pdf)

   Return the petition form to CE 143 for DGS approval.

3. Select research committee members in consultation with your adviser and in accordance with Graduate School Policy. The formal approval of the research committee requires online submission by the student at the following link:

   [http://www.grad.umn.edu/students/forms/masters/index.html](http://www.grad.umn.edu/students/forms/masters/index.html)

   The committee members is due after one full-time academic semester or after completing 10 credits.

   The Graduate Degree Plan (GDP) milestone must be on your record before you are eligible to access the committee workflow. This means the GDP must be approved by the college and/or program in addition to central data entry completed by Graduate Student Services & Progress (GSSP) and the Office of the Registrar (OTR).

   Also, you are allowed only one committee request in the workflow at a time.

   Plan C students do not need to submit a committee.

4. Complete the Plan A thesis or Plan B project.

   For a Plan B project, up to 3 credits of directed research (CEGE 8094) may be applied to the course requirements. Directed research credits are for CEGE 8094 only.

   The Plan C does not have a project or thesis. For the Plan C, you need to fill out the Plan C tracking form. It must be completely filled out and signed before returning it to the Secretary of Graduate Studies. You can find this form on our website under current graduate students, resources, forms.

5. Request the graduation packet via the web at:

   [http://www.grad.umn.edu/current_students/forms/grad_packet/inexhtml](http://www.grad.umn.edu/current_students/forms/grad_packet/inexhtml)

   If circumstances require a change of a committee member, simply resubmit your new committee:

   [http://grad.umn.edu/students/forms/doctoral/index.html](http://grad.umn.edu/students/forms/doctoral/index.html)

   Each student must have an approved degree program form on file with the Department and the Graduate School before he or she can execute this step.
The application for degree form must be submitted via your MyU by the first working day of one’s expected graduation month.

6. Schedule the final oral examination for the defense of the Plan A thesis or Plan B project. The Plan C does not have a final oral exam.

A final examination is required for all Plan A and Plan B MS candidates. The exam is oral, and is usually 90 minutes in length. It is conducted by a minimum of three members of the graduate faculty assigned at the time the degree program form is approved. At least two faculty members must be from the major field and one from the minor or supporting program area.

It is the student’s responsibility to schedule the oral exam in consultation with their adviser and committee members.

This examination may relate to a combination of both thesis content (for Plan B programs, project and paper content) and technical course competence. The final presentation should be well-prepared and succinct, and one should allow examiners ample time for questions and comments on coursework. The formal presentation should be no more than 30 minutes in duration.

Be sure the committee is informed of impending examination, and schedule it to accommodate all examining members. For available rooms, please contact: CE 122, the main office.

File the approved final examination form with Graduate School (Onestop). This form is due the last working day of one’s expected graduation month.

7. Complete final edit of the examined Plan A thesis or Plan B paper.

8. Check-out. To verify completion of graduate work for a degree and to provide control of inventory, keys, and office space, each student must complete a Departmental Check-out Form (emailed to you) prior to departure from the Department or prior to beginning another degree objective within the Department.
Doctor of Philosophy (Ph.D.)

1. Choose a research adviser soon after beginning study. The adviser must be a member of the CEGE graduate faculty and should be chosen no later than the end of the first semester of full-time graduate registration (or second semester of part-time graduate registration). Once an adviser has been chosen, notify Tiffany Ralston.

2. Complete the Graduate Degree Plan (GDP). This step must be approved before the written preliminary exam can be taken. The form is available at:

   [http://policy.umn.edu/forms/otr/otr198.pdf](http://policy.umn.edu/forms/otr/otr198.pdf)

   Complete all blanks on the program: courses, major/minor-related field, calendar time taken, credits, etc. Thesis credits should be included in the course listings; however, they should not be added to the credit totals at the bottom of the program.

   Master’s thesis credits may not be applied towards a Ph.D. degree.

   To change an approved degree plan, file a petition form, available at: [http://www.grad.umn.edu/current_students/forms/gs59.pdf](http://www.grad.umn.edu/current_students/forms/gs59.pdf)

   Return the petition form to Tiffany Ralston for DGS approval.

3. Select research committee members in consultation with your adviser and within two semesters of passing the qualifying exams. To assign one’s committee for preliminary oral exam please submit selected committee members with the Graduate School at the following link:

   [http://grad.umn.edu/students/forms/doctoral/index.html](http://grad.umn.edu/students/forms/doctoral/index.html)

   If circumstances require a change of a committee member, simply resubmit your new committee:

   [http://grad.umn.edu/students/forms/doctoral/index.html](http://grad.umn.edu/students/forms/doctoral/index.html)

   NOTE* The Graduate Degree Plan (GDP) milestone must be on your record before you are eligible to access the committee workflow. This means the GDP must be approved by the college and/or program in addition to central data entry completed by Graduate Student Services & Progress (GSSP) and the Office of the Registrar (OTR).

4. Complete written preliminary exam. The written examination must be passed prior to scheduling the preliminary oral examination.

   Submit the preliminary written exam report to the DGS Assistant, asserting passing quality.

5. Schedule oral preliminary exam after passing the written preliminary exam. Schedule this exam at least one week in advance.
Rooms may be scheduled by stopping in the main office, CE 122.

Submit the oral preliminary examination report form to Onestop.

6. To assign one’s committee for final exam please submit selected committee members with the Graduate School at the following link:

http://grad.umn.edu/students/forms/doctrinal/index.html

At least one month prior to exam.

7. Request graduation packet via the web at:

http://www.grad.umn.edu/current_students/forms/grad_packet/index.html

The application for degree form is online in your MyU. Submit this form via your MyU by the first working day of one’s expected graduation month.

8. Submit Thesis to reviewers (check with reviewers to ascertain their required reading time frame—usually a minimum of 2 weeks).

9. Schedule the doctoral final exam at least two weeks in advance at:

http://www.grad.umn.edu/current_students/finalschedule/

(The Graduate School will pass the final oral examination report to each student’s committee chairperson). A minimum of 4 committee members are required to serve on the final examining committee (three from the major and one from outside the major).

10. Submit doctoral final oral exam report (Graduate School, Onestop).

11. Edit examined Thesis if required.


http://www.etdadmin.com/umn

13. To verify completion of graduate work for a degree and to provide control of inventory, keys, and office space, each student must complete a Departmental Check-out Form (emailed to you) prior to departure from the Department or prior to beginning another degree objective within the Department.
Registration

Registration Steps – New Students
Obtain Student I.D. Card

All new International Students – Check in with International Student and Scholar Services Office. 190 Hubert H. Humphrey Center, West Bank

The Graduate School Policy requires that new graduate students meet with their advisors prior to their initial registration. Consult with your advisor to establish the first semester courses. If you don’t have an advisor yet, please see the GSC member for your research group.

Follow the registration procedures on Onestop: onestop.umn.edu

Foreign Nationals who do not have a Social Security number will register after completing the document check with the Office of International Student and Scholar Services (ISSS). The Social Security Administration Office requires you to present them a letter from ISSS verifying your F-1 status as well as full time enrollment at the time you apply for your Social Security Number. Tiffany Ralston will provide you will this letter when you arrive. You should register for courses at least 4 working days in advance of applying for the SS#.

You are responsible for knowing the Registration Policies and Procedures set forth by the University of Minnesota each semester. Registration Policies and Policies can be found at One Stop onestop.umn.edu/. Under Registration, click on the link to Printable Policies and you will find the information for the current semester. In addition, you are also responsible for knowing the requirements of the Grading System also found at the Printable Policies page.

You must register by September 4, 2016 to avoid late registration fees. If your initial registration occurs after this date you will be assessed a $50 late registration fee ($100 limit per semester). If your initial registration occurs after Tuesday, September 17, you will be assessed a $100 late registration fee. Monday, September 5 is an official University of Minnesota Holiday; you can register online but offices will be closed. We encourage you to have your initial registration done by Friday August, 30 to avoid any problems. When in doubt please check OneStop Registration Policies.

If you need to make changes to your registration please know the policies in advance: http://onestop.umn.edu/registration/change/index.html

Students can view the class schedule and register at http://onestop.umn.edu/onestop/registration.html.

Important: Email yourself (or print) a copy of your “Enrollment Summary” before you log off of the registration system. This will be your only receipt and proof that you have registered on time should a problem occur. Make sure you complete the Hospitalization/Insurance information section if registering by computer. Every student has a student account. To view your student account online, go to onestop.umn.edu, under finances click on “Your student account.”

Registration Steps – Current Students

Register at Onestop in the Science Teaching and Students Services (STSS) building or online through the Student Access System (Onestop.umn.edu), according to the registration queue
The Graduate School requires all students to register every fall and spring term from the beginning of graduate study until graduation in order to maintain active status. Maintaining active status is critical and is required in order to participate in the University community as a graduate student. This includes registering for coursework, taking examinations, submitting milestone forms, or filing for graduation. Students not registered every semester are considered to have withdrawn and their Graduate School records are deactivated. Those students whose records are deactivated and wish to resume graduate study are required to seek readmission. The Department reserves the right to reject a readmission application based on academic performance and other factors.

The University requires that graduate students holding appointments as teaching assistantships, research assistantships, and administrative fellows register for at least 6 credits during each term which he or she holds an appointment of greater than 12.5%. (This rule does not apply to summer terms if you were registered the preceding spring quarter.) Each student should check to make sure they satisfy other criteria for full-time status (i.e., some student loan deferrals require 7-credit registrations) that may apply to financial aid.

Doctoral students must register for 24 doctoral thesis credits (CE 8888) at the University of Minnesota beginning the semester after they have passed the preliminary oral exam. This is a departmental policy. The requirement of 24 doctoral thesis credits cannot be reduced by transfer of master’s thesis credits, or thesis credits taken at another institution.

International Students:
Under SEVIS (Student and Exchange Visitor Information System), it is important that all international students maintain full-time enrollment for the duration of each semester. Students who fail to maintain a full course load will be in violation of federal regulations and will be reported to INS. Except under special circumstances, students who violate their visa status will be required to leave the U.S. and make a new entry to regain legal status.

