To graduate with a bachelor of science in civil engineering, a student must achieve the following: 128 or more credits, credit for the civil engineering program’s major and elective courses, satisfaction of the University’s Discovery Program requirements, satisfaction of the University’s writing-intensive course requirements, a cumulative grade-point average of 2.0 or better for all courses, and a cumulative grade-point average of 2.0 or better in all CEE courses.

CIVIL ENGINEERING MAJOR (B.S)

https://ceps.unh.edu/civil-environmental-engineering/program/bs/civil-engineering-major

**Description**

Matriculating students should have strong aptitudes in mathematics and science along with imagination, spatial and graphic abilities, communication skills, and creativity.

Students follow a four-year program of study. The first two years of the program provide the necessary technical knowledge in mathematics, chemistry, and physics, while introducing and developing problem-solving techniques in eight courses tailored to civil engineering students. The junior year provides courses in each of the civil engineering sub-disciplines, providing students with skills in each and allowing students to determine which they wish to pursue further. The senior year is flexible, allowing students to choose where to focus attention by selecting from more than forty elective courses in civil and environmental engineering.

Additional opportunities exist for study abroad, cognates, minors, and dual majors, a three-year accelerated track, and early admission into two masters of science degree programs.

The Civil Engineering program (B S in Civil Engineering) is accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Program Criteria for Civil and Similarly Named Engineering Programs.

**Requirements**

**Degree Requirements**

Minimum Credit Requirement: 129 credits

Minimum Residency Requirement: 32 credits must be taken at UNH

Minimum GPA: 2.0 required for conferral*

Core Curriculum Required: Discovery & Writing Program Requirements

Foreign Language Requirement: No

All Major, Option and Elective Requirements as indicated.

*Major GPA requirements as indicated.

**Major Requirements**

More than half of the major’s total credits and nearly all of the senior-level courses are elected by the student. Of these, there are Discovery Program electives required by the University and other electives required by the department in order to satisfy departmental objectives and accreditation requirements.

The Discovery Program is described in University Academic Requirements. Courses required by the BSCIVE program fulfill Discovery requirements in Inquiry and Environment, Technology, and Society; Writing Skills; Quantitative Reasoning; Physical Sciences and Discovery Lab; and Capstone.

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To transfer into the BSCIVE major, a student must satisfy the following:

1. Be a CEPS major or have at least 12 credits of graded work at UNH along with Calculus I, and either chemistry or calculus-based physics.
2. Have an overall UNH grade-point average of 2.33 or greater.
3. Have an overall grade-point average of 2.33 or greater in all CEE courses taken to date.
4. Have a grade-point average of 2.33 or greater in courses taken to date at UNH of MATH 425, PHYS 407, CHEM 403 or CHEM 405, CEE 500 or ME 525, and CEE 501 or ME 526.

At the time of transferring into the BSCIVE program, only CEE 600-level and CEE 700-level classes with a grade of C- or better may be transferred in.

BSCIVE majors wishing to participate in domestic or international exchange programs must achieve a cumulative grade-point average of 2.75 or better in all CEE courses taken to date at the time of application to the exchange program.

To begin taking the required CEE 600-level courses in the junior year, students must meet the following requirements:

1. MATH 425, PHYS 407, CHEM 403 or CHEM 405, CEE 500 or ME 525 ; and CEE 501 or ME 526 must have been completed with passing grades.
2. The student must have a grade-point average of 2.00 or greater in all CEE courses.
3. The student must have a grade-point average of 2.00 or greater in MATH 425, PHYS 407, CHEM 403 or CHEM 405, CEE 500 or ME 525 , and CEE 501 or ME 526 .
4. The student must have a grade-point average of 2.00 or greater in CEE 500 or ME 525 and CEE 501 or ME 526 .

To transfer to the BSCIVE major, a student must satisfy the following:

1. Be a CEPS major or have at least 12 credits of graded work at UNH along with Calculus I, and either chemistry or calculus-based physics.
2. Have an overall UNH grade-point average of 2.33 or greater.
3. Have an overall grade-point average of 2.33 or greater in all CEE courses taken to date;
4. Have a grade-point average of 2.33 or greater in courses taken to date at UNH of MATH 425, PHYS 407, CHEM 403 or CHEM 405, CEE 500 or ME 525 , and CEE 501 or ME 526 .
### Third Year

**Fall**

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<td>CEE 635</td>
<td>Engineering Materials</td>
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<tr>
<td>CEE 650</td>
<td>Fluid Mechanics</td>
<td>4</td>
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<td>CEE 680</td>
<td>Classical Structural Analysis</td>
<td>3</td>
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**Credits** 18

**Spring**

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<td>CEE 620</td>
<td>Fundamental Aspects of Environmental Engineering</td>
<td>4</td>
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<td>CEE 665</td>
<td>Soil Mechanics</td>
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<td>Elective Statistics</td>
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**Credits** 15

### Fourth Year

**Fall**

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<td>Elective Project-Based Design Elective</td>
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<tr>
<td>Elective Area Elective 2</td>
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<tr>
<td>Elective Civil Engineering 3</td>
<td></td>
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<td>Elective Discovery Program requirement 1</td>
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**Credits** 16

**Spring**

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<th>Course Code</th>
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<tr>
<td>CEE 798</td>
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<td>Elective Senior Technical Elective 3</td>
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**Credits** 14

**Total Credits** 128

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1 A course satisfying one each of the Discovery Program categories of Biological Science, Humanities, Fine and Performing Arts, Historical Perspectives, Social Science and World Cultures, preferably taken in this order. The Discovery Social Science elective must be selected from CEP 415, ECON 401, ECON 402, EREC 411, GEOG 582, GEOG 584, or POLT 402.

2 Satisfies capstone requirement for Discovery.

3 Approved list available in the CEE office.

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### Student Learning Outcomes

By the time of graduation students have attained:

- an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- an ability to communicate effectively with a range of audiences.
- an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.