Civil and Environmental Engineering: Construction Engineering and Management, M.S.

A master's degree in Construction Engineering and Management (CEM) from the University of Wisconsin–Madison provides you with expertise in the theoretical and practical methods of planning, design, and construction, building on your civil engineering foundation in environmental engineering, transportation, structural analysis, fluid dynamics, and material science.

In just one year of intensive face-to-face learning, you gain an enriched understanding of construction scheduling, cost estimating, construction law, business management, ethics, risk management, safety and quality management, project control, teamwork, leadership, written and oral communications, and continuous improvement. You emerge fully prepared to immerse yourself in construction engineering and management.

Industry partners are strongly engaged in all aspects of the Construction Engineering and Management program, serving as adjunct professors, professors of practice, instructors, strategic advisors, and general supporters. This provides you with a valuable network of contacts during your time on the UW–Madison campus and once you enter the workforce.

Our Construction and Engineering Management graduates are among the top executive performers and leaders in the industry. Leading construction companies consider the UW–Madison Construction and Engineering Management program a top producing school and first choice for future recruiting.

Earn your master's degree through a program created with professional values in mind. As a UW–Madison graduate, you can provide outstanding service and expertise to the construction industry.

Admissions

Applicants must first meet all of the requirements of the Graduate School. Please visit this website (https://grad.wisc.edu) for details.

Applicants must also meet department specific requirements as outlined below:

- Have a bachelor's degree in civil and environmental engineering from an ABET-accredited engineering program or from a recognized international institution
- Submit a 1,000 word or fewer statement of purpose; include 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
- Submit three letters of recommendation
- Non-native English speakers must have a Test of English as a Foreign Language (TOEFL) with a score of 580 (written) or 92 (Internet version)
- The Graduate Record Examination (GRE) is required for admission

Please do not mail paper copies of application materials. Upload the required application materials to the electronic Graduate School application, including a PDF copy of the most current transcripts. Applicants who are recommended for admission by the CEE Admissions Committee, will receive an e-mail with further instructions from the CEE Graduate Admissions Office, requesting official transcripts or other required application material.

Applicants should monitor the application status by visiting the “Graduate Application Status” window within your MyUW portal (information on this is received after submitting an application). You may need to activate a NetID to gain access to the MyUW portal.

Graduate Application Status will remain “pending” until recommendations are determined. All applicants will receive an e-mail from the CEE Graduate Admissions Team with more details once the admission committees have made decisions.

Further questions related to the CEE admissions process may be directed to ceeadmissions@engr.wisc.edu.

Graduate School Admissions

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

Funding

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 processes related to funding.

Program Resources

Students in this program are not eligible for department funded opportunities in the form of teaching assistantship (TA), research assistantship (RA), or project assistantship (PA).

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 Definitions

- **Face to Face**: These programs are offered in a traditional on-campus format. Enjoy the advantages of interacting face-to-face with professors and peers, while meeting the requirements of a condensed schedule.

- **Evening/Weekend**: These programs are offered primarily on-campus with a partial or completely online component that is designed to accommodate working schedules. Take advantage of the convenience of online learning while participating in a rich, interactive learning environment.

- **Online**: These programs are offered primarily online. Many available online programs can be completed almost entirely online with all online programs offering at least 50 percent or more of the program work online. Some online programs have an on-campus component that is often designed to accommodate working schedules.

- **Hybrid**: These programs have innovative curricula that combine on-campus and online formats. Most hybrid programs are completed on-campus with a partial or completely online semester. For more information about the hybrid schedule of a specific program, contact the program.

- **Accelerated**: These on-campus programs are offered in an accelerated format that allows you to complete your program in a condensed time-frame. Enjoy the advantages of on-campus courses with minimal disruption to your career. For more information about the accelerated nature of a specific program, contact the program.

### CURRICULAR REQUIREMENTS

<table>
<thead>
<tr>
<th>Minimum Credit Requirement</th>
<th>Minimum Residence Credit Requirement</th>
<th>Minimum Graduate Coursework Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 credits</td>
<td>16 credits</td>
<td>At least 50% of credits applied toward the graduate degree credit requirement must be completed in graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide.</td>
</tr>
</tbody>
</table>

- Overall Graduate GPA Requirement: 3.00 GPA required.
- Other Grade Requirements: The Graduate School requires an average grade of B or better in all coursework (300 or above, not including research credits) taken as a graduate student unless conditions for probationary status require higher grades. Grades of Incomplete are considered to be unsatisfactory if they are not removed during the next enrolled semester.
- Assessments and Examinations: Contact the program for information on required assessments and examinations.
- Language Requirements: Contact the program for information on any language requirements.

### REQUIRED COURSES

This is a face-to-face, accelerated program:

- **30 credit degree program**
- **Complete the program in one academic year (fall, spring, summer)**
- **Courses begin in fall semester only**
- **Take 15 credits from the approved list of Construction Engineering and Management courses (see below)**
- **6 credits from a second discipline within the approved list of Civil and Environmental Engineering (CEE) specialization courses, based on your career interests**
- **3 credits from a third discipline within the approved list of CEE specialization courses, based on your career interests**
- **5 credits of independent study**
- **1 credit in a graduate student seminar**

### Typical Curriculum in this Program

(Student and advisor will select specific courses)

#### Fall Semester (12 credits)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV ENGR 492</td>
<td>Integrated Project Estimating and Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CIV ENGR 497</td>
<td>Mechanical Systems for Construction</td>
<td>3</td>
</tr>
<tr>
<td>CIV ENGR 498</td>
<td>Construction Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CIV ENGR 592</td>
<td>Construction Labor Productivity Management</td>
<td>3</td>
</tr>
<tr>
<td>CIV ENGR 669</td>
<td>Special Topics in Construction Engineering and Management (Topic: Field Engineering Workshop-Civ Engr. section)</td>
<td>1-4</td>
</tr>
<tr>
<td>CIV ENGR 669</td>
<td>Special Topics in Construction Engineering and Management (Topic: Field Engineering Workshop-Electrical Engr. section)</td>
<td>1-4</td>
</tr>
<tr>
<td>CIV ENGR 669</td>
<td>Special Topics in Construction Engineering and Management (Topic: Field Engineering Workshop-Mechanical Engr. section)</td>
<td>1-4</td>
</tr>
</tbody>
</table>

#### Spring Semester (12 credits)

<table>
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<tr>
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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV ENGR 492</td>
<td>Integrated Project Estimating and Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CIV ENGR 496</td>
<td>Electrical Systems for Construction</td>
<td>3</td>
</tr>
<tr>
<td>CIV ENGR 498</td>
<td>Construction Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CIV ENGR 669</td>
<td>Special Topics in Construction Engineering and Management (Topic: Lean Project Delivery Field Engineering Workshop)</td>
<td>1-4</td>
</tr>
<tr>
<td>CIV ENGR 669</td>
<td>Special Topics in Construction Engineering and Management (Topic: Leadership Development for Project Managers)</td>
<td>1-4</td>
</tr>
<tr>
<td>CIV ENGR 669</td>
<td>Special Topics in Construction Engineering and Management (Topic: Graduate Student Seminar)</td>
<td>1-4</td>
</tr>
</tbody>
</table>

#### Summer Session (6 credits)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
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<tr>
<td>CIV ENGR 669</td>
<td>Special Topics in Construction Engineering and Management (Topic: Field Engineering Workshop)</td>
<td>1-4</td>
</tr>
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<td>Special Topics in Construction Engineering and Management (Topic: Leadership Development for Project Managers)</td>
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<td>Special Topics in Construction Engineering and Management (Topic: Graduate Student Seminar)</td>
<td>1-4</td>
</tr>
</tbody>
</table>
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

GRADUATE PROGRAM HANDBOOK
The Graduate Program Handbook (https://www.engr.wisc.edu/app/uploads/2016/02/cee-graduate-student-handbook.pdf) is the repository for all of the program's policies and requirements.

PRIOR COURSEWORK

Graduate Work from Other Institutions
With program approval, students are allowed to count credits of graduate coursework from other institutions. Approved credits will be allowed to count toward the minimum graduate degree credit requirement and the minimum graduate coursework requirement, but will not count toward the minimum graduate residence credit requirement. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

UW–Madison Undergraduate
With program approval, no more than 7 credits of coursework numbered 300 or higher from a UW–Madison undergraduate degree are allowed to count only toward the minimum graduate degree credit requirement. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

UW–Madison University Special
With program approval, students are allowed to count up to 15 credits of coursework numbered 300 or above taken as a UW–Madison special student toward the Minimum Graduate Residence Credit Requirement, and the Minimum Graduate Degree Credit Requirement; those courses numbered 700 or above may be applied toward the Minimum Graduate Coursework (50%) Requirement. Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

PROBATION
The Graduate School regularly reviews the record of any student who earned grades of BC, C, D, F, or Incomplete in a graduate course (300 or above), or grade of U in research credits. This review could result in academic probation with a hold on future enrollment or in being suspended from the Graduate School.

ADVISOR / COMMITTEE
Every graduate student is required to have an advisor. To ensure that students are making satisfactory progress toward a degree, the Graduate School expects them to meet with their advisor on a regular basis.

An advisor generally serves as the thesis advisor. In many cases, an advisor is assigned to incoming students. Students can be suspended from the Graduate School if they do not have an advisor.

An advisor is a faculty member, or sometimes a committee, from the major department responsible for providing advice regarding graduate studies.

A committee often accomplishes advising for the students in the early stages of their studies.

CREDITS PER TERM ALLOWED
15 credits

TIME CONSTRAINTS
Master’s degree students who have been absent for five or more consecutive years lose all credits that they have earned before their absence. Individual programs may count the coursework students completed prior to their absence for meeting program requirements; that coursework may not count toward Graduate School credit requirements.

OTHER
Students in the accelerated MS (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 Noyce (chair), Adams, Bahia, Cramer, Feigl, Hanna, Harrington, Holloway, Hurley, Karthikeyan, Lee, Likos, Long, McMahon, Noguera, Park, Parra-Montesinos (director), Pedersen, Potter, Ran, Russell, Schauer, Wu; Associate Professors Ahn, Fratta, Hurley, Loheide, Pincheira, Tinjum; Assistant Professors Block, Gadikota, Ginder-Vogel, Hedegaard, Hicks, Prabhakar, Remucal, Sone, Wang, Wright. See also CEE faculty (http://directory.engr.wisc.edu/cee/faculty).

Geological Engineering Faculty: Professors Likos (director) (Civil and Environmental Engineering), Anderson (Geoscience), Baher (Geoscience), Feigl (Geoscience), Goodwin (Geoscience), Holloway (Nelson Institute), Thurbet (Geoscience), Tikoff (Geoscience), Tobin (Geoscience), Wang (Geoscience), Wu (Civil and Environmental Engineering); Associate Professors Fratta (Civil and Environmental Engineering), Loheide (Civil and Environmental Engineering), Tinjum (Engineering Professional Development); Assistant Professors Cardiff (Geoscience), Ginder-Vogel
(Civil and Environmental Engineering), Hicks (Civil and Environmental Engineering), Sone (Civil and Environmental Engineering), Zoet (Goscience); Affiliate Professors Kung (Soil Science), Lowery (Soil Science), Plesha (Engineering Physics), Potter (Civil and Environmental Engineering). See also GLE faculty (https://www.engr.wisc.edu/geological-engineering/people).

**Environmental Chemistry and Technology:** Professors Hurley (director) (Civil and Environmental Engineering), Bertram (Chemistry), Bleam (Soil Science), Ginder-Vogel (Civil and Environmental Engineering), Gadikota (Civil and Environmental Engineering), Harrington (Civil and Environmental Engineering), Karthikeyan (Biological Systems Engineering), McMahon (Civil and Environmental Engineering), Pedersen (Soil Science), Remucal (Civil and Environmental Engineering), Roden (Geoscience), Root (Chemical and Biological Engineering), Schauer (Civil and Environmental Engineering), Thompson (Biological Systems Engineering). See also ECT Faculty (https://www.engr.wisc.edu/academics/graduate-academics/environmental-chemistry-technology).