International students enrolled for the FTE course will be reported as maintaining a full-time course of study. Audit courses do not count toward full-time enrollment for international students. International students may audit courses, but must be registered for at least 6 additional course or thesis credits. International students not enrolled full-time need to submit an “Exception from Full Course of Study” form to International Student and Scholar Services (ISSS). These forms must be submitted before the semester begins to avoid being reported as not enrolled or enrolled part-time.

ISSS (www.isss.umn.edu, isss@umn.edu, 612-626-7100, 190 Humphrey) is the office dedicated to serving the University of Minnesota's international community and should be consulted regarding any questions concerning student visa status. International students are encouraged to subscribe to the ISSS Weekly Update. Each week an update is sent by email. The updates consist of announcements regarding changes and news about INS regulations, dates of workshops and information sessions, and important deadlines.

**Registration – Special Categories**

**Curricular Practical Training (CPT)**
Curricular Practical Training (CPT) is work authorization that allows a student to work in a job related to his/her field. ISSS offers CPT/OPT Workshops; it is highly recommended that students attend a workshop before applying for CPT.
To apply for CPT, you must:

1. Complete a CPT workshop to learn about the application process.
2. Download the CPT Application Packet or obtain the packet at ISSS.
3. Complete the “CPT Student Request and Academic Adviser Verification” form from the packet.
   - Your academic adviser must sign the back of the form.
4. The academic adviser is the Director of Undergraduate Studies for Civil Engineering Professor Cathy French. cfrench@umn.edu
5. Students will sign up for class CEGE 4170/4180
6. Students will take this class as S/N for one credit.
7. To receive the “S” grade to fulfill the requirements of this course, you will need to provide the DUGS with a letter from the students’ employer at the end of the term to indicate your actual dates of employment and that the student performed their work satisfactorily.
   - Additional documentation may be required. Please see the instructions in the application packet.
8. Bring completed application materials to ISSS during walk-in hours or a scheduled appointment to meet with an F-1 adviser for processing.

**GRAD 999**

GRAD 999 is a zero credit/no fee class that will maintain a student’s active status with the Graduate School. However, it will not maintain fulltime status for anything else such as a paid appointment (RA or TA), visa status, or deferred student loans. International students can get a waiver from ISSS to register for GRAD 999, but must check with ISSS before registering.

Once all degree requirements have been completed, but active status needs to be maintained to graduate, GRAD 999 can be registered for. After a student’s second registration for GRAD 999 a hold will be placed on their record. If a student is making continuous progress towards their degree a permission number may be granted for additional registrations of GRAD 999. If continuous progress in not being made, a Leave of Absence should be considered.

Do not register for Grad 999 if you must be registered to hold an assistantship, be registered to maintain legal visa status, defer loans, or receive financial aid.

**8333 Advanced Masters Status**

8333 is a one-credit registration option for eligible master’s students who must certify full-time status to be in compliance with requirements of the University and/or external agencies (e.g., employment as a graduate assistant; loan deferment). Students eligible for 8333 can be employed in one of the low-tuition/low-fringe job classes.

**8444 Advanced Doctoral Status**

8444 is a one-credit registration option for eligible doctoral students who must certify full-time status to be in compliance with requirements of the University and/or external agencies (e.g., employment as a graduate assistant; loan deferment). Students eligible for 8444 can be employed in one of the low-tuition/low-fringe job classes.

For more information on registration requirements, Grad 999, or FTE, please see http://www.grad.umn.edu/students/registration/specialcategories/index.html.
**Leave of Absence (LOA)**

Graduate students are expected to maintain active status through continuous registration from the time they matriculate until their graduation. Students who are not able to maintain active status are strongly encouraged to consult with the DGS, their advisor, and student advising office to determine whether requesting a leave of absence is the most appropriate course of action.

In order to apply for a leave of LOA a student must complete the LOA form and have it signed by their advisor. Then, submit the completed form to the student advising office for the signature of the DGS. A student may request a leave for up to 2 academic years.

Once the student returns from the LOA they need to contact the student advising office for matriculating back into the Graduate Program. It is necessary that the student returns by the date specified on the LOA form, or earlier. One the student matriculates back into the program, it will be like they never left and there is no readmission fee.

**Registration Exceptions (Cancel/Add Requirements)**

All-University policies on Cancel/Adds apply to all students in all colleges. Complete information about changing your registration can be found at the One Stop Registration Website. [http://onestop.umn.edu/special_for/graduate_students.html](http://onestop.umn.edu/special_for/graduate_students.html)

If you decide before the semester begins not to attend, you must cancel before the first day of classes to avoid being charged for a percentage of the tuition, even if your RA appointment pays for a tuition waiver. However, no additional tuition is charged when any course addition is balanced by a course cancellation, i.e., a cancellation equals the number of credits being added, or a cancellation and course addition that keeps the total number of credits within the 14 credit tuition plateaus or bands.

On occasion, a course may be cancelled by the department offering the course. Contact the department immediately to see if other arrangements have been made. If no arrangements exist, it is then your responsibility to remove the course from your record by changing your registration. Cancellations are effective the day you officially cancel not on the date you stopped attending class. You will receive billing statements from Student Accounts Receivable for any credits over the maximum allowed with your assistantship (14 credits) and for fees or additional billing charge, if applicable. If you fail to pay by the due date on your billing statement, a hold will be placed on your records. The refund schedule can be found at the One Stop Registration Website. Cancel/Add Deadline: [http://onestop.umn.edu/calendars/cancel_add_refund_deadlines/index.html](http://onestop.umn.edu/calendars/cancel_add_refund_deadlines/index.html)

**Note:** The registration request for changing your grade after the end of week 2 of classes will NEVER be granted.

**Course Approval/”Class Permission Numbers”**

Approval may be required if you want to register for some CE 5000 or 8000 level courses. See the Professor teaching the class for permission numbers. Permission numbers for courses outside the department must be obtained from the department that offers the course.

**Course Time Conflict Approval**

You may not register for courses that have less than 1 minute separation or overlapping times without approval of the instructors of both courses. If this happens you should fill out the Course Time Conflict Form found online at: [policy.umn.edu/forms/otr/otr024.pdf](http://policy.umn.edu/forms/otr/otr024.pdf)
Registration Holds
If you were admitted to the Graduate School with a "degree pending," you will need to provide an official transcript or other suitable material prior to registration. This is done in Johnston 309. Other holds may include Health Clearance and Visa Clearance (document check for international students). You must clear all registration holds before registering.

See Tiffany Ralston if you have difficulties (e.g. transcripts that were sent but cannot be found).

Each spring semester a registration hold will be placed on your record. To get the hold removed to register for the next fall semester, you will need to turn in your annual student review.

Fees
You are responsible for paying all fees by the due dates defined on the original fee statements. A list of fees and a schedule for payment of fees can be found at the One Stop Registration Website. Fees are billed through Student Accounts Receivable. Student services fees, late registration, and any non-refundable fees assessed are the responsibility of the student and are not covered under tuition benefits (this includes any fees associated with canceling a course).
Change of Status

For students who are currently enrolled in a U of M Graduate Program

-Complete a new application if you want to:
  - add a new program
  - change to a different program
  - add or change a track
  - change to a higher degree level

-Complete the Express COS Application if you want to:
  - Drop from a Ph.D. program to a Masters only (in the same program your Ph.D. was in)
  - Add your first track to the major in which you are enrolled (if you’re not already in a track)
  - drop a track (without adding a track)
Selection of Adviser(s)

Each graduate student must have a faculty adviser while in the graduate program. It is also permissible to have one or more co-advisers. The adviser(s) is an important part of your graduate program as she/he assists in selection of courses, provides guidance on research or project work, and helps you progress toward completion of your degree in a timely fashion. Graduate students typically have a much closer working relationship with their adviser than is the case for undergraduate students. Each student should meet regularly (e.g., weekly or biweekly intervals) with his or her adviser to discuss progress in coursework and in research. Regular communication with your adviser is extremely important.

Typically an incoming student is paired with an adviser during the recruitment and admissions processes. This pairing could occur via direct involvement of the student through email, phone, or face-to-face conversations with the faculty of the department. Conversely, students may be assigned an adviser based on the personal statement submitted with their application. In other cases, the Grad Studies Committee (GSC) representative is assigned as the adviser temporarily until a permanent adviser is arranged. If you do not have an adviser or do not know who your adviser is, contact the faculty representative on the GSC from your program area immediately. The Secretary of Graduate Studies initiates advisor assignments and updates in the Graduate School tracking system. As soon as you know who your advisor is let the Secretary of Graduate Studies know so your information can be updated.

For a student admitted with an academic appointment, the faculty member who is the supervisor of the research project is typically the student’s adviser because a RA usually incorporates the research performed for the funded project into their thesis. For a student awarded a graduate fellowship or wholly funded on a teaching assistantship (TA), the student’s immediate funding is not tied to a particular faculty member or project. Nevertheless, even for fellowship or TA students, promised funding beyond the initial fellowship or TA position may be in the form of a RA position that is linked to a particular faculty member. The student should consult his or her award letter for more details concerning funding and adviser(s). Students who are paying for their graduate education using funding sources from outside the University (e.g., external fellowships, employer, and personal funds) are entirely flexible in selecting an adviser, but should do so in consultation with the faculty in their program area. New students should contact the faculty representative on the GSC for their program area (page 5) for further information concerning adviser selection.

Situations occasionally arise in which a change of advisers is appropriate and desirable. For example, you may find that your research interests are matched more closely with another faculty member. Changing advisers is permissible. Nevertheless, you should recognize that changing advisers is a major decision that should not be taken lightly, especially if you have been in the program for several semesters. In some cases, your adviser may have invested Substantial time and research support into your development. Furthermore, changing advisers may result in the termination of an assistantship and could delay your graduation. Whether another faculty member is available to guide you in your thesis research and whether funds will be available for a graduate assistantship are important issues that you need to consider before requesting a change. If possible, you should discuss the proposed change with your current adviser as soon as possible. If that is not possible, you should meet with the DGS. After a decision has been made to change advisers, you should notify your former and new advisers, DGS, and the Secretary of Graduate Studies to change your adviser.
Graduate Student Expectations

The departmental faculty expects that all graduate students will complete their degree programs in a reasonable amount of time and that graduate work in the department will be a positive and rewarding experience.

