The first two years of the civil engineering curriculum build a solid foundation in mathematics, science and engineering science which are the necessary building blocks for a successful career in engineering. The third year provides an introduction to the various civil engineering disciplines and engineering principles, methods of analysis, and design. The fourth year provides the opportunity to pursue either a broad based program in general civil engineering or pursue more depth in an area of specialization by choice of one of eight tracks, described further below. The curriculum also includes courses in history, government/political science, social sciences, language, philosophy and culture and creative arts that help students:

1. understand the need for considering the global and societal context in which engineering solutions are completed,
2. understand professional and ethical responsibility, and
3. be knowledgeable of contemporary issues.

Students are encouraged to participate in cooperative education or to intern with civil engineering agencies during their undergraduate education.

All students must choose one of the eight tracks in the BS in Civil Engineering curriculum: construction engineering and management (http://catalog.tamu.edu/undergraduate/engineering/civil/bs/construction-engineering-management-track), coastal and ocean (http://catalog.tamu.edu/undergraduate/engineering/civil/bs/coastal-ocean-engineering-track), environmental (http://catalog.tamu.edu/undergraduate/engineering/civil/bs/environmental-engineering-track), general (http://catalog.tamu.edu/undergraduate/engineering/civil/bs/general-engineering-track), geotechnical (http://catalog.tamu.edu/undergraduate/engineering/civil/bs/geotechnical-engineering-track), structural (http://catalog.tamu.edu/undergraduate/engineering/civil/bs/structural-engineering-track), transportation (http://catalog.tamu.edu/undergraduate/engineering/civil/bs/transportation-engineering-track), and water resources (http://catalog.tamu.edu/undergraduate/engineering/civil/bs/water-resources-engineering-track). The choice of track determines acceptable courses for technical electives listed in the general curriculum.

**Program Requirements**

The freshman year is identical for degrees in aerospace engineering, biomedical engineering, civil engineering, computer engineering, computer science, electrical engineering, electronic systems engineering technology, industrial distribution, industrial engineering, manufacturing and mechanical engineering technology, mechanical engineering, multidisciplinary engineering technology, nuclear engineering, ocean engineering, and petroleum engineering. The freshman year is slightly different for chemical engineering in that students take CHEM 101/CHEM 111 or CHEM 107/CHEM 117 and CHEM 102/CHEM 112, Biomedical Engineering also requires a two semester sequence of chemistry courses consisting of CHEM 101/CHEM 111 or CHEM 107/CHEM 117 and CHEM 102/CHEM 112.

Students pursuing degrees in biological and agricultural engineering should refer to the specific curriculum for this major. It is recognized that many students will change the sequence and number of courses taken in any semester. Deviations from the prescribed course sequence, however, should be made with care to ensure that prerequisites for all courses are met.

### First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 104 Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 111 Foundations of Engineering I</td>
<td>2</td>
</tr>
<tr>
<td>MATH 151 Engineering Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 218 Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>University Core Curriculum (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum</a>)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Spring

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 107 General Chemistry for Engineering Students 1,4</td>
</tr>
<tr>
<td>CHEM 117 General Chemistry for Engineering Students Laboratory</td>
</tr>
<tr>
<td>ENGR 112 Foundations of Engineering II</td>
</tr>
<tr>
<td>MATH 152 Engineering Mathematics II</td>
</tr>
<tr>
<td>PHYS 208 Electricity and Optics</td>
</tr>
<tr>
<td>University Core Curriculum (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum</a>)</td>
</tr>
</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>CVEN 207 Introduction to the Civil Engineering Profession</td>
</tr>
<tr>
<td>CVEN 221 Engineering Mechanics: Statics</td>
</tr>
<tr>
<td>MATH 251 Engineering Mathematics III</td>
</tr>
<tr>
<td>STAT 211 Principles of Statistics I</td>
</tr>
</tbody>
</table>
A total of 33 hours of technical electives is required. Technical electives are divided into four categories: science courses, breadth courses, focus courses, and capstone design courses. The choice of courses to be taken in each of the four categories depends on the track chosen and must be made in consultation with the student’s advisor and/or the Civil Engineering Undergraduate Student Services Office. Capstone design courses must include more than one civil engineering context.

All students must take at least two courses in their major that are designated as writing intensive (W). ENGR 482 and CVEN 424 taken at Texas A&M satisfy this requirement. Other CVEN courses may be approved as W courses at a later date. A grade of C or better is required in these courses.

A grade of C or better is required in all science, mathematics and engineering courses taken to satisfy degree requirements.

Total Program Hours 128