### B.S. CIVIL ENGINEERING - TRADITIONAL MATH 2017

#### FRESHMAN
- Fall (17 hrs)
  - CVEEN 1000 Intro to Civil & Environmental Engineering (4)
  - CHEM 1210 Calculus I (QR) (4)
  - PHYS 2210 Physics for Sci & Engineers I (4)
  - General Ed. Requirement (3)
- Spring (16 hrs)
  - CVEEN 1010 Intermediate Writing (3)
  - CHEM 1210 Gen Chemistry I (2)
  - CHEM 1215 Gen Chemistry I Lab (1)
  - MATH 1050 or 1060 or Math 1080 (3)
  - See catalog for individual prerequisites (3)

#### SOPHOMORE
- Fall (14.5 hrs)
  - MATH 1210 Calculus II (4)
  - MATH 2210 Diff Equations & Linear Algebra (4)
  - CVEEN 2140 Strength of Materials (3)
  - CVEEN 2310 Probability & Statistics (3)
  - CHEM 1225 Gen Chemistry II Lab (1)
- Spring (19 hrs)
  - CHEM 2250 Elements of MSE (3)
  - CH EN 2300 Thermodynamics (2)
  - CVEEN 2210 Calculus III (4)
  - MATH 2250 Diff Equations & Linear Algebra (4)

#### JUNIOR
- Fall (15.5 hrs)
  - MATH 2250 Diff Equations & Linear Algebra (4)
  - CRC 2210 Structural Loads & Analysis (3)
  - CVEEN 2310 Probability & Statistics (3)
  - CVEEN 2140 Strength of Materials (3)
  - MATH 2250 Diff Equations & Linear Algebra (4)
- Spring (16 hrs)
  - MATH 2250 Diff Equations & Linear Algebra (4)
  - CRC 2210 Structural Loads & Analysis (3)
  - CVEEN 2310 Probability & Statistics (3)
  - CVEEN 2140 Strength of Materials (3)
  - MATH 2250 Diff Equations & Linear Algebra (4)

#### SENIOR
- Fall (15.5 hrs)
  - MATH 2250 Diff Equations & Linear Algebra (4)
  - CRC 2210 Structural Loads & Analysis (3)
  - CVEEN 2310 Probability & Statistics (3)
  - CVEEN 2140 Strength of Materials (3)
  - MATH 2250 Diff Equations & Linear Algebra (4)
- Spring (15 hrs)
  - MATH 2250 Diff Equations & Linear Algebra (4)
  - CRC 2210 Structural Loads & Analysis (3)
  - CVEEN 2310 Probability & Statistics (3)
  - CVEEN 2140 Strength of Materials (3)
  - MATH 2250 Diff Equations & Linear Algebra (4)

### Recommended General Education Courses:
- LEAP 1501 Social & Ethical Engineering (BF) - Fall Only
- LEAP 1500 Humanities for Engineers (HFDV) - Spring Only

Total Required Credit Hours: 128.5
### TECHNICAL ELECTIVES

Congratulations on reaching the Technical Electives! These delve deeper into the various areas covered in the 3000-level courses. A total of 6 Technical Electives, with the exception of Fastrax students, are required. While you are able to take courses in your areas of interest, further specialization is achieved by pursuing Graduate School.

#### Primary Technical Electives

**To graduate with a Bachelor of Science Degree in Civil Engineering you must:**

1. Take at least one course from 3 of the 5 emphasis areas in the Primary section. Three different checkboxes must be marked to fulfill this requirement.
2. Complete at least two Design courses from different emphasis areas. These are designated by a shaded box. Example: CVEEN 4221 and CVEEN 5420

As long as these requirements are satisfied, you may take the remaining 3 technical electives in either section.

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Structures</th>
<th>Geotech &amp; Materials</th>
<th>Transportation</th>
<th>Water Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVEEN 5605 Water and Wastewater Treatment</td>
<td>CVEEN 4221 Concrete I</td>
<td>CVEEN 5305 Introduction to Foundations</td>
<td>CVEEN 5510 Highway Design</td>
<td>CVEEN 5410 Engineering Hydrology</td>
</tr>
<tr>
<td>CVEEN 3210 ↓</td>
<td>CVEEN 3210 ↓</td>
<td>CVEEN 3510 &amp; 3515 ↓</td>
<td>CVEEN 3520 ↓</td>
<td>CVEEN 3410 &amp; 3415 ↓</td>
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<tr>
<td>CVEEN 4222 Steel I</td>
<td>CVEEN 5570 Pavement Design</td>
<td>CVEEN 5500 Sustainable Materials</td>
<td>CVEEN 5560 Transportation Planning</td>
<td>CVEEN 5420 Open-Channel</td>
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<td>SP 3</td>
<td>F 3</td>
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#### Secondary Technical Electives

With the exception of Construction, where only one course may be taken, you may take multiple courses in a single emphasis area — up to a total of 3 courses.

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Structures</th>
<th>Construction (Max 1)</th>
<th>Nuclear Engineering</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVEEN 5610 Water Chemistry</td>
<td>CVEEN 5210 Structural Analysis II</td>
<td>CVEEN 5100 ↓</td>
<td>CHEM 1220, PHYS 2220, MATH 1220 ↓</td>
<td>CVEEN 5110 Nuclear Principles in Engineering &amp; Science</td>
</tr>
<tr>
<td>CVEEN 3610 &amp; 3615 ↓</td>
<td>CVEEN 5230 Steel II</td>
<td>CVEEN 3100 ↓</td>
<td>CHEM 1400 &amp; MG EN 2400 ↓</td>
<td>F/SP 3</td>
</tr>
<tr>
<td>CVEEN 4222 ↓</td>
<td>CVEEN 3210 ↓</td>
<td>CVEEN 5710 Cost Estimation &amp; Proposal Writing</td>
<td>CVEEN 5710 Project Management &amp; Contract Administration</td>
<td>NEUCL 3000 Nuclear Principles in Engineering &amp; Science</td>
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<tr>
<td>CVEEN 4221 ↓</td>
<td>CVEEN 3210 ↓</td>
<td>F 18/20</td>
<td>SP 18/20</td>
<td>F/SP 3</td>
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<td>SP 3</td>
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<td>3</td>
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### Caveat

Semester availability is subject to change at the discretion of the department and does not create a binding contractual nexus or obligation between the student and the University of Utah.