Satisfactory Academic Progress

All graduate students are expected to make satisfactory academic progress. In the case of those who are receiving financial support, this is a condition for continuation of support.

For master’s students, satisfactory academic progress and degree completion vary depending on the program. Under normal circumstances, full-time M.S. Plan A, M.S. Plan B, and M.CE/M.Geo Plan A students should finish their coursework and thesis/project within two calendar years. Full-time M.S. Plan C and M.CE/M.GeoE Plan B students should finish their coursework within one calendar year plus one regular semester. Individual satisfactory academic progress expectations for master’s students should be discussed with their adviser(s).

For a full-time student in a Ph.D. program, satisfactory academic progress includes completion of required coursework and the Ph.D. written preliminary examination by the end of the third semester of study after completing the M.S. degree or equivalent (30 graduate credits). It also includes successfully passing the Ph.D. preliminary oral examination by the end of the fourth semester of post-M.S. study. Finally, submission and successful defense of a thesis is expected by the end of the third (post-M.S.) year of study and no later than the fourth (post-M.S.) year of study.

Part-time students are not subject to the above timetables for reasonable progress. Nevertheless, the degree should represent academic work completed within a reasonable span. Students who do not maintain regular progress, including registering each fall and spring semester, are deemed inactive. Inactive students must file a Change of Status/Readmission form if they wish to continue their studies.

As per Graduate School Policy, master’s students matriculating prior to January of 2013 must complete requirements for their degree within a seven-year period. Effective for all students matriculating following January of 2013, requirements for the master’s degree must be completed and the degree awarded within five years. These time periods begin with the earliest coursework included on the Graduate Degree Plan. Requirements for the doctoral degree must be completed and the degree awarded within five calendar years after passing the preliminary oral exam. Students may refer to the Graduate School Catalog for more information on the maximum time allowed for completion of the master's and Ph.D. degrees.

The Graduate School requires all master’s degree-seeking students to maintain an overall GPA of 2.8 (out of a possible 4.00) in courses used to satisfy the requirements for a Master's degree. If a student’s GPA is below 2.8 at the time they apply for graduation, they will be required to take additional courses to raise the GPA above 2.8 before they will be allowed to graduate. There is no Graduate School minimum GPA requirement for Ph.D. students, but the department’s minimum requirement is 3.00 overall. Grades in courses taken to make up deficiencies in undergraduate preparation count in the GPA even though they are not part of the graduate course program and are not included on the degree program form.

All graduate students must maintain a level of research productivity judged adequate by their adviser. This is over and above the research that may be required for a research assistantship. Except in extreme circumstances, the adviser and examining committee are the final arbiters of what
constitutes acceptable productivity and quality in thesis research.

**Annual Student Reviews**

It is Graduate School policy that departments conduct annual written reviews of graduate students and communicate the results to the student. The review will be an evaluation of the student’s progress, as measured against the published performance expectations of the department and the Graduate School. Each spring semester, graduate students will be asked to complete a review form. The form will then be given to the student’s adviser for comment and verification. The DGS then signs off on all reviews and they are subsequently placed in the student’s permanent file.

A hold will be placed on your record until the review is turned in. This will prevent you from registering for the next fall semester. So please turn in your review in a timely manner.

**Ethics**

The objective of the ethics training for graduate students in the Department of Civil Engineering is to provide opportunities to discuss ethical conduct as applied to research and professional practice. Graduate students are required by the Graduate School to obtain training in research and professional ethics. The department uses four modes of delivery for training in research and professional ethics: (1) a two hour online ethics course, (2) group seminars, (3) graduate course on ethics, and (4) faculty-student interaction. Information can also be found at [http://www.research.umn.edu/ethics](http://www.research.umn.edu/ethics).

The various sub-disciplines within the department hold weekly seminars. Typically one seminar each year will be devoted to research and professional ethics in research. Invited speakers or faculty will lead discussion groups, where problems will be posed and various standards of conduct will be critiqued. Faculty representatives of the sub-disciplines on the Graduate Studies Committee will inform the DGS when the seminar will be held and will report on attendance.

A 0.5 credit course on research and professional ethics is offered periodically (CE 8581 - Research and Professional Ethics in Water Resources and Environmental Science). Consult the course catalog for more information.

Faculty are expected to discuss relevant ethics issues with their advisees as part of the mentoring process. All students who are supported by funds originating from the National Science Foundation (NSF) must undergo training in research ethics. Currently, there are three ways to achieve compliance with this requirement: (1) completing an approved University course on the subject of Research Ethics, such as CEGE 8581; (2) completing a non-course “event” on the subject of Research Ethics (a list of such events can be found in [https://docs.google.com/a/umn.edu/document/d/1VwNqs6wBgY1KTJnwaRoHqNhpK05vk_uvv0Hkoj-o-tE/edit](https://docs.google.com/a/umn.edu/document/d/1VwNqs6wBgY1KTJnwaRoHqNhpK05vk_uvv0Hkoj-o-tE/edit)); and (3) completing an online Collaborative Institutional Review Board (IRB) Training Initiative (CITI) (see [https://www.citiprogram.org/](https://www.citiprogram.org/) and request an instruction sheet from Tiffany Ralston or see appendix L).
Graduate Assistants
The following describes departmental policies concerning graduate assistants. University guidelines for graduate assistants are available from the Graduate Assistant Employment Office (612-624-7070, Donhowe Building, 319 15th Ave. S.E., http://www1.umn.edu/ohr/gae/). Office hours are 8:00 a.m. to 4:30 p.m., Monday through Friday.

Graduate assistants often receive appointments as teaching assistants (TAs) or research assistants (RAs) on a semester-by-semester basis for the academic year. There are no TA positions available in the summer. A summer appointment as an RA is arranged with the adviser or principal investigator in charge of a research project.

Renewal of graduate assistantships is contingent on satisfactory progress toward the graduate degree and availability of funds. See Section IX A. regarding satisfactory academic progress.

TAs are expected to help formulate and grade homework problems, laboratory projects, and exams. TAs typically have office hours during which students may seek help regarding homework or lab problems. TAs in lab courses are expected to provide instruction in and monitor laboratory work. On occasion a TA may be called upon to deliver lectures in a course. A 50% TA should expect to spend an average of 20 hours per week on TA duties. Some flexibility in weekly duties should be expected because course requirements (exams, problem sets, etc.) are not evenly distributed throughout the semester.

Duties of RAs are determined by mutual agreement between the RA and adviser/principal investigator of the project on which the RA is paid. The average time spent on department duties for a 50% time appointment is 20 hours per week. Nevertheless, when the thesis and assistantship work overlap, considerably more than 20 hours per week is required as the student is also working on his/her thesis and earning graduate (thesis) credits.

As a research assistant you should be aware that you are a part-time employee with responsibilities through your faculty supervisor to a granting agency. Before changing your work schedule or scheduling time off you should discuss the proposed change with your supervisor.

F-1 and J-1 visa holders cannot hold appointments greater than 50% time during the fall and spring terms

An assistant, who has been discharged, disciplined, or has his or her financial support terminated because of unsatisfactory job performance or unsatisfactory academic progress is entitled to a written explanation of cause and description of his or her avenues of appeal. Provided that an appeal is made within two weeks of notification, assistants will be continued on payroll until the final decision regarding the appeal is made by the DGS.

Graduate Fellows
Graduate fellowships awarded by the University or department typically provide stipend, tuition and health insurance benefits for the duration specified in the award letter. Most fellowships are for a fixed term and they are not renewable on an indefinite basis. Fellows should read their letter of award carefully. The department makes every effort to provide continuous support in the form of research or teaching assistantship after the fellowship period,
provided the student has made satisfactory academic progress. Fellows should select a faculty adviser and become involved in research prior to beginning the graduate program and no later than the end of the first semester of study. Becoming actively involved in research increases the likelihood that financial support will be maintained.

Continuation of a graduate fellowship appointment is contingent upon satisfactory progress toward the graduate degree and maintenance of superior scholarship in coursework. Specific details are provided in letters of award; in addition, see Section IX A. on satisfactory academic progress. Continuation of fellowship support for students who do not maintain satisfactory academic progress, as defined in this handbook and/or their letter of award, can only be obtained through successful appeal by the student and the student's adviser. Such appeals must be presented to the DGS at least a month before the time limit of satisfactory progress expires.

A graduate fellow who is disciplined or has his or her fellowship terminated because of unsatisfactory academic progress is entitled to a written explanation of cause and explanation of his or her avenues of appeal. Provided that appeal is made within two weeks of notification, fellows will be continued on payroll until the final decision regarding the appeal is made by the DGS.

The Graduate School Fellowship Office administers a variety of fellowships and awards. The Doctoral Dissertation Fellowships is awarded by the Graduate School. The department nominates its top Ph.D. candidates for this University-wide competition each spring. The nominees are selected by the GSC. Minimum requirements for consideration include a GPA greater than 3.8 and one or more peer-reviewed journal articles published. Students must have passed their preliminary oral exam and completed all their coursework to be eligible for this academic-year award. These fellowships include stipend, tuition, and health insurance benefits.

**Tax Status**

Only competent tax attorneys and the U.S. Internal Revenue Service can give definitive information on federal income tax matters. Only the Minnesota State Department of Taxation can give definitive information on Minnesota income tax regulations. The Federal Tax Reform Act of 1986 made major changes in the tax regulations applicable to fellowships and assistantships. The net effect in general is to make all income that a student receives subject to taxation, except for tuition waivers (and fellowships to cover other direct expenses such as books and fees), regardless of whether the income is received as a fellowship or as a research/teaching assistantship. Students are advised to keep careful financial records and consult tax specialists for further advice. The University will withhold estimated taxes from assistantships, but does not automatically withhold income taxes from fellowship payments. You can elect to have income taxes withheld by filling out the Graduate Fellowship Income Tax Withholding Request form. For information on how to determine the withholding amount, and to download the form, see [http://www1.umn.edu/ohr/payroll/gradfellow/index.html](http://www1.umn.edu/ohr/payroll/gradfellow/index.html). For information on exclusion from FICA (Social Security and Medicare Taxes) see [http://www1.umn.edu/ohr/payroll/tax/graduate/index.html](http://www1.umn.edu/ohr/payroll/tax/graduate/index.html).

**English Proficiency for International Assistants**

The University of Minnesota requires high standards of English proficiency for nonnative English speaking students who are appointed to teaching assistant and instructor positions. Spoken proficiency is assessed in one of three ways: Internet-based TOEFL (speaking subscore), SETTA (Spoken English Test for Teaching Assistants), or final exam taken after coursework in the International TA Program.
Scores on these assessments are converted into numerical English Language Proficiency (ELP) ratings which correspond to eligibility for various teaching responsibilities (i.e., higher proficiency corresponds with more demanding instructional responsibilities.) For ELP ratings lower than 1, one to three semesters of ITA Program coursework is required. For ELP ratings see [http://www1.umn.edu/ohr/teachlearn/graduate/itap/settaeligibility/index.html](http://www1.umn.edu/ohr/teachlearn/graduate/itap/settaeligibility/index.html)

For SPEAK test registration information, please see [http://www1.umn.edu/ohr/teachlearn/graduate/itap/schedule/index.html](http://www1.umn.edu/ohr/teachlearn/graduate/itap/schedule/index.html)

<table>
<thead>
<tr>
<th>ELP Rating</th>
<th>Instructional Responsibilities Allowed</th>
<th>How to Achieve This ELP Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELP rating 1</td>
<td>Eligible for all instructional responsibilities. No coursework required.</td>
<td>27-30 on ibTOEFL speaking ELP 1 on SETTA Pass GRAD 5105 final exam</td>
</tr>
<tr>
<td>ELP rating 4</td>
<td>Eligible only to tutor, hold office hours, grade, proctor. Not eligible to teach. GRAD 5102 is required.</td>
<td>18-22 on ibTOEFL speaking ELP 4 on SETTA Pass Foundations final exam</td>
</tr>
<tr>
<td>ELP rating 5</td>
<td>Not eligible for any TA position. Foundations course is required.</td>
<td>&lt;18 on ibTOEFL speaking ELP 5 on SETTA</td>
</tr>
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Department Facilities

Desk Space

We try to place all full time graduate students an assigned desk space in the Civil Engineering (CivE) Building or at an off-site laboratory if applicable (e.g., the St. Anthony Fall Laboratory). Also, an effort is made to provide all students housed at off-site labs, who are taking courses on campus, with shared desk space in the CivE Building. New students should seek desk space through Tiffany Ralston if they want a desk. We can’t guarantee you will get a desk space but we try to place everyone if possible.

Keys

All full-time graduate students may receive keys to their office and key card access to the building in which the office is located. Your U-Card will serve as your key to Civil Engineering main entrance. Keys to research laboratories are also available. Keys may be obtained by having your faculty adviser sign a Key Request Form available from the front office in CivE room 122. The deposits for graduate student offices, cabinets and labs are $20 per key. Deposits are charged on your student accounts and refunded to your student account when you turn the key in. No cash/checks will be exchanged. No refunds are available for lost keys and replacement keys will require a new deposit. **If you lose a key or don’t return your keys upon graduation, you or your advisor will be responsible for re-keying, this could cost $100 or more!!**

All graduate students are required to do Online Safety Training to gain lab access. You need to attach the proof of training confirmation to the key request form before you are given any CE Lab keys. The safety training can be found at [http://www.dehs.umn.edu/training_newlabsafety.htm](http://www.dehs.umn.edu/training_newlabsafety.htm). Please contact the departmental Health and Safety Officer with any questions.

Mail

Mailboxes for graduate students are located next to the faculty mailboxes in the department office (CivE 122). Students should check their mailbox frequently for notices and campus mail. Students whose primary office is at SAFL should have their mail sent directly there, but should check the CivE mailboxes periodically. **Please do not use the department address for personal mail.**

Paychecks

Graduate assistants are typically appointed on a semester basis during the academic year (Fall/Spring) and for summer term. Fellowship recipients may be appointed for either a nine month academic year or 12 months. Biweekly payroll is paid every other Wednesday. Paychecks will be sent to your home address if not signed up for direct deposit. Direct deposit pay information is available online at [http://hrss.umn.edu](http://hrss.umn.edu). It is highly recommended that you sign up for direct deposit.

All potential employees must comply with federal laws verifying the person's eligibility to work in the United States. An I-9 form must be completed and the departmental Executive Accounts Specialist must see all U.S. citizens in person. All international graduate students must go to the University Payroll Office (Suite 545, WBOB/West Bank Office Building, 1300 South 2nd Street, Minneapolis, MN) to verify employment. Appropriate documents must be presented prior to
Information on payment of other fellowship and assistantship awards may be obtained from the departmental Executive Accounts Specialist in 125 Civil Engineering Building. A student who encounters undue delay in receiving his or her stipend or notices a discrepancy in the amount of the promised stipend should contact the Executive Accounts Specialist.

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**Copying/Faxing Facilities**

The departmental copy machine is for University business ONLY. Personal copying can be done on campus ([http://www.printing.umn.edu](http://www.printing.umn.edu)) or at one of the commercial copy centers located near campus.

The fax machine is to be used by faculty and staff for University business only. Graduate students who need something faxed for University business can bring it up to the front office and request that a staff member fax it for them. If the staff member determines that it is not University business, students will be referred to a nearby fax center.

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**Office Facilities**

Student records and forms are maintained in the department office (CivE 122). The staff in the accounting/payroll office (CivE 125) will assist you with reimbursements for travel on funded research projects on research accounts, provided that your adviser has approved the travel. Jane Govro, in the main office (CivE 122) can assist you in ordering supplies on research accounts, provided your advisor approved the supply requests.

Supplies maintained in the department office are not for general use by graduate students. Teaching assistants (TA) should see the main office staff for supplies needed in relation to their TA responsibilities.

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**Phone**

The department has installed phones in or near all offices used for graduate student study space. These phones are for local use only. Long distance calls can be made only on faculty or main office phones, and you must have approval from your faculty adviser for all long distance calls. Personal long distance calls are not to be made on any University phone unless using a personal long distance calling card.

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**Shops**

The department maintains fairly extensive machine shop facilities on the third floor of the CivE Building (next to the large structural-testing laboratory). Because of insurance limitations, graduate students are not permitted to operate equipment in the shop, but the shop staff will assist graduate students with experimental apparatus of all kinds. A budget number must be provided for all work orders. Therefore, you should discuss any proposed shop work with your adviser before proceeding. A shop is also located at SAFL as well as in many other departments across campus.
Travel Awards

All CURRENT graduate students are eligible for departmental travel grants to attend professional conferences or meetings. Students should submit the application BEFORE they travel to their conference or meeting.

Masters level students can receive one grant and doctoral level students can receive two grants during the course of their degree.

Each travel grant is worth $500, and the student must make an oral or poster presentation at the conference or meeting in order to be eligible. The presentation must have been accepted by the conference when the application is submitted.

The applicant must be a current student during the time they will be using this grant. Students can’t be registered for GRAD 999 and get a travel grant.

Grants are given as a form of reimbursement to your student account. To get reimbursed you need to send Tiffany Ralston at cegesps@umn.edu your receipts. Reimbursements will not go to faculty accounts. All requests will be approved by the DGS.

To complete the application process you must do the following: Fill out the application

Complete a cost estimation & expense breakdown

Provide confirmation that you have been accepted to present (original letter, e-mail, etc.)

*All applications must be complete to be reviewed.

The deadlines are rolling deadlines.

A couple other sources of travel awards are through the Council of Graduate Students (COGS) http://www.cogs.umn.edu/awards.html
Scheduling Rooms in Civil Engineering

There may be times where you need to schedule a room in Civil Engineering. To accomplish this, go to the main office CE 122. Rooms available for reservation are: CE 188, CE 202, CE 205, and CE 210. Conference rooms that are available are CE 129A, CE 654, and CE 780B/C.

To schedule meetings in rooms CE 212, CE 213, and CE 214, and other rooms outside of CE, please go to the Office if Classroom Managements website.

http://www.classroom.umn.edu/scheduling/classroom_schedules.html

Computing Facilities

The department maintains a wide range of computer equipment within its buildings, and there are other computing facilities available on campus. Most research laboratories are equipped with computers for equipment operation, data acquisition, data analysis, and/or modeling.

University-owned desktop/laptop computers (compatible with the Active Directory architecture) are required to be set up and administered by departmental IT staff. This can take a significant amount of time so be aware that any newly purchased computer will not be immediately available for your use.

Personally-owned desktop/laptop computers are prohibited from using wired connections (i.e. the network “Etherjacks” which are available in most rooms and offices.)

Any device may use the wireless Internet access which is available in all areas of the Civil Engineering Building, including graduate offices. It is highly recommended that you configure your device, if possible, to connect via “UofM Secure”. Instructions for doing so may be found at http://www.oit.umn.edu/wireless/setup-guides/index.htm.

Any computer using the University network, either via wired or wireless connection, must be configured securely per the guidelines described on the Safe Computing web site at www.oit.umn.edu/safe-computing/.

Accounts

The University recently transitioned from University of Minnesota “Central” email accounts to Google Apps for Education accounts. For those new to the University, a Google Mail email account will be provided for you as part of the larger suite of U of M Google Apps for Education, which includes Google Mail, Google Docs/Drive, and Google Calendar.

With your University U of M Google Apps account comes approximately 5GB of storage space as part of Google Docs/Drive. Google Docs/Drive is a powerful service for working collaboratively and for sharing large files within the University and those with non-University Google accounts. You can find out more about Google Apps here: http://www.oit.umn.edu/google/.
To learn more about Google Apps for the University of Minnesota, visit www.umn.edu/google/.

In addition, the University's Office of Information Technology (OIT) will provide another account, which is often referred to as an “x.500 ID” or “Internet ID” or “Internet Account.” This account will be used for authenticating to departmental and University resources and may still include email access for some at the University.

The “Internet ID” can be used to access a considerable amount of information, it is important to select a secure password and to follow best practices for safer computing. For information regarding selecting a secure password as well as other security-related information, visit the University’s Safe Computing website, safecomputing.umn.edu.

