Bachelor of Science in Civil Engineering

Learn more about the Bachelor of Science in Civil Engineering (https://www.temple.edu/academics/degree-programs/civil-engineering-major-en-cee-bsce).

Goals, Objectives & Design Integration

Civil Engineering professionals plan, design, construct, and operate facilities which are essential to the quality of modern life. The Civil Engineering curriculum is based upon providing a fully-integrated design experience by beginning with introductory courses in the study of engineering history and economics, then progressing through a broad coverage of the primary areas of practice within Civil Engineering (surveying, structures, geotechnical engineering, construction engineering, water resources, transportation, and environmental engineering), and finishing with a year-long capstone Civil Engineering senior design project. The goal of the Civil Engineering program is to prepare students to pursue graduate education in their specific areas of interest, to pass the Fundamental of Engineering and Professional Engineer exams in the areas of practice within Civil Engineering, and become involved in design, project planning and research.

Summary of Requirements

University Requirements

All new students are required to complete the university's General Education (GenEd) curriculum.

All Temple students must take a minimum of two writing-intensive courses for a total of at least six credits. The writing-intensive course credits are counted as part of the major; they are not General Education (GenEd) or elective credits. The writing-intensive courses must be completed at Temple University and students may not transfer in credits to satisfy this requirement. The specific writing-intensive courses required for this major are:

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<th>Credit Hours</th>
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<td>Honors Technical Communication by Design</td>
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<td>ENGR 4296</td>
<td>Senior Design Project II</td>
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Department Requirements

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<td>General Chemistry Laboratory I</td>
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<tr>
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<td>Introductory Geology</td>
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<td>EES 2001</td>
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## Required General Education Courses
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<td>ENG 0812</td>
<td>Analytical Reading and Writing: ESL</td>
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<tr>
<td>ENG 0902</td>
<td>Honors Literature/Reading/Writing</td>
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<tr>
<td>IH 0851</td>
<td>Intellectual Heritage I: The Good Life</td>
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<tr>
<td>or IH 0951</td>
<td>Honors Intellectual Heritage I: The Good Life</td>
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<tr>
<td>IH 0852</td>
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<tr>
<td>or IH 0952</td>
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<tr>
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<tr>
<td>GenEd 08xx or 09xx (Global/World Society)</td>
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<td>GenEd 08xx or 09xx (Human Behavior)</td>
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<tr>
<td>GenEd 08xx or 09xx (The Arts)</td>
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<td>GenEd 08xx or 09xx (Race and Diversity)</td>
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## Required Civil Engineering Courses

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<td>Transportation Engineering</td>
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<td>Construction Engineering</td>
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<td>Soil Mechanics Laboratory</td>
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<td>Structural Analysis Laboratory</td>
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## Required Engineering Courses

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<td>ENGR 1102</td>
<td>Introduction to Engineering Problem Solving</td>
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<td>ENGR 1117</td>
<td>Engineering Graphics</td>
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<td>ENGR 2196</td>
<td>Technical Communication (WI)</td>
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<td>or ENGR 2996</td>
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<td>Engineering Statics ¹</td>
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<td>Engineering Dynamics ¹</td>
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<tr>
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<td>Honors Mechanics of Solids</td>
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<td>Mechanics of Fluids</td>
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<td>or ENGR 3953</td>
<td>Honors Mechanics of Fluids</td>
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<tr>
<td>ENGR 3571</td>
<td>Classical and Statistical Thermodynamics</td>
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<td>ENGR 4169</td>
<td>Engineering Seminar</td>
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<td>Senior Design Project I for Civil Engineering</td>
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<td>Senior Design Project II (WI)</td>
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<tr>
<td>MEE 3506</td>
<td>Fluid Mechanics Laboratory</td>
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### Total Credit Hours 128-129

¹ Course must be passed with a C- or better.
# Suggested Academic Plan

Please note that this is a suggested academic plan. Depending on your situation, your academic plan may look different.

## Bachelor of Science in Civil Engineering

### Requirements for New Students starting in the 2018-2019 Academic Year

<table>
<thead>
<tr>
<th>Year 1</th>
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<th>Credit Hours</th>
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<td>MATH 1042 or 1942</td>
<td>Calculus II</td>
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<td>MATH 3041 or 3941</td>
<td>Differential Equations I</td>
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<td>IH 0852 or 0952</td>
<td>Intellectual Heritage II: The Common Good [GZ]</td>
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<td>CEE 2011</td>
<td>Civil Engineering Materials</td>
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<td><strong>Spring</strong></td>
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<td>Steel Concrete Design</td>
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</table>
Bachelor of Science in Civil Engineering

| MEE 3506 | Fluid Mechanics Laboratory | 1 |
| CEE 2711 | Environmental Chemistry Microbiology | 3-4 |
| EES 1001 | Introductory Geology | |
| EES 2001 | Physical Geology | |

Select one of the following:

- CEE 2711: Environmental Chemistry Microbiology
- EES 1001: Introductory Geology
- EES 2001: Physical Geology

Term Credit Hours: 15-16

**Year 4**

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Term Credit Hours: 17

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Term Credit Hours: 15

Total Credit Hours: 128-129

**Bachelor of Science in Civil Engineering - Temple Rome Semester Abroad Option**

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<td>CHEM 1035</td>
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Term Credit Hours: 15

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Term Credit Hours: 17

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Term Credit Hours: 17

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### Bachelor of Science in Civil Engineering

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<td>ITAL 1001</td>
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**Term Credit Hours:** 13

#### Year 3

**Fall**

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<td>CEE 3412</td>
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<td>Differential Equations I</td>
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**Term Credit Hours:** 17

**Spring**

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<td>MEE 3506</td>
<td>Fluid Mechanics Laboratory</td>
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<tr>
<td>CEE 3441</td>
<td>Steel Concrete Design</td>
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Select one of the following:

- CEE 2711 | Environmental Chemistry Microbiology | 3-4 |
- EES 1001 | Introductory Geology                 |    |
- EES 2001 | Physical Geology                     |    |

**Term Credit Hours:** 15-16

#### Year 4

**Fall**

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<th>Course Title</th>
<th>Credit Hours</th>
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<td>Approved Civil Engineering Technical Elective #1</td>
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<td>CEE 3711</td>
<td>Environmental Engineering</td>
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<tr>
<td>CEE 3311</td>
<td>Construction Engineering</td>
<td>3</td>
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<td>GenEd Breadth Course¹</td>
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<td>Free Elective</td>
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**Term Credit Hours:** 17

**Spring**

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**Term Credit Hours:** 17

**Total Credit Hours:** 128-129

¹ Students participating in the College of Engineering Temple Rome semester abroad program will not be required to complete the Global/World Society General Education requirement as the abroad experience will waive the Global/World Society requirement.

### APPROVED CIVIL ENGINEERING TECHNICAL ELECTIVES

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<td>CEE 3334</td>
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<td>CEE 3611</td>
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<td>Contaminant Dynamics in Urban Streams</td>
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