CIVIL AND ENVIRONMENTAL ENGINEERING: RESEARCH, MS

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

The MS Civil and Environmental Engineering-research degree program takes approximately two years to complete. MS 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

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/).

Letters of Recommendation Required

APPLICATION PROCESS AND REQUIREMENTS

All applicants must meet the Graduate School’s admission requirements (http://grad.wisc.edu/admissions/requirements/) to be considered for admission. Departmental admission is by committee review. Applications submitted after the fall deadline through March 15 will be reviewed if complete and will be considered for admission by the department if space is still available. To check if space is available, please email: ceegradadmission@engr.wisc.edu.

In addition, applicants must also meet the department’s 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) or a master’s degree with a minimum cumulative GPA of 3.00 is required. Applicants from an international institution must demonstrate strong academic achievement comparable to a 3.00 for an undergraduate or master’s degree. The Graduate School will use your institution’s grading scale. Do not convert your grades to a 4.00 scale.

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 (Pathway C). To do so, applicants must meet the department’s deficiency requirements, some of which may be completed after admission. Generally, applicants with more than 12 credits of deficiencies are not admitted to the graduate program. Rather, they are encouraged to enroll as University Special students until most deficiencies are satisfied. All plans of study within this pathway must be approved by the department faculty. The deficiency requirements for applicants following Pathway C must be obtained directly from the department.

Funding

Funded offers for MS (research) and PhD admitted applicants, in the form of research assistantships, project assistantships, and/or teaching assistantships come directly from individual faculty members (https://directory.engr.wisc.edu/cee/). Please contact interested faculty before or after you have applied to inquire about assistantship opportunities. Funding is not guaranteed with admission. Faculty will contact successful applicants directly regarding funding opportunities.

COMPLETE APPLICATION

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

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

Submit a statement of purpose of 1,000 words or less in the online application. This statement should cover your technical areas of interest, coursework emphasis, research experience, professional goals, faculty
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 MS/PhD 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</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Mode of Instruction Definitions

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.

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.

Face-to-Face: Courses typically meet during weekdays on the UW–Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

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.

CURRICULAR REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirement Detail</th>
<th>Minimum Credit Requirement</th>
<th>Detailed Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>30 credits</td>
<td>15 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework Requirement policy: <a href="https://policy.wisc.edu/library/UW-1244/">https://policy.wisc.edu/library/UW-1244/</a>.</td>
</tr>
<tr>
<td>Residence</td>
<td>16 credits</td>
<td>Overall 3.00 GPA required. Refer to the Graduate School: Graduate GPA Requirement policy: <a href="https://policy.wisc.edu/library/UW-1203/">https://policy.wisc.edu/library/UW-1203/</a>; or see UW-1203/).</td>
</tr>
<tr>
<td>Credit Requirement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This pathway requires a minimum of 30 credits of graduate work including:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Graduate Level Coursework (numbered 300 and higher with the Grad 50% attribute)</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>At least 9 of the 18 credits must be in Civil and Environmental Engineering. This may include the seminar course with approval from the faculty advisor. May not include CIV ENGR 790.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Discuss seminar options with faculty advisor. See options below.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research or Thesis</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>A faculty committee will conduct a final examination on the thesis research.</td>
<td></td>
</tr>
<tr>
<td>CIV ENGR 790</td>
<td>Master’s Research or Thesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Additional Coursework</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>In consultation with advisor, complete coursework to reach the minimum of 30 credit requirement.</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits** 30

1. 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.

2. Some courses numbered 300 or above may require special faculty approval.

**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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Graduate Level Coursework (numbered 300 and higher with the Grad 50% attribute)</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>At least 9 of the 18 credits must be in Civil and Environmental Engineering. This may include the seminar course with approval from the faculty advisor. May not include CIV ENGR 790.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Discuss seminar options with faculty advisor. See options below.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research or Thesis</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>A faculty committee will conduct a final examination on the thesis research.</td>
<td></td>
</tr>
<tr>
<td>CIV ENGR 790</td>
<td>Master’s Research or Thesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Additional Coursework</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>In consultation with advisor, complete coursework to reach the minimum of 30 credit requirement.</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits** 30

1. 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.

2. Some courses numbered 300 or above may require special faculty approval.

**Pathway B—Advanced Independent Study**

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Graduate Level Coursework (numbered 300 and higher with the Grad 50% attribute)</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>At least 9 of the 21 credits must be in Civil and Environmental Engineering. This may include the seminar course with approval from the advisor. May not include independent study or research courses.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Discuss seminar options with faculty advisor. See options below.</td>
<td></td>
</tr>
</tbody>
</table>

**Research or Thesis**

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.

CIV ENGR 970 Master’s Research or Thesis or CIV ENGR 999 Advanced Independent Study

**Additional Coursework**

In consultation with advisor, complete coursework to reach the minimum of 30 credit requirement.

