# B.S. CIVIL ENGINEERING - TRADITIONAL MATH 2018

## FRESHMAN

### Fall (17 hrs)
- **CVEEN 1000** Intro to Civil & Environmental Engineering (F/S/P/SU)
- **MATH 1210** Calculus I (QR) (F/S/P/SU)
- **PHYS 2210** Physics for Sci & Engineers I (F/S/P/SU)
- **CHEM 1210** Gen Chemistry I (F/S/P/SU)
- **CHEM 1215** Lab (F/S/P/SU)

### Spring (16 hrs)
- **CVEEN 1400** Computer-Aided Design (F/S/P/SU)
- **MATH 1220** Calculus II (F/S/P/SU)
- **WRTG 1010** Intermediate Writing (F/S/P/SU)
- **CHEM 1220** Gen Chemistry II (F/S/P/SU)
- **PHYS 2220** Physics for Sci & Engineers II (F/S/P/SU)

## SOPHOMORE

### Fall (14.5 hrs)
- **CVEEN 2000** Seminar (F)
- **CVEEN 2010** Strength of Materials (F/S/P)
- **MATH 1210** Calculus I (QR) (F/S/P/SU)
- **CHEM 1220** Gen Chemistry II Lab (F/S/P/SU)
- **PHYS 2225** Physics for Sci & Engineers II Lab (F/S/P/SU)

### Spring (18 hrs)
- **CVEEN 2140** Structural Loads & Analysis (QI) (F/S/P/SU)
- **CVEEN 2750** Computer Tools (F/S/P)
- **MATH 2210** Diff Equations & Linear Algebra (F/S/P/SU)
- **MG EN 2400** Surveying (F/S/P/SU)
- **Additional Science Requirement** (F/S/P/SU)

## JUNIOR

### Fall (17 hrs)
- **CVEEN 2010** Calculus Windsor (QI) (F/S/P/SU)
- **ME EN 2030** Design ME EN 2030 (F/S/P)
- **CHEM 1210** Gen Chemistry I Lab (F/S/P/SU)
- **MG EN 2140 & 2310** Transportation (F/S/P/SU)
- **General Ed. Requirement** (F/S/P/SU)

### Spring (17 hrs)
- **CVEEN 3210** Geotech I (QI) (F/S/P/SU)
- **CVEEN 3100** Professional Practice (F/S/P/SU)
- **ME EN 2050** Design ME EN 2050 (F/S/P/SU)
- **ME EN 2150 & 2310** Transportation (F/S/P/SU)
- **General Ed. Requirement** (F/S/P/SU)

## SENIOR

### Fall (15 hrs)
- **CVEEN 4900** Design Capstone (F/S/P/SU)
- **CVEEN 3000** Advanced Design (F/S/P/SU)
- **CVEEN 3100** Advanced Design (F/S/P/SU)
- **Technical Elective** (F/S/P/SU)
- **Elective** (F/S/P/SU)

### Spring (15 hrs)
- **CVEEN 4000** Design Capstone (F/S/P/SU)
- ** CVEEN 4100** Advanced Design (F/S/P/SU)
- **Technical Elective** (F/S/P/SU)
- **Elective** (F/S/P/SU)
- **Elective** (F/S/P/SU)

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### KEY
- **F/S/P/SU**: Full Semester Course
- **F**: Fall Only
- **S**: Spring Only
- **SU**: Summer Only
- **SP**: S/U Option
- **QR**: Quantitative Reasoning
- **DV**: Distinct Vital
- **BF**: Bottleneck
- **QI**: Quantitative Inquiry
- **(BF)**: Bottleneck
- **(QI)**: Quantitative Inquiry
- **(SP)**: S/U Option

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### Have you completed 3 of the 4 shaded courses? Is your EGPA 2.50? If yes, apply for Full Major Status!

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### Additional Science Requirement

- The Additional Science Requirement is satisfied by taking any 1000-level course in the following departments: Biology, Geology & Geophysics, and Atmospheric Sciences.

### Recommended General Education Courses

- LEAP 1501 Social & Ethical Engineering (BF) - Fall only
- LEAP 1500 Humanities for Engineers (HFDV) - Spring only

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Updated February 7, 2018

Total Required Credit Hours: 129.5
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 & Environmental 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.

Environmental

- CVEEN 3610 & 3615
- CVEEN 3610
- CVEEN 3615
- CVEEN 5605
  - Water and Wastewater Treatment

Structures

- CVEEN 4221
  - Concrete I
- CVEEN 5305
  - Introduction to Foundations
- CