CIVIL ENGINEERING, MS

for the degree of Master of Science in Civil Engineering (on campus & non-thesis online)

The Department of Civil and Environmental Engineering, consistently ranked as having one of the best graduate programs in the country, offers graduate work leading to master's and doctoral degrees. These are in a variety of specialized areas through departmental and joint programs which are described on this page.

Opportunity exists for specializing in computational science and engineering via the Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/) optional graduate concentration.

Admission Requirements

The Department of Civil & Environmental Engineering accepts applications for admission to the graduate program for both fall and spring semesters.

A prerequisite for graduate study in civil engineering is the equivalent of the BS in Civil Engineering (http://catalog.illinois.edu/undergraduate/engineering/civil-engineering-bs/) from an accredited institution whose requirements for the bachelor's degree are substantially equivalent to those of the University of Illinois and his or her cumulative grade point average is at least 3.00 (A = 4.00). The Graduate Record Examination (GRE) (http://www.ets.org/portal/site/ets/menuitem.fab2360b1645a1de9b3a0779f1751509/?vgnextoid=b195e3b5f64f4010VgnVCM10000022f95190RCRD) is required.

All applicants whose native language is not English are required to submit TOEFL (http://www.toefl.org/) or International English Language Testing System (IELTS) (http://www.ielts.org/) scores as evidence of English proficiency. Minimum admission requirements (https://grad.illinois.edu/admissions/instructions/04c/) are set by the Graduate College. Students applying to the online program must satisfy the full status admissions requirement.

Applicants to the joint programs with Architecture or Urban Planning must meet the admissions standards for both degree programs and be accepted by both programs. For more information on the joint degree program, please see Civil Engineering, MS & Architecture, MARCH (http://catalog.illinois.edu/graduate/engineering_faa/joint-degree/architecture-march-civil-engineering-ms/) or Urban Planning, MUP & Related majors, MS (http://catalog.illinois.edu/graduate/faa/joint-degree/urban-planning-mup/)

Financial Aid

Financial aid is available in the form of fellowships and research and teaching assistantships. All applicants, regardless of US citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (http://www.grad.illinois.edu/admissions/taengprof.htm) by achieving a minimum score of 50 or 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (https://citl.illinois.edu/citl-101/teaching-learning/grad-academy-for-college-teaching/) conducted prior to the start of the semester.

Department Research

Areas of study and research pursued by our world-renowned faculty are focused in the following ten specializations:

- construction management
- environmental engineering
- environmental hydrology and hydraulic engineering
- geotechnical engineering
- materials
- structural engineering
- transportation engineering
- sustainable and resilient infrastructure systems
- energy-water-environment sustainability
- societal risk and hazard mitigation

More information about these specialized areas may be found at the department's research Web site (https://cee.illinois.edu/areas/).

Through the research centers based in the department, CEE students participate in a wide range of groundbreaking research projects with immediate relevance to real-world engineering applications. For more information, see the department's research centers Web site (https://cee.illinois.edu/research/research-centers/).

CEE at Illinois is one of the nation's best-equipped programs, with a broad range of facilities for civil and environmental engineering education and research. For more information, see the department's research facilities Web site (https://cee.illinois.edu/research/research-facilities/).
Other Graduate Programs in the Department of Civil & Environmental Engineering

- degrees:
  - Civil Engineering, PhD ([link](http://catalog.illinois.edu/graduate/engineering/civil-engineering-phd/))
    - optional concentrations for the PhD:
      - Computational Science & Engineering ([link](http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/))
  - Environmental Engineering in Civil Engineering, MS ([link](http://catalog.illinois.edu/graduate/engineering/environmental-engineering-civil-engineering-ms/))
    - optional concentrations:
      - Computational Science and Engineering ([link](http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/))
  - Environmental Engineering in Civil Engineering, PhD ([link](http://catalog.illinois.edu/graduate/engineering/environmental-engineering-civil-engineering-phd/))
    - optional concentrations:
      - Computational Science and Engineering ([link](http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/))
    - concentrations:
      - Railway Engineering ([link](http://catalog.illinois.edu/graduate/engineering/engineering-meng/railway/))
      - available for:
        - Engineering, MENG ([link](http://catalog.illinois.edu/graduate/engineering/engineering-meng/))
  - joint programs:
    - Civil Engineering, MS & Architecture, MARCH ([link](http://catalog.illinois.edu/graduate/engineering_faa/joint-degree/architecture-march-civil-engineering-ms/)), (Construction Management or Structures)
    - Civil Engineering, MS & Urban Planning, MS ([link](http://catalog.illinois.edu/graduate/faa/joint-degree/urban-planning-mup/))

