# B.S., CIVIL ENGINEERING

**Minimum Requirements for Degree: 134 credits**
Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>General University Requirements</strong></td>
<td>Complete the general university requirements. (<a href="http://catalog.uaf.edu/bachelors/">http://catalog.uaf.edu/bachelors/</a>)</td>
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<tr>
<td><strong>General Education Requirements</strong></td>
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As part of the general education requirements, complete:

- CHEM F105X General Chemistry I
- CHEM F106X General Chemistry II
- MATH F251X Calculus I

**B.S. Degree Requirements**

Complete the B.S. degree requirements. ([http://catalog.uaf.edu/bachelors/summary-of-bachelors-degree-reqs/#bachelorofsciencetext](http://catalog.uaf.edu/bachelors/summary-of-bachelors-degree-reqs/#bachelorofsciencetext))

As part of the B.S. degree requirements, complete:

- MATH F252X Calculus II
- PHYS F211X General Physics I
- PHYS F212X General Physics II

**Program Requirements**

- CE F112 Elementary Surveying 3
- CE F302 Fundamentals of Transportation Engineering 3
- CE F326 Introduction to Geotechnical Engineering 4
- CE F331 Structural Analysis 3
- CE F334 Properties of Materials 3
- CE F341 Environmental Engineering 4
- CE F344 Water Resources Engineering 3
- CE F432 Steel Design 3
- CE F437 Design of Engineered Systems I\(^1\) 3
- CE F438 Design of Engineered Systems II\(^1\) 3
- CE F470 Civil Engineering Internship 1
  or CE F471 Field Practicum
- ES F101 Introduction to Engineering 3
- ES F201 Computer Techniques 3
- ES F209 Statics 3
- ES F210 Dynamics 3
- ES F301 Engineering Analysis 3
- ES F331 Mechanics of Materials 3
- ES F341 Fluid Mechanics 4
- ESM F422 Engineering Decisions 3
- ESM F450 Economic Analysis and Operations 3
- GE F261 General Geology for Engineers 3
- MATH F253X Calculus III 4
- MATH F302 Differential Equations 3

**Technical Electives**

Field of environmental engineering, construction or transportation 3
CE, ENVE, ESM courses or approved technical courses, 6
ES F307 Elements of Electrical Engineering or ES F346 Introduction to Thermodynamics 3

**Fundamentals of Engineering (FE) Examination**

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

1. Fulfills the baccalaureate capstone requirement.
2. Up to two graduate-level courses may be used towards graduation. Graduate-level courses must be approved by student’s advisor, and the student must be within two semesters of graduation and have at least a 3.0 GPA to take graduate-level courses.

**Note:** The ability to use computers for normal class work is expected in all engineering classes above the F100 level.