**Seminar Course Options**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV ENGR 579</td>
<td>Seminar-Transportation Engineering</td>
<td>1</td>
</tr>
<tr>
<td>CIV ENGR/ ENVIR ST/ URB R PL 717</td>
<td>Water Resources Management Practicum Planning Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>CIV ENGR/ ENVIR ST/ URB R PL 718</td>
<td>Water Resources Management Practicum Planning Seminar II</td>
<td>2</td>
</tr>
<tr>
<td>CIV ENGR 760</td>
<td>Research Methods in Construction Engineering Management</td>
<td>1</td>
</tr>
</tbody>
</table>

**Written Report**

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.

1. 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.

2. Some courses numbered 300 or above may require special faculty approval.

**Pathway C—Master’s** (for Students without Engineering Bachelor’s Degrees)

This program is designed for students without an engineering bachelor’s degree. Prior to beginning the program, the student will meet with their faculty advisor to determine the courses and total credits required to fulfill the deficiency requirements. Generally, a student with more than 12 credits in deficiencies is not admitted to the program. Rather, they are encouraged to enroll as a University Special student until most of their deficiencies are satisfied. Some 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 Thesis Pathway A or Advanced Independent Study Pathway B, consistent with the requirements 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 satisfy the minimum credit requirement.

1. 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.
Civil and Environmental Engineering: Research, MS

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 Credits Earned at Other Institutions
Refer to the Graduate School: Transfer Credits for Prior Coursework (https://policy.wisc.edu/library/UW-1216/) policy.

Undergraduate Credits Earned at Other Institutions or UW-Madison
Upon approval from a student’s graduate advisor and the graduate program chair, the Civil and Environmental Engineering program may decide to transfer up to seven credits from another institution or numbered 300 or above from the undergraduate career completed at UW-Madison. Exceptions to this limit must be approved by the Graduate School. Transfer credits from other institutions must be equivalent to the rigor of UW-Madison courses numbered 300 and above. These credits are not allowed to count toward the 50% graduate coursework minimum unless numbered 700 or above from UW-Madison. The credits are noted on the transcript in the graduate career as transfer credits, but the courses remain in the undergraduate career if taken at UW-Madison. Refer to the Graduate School: Transfer Credits for Prior Coursework (https://policy.wisc.edu/library/UW-1216/) policy.

Credits Earned as a Professional Student at UW-Madison (Law, Medicine, Pharmacy, and Veterinary careers)
Refer to the Graduate School: Transfer Credits for Prior Coursework (https://policy.wisc.edu/library/UW-1216/) policy.

Credits Earned as a University Special student at UW-Madison
Refer to the Graduate School: Transfer Credits for Prior Coursework (https://policy.wisc.edu/library/UW-1216/) policy.

PROBATION
Refer to the Graduate School: Probation (https://policy.wisc.edu/library/UW-1217/) policy.

ADVISOR / COMMITTEE

CREDITS PER TERM ALLOWED
15 credits

TIME LIMITS
Refer to the Graduate School: Time Limits (https://policy.wisc.edu/library/UW-1221/) policy.

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)
- Hostile and Intimidating Behavior Policies and Procedures (https://hr.wisc.edu/hib/)
  - Office of the Provost for Faculty and Staff Affairs (https://facstaff.provost.wisc.edu/)
- Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (https://employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (https://grad.wisc.edu/) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)
- Office of Compliance (https://compliance.wisc.edu/) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office Student Assistance and Support (OSAS) (https://osas.wisc.edu/) (for all students to seek grievance assistance and support)
- Office of Student Conduct and Community Standards (https://conduct.students.wisc.edu/) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (https://compliance.wisc.edu/titleix/) (for concerns about discrimination)

Civil and Environmental Engineering Grievance Procedures
Students who feel that they have been treated unfairly have the right to a prompt hearing of their grievance. Such complaints may involve course grades, classroom treatment, advising, various forms of harassment, or other issues. Any student or potential student may use these procedures.
• The student should speak first with the person toward whom the grievance is directed. In most cases, grievances can be resolved at this level.

• Should a satisfactory resolution not be achieved, the student should contact the program’s Grievance Advisor to discuss the grievance. Currently, the Civil and Environmental Engineering Grievance Advisors are:

  Pavana Prabhakar, Professor and Associate Chair for Graduate Programs
  pavana.prabhakar@wisc.edu, 2210 Engineering Hall, Phone: (608) 265-7834

  Greg Harrington, Professor and CEE Department Chair
  gwharrin@wisc.edu, 2205 Engineering Hall, Phone: (608) 695-3380

If the student prefers to talk with someone outside of the Civil and Environmental Engineering department, contact:

  Joanna Gurstelle, College of Engineering Assistant Dean for Graduate Affairs
  The Assistant Dean for Graduate Affairs (engr-dean-graduateaffairs@engr.wisc.edu) provides overall leadership for graduate education in the College of Engineering, and is a point of contact for graduate students who have concerns about education, mentoring, research, or other difficulties.

• The Grievance Advisor is responsible for facilitating any complaints or issues of students. The Grievance Advisor first attempts to help students informally address the grievance prior to any formal complaint. Students 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 of Engineering.

• 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.