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The degree requirements for the online programs are the same as for the on-campus non-thesis M.S. program—36 hours of course work—and the degree awarded to online students is the same degree awarded to resident students. Online students have five years to complete the program.

The M.S. degree in Civil Engineering offered online is currently available for specialization in Construction Management, Infrastructure, Structural Engineering, and Transportation Engineering. Students can also develop cross-disciplinary programs in consultation with their advisers. Additional courses are available online in the following areas of concentration to complement the student's area of specialty above: Construction Materials, Environmental Engineering and Science, Environmental Hydrology and Hydraulic Engineering, and Geotechnical Engineering.

For additional details and requirements refer to the department’s Graduate Handbook ([link](https://cee.illinois.edu/academics/graduate-programs/graduate-handbook/)) and the Graduate College Handbook ([link](http://grad.illinois.edu/gradhandbook/)).

This degree program can be completed either on campus or online; with or without a thesis, the requirements are listed below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td></td>
<td><strong>Non-Thesis Option</strong></td>
<td></td>
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<tr>
<td>Elective courses</td>
<td>36 hours subject to Other Requirements and Conditions below</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>Non-Thesis Option</strong></td>
<td><strong>36</strong></td>
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<td></td>
<td><strong>Thesis Option</strong></td>
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<tr>
<td>CEE 599</td>
<td>Thesis Research (4 to 12 hours)</td>
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<tr>
<td>Elective courses</td>
<td>20-28 hours subject to Other Requirements and Conditions below</td>
<td></td>
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<tr>
<td><strong>Total Hours</strong></td>
<td><strong>Thesis Option</strong></td>
<td><strong>32</strong></td>
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Other Requirements

<table>
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<tr>
<th>Requirement</th>
<th>Description</th>
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<tr>
<td>Other Requirements may overlap</td>
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<tr>
<td>Individual programs are developed by the students in consultation with their academic advisors.</td>
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<tr>
<td>A minimum of 16 hours of credit within the major field with 8 graded and at the 500 level.</td>
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Information listed in this catalog is current as of 10/2022
A minimum of 12 hours at the 500-level overall. A maximum of 8 hours of CEE 597 (or other independent study) may be applied toward the elective course work requirement.

At least half of the minimum hours required for the degree must be in Illinois courses meeting on the Urbana-Champaign campus or in courses meeting in other locations approved by the Graduate College for residency credit for the degree.

Minimum program GPA 2.75

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1. Ability to identify and utilize advanced mathematical, computational, design and/or experimental skills to solve complex problems in civil and environmental engineering
2. Demonstrate technical knowledge and depth in at least one or more CEE subject areas and breadth of knowledge in at least one additional area.
3. Demonstrate the ability to communicate effectively (written, oral presentation, and other media) technical ideas, design concepts, or research results.
4. Understanding of the student's professional and scientific ethical responsibilities;
5. Propose, plan, and execute original research idea that target current or future societal challenges related to civil and environmental engineering.
6. Demonstrate skills to teach technical subjects in CEE at the university level

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head of department: Ana Barros (https://cee.illinois.edu/directory/staff/office-department-head/)
director of graduate studies: Jeffery R Roesler (jroesler@illinois.edu)

overview of admissions & requirements: https://CEE.illinois.edu/admissions/graduate/
overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply (https://grad.illinois.edu/admissions/apply/)

department website: https://cee.illinois.edu/
program website: https://cee.illinois.edu/academics/graduate-programs/phd-degree-and-curriculum (https://cee.illinois.edu/academics/graduate-programs/phd-degree-and-curriculum/)
department faculty: https://CEE.illinois.edu/directory/faculty (https://CEE.illinois.edu/directory/faculty/)
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