For more information regarding University accounts, check OIT's account website by going to www.oit.umn.edu/accounts/

For answers to many questions about general information technology services at the University, start browsing from www.oit.umn.edu/help/.

**Departmental Instructional Computing Lab**
The department maintains an instructional computing laboratory in CivE 221 for use by both graduate and undergraduate students in carrying out course assignments (not research).

The lab currently contains 25 PC's, operating under Microsoft Windows 7. The computers have standard software (e.g., Microsoft Office) along with specialty software used in civil engineering. For example, Civil3D is used to teach our AutoCAD course and MINEQL+ is used by environmental engineering courses. The laboratory is usually open for student use eight to ten hours a day, five days a week throughout the semester. A lab attendant is on duty to assist you. The laboratory is periodically reserved for courses and can also be reserved for class tutorials on an ad hoc basis. A weekly schedule is posted on the door to CivE 221.

A black-and-white laser printer is available in the room. *An account must be set up (by cash payment) before printing.* See the lab attendant to do so.

**College Instructional Computing Lab**
The College of Science and Engineering maintains a public computer lab in CivE 230 which is usable by any student with a CSE Labs account. An account is available for any student who is currently enrolled in the College. See help.cselabs.umn.edu/account.

The lab in CivE 230 contains 45 PC’s operating under Microsoft Windows 7, a laser printer. Each semester, each student in CSE Labs is given a $60 quota of free printing. This allows a user to print, without charge, 750 black and white pages, or 375 color pages, or a combination of both (where one color page is equivalent to two black and white pages).

CSE Labs operates 11 other public labs; see help.cselabs.umn.edu/ for complete information. These are the labs that have color printers and scanners for your use:

**Keller 4-250** – color printer and scanner and open 24/7 with U-card access
**ME 308** – color printer and scanner
**Lind 150** – color printer and scanner
**ME 302** – Open 24/7 with U-card access.
Other University Campus Resources

**Office of Information Technology** - www.oit.umn.edu/
We oversee information technology (IT) at the University by providing guidance to central and collegiate units and managing the system-wide IT enterprise.

This is a site to look at before and after you arrive on campus by clicking the link to Students.
- Initiate your Internet ID
- Activate your accounts for campus resources
- Purchase certified computer bundles
- Get your computer ready for the University network
- Download and install antivirus software
- Purchase discounted hardware and software
- Learn about your internet account and passwords
- Set-up your University email account
- Manage your account

**Digital Technology Center** - www.dtc.umn.edu/
The Digital Technology Center (DTC) is a hub of innovation and excellence at the University of Minnesota in the digital technologies serving the industrial, educational, and public needs of the state of Minnesota and the nation. The DTC integrates research, education, and outreach in digital design, computer graphics and visualization, telecommunications, intelligent data storage and retrieval systems, multimedia, datamining, scientific computation, and other digital technologies. The DTC's first-rate laboratory facilities offer researchers the tools to make progress in these areas. The DTC houses the Laboratory for Computational Science and Engineering for computational science and engineering and visualization, and the Usability Laboratory for evaluations of computational solutions. Additional, specialized laboratories assist with research projects.

**Minnesota Supercomputing Institute** - www.msi.umn.edu/
The Supercomputing Institute for Advanced Computational Research is an interdisciplinary research program spanning all colleges of the University of Minnesota. The Institute provides supercomputing resources and user support to faculty and their research groups. It is a linchpin program in the University's broad-based digital technology effort, provides a focal point for collaborative research on supercomputing within the University and the State, and provides an interdisciplinary focus for undergraduate and graduate education related to supercomputing and scientific computing. The Institute's hardware and software resources and technical support are available to researchers at the University of Minnesota and other post-secondary educational institutions in the State of Minnesota.

**University Technology Training Center** - uttc.umn.edu
The University Technology Training Center (UTTC) is the premiere source of information technology training at the University of Minnesota – Twin Cities campus. Staffed by people who actually use the software they train on, UTTC offers training on a variety of applications used by University students, staff, and faculty. Our mission is to provide the University community with:
- Up-to-date technology training, instructor-led and online, on-demand
- Efficient, economical learning through short, non-credit courses
- Knowledgeable, qualified instructors in a supportive learning environment

UTTC is a part of the Office of Information Technology (OIT).
Libraries

The University of Minnesota library system, with over 7.1 million volumes, is the 15th largest university collection in the United States. Bibliographic and other services of professional librarians are available to graduate students, and the library system is an invaluable asset for research. The main library site is [http://www.lib.umn.edu](http://www.lib.umn.edu) and the Science and Engineering Library is available at [http://sciweb.lib.umn.edu/](http://sciweb.lib.umn.edu/). The physical sciences and engineering collections are housed primarily in Walter Library. College of Science and Engineering librarians in Walter Library can explain how to use the library services (including LUMINA). Students need a University identification card to withdraw books or periodicals from the library system. The department does not maintain major library collections in its facilities, but small collections are maintained by some research areas.

**Bookstores and Libraries, Directories**

- University Bookstores - [www.bookstores.umn.edu](http://www.bookstores.umn.edu)
- University Library - [www.lib.umn.edu/](http://www.lib.umn.edu/)
  Workshop, Tutorials and Guides - [http://www.lib.umn.edu/services/workshops/registration](http://www.lib.umn.edu/services/workshops/registration)
- Minneapolis Public Library - [www.mplib.org](http://www.mplib.org)
- St. Paul Public Library - [www.stpaul.lib.mn.us/](http://www.stpaul.lib.mn.us/)

**Facilities Management Problems**

**During Business Hours**

Any Facilities Management problem in Civil Engineering (i.e., plumbing leaks, water leaks, falling ceiling tiles, vermin, too hot, too cold, etc.) should be reported to the main office, CE 122, 5-5522. A Facilities Management Service Request will be submitted right away. It is important that your concerns be reported in a timely manner.

**After Business Hours and On Weekends**

After business hours building problems or emergencies should be reported to Facilities Management, 4-2900.

**Security**

We are occasionally subjected to thieves who roam the halls looking for easy pickings. Do not leave your office unattended and unlocked. You are encouraged to ask politely for the identity and purpose of any stranger you encounter in the building after regular office or evening class hours.

The Security Monitor Program offers a free walking/biking escort service to and from campus locations and nearby adjacent neighborhoods. To request an escort from a trained student security monitor, please call 624-WALK shortly before your desired departure time and walk safe. Visit [www1.umn.edu/police/escort.html](http://www1.umn.edu/police/escort.html) for additional information.
General Information

Student Identification “U Card”

Student ID “U Cards” can be obtained at G22 Coffman Memorial Union from 8:00am-4:30pm weekdays or at the University Rec Center from 11:00am-1:00pm weekdays and on Saturdays from 11:00 am to 1:00 pm. Additional information can be found at:
http://www1.umn.edu/ucard/umtc/home.html

Tuition Benefits and Waivers

Tuition benefits are available to graduate assistants who hold appointments of at least 12.5% for the entire semester. This benefit is capped at a maximum of 14 credits per semester during the academic year and 14 credits for the combined May session/summer term. An assistantship will allow the appointee a tuition benefit that is double the percentage worked. For example, a 25% appointment provides a 50% tuition benefit and a 50% appointment provides a 100% tuition benefit up to the capped amount. If a graduate assistant’s appointment ends for any reason (other than graduation) before it is completed, she/he may be billed for some or all of the semesters’ tuition.

Although tuition benefits are available to assistants with 12.5% appointments, only those who work a minimum of 25% appointments are eligible for resident rates. The tuition benefit offered to assistants with 12.5% appointments is 25% of in-state tuition; however, the appointee would be required to pay the balance of the non-resident tuition rate if she/he is not a resident of MN or a state with a reciprocity agreement. A student may combine appointments (12.5% RA, 12.5% TA) to achieve a 25% appointment.

Department fellowship recipients receive tuition waivers for up to 14 credits per semester, as do Graduate School fellowship recipients. The Executive Accounts Specialist will process the waiver.

It is very important that students check their fee statements carefully. If the tuition benefit or waiver does not appear on the fee statement, students should see the Secretary of Graduate Studies.

The tuition benefits and waivers associated with assistantships and fellowships do not pay for miscellaneous fees such as the student services fee or for any books required for courses. Fees may be paid in 145 Williamson Hall or online at http://onestop.umn.edu/onestop/Tuition_Billing/UM_Pay.html.

Health Service and Hospitalization Insurance

University Policy requires that all students registering for 6 or more credits to have health plan coverage. Students may satisfy University Policy in one of three ways:

Graduate Assistant Health Plan:
The Graduate Assistant Medical Plan is available to departmental fellowship recipients and graduate assistants who hold appointments of 25% or more a semester. The University subsidizes the cost of health coverage and pays a portion of the health insurance premium equal to twice the appointment percentage (50% for a 25% appointment, 100% for a 50% appointment). To receive this coverage fellowship recipients and graduate assistants must apply for it during the first semester of their assistantship and enroll by the enrollment deadline. For most students, this deadline is
within two weeks of your starting date. Consult the Office of Student health Benefits (410 Church Street SE, N323, 612-624-0627, www.bhs.umn.edu/insurance/graduate/) for further information.

**Private policy:**
Students carrying their own insurance policy will not be required to purchase the University-sponsored Student Health Benefit Plan. To ensure that you will not be billed for the University-sponsored plan, provide the following when you register for classes online: The name of the company providing your health plan; the company phone number; and your health plan member ID. You must register this information each semester when you register.

If you are registering for 6 or more credits and FAIL to provide the required information when registering, you will automatically be charged for the Student Health Insurance plan. If you think that you have been billed incorrectly, contact a One Stop counselor 624-1111.

**University-Sponsored Student Health Benefit Plan:**
Full-time students who are not covered through a private policy or the Graduate Assistant Health Plan must enroll in the University-sponsored Student Health Benefit Plan. Questions regarding this program should be directed to the Student Insurance Office (Boynton Health Service, 624-0627)

The University of Minnesota mandates that all international students and their dependents must be enrolled in the University sponsored Student Health Benefit Plan (SHBP) unless they are covered by a United States-based employer-sponsored health plan or the Graduate Assistant Medical Plan provided by the University of Minnesota.

