CIVIL AND ENVIRONMENTAL ENGINEERING: RESEARCH, M.S.

This is a named option in the Civil and Environmental Engineering M.S. (http://guide.wisc.edu/graduate/civil-environmental-engineering/civil-environmental-engineering-ms/)

The M.S. CEE-Research degree program takes approximately two years to complete. M.S. research degree candidates will choose a pathway for their program of study: thesis or advanced independent study. Students who do not have a bachelor's degree from an ABET accredited engineering program, or from a recognized international institution, may be required to complete deficiency coursework in addition to completing either the thesis or advanced independent study curriculum requirements. Selection of a pathway is dependent upon the educational objectives of the candidate.

ADMISSIONS

Please consult the table below for key information about this degree program's admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program's website.

Graduate admissions is a two-step process between academic programs and the Graduate School. Applicants must meet the minimum requirements (https://grad.wisc.edu/apply/requirements/) of the Graduate School as well as the program(s). Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/apply/).

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Deadline</td>
<td>December 15</td>
</tr>
<tr>
<td>Spring Deadline</td>
<td>September 1</td>
</tr>
<tr>
<td>Summer Deadline</td>
<td>December 15</td>
</tr>
<tr>
<td>GRE (Graduate Record Examinations)</td>
<td>Not required.</td>
</tr>
<tr>
<td>English Proficiency Test</td>
<td>Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements (<a href="https://grad.wisc.edu/apply/requirements/#english-proficiency">https://grad.wisc.edu/apply/requirements/#english-proficiency</a>).</td>
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<tr>
<td>Other Test(s) (e.g., GMAT, MCAT)</td>
<td>n/a</td>
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<tr>
<td>Letters of Recommendation Required</td>
<td>3</td>
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</tbody>
</table>

All applicants must meet the Graduate School's admission requirements (http://grad.wisc.edu/admissions/requirements/) to be considered for admission. The application deadline is December 15 for the fall term and September 1 for the spring term. Late applications may not be reviewed for funding opportunities.

In addition, applicants must also meet the department's more stringent admission requirements listed below to be considered for admission:

- Grades: A minimum undergraduate grade point average (GPA) of 3.00 (on a 4.00 scale) on the equivalent of the last 60 semester hours (approximately two years of work) is required for domestic applicants. A strong academic performance comparable to an average of B or above grades for all undergraduate course work is required for international applicants.
- Degree: A bachelor's degree from an ABET-accredited engineering program or from a recognized international institution is required. Applicants who do not have a bachelor's degree as specified above may study for the master of science in civil and environmental engineering (Program Option C); however, to become eligible for this program, applicants must meet the department’s deficiency requirements, some of which may be completed as deficiencies after admission. As a general rule, students with more than 12 credits in deficiencies are not admitted to the graduate program. Rather, they are encouraged to enroll as special students until most of their deficiencies are satisfied. All plans of study within this option must be approved by the department faculty. The deficiency requirements for applicants without a bachelor’s degree from an ABET-accredited engineering program or from a recognized international institution must be obtained from the department.

A complete graduate application is required before an application will be reviewed by the faculty. A complete graduate application contains the following:

- Graduate School Application Form and application fee: Applicants must submit an online application to the UW–Madison Graduate School. See Graduate School Admissions (https://grad.wisc.edu/admissions/) to apply.
- Statement of purpose: A statement of purpose for graduate study must be submitted through an applicant’s online UW–Madison Graduate School application. Please limit this important document to 1,000 words.
- Letters of recommendation: Three letters of recommendation must be submitted through an applicant’s online UW–Madison Graduate School application.
- Transcripts: Upload the most recent copies of your transcripts to the electronic application, from each institution attended. Study abroad transcripts are not required if coursework is reflected on the degree granting university’s transcript. If the application is recommended for admission then we will follow-up with instructions for official transcript submission.
- English proficiency scores: Applicants whose native language is not English, or whose undergraduate instruction was not in English, must provide an English proficiency test score. Scores are accepted if they are within two years of the start of the admission term. See Graduate School Admission Requirements (http://grad.wisc.edu/admissions/requirements/) for more information on the English proficiency requirement.
- TOEFL scores may be sent to institution code 1846 from ETS
FUNDING

GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

PROGRAM RESOURCES

Financial support is available through fellowships, project/program assistantships (PA), research assistantships (RA), and teaching assistantships (TA). Faculty will contact successful M.S./Ph.D. applicants directly regarding funding opportunities. Admission is not a guarantee of funding.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

NAMED OPTION REQUIREMENTS

MODE OF INSTRUCTION

<table>
<thead>
<tr>
<th>Mode of Instruction Definitions</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.</td>
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<tr>
<td>Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.</td>
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<tr>
<td>Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.</td>
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<tr>
<td>Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.</td>
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</table>

CURRICULAR REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>30 credits</td>
</tr>
<tr>
<td>Credit</td>
<td>Requirement</td>
</tr>
</tbody>
</table>

Nil

Required

15 credits must be graduate-level coursework. Details can be found in the Graduate School’s Minimum Graduate Coursework Requirement (50%) policy (https://policy.wisc.edu/library/UW-1244). Overall 3.00 GPA required.

