

# CIVIL AND ENVIRONMENTAL ENGINEERING: RESEARCH, MS

This is a named option in the Civil and Environmental Engineering MS (<https://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/>).

Requirements	Detail
Fall Deadline	December 15
Spring Deadline	September 1
Summer Deadline	December 15
GRE (Graduate Record Examinations)	Not required.
English Proficiency Test	Refer to the Graduate School: Minimum Requirements for Admission policy: <a href="https://policy.wisc.edu/library/UW-1241">https://policy.wisc.edu/library/UW-1241</a> ( <a href="https://policy.wisc.edu/library/UW-1241/">https://policy.wisc.edu/library/UW-1241/</a> )
Other Test(s) (e.g., GMAT, MCAT)	n/a
Letters of Recommendation Required	3

## 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](mailto: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 members you are interested in working with, and any other items relevant to your qualifications for graduate school. See the Graduate School for

additional guidelines for the Statement of Purpose (<https://grad.wisc.edu/apply/prepare/>) (scroll to bottom of page).

### Three Letters of Recommendation

Three letters of recommendation must be submitted through the online application. These letters should be from people who can judge the applicant's academic, research, and/or work performance. See the Graduate School for FAQs (<https://grad.wisc.edu/apply/prepare/>) regarding these letters.

### Academic Transcripts

Upload the most recent copies of your transcripts to the online application, from each institution attended. Study abroad transcripts are not required if coursework is reflected on the degree granting university's transcript. Unofficial copies of transcripts will be accepted for departmental review. If the applicant is recommended for admission, then the Graduate School will follow-up with instructions for official transcript submission. Please do not send transcripts or any other application materials to the Graduate School or the Department of Civil and Environmental Engineering unless requested.

### Resume/Curriculum Vitae

Upload your most recent resume or curriculum vitae in the online application.

### English Proficiency Score

Refer to the Graduate School: Minimum Requirements for Admission policy.

### Application Fee

A one-time application fee is required. See the Graduate School frequently asked questions (<https://grad.wisc.edu/apply/#FAQ>) for fee information. Fee grants are offered by the Graduate School on a limited basis and under certain conditions, as outlined here (<https://grad.wisc.edu/apply/fee-grant/>). The department does not offer an application fee waiver due to the large volume of applications received. However, if you are working with a specific faculty member, then they may offer you a fee voucher.

## FUNDING

## FUNDING

### GRADUATE SCHOOL RESOURCES

[The Bursar's Office provides information about tuition and fees associated with being a graduate student. Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information 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 degree requirements (<https://guide.wisc.edu/graduate/#requirements>) and policies (<https://guide.wisc.edu/graduate/#policies>), in addition to the program requirements listed below.

## NAMED OPTION REQUIREMENTS MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	No

### 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

Requirement Detail	
Minimum Credit Requirement	30 credits
Minimum Residence Credit Requirement	16 credits
Minimum Graduate Coursework Requirement	15 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: <a href="https://policy.wisc.edu/library/UW-1244">https://policy.wisc.edu/library/UW-1244</a> ( <a href="https://policy.wisc.edu/library/UW-1244/">https://policy.wisc.edu/library/UW-1244/</a> ).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: <a href="https://policy.wisc.edu/library/UW-1203">https://policy.wisc.edu/library/UW-1203</a> ( <a href="https://policy.wisc.edu/library/UW-1203/">https://policy.wisc.edu/library/UW-1203/</a> ).
Other Grade Requirements	n/a

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<sup>1</sup>

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:

Code	Title	Credits
<b>Graduate Level Coursework (numbered 300 and higher with the Grad 50% attribute)</b>		
	Students must complete 18 credits, including at least 9 credits in Civil and Environmental Engineering (CIV ENGR). This may include the seminar course with approval from the faculty advisor. May not include CIV ENGR 790. <sup>2</sup>	18
<b>Seminar</b>		
	Discuss seminar options with faculty advisor. See options below.	1
<b>Research or Thesis</b>		
	A faculty committee will conduct a final examination on the thesis research. Students must complete 6 credits of following:	6
	CIV ENGR 790      Master's Research or Thesis	
<b>Additional Coursework</b>		
	In consultation with advisor, complete coursework to reach the minimum of 30 credit requirement.	5
<b>Total Credits</b>		<b>30</b>

<sup>1</sup> 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.

<sup>2</sup> Some courses numbered 300 or above may require special faculty approval.

### Pathway B—Advanced Independent Study<sup>1</sup>

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

Code	Title	Credits
<b>Graduate Level Coursework (numbered 300 and higher with the Grad 50% attribute)</b>		
	Students must complete 21 credits, including at least 9 credits in Civil and Environmental Engineering (CIV ENGR). This may include the seminar course with approval from the advisor. May not include independent study or research courses. <sup>2</sup>	21
<b>Seminar</b>		
	Discuss seminar options with faculty advisor. See options below.	1

### 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. Students complete 3 credits from following:	3
CIV ENGR 790      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.	5
<b>Total Credits</b>	<b>30</b>

<sup>1</sup> 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.

<sup>2</sup> Some courses numbered 300 or above may require special faculty approval.

### Pathway C—Master's<sup>1</sup> (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.

<sup>1</sup> 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.

### Seminar Course Options

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

CIV ENGR 909	Graduate Seminar – Environmental Chemistry & Technology	1
CIV ENGR/ ATM OCN/BOTANY/ ENVIR ST/GEOSCI/ ZOOLOGY 911	Limnology and Marine Science Seminar	1
CIV ENGR 919	Seminar-Hydraulic Engineering and Fluid Mechanics	1
CIV ENGR 929	Seminar-Environmental Engineering	1
CIV ENGR 939	Geotechnical Engineering Seminar	1
CIV ENGR 949	Seminar-Structural Engineering	1

## POLICIES

### GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) serve as the official document of record for Graduate School academic and administrative policies and procedures and are updated continuously. Note some policies redirect to entries in the official UW-Madison Policy Library (<https://policy.wisc.edu/>). Programs may set more stringent policies than the Graduate School. 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.

##### 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

Refer to the Graduate School: Advisor (<https://policy.wisc.edu/library/UW-1232/>) and Graduate School: Committees (Doctoral/Master's/MFA) (<https://policy.wisc.edu/library/UW-1201/>) policies.

### CREDITS PER TERM ALLOWED

15 credit maximum. Refer to the Graduate School: Maximum Credit Loads and Overload Requests (<https://policy.wisc.edu/library/UW-1228/>) policy.

### 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://employee disabilities.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/departamental 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:

Daniel Wright, Professor and Associate Chair for Graduate Programs  
danielb.wright@wisc.edu, Phone: (608) 262-1978

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.

## OTHER

n/a

## PROFESSIONAL DEVELOPMENT

### 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.