Note: you do not need to enroll during the summer to receive continued insurance coverage, provided you have held at least a 50% RA appointment during fall and spring semesters. If you have any questions, please contact the Graduate Assistant Insurance Office at 624-0627.

Information regarding sick leave, vacation, parental leave, workers compensation/unemployment compensation, and travel insurance is available from the Graduate Assistant Office at http://www1.umn.edu/ohr/gae/.

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**Transcripts**

**Unofficial Transcripts:**
You may view your unofficial transcript online or request a copy in person. One Stop does not send unofficial transcripts by mail. You may not request a transcript by phone. [http://onestop.umn.edu/grades_and_transcripts/unofficial_transcripts.html](http://onestop.umn.edu/grades_and_transcripts/unofficial_transcripts.html)

**Official Transcripts:**
The online request is the most convenient way to order an official transcript. Transcripts requested online are available in either printed or electronic (a secure, certified PDF) format. Payment for fees must be paid with a credit or debit card. According to University policy, official transcripts will not be issued for you if you have certain types of holds on your record. You can review your holds online. To find out what the fees are check here: [http://onestop.umn.edu/grades_and_transcripts/official_transcripts/fees_service_types.html](http://onestop.umn.edu/grades_and_transcripts/official_transcripts/fees_service_types.html)
Parking and Transportation

Parking and Transportation Services works with local public transit providers to provide the best possible service to meet the transportation needs of the University community. The University also provides FREE shuttle service between campuses! Visit Parking Services at www1.umn.edu/pts/ For information on parking, busing, the rail, bicycle, maps

Student Parking Contracts “Lottery for 24-Hour Contract Parking”
These contracts are sold though a lottery system each semester. Sign-up for Fall is typically in mid-July, sign-up for Spring is on November 25 – check their website for updates. Locations may vary each quarter, but include spaces on the East Bank, West Bank, and St. Paul campuses. Information on this can be found at: www1.umn.edu/pts/park/contract/studentcontracts.html

Free Campus Shuttle
You can get wherever you need to go at the University on the campus shuttle system. For example, the St. Paul Campus is only a 15-minute ride using the Campus Connector. All campus shuttles are free and use a color-coded bus stop mapping system. Visit www1.umn.edu/pts/bus/shuttle.html for additional information, including maps and schedules.

Metropass
The Metro Transit provides most of the regular route bus service in the Twin Cities and has excellent bus service. The Twin Cities Campus Busing Guide is available from Parking and Transportation Services and Metro Transit. To learn more about the buses available to your area, call the Transit Information Center at 612-373-3333 or visit one of the campus kiosks at: Parking and Transportation Services. Additional information can also be found at www1.umn.edu/pts/bus/metropass.html.

U-Pass/unlimited bus rides
The U-Pass is the ultimate transit pass that provides unlimited rides 24 hours a day. It's valid on all regular metro-area bus routes, as well as express, local, limited-stop, or Downtown Zone routes. Metro Transit is the primary bus line running in the Twin Cities area, providing service to just about any destination you desire. U-Pass may not, however, be used on some special event services. To order the U-Pass go to www1.umn.edu/pts/bus/upass.html

Academic Code of Conduct

Scholastic dishonesty is not tolerated in the Department. According to the University Student Conduct Code, scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using old exams or other test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. You may expect your teachers and advisors to define these terms and set clear scholastic honesty rules and expectations. Familiarize yourself with the University of Minnesota Academic Misconduct Policy, found at: http://www.policy.umn.edu/Policies/Education/index.htm.
Professional Code of Conduct

You are expected to promote and safeguard the comfortable learning and professional environment of the Department, and to treat everyone with the respect and courtesy that you would like to receive from them. Threatening or harassing conduct and language are not tolerated. Report any such behavior to the head of the Department, the DGS, or faculty members, as you deem appropriate. Any student behaving unprofessionally is subject to appropriate disciplinary action, in accordance with the University Student Conduct Code. Familiarize yourself with this code, found at http://www1.umn.edu/regents/policies/academic/Student_Conduct_Code.pdf.

Human Resources

The Department adheres to University of Minnesota Human Resources Policies and Procedures, including but not limited to benefits, compensation, medical leaves, and parental leaves. Contact Heather Eastlund with any questions or concerns related to human resources policies and procedures.

Sexual Harassment

Sexual harassment is a serious issue. As students we may be sexually harassed by advisor or other faculty members. Sometimes it’s difficult to tell whether a faculty member’s behavior constitute harassment or not. If you feel uncomfortable with a faculty member's behavior, say something either to a faculty member or to someone who can help you find answers and services.

Teaching assistants responsible for classroom or laboratory instruction are expected to maintain standards of professional ethics appropriate for any member of a university faculty.

What is Sexual Harassment? (Text from the Board of Regents Policy)

Sexual Harassment
Sexual harassment includes unwelcome sexual advances, requests for sexual favors and/or other verbal or physical conduct of a sexual nature. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual’s employment or academic advancement in any University activity or program;

Submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions affecting such individual in any University activity or program; or

Such conduct has the purpose or effect of unreasonably interfering with an individual’s work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program.

Sexual Violence
Sexual Violence is any sexual behavior between two or more people to which one person does not or cannot consent. This includes all forms of sexual violence including sexual harassment.

Available Resources
The following programs and resources are available to individuals who have been sexually harassed or exploited in any way.
You can call any of these resources if you feel uncomfortable with someone’s behavior, even if you aren’t sure whether it qualifies as harassment, even if you aren’t sure that it wasn’t just your own misinterpretation, or even if you believe you did something to justify the other person’s behavior. These resources can help you understand what happened and help you find ways to respond to the situation.

If your advisor or another faculty member sexually harasses you or otherwise behaves inappropriately toward you, you can contact the Graduate Student Liaison Committee for confidential assistance in determining what your options for handling the situation may be. Even if you decide not to do anything at all, the Committee can help identify your options. You can contact the Graduate Student Liaison Committee.

For your protection, we recommend using the free campus Escort Service. Call 624- WALK (624-9255) and the dispatcher will send a uniformed escort to walk you to your destination.

### Campus Escort Service
24 hours a day, 7 days a week. (612-624-9255) Free walking and biking security escort service to and from campus locations and nearby adjacent neighborhoods.

### Crisis Connection
612-379-6363

### Urgent Mental Health Counseling at Boynton
612-625-8475

### First Call for Help
651-291-0211

### Law Clinics, 190 Mondale Hall
612-625-5515

### Disability Services, McNamara Alumni Center, Suite 180
612-626-1333

### Office of Equal Opportunity and Affirmative Action
612-624-9547

Located in 274 McNamara Alumni Center, this is the place to file an informal or formal complaint. You can also ask questions about your options and choices.

### AURORA Center for Advocacy & Education, 407 Boynton
On-campus resource for victims of sexual assault, relationship violence, stalking and harassment.

- **24-Hour Crisis Line:** 612-626-9111
- **Business Line:** 612-626-2929
- **Minneapolis Suicide Hotline (24 hours)** 612-873-2222
- **University Counseling and Consulting Services (340 Appleby Hall)** 612-624-3323
- **University Police Non-Emergency:** 612-624-2677
- **University Police Emergency:** 911
- **University of Minnesota Medical Center Information:** 612-273-3000

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### Grievances

Graduate students should discuss any problems related to their academic program, research, or assistantship responsibilities with their adviser, the DGS, and any other faculty member(s) they deem appropriate. Grievances should be resolved at the lowest level possible and a student should only seek resolution at a higher level when absolutely necessary. For further information, students may consult the Student Conflict Resolution Center in 254 Appleby Hall or at 612-624-7272, sos@umn.edu, http://www.sos.umn.edu/students/index.html.
## Graduate School Contact Information

### Graduate School Office Contacts

<table>
<thead>
<tr>
<th>Graduate School Admissions</th>
<th>309 Johnston Hall</th>
<th>612-625-2040</th>
<th><a href="mailto:gsquest@umn.edu">gsquest@umn.edu</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Student Services (GSSP)</td>
<td>Onestop</td>
<td>612-625-3490</td>
<td><a href="mailto:gssp@umn.edu">gssp@umn.edu</a></td>
</tr>
</tbody>
</table>

### Frequently Called Phone Numbers

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bookstore, Coffman Union</td>
<td>625-6000</td>
</tr>
<tr>
<td>Boynton Health Services</td>
<td>625-3222</td>
</tr>
<tr>
<td>Boynton Health Services Appointments</td>
<td>625-8400</td>
</tr>
<tr>
<td>Boynton Health Services General Information</td>
<td>625-7900</td>
</tr>
<tr>
<td>Boynton Health Services Medical Information</td>
<td>624-1444</td>
</tr>
<tr>
<td>Boynton Health Services Mental Health</td>
<td>625-3041</td>
</tr>
<tr>
<td>Center for Teaching and Learning</td>
<td>624-4000</td>
</tr>
<tr>
<td>College of Continuing Education Information</td>
<td>624-4000</td>
</tr>
<tr>
<td>CSE Computer Labs</td>
<td>625-0876</td>
</tr>
<tr>
<td>Disability Services</td>
<td>626-1333</td>
</tr>
<tr>
<td>Email Information (OIT)</td>
<td>301-4357</td>
</tr>
<tr>
<td>Facilities Management</td>
<td>624-2900</td>
</tr>
<tr>
<td>Financial Aid Office</td>
<td>624-1111</td>
</tr>
<tr>
<td>Graduate Assistant Employment Office</td>
<td>624-8647</td>
</tr>
<tr>
<td>Graduate Assistant Insurance Office</td>
<td>624-0627</td>
</tr>
<tr>
<td>Graduate School: Admissions</td>
<td>625-2040</td>
</tr>
<tr>
<td>Graduate School: Fellowship Office</td>
<td>625-7579</td>
</tr>
<tr>
<td>Graduate School: Final Oral Scheduling</td>
<td>625-3490</td>
</tr>
<tr>
<td>Graduate School: Graduate Student Services</td>
<td>625-3490</td>
</tr>
<tr>
<td>Graduate School: Graduation for Masters</td>
<td>625-3490</td>
</tr>
<tr>
<td>Graduate School: Graduation for Doctoral</td>
<td>625-3490</td>
</tr>
<tr>
<td>Graduate School: Preliminary Oral Scheduling</td>
<td>625-3490</td>
</tr>
<tr>
<td>Graduate School: Programs, Petitions, and Thesis Proposals</td>
<td>625-3490</td>
</tr>
<tr>
<td>International Student &amp; Scholar Services</td>
<td>626-7100</td>
</tr>
<tr>
<td>Law Library, Circulation</td>
<td>625-4300</td>
</tr>
<tr>
<td>Law Library, Reference</td>
<td>625-4309</td>
</tr>
<tr>
<td>Office of Equal Opportunity/Affirmative Action</td>
<td>624-9547</td>
</tr>
<tr>
<td>Office of Information Technology (OIT) Helpline</td>
<td>301-4357</td>
</tr>
<tr>
<td>Student Academic Success Services</td>
<td>624-3323</td>
</tr>
<tr>
<td>Student Accounts Receivable</td>
<td>624-1111</td>
</tr>
<tr>
<td>Walter Library – Circulation</td>
<td>624-3366</td>
</tr>
<tr>
<td>Walter Library - Reference</td>
<td>624-0224</td>
</tr>
</tbody>
</table>
Other Miscellaneous Information