Other Grade Requirements

Assessments and Examinations

Pathway A, Thesis: A faculty committee will conduct a final examination on the thesis research. Pathway B, Independent Study: A faculty committee will review and approve the final report. A final examination is not required but may be requested by the faculty committee.

Language Requirements

No language requirements.

REQUIRED COURSES

Pathway A—Thesis

Students who wish to do advanced work and research in a well-defined area of specialization are encouraged to pursue this program.

This option requires a minimum of 30 credits of graduate work including:

• A minimum of 18 credits graduate-level coursework (numbered 300 and higher); at least 9 of the 18 credits must be in Civil and Environmental Engineering (may include the seminar course with approval from the faculty advisor; may not include CIV ENGR 790) Some courses numbered 300+ may require special faculty approval.

• A minimum of one-credit seminar course (Discuss seminar options with faculty advisor.)

• A minimum of 6 credits of CIV ENGR 790 Master’s Research or Thesis A faculty committee will conduct a final examination on the thesis research.

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These pathways are internal to the program and represent different curricular paths a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript.

Pathway B—Advanced Independent Study

This pathway requires a minimum of 30 credits of graduate work including:

• A minimum of 21 credits graduate-level coursework (numbered 300 and higher); at least 9 of the 21 credits must be in Civil and Environmental Engineering (may include the seminar course with approval from the advisor; may not include independent study or research courses) Some courses numbered 300+ may require special faculty approval.

• A minimum of one-credit seminar course. (Discuss seminar options with faculty advisor.)

• A minimum of 3 credits of CIV ENGR 790 Master’s Research or Thesis or CIV ENGR 999 Advanced Independent Study A required written report based on the student’s advanced independent study.
project does not have to meet UW-Madison Graduate School requirements for a thesis, but has to show independent thinking by the student. A faculty committee will review and approve the final report. A final examination is not required but may be requested by the faculty committee.

These pathways are internal to the program and represent different curricular paths a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript.

Pathway C—Master’s 1 (for Students without Engineering Bachelor’s Degrees)
This program is designed for students without engineering bachelor’s degrees. Students will meet with their faculty advisor to determine the courses and total credits required to fulfill the deficiency requirements. As a general rule, students with more than 12 credits in deficiencies are not admitted to the program. Rather, they are encouraged to enroll as special students until more of their deficiencies are satisfied. Some of the deficiency course requirements may be completed after admission. The exact number of deficiency courses and credits completed before and after admission will be determined by the faculty advisor. All prerequisite courses must be taken for a letter grade. In addition to the total deficiency credit requirement, Pathway C requires a minimum of 30 credits of graduate work. Students can select either a Thesis Pathway or Advanced Independent Study Pathway, consistent with the requirements of Pathway A or Pathway B described above, to complete the non-deficiency requirements of Pathway C. Students should meet with their faculty advisor to determine which pathway is most appropriate for their degree plan. Deficiency credits cannot be applied to fulfill the 30 credit degree requirement.

These pathways are internal to the program and represent different curricular paths a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript.

**POLICIES**

**GRADUATE SCHOOL POLICIES**
The Graduate School’s Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy/) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

**NAMED OPTION-SPECIFIC POLICIES**

**PRIOR COURSEWORK**

Graduate Work from Other Institutions
This program follows the Graduate School’s policy for Satisfying Requirements with Prior Graduate Coursework from Other Institutions. (https://policy.wisc.edu/library/UW-1216/)

UW–Madison Undergraduate
This program follows the Graduate School’s policy for Satisfying Requirements with Coursework from Undergraduate Career at UW–Madison. (https://policy.wisc.edu/library/UW-1216/)

UW–Madison University Special
This program follows the Graduate School’s policy for Transfer from UW–Madison University Special Student Career at UW–Madison. (https://policy.wisc.edu/library/UW-1216/)

**PROBATION**
This program follows the Graduate School’s Probation policy. (https://policy.wisc.edu/library/UW-1217/)

**ADVISOR / COMMITTEE**
This program follows the Graduate School’s Advisor policy (https://policy.wisc.edu/library/UW-1220/) and the Graduate School’s Committees policy (https://policy.wisc.edu/library/UW-1201/).

**CREDITS PER TERM ALLOWED**
15 credits

**TIME LIMITS**
This program follows the Graduate School’s Time Limits policy. (https://policy.wisc.edu/library/UW-1221/)

**GRIEVANCES AND APPEALS**
These resources may be helpful in addressing your concerns:
- Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
- Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/policies/gapp/#grievance-procedure)
are also encouraged to talk with their faculty advisors regarding concerns or difficulties if necessary. University resources for sexual harassment concerns can be found on the UW Office of Compliance website and are included in the next section.

• If the issue is not resolved to the student’s satisfaction the student can submit the grievance to the Grievance Advisor in writing, within 60 calendar days of the alleged unfair treatment.

• On receipt of a written complaint, a faculty committee will be convened by the Grievance Advisor to manage the grievance. The program faculty committee will obtain a written response from the person toward whom the complaint is directed. This response will be shared with the person filing the grievance.

• The faculty committee will determine a decision regarding the grievance. The Grievance Advisor will report on the action taken by the committee in writing to both the student and the party toward whom the complaint was directed within 15 working days from the date the complaint was received.

• At this point, if either party (the student or the person toward whom the grievance is directed) is unsatisfied with the decision of the faculty committee, the party may file a written appeal. Either party has 10 working days to file a written appeal to the College.

• Documentation of the grievance will be stored for at least 7 years. Significant grievances that set a precedent will be stored indefinitely.

The Graduate School has established policies governing student conduct, academic dishonesty, and sexual and racial harassment. The Graduate School also has procedures for students wishing to appeal a grievance decision made at the college level. These policies are described in the Academic Guidelines.

OTHER
Students in the accelerated M.S. named options are not eligible for department funded opportunities.

PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES
Take advantage of the Graduate School’s professional development resources (https://grad.wisc.edu/pd/) to build skills, thrive academically, and launch your career.

PEOPLE

Civil and Environmental Engineering Faculty: Professors Likos (chair), Ahn, Hanna, Harrington, Hurley, Loheide, McMahon, Nogueira, Noyce, Park, Parra-Montesinos, Ran, Russell, Schauer, Wu; Associate Professors Block, Fratta, Ginder-Vogel, Hicks, Li, Pincheira, Prabhakar, Remucal, Sone, Tinjum, Wright; Assistant Professors Blum, Chen, Hampton, Pujara, Qin, Wang, Wei, Zhu; M.Eng Program Director Carlson. See also CEE faculty (http://directory.engr.wisc.edu/cee/faculty/).

Geological Engineering Faculty: Professors Tinjum (Director) (Civil and Environmental Engineering), Feigl (Geoscience), Goodwin (Geoscience), Hard (Wisconsin Geological and Natural History Survey), Likos (Civil and Environmental Engineering), Loheide (Civil and Environmental Engineering), Tikoff (Geoscience), Wu (Civil and Environmental Engineering); Associate Professors Cardiff (Geoscience), Ferrier (Geoscience), Fratta (Civil and Environmental Engineering), Ginder-Vogel
(Civil and Environmental Engineering), Hicks (Civil and Environmental
Engineering), Sone (Civil and Environmental Engineering), Zoet
(Geoscience); Assistant Professors Hampton (Civil and Environmental
Engineering), Golos (Geoscience), Zahasky (Geoscience). See also GLE
faculty (https://engineering.wisc.edu/departments/civil-environmental-
engineering/research/geological-engineering/).

Environmental Chemistry and Technology: Professors Hurley (Civil
and Environmental Engineering), Bertram (Chemistry), Bleam (Soil
Science), Harrington (Civil and Environmental Engineering), Karthikeyan
(Biological Systems Engineering), McMahon (Civil and Environmental
Engineering/Bacteriology), Roden (Geoscience), Root (Chemical and
Biological Engineering), Schauer (Civil and Environmental Engineering),
Thompson (Biological Systems Engineering); Associate Professors
Ginder-Vogel (director; Civil and Environmental Engineering), Remucal
(Civil and Environmental Engineering), Whitman (Soil Science); Assistant
Professors Anantharaman (Bacteriology), Majumder (Bacteriology),
Qin (Civil and Environmental Engineering), Wei (Civil and Environmental
Engineering). See also ECT Faculty (https://engineering.wisc.edu/
departments/civil-environmental-engineering/research/environmental-
chemistry-technology/).