- Boynton Health Services – Graduate Assistant Health Plan – www.shb.umn.edu/twincities/graduate-assistants.htm
- Center for Teaching and Learning – www1.umn.edu/ohr/teachlearn/
- The Spoken English Test for Teaching Assistants (SETTA) - www1.umn.edu/ohr/teachlearn/graduate/itap/learnaboutthesetta/index.html
- Council of Graduate Students (COGS) - www.cogs.umn.edu
- Disability Service - ds.umn.edu/
- Student Unions & Activities - sua.umn.edu/
- Graduate and Professional Student Assembly (GAPSA) - http://www.gapsa.umn.edu/
- Graduate Assistants Human Resources: Employment Services - www.umn.edu/ohr/gae
- Graduate School - www.grad.umn.edu
- Graduate School Fellowship Office – www.grad.umn.edu/fellowships
- Graduate School Forms Doctoral - www.grad.umn.edu/current_students/doctoral/index.html
- Graduate School Forms Masters - www.grad.umn.edu/current_students/masters/index.html
- Graduate School Restructuring - www.grad.umn.edu/deans-office/restructuring/index.html
- Graduate Student Services and Progress (GSSP) - www.grad.umn.edu/students/index.html
- International Student and Scholar Services (ISSS) - www.isss.umn.edu
- Office for Equity and Diversity - www.academic.umn.edu/equity/
- OneStop Student Services (Class Schedule, Register, etc.) - onestop.umn.edu
- Student Conflict Resolution Office - www.sos.umn.edu/
- University Department Directory - www1.umn.edu/systemwide/directories/
- University Websites or People Search - http://search.umn.edu/
- Womens Center - www1.umn.edu/women/

Minnesota, Minneapolis, and St. Paul

- State of Minnesota - www.state.mn.us
- City of Minneapolis - www.ci.minneapolis.mn.us/
- City of St. Paul - www.stpaul.gov/

Policies and Codes of Ethics

- Equity, Diversity, Equal Opportunity, and Affirmative Action - www1.umn.edu/regents/policies/administrative/Equity_Diversity_EO_AA.html
- Student Conduct Code - www1.umn.edu/regents/policies/academic/Student_Conduct_Code.html
- Student Education Records - www1.umn.edu/regents/policies/administrative/Student_Education_Records.pdf
Emergency and Security Procedures

Please review the following emergency and security procedures. If you have any questions, contact the Department of Civil, Environmental, and Geo-Engineering staff in room 122 CivE or telephone: 612-625-5522.

Emergency Numbers

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Department</td>
<td>9-1-1</td>
</tr>
<tr>
<td>Police Department</td>
<td>9-1-1</td>
</tr>
<tr>
<td>Ambulance</td>
<td>9-1-1</td>
</tr>
<tr>
<td>Chemical spills (emergency)</td>
<td>9-1-1</td>
</tr>
<tr>
<td>Chemical spills (prompt response)</td>
<td>9-1-1</td>
</tr>
<tr>
<td>Department of Environmental Health &amp; Safety: Consult with DEHS staff on call</td>
<td>612-626-6002</td>
</tr>
<tr>
<td>Facilities management</td>
<td>612-624-2900</td>
</tr>
<tr>
<td>University Emergency Management</td>
<td>612-625-8047</td>
</tr>
</tbody>
</table>

Closing Offices

Only the President or one of his designates can close the University. University Relations has the responsibility to notify the campus community and the public if the University is to be closed.

Safety/Security

Building Hours

The Civil Engineering Building is open from 7:00 a.m. until 10:00 p.m. All students enrolled in the Department of Civil, Environmental and Geo-engineering have 24/7 access to the building with their UCard. For laboratory safety and security, authorized personnel are asked to use a buddy system when working in the Civil Engineering Building after hours. Authorized personnel and custodial staff are asked to report unusual incidents or unauthorized people to the University Police.

Emergency Telephones

Special automatic dial security telephones are located in the elevators, hallways on the 6th and 7th floor, and in the refuge areas in the main stairwell and the east stairwell.

Escort Service

The University offers free walking and biking security escorts 365 days a year to and from campus and adjacent neighborhoods. Contact 612-624-WALK (9255) to request a security escort.

Threats & Violence

For any threat call 9-1-1 for police assistance if you observe violence taking place or believe/feel there is an immediate threat to someone's safety. All faculty, staff, and student workers should communicate to an administrator/supervisor any knowledge of violence or threat-related behaviors including possession of a weapon in the workplace. Students and other non-workers should call 9-1-1.
Emergency Procedures

Contact
University Police (9-1-1 in emergencies, 612-624-2677 in non-emergencies). In case of fire or medical emergency, position someone outside the building to lead ambulance or fire personnel to the emergency location.

Fire Emergencies
Elevators will shut down automatically when there is a fire alarm. All employees should familiarize themselves with fire exits, stairwells and extinguishers located in the building. Evacuate the building immediately when a fire alarm is sounded and do not return until the fire department has approved re-entry into the building. There are refuge areas located on the 4th floor landing in the main stairwell and the 4th and 5th floor landings in the east stairwell. Report the use of fire extinguishers so they can be inspected and refilled.

Injuries
If an employee is injured on the job, the supervisor is responsible for notifying the department administrator and obtaining a “Report of Incident” form to complete. This form must be completed within 24 hours of the injury. Failure to comply may result in loss of Worker’s Compensation Rights and a fine levied against the department.

TXT-U
TXT-U is the University’s emergency notification text messaging system. Students with an active Internet ID and University of Minnesota email address are automatically added to the TXT-U system. However, only those with cell phone numbers included in their University personal information will receive emergency text messages. To be sure you will receive TXT-U messages in an emergency, verify your information by going to your http://www1.umn.edu/prepared/txtu/.

Minnesota Employee Right to Know Act (MERTKA)
All new graduate students and employees of the Department of Civil, Environmental, and Geo-Engineering are required to attend safety-training sessions, follow safety guidelines, and read the “Laboratory Safety Plan” before working in any laboratory. Copies of the “Lab Safety Plan” are available online.

Chemical Spills
Call 9-1-1 (For a chemical spill of any size, it is always acceptable to call 9-1-1.)
- fire or explosion potential—>25% lower explosive limit (LEL)
- conditions immediately dangerous to life and health (IDLH), including low oxygen and a high level exposure to toxic substances
- uncontrolled release of a hazardous substance
- hazardous spill in a public hallway
- spills > 5 gallons
For a chemical spill requiring a prompt response, but is a non-emergency, you can also call 9-1-1 and request a "Consult with DEHS staff on call."

If you call an emergency number, notify the front office as soon as possible and give a brief description of what you reported, 612-625-5522. Also, at your earliest convenience post clean-up please email Kathy Wabner, DSO, and give a report of the situation (your contact information, what happened, why it happened, where it happened, and how it was resolved).
You are never expected to clean up a chemical spill, if you have not received training, do not have proper equipment, or feel uncomfortable.

Often spills require a prompt response, but do not pose an emergency. For those, contact the Department of Environmental Health and Safety (DEHS) by calling 911, then request “Consult with DEHS on call.” Don’t hesitate to call:

- for any amount of mercury or stench chemical,
- spills > 4 L,
- if you don’t feel comfortable, or have the training or supplies needed to clean it up, and need guidance assessing the situation, additional supplies, monitoring equipment or responders.

If you are familiar with the chemical hazards, have received training, have supplies needed to clean up, feel comfortable handling chemicals and would like to perform responsive control measures, you may do so at the time of a spill in the immediate area.

**Small chemical spills**
- Small chemical spills may be cleaned up by laboratory personnel.
- **Spill kit** - Each lab should have a spill kit in their laboratory space. It should be accessible and stocked according to the needs of each individual lab and chemicals used within your lab. A spill kit can be ordered through U Market or you may assemble one using supplies ordered through U Market. Please be certain your kit is in a highly visible container and may be easily transported.

**Large spills or toxic materials**
- Larger spills or spills of especially toxic materials should be cleaned up by professionals.
- Immediately, contact the Department of Environmental Health & Safety at (612) 626-6002.
- After hours or on weekends, call 9-1-1 for assistance.

**Mercury spills**
- Except for a small bead or two from a broken thermometer, mercury spills should always be cleaned up by the Department of Environmental Health & Safety. Contact at (612) 626-6002.
EQUAL OPPORTUNITY STATEMENT

The University of Minnesota shall provide equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression.

Inquiries regarding compliance may be directed to the Director, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 274 McNamara Alumni Center, 200 Oak Street S.E., Minneapolis, MN 55455, (612) 624-9547, eoaa@umn.edu. Web site at diversity.umn.edu/eoaa.

This publication/material is available in alternative formats upon request. Please contact Department of Civil, Environmental, and Geo-Engineering

CE 143
500 Pillsbury Drive SE Minneapolis, MN 55455
612-625-9581
## Appendix A: Plan C Requirement List
Courses that meet Plan C M.S. degree project, oral presentation, and/or ethics requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEGE 4412</td>
<td>Reinforced Concrete Design II * (60 hours) #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 4512</td>
<td>Open Channel Hydraulics* (40 hours)</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 5094</td>
<td>Independent Study* (50 hours)</td>
<td></td>
</tr>
<tr>
<td>CEGE 5212</td>
<td>Transportation Policy, Planning and Deployment ' (40 hours) #</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 5311</td>
<td>Experimental Geomechanics ' (40 hours) #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 5321</td>
<td>Geomechanics ' (40 hours)</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 5341</td>
<td>Wave methods for nondestructive testing* (40 hours)#</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 5415</td>
<td>Masonry Structures* (50 hours) #</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 5542</td>
<td>Experimental Methods in Env. Engineering (40 hours) *</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 5552</td>
<td>Environmental Microbiology Lab * (40 hours) *</td>
<td>1</td>
</tr>
<tr>
<td>CEGE 5561</td>
<td>Air Quality Engineering* (40 hours)#</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 5570</td>
<td>Design for Sustainable Development* (60 hours)</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8022</td>
<td>Numerical Methods for Free and Moving Boundary Problems #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8200</td>
<td>Transportation Seminar *</td>
<td>1</td>
</tr>
<tr>
<td>CEGE 8202</td>
<td>Networks and Places: Transportation, Land Use, and Design (40 hours) *</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 8214</td>
<td>Transportation Economics' (50 hours) #</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 8219</td>
<td>MS-Plan C Project for Transportation Engineering *</td>
<td>2</td>
</tr>
<tr>
<td>CEGE 8300</td>
<td>Geomechanics Seminar *</td>
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<tr>
<td>CEGE 8302</td>
<td>Soil/Rock Plasticity and Limit Analysis ' (40 hours)</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 8341</td>
<td>Dynamics of Soils and Foundations' (40 hours) #</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 8400</td>
<td>Structures Seminar #</td>
<td>1</td>
</tr>
<tr>
<td>CEGE 8401</td>
<td>Fundamentals of Finite Element Method ' (50 hours)</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8402</td>
<td>Nonlinear Finite Element Analysis ' (50 hours) #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8441</td>
<td>Ductile Behavior of Steel Structures ' (50 hours) #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8461</td>
<td>Structural Reliability ' (50 hours) #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8490</td>
<td>Optimization and Random Vibration ' (50 hours) #</td>
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<tr>
<td>CEGE 8490</td>
<td>Fracture and Scaling* (40 hours) #</td>
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<tr>
<td>CEGE 8500</td>
<td>Environmental Seminar #</td>
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<tr>
<td>CEGE 8502</td>
<td>Environmental Fluid Mechanics II ' (40 hours)#</td>
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<tr>
<td>CEGE 8504</td>
<td>Theory of Unit Operations ' (40 hours) *</td>
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<tr>
<td>CEGE 8505</td>
<td>Biological Processes ' (40 hours) #</td>
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<tr>
<td>CEGE 8506</td>
<td>Stochastic Hydrology ' (50 hours) #</td>
<td>4</td>
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<tr>
<td>CEGE 8508</td>
<td>Ecofluid Dynamics ' (40 hours) #</td>
<td>4</td>
</tr>
<tr>
<td>CEGE 8511</td>
<td>Mechanics of Sediment Transport ' (50 hours) #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8542</td>
<td>Organic Environmental Chemistry * (40 hours) #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8581</td>
<td>Research and Professional Ethics in Water Resources and Environmental Science †</td>
<td>0.5</td>
</tr>
<tr>
<td>CEGE 8601</td>
<td>Introduction to Stream Restoration ' (40 hours) #</td>
<td>3</td>
</tr>
<tr>
<td>CEGE 8602</td>
<td>Stream Restoration Practice ' (50 hours) *</td>
<td>2</td>
</tr>
</tbody>
</table>

* Meets minimum 40 hour project requirement (total hours indicated in parentheses)
* Meets oral presentation requirement.
† Ethics training
# Civil, Environmental, and Geo-Engineering
## MS Plan C
### Student Tracking Form

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Student ID#</th>
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</table>

**Project Courses:** 100 project hours, at least 40 hours per project are required

<table>
<thead>
<tr>
<th>Term &amp; Yr</th>
<th>Dept &amp; Course No.</th>
<th>Title</th>
<th># of Project hours</th>
<th>Instructor</th>
<th>Instructor’s signature and date</th>
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**Ethics Training:** students are required to have an ethics seminar, course, or training.

For CITI – please attach completion certificate

- Date/Year taken:
- CITI RCR:
- Course:
- Other:
- Advisor/Instructor signature:

**Oral Presentation:** one oral presentation of at least 10 minutes

- Date given:
- Topic:
- Instructor signature & date:

My Signature below indicates that I have completed the above requirements of a Civil Engineering MS Plan C.

**Student Signature**

---

**Signature of Advisor**

---

**Signature of DGS**

---
Completing the CITI RCR Tutorial for NSF-Funded Projects
Instructions for New Users

The Collaborative IRB Training Initiative (CITI), hosted by the University of Miami Medical School, offers training to meet the research ethics training requirement to work on a project funded by the National Science Foundation (NSF). This training is to be used only by undergraduate and graduate students working on NSF-funded projects. It does not satisfy any part of the University’s RCR requirements for faculty or postdocs. To access this curriculum for the first time and complete the requirement:

1. Go to: https://www.citiprogram.org/.
2. Register as a "new user".
3. Select "University of Minnesota" from the list of participating institutions.
4. Create a user name and password and complete the rest of the member information. Please use only your UMN ID (sometimes called your X.500 ID) and email address – e.g., you@umn.edu. Do not use a gmail or other email account. Your password does not have to be the same one you use for your UMN accounts, but you must be able to remember it in case you need to re-enter the CITI system.
5. Do not apply for CME/CEU credits for completing the tutorial. You will be charged for them and this option does not apply to you.
6. Go directly to question 6 ("RCR Course Enrollment") and select the version of the RCR course you will complete. Select the version that most closely relates to your field or major. (pick the Physical Sciences RCR)
7. You do not need to answer any of the other questions on this page. If you think you need to complete any of the other training listed on the page, such as human subjects protection training, check with your supervisor or lead scientist to ensure the training is necessary. See directions at the end of this list if you are required to complete human subjects protection training.
8. Click the “Continue” button at the bottom of the questionnaire.
9. The "Main Menu" page lists the courses you selected to complete. Select the "enter" link to begin the RCR course, or the "Add a course" link to make changes.
10. You can stop work on the tutorial at any point. To reenter the tutorial, return to the CITI website listed above and enter your user name and password, then select the appropriate module to reenter.
11. A report of your completion will be sent to RCR Programs and will be added to your University online training record. You do not need to report anything.
12. It is strongly recommended that you print or download a copy of your CITI completion certificate for your own records. The University does not receive or store individual copies of the detailed completion certificates from CITI.

Directions for completing CITI human subjects protection course, if required:
1. On the "Select Curriculum" page, go to question 1 ("Select the group...") and select either Group 1 or Group 2, based on the type of research you do. Do not select "I have completed my Basic training at University of Minnesota and would like to complete my Refresher course requirements."
2. Go to question 2, and select only "I have not previously completed an approved Basic Course."
3. For question 3, select “Not at this time”.
4. Go to question 5 ("RCR Course Enrollment") and select the version of the RCR course you will complete.
5. Continue directions above.
6. To record completion of the human subjects protection training, go to http://www.research.umn.edu/reo/education/core.html. On this page, click the title to expand the "Additional courses" section, then scroll to the bottom of the page and look for the "report completion..." links and click the one for the curriculum you completed, then follow the directions. It is recommended that you keep a copy of your CITI completion certificate for your own records. The University does not receive or store individual copies of the detailed completion certificates from CITI.
Preliminary Written Exam Form

Student ID:___________________

This document is to certify that,

_____________________________________________________________________________________________

Last name   First name

 has taken the doctoral preliminary written exam on,   _____________________________

Date

Committee Member:    Pass  Pass with reservations  Fail  Remove Reservations
1.                  [ ]  [ ]  [ ]  [ ]
2.                  [ ]  [ ]  [ ]  [ ]
3.                  [ ]  [ ]  [ ]  [ ]
4.                  [ ]  [ ]  [ ]  [ ]

We recommend that the student:

[ ] Pass the Exam  [ ] Pass with Reservations  [ ] Fail

Advisor Signature    Date

Please return to Tiffany Ralston at cegesps@umn.edu or CivE 143.
Combined Bachelor/Masters Course Planning Worksheet – Year 4  
B.C.E/B.Env.E/B.GeoE

*Upload this form into the online graduate application applyyourself in the supplemental uploads section along with your most current APAS report.*

<table>
<thead>
<tr>
<th>Today’s date</th>
<th>ID Number</th>
<th>GPA</th>
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</thead>
</table>

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<thead>
<tr>
<th>Name (Last, First, MI)</th>
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<tbody>
<tr>
<td>Email Address</td>
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<tr>
<td>Undergraduate Adviser</td>
</tr>
<tr>
<td>Graduate Adviser</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Undergraduate Emphasis Area</th>
<th>Graduate Emphasis Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Seeking Admission</td>
<td>Planned Bachelor’s degree graduating semester</td>
</tr>
</tbody>
</table>

**Instructions:** On this form, please list the courses that will fulfill your Bachelor’s degree tech elective course requirements. Students who are at the end of their junior year are eligible to apply. If you apply a course towards your bachelor’s degree, you can not apply it towards your MS degree. You will still need to approve your technical elective courses from your undergraduate advisor.

### Completed and Planned Technical Elective Program for CE, EnvE, or GeoE

<table>
<thead>
<tr>
<th>Course (e.g. CEGE 4512)</th>
<th>Credits</th>
<th>Semester (i.e. F09)</th>
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</tbody>
</table>

Total credits (21 needed for CE, 12 needed for EnvE, 14 for GeoE): _______

### Planned Masters Courses Taken as an Undergraduate Student

<table>
<thead>
<tr>
<th>Course (e.g. CEGE 4512)</th>
<th>Credits</th>
<th>Semester (i.e. F09)</th>
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</table>

Total Credits (1 minimum and 16 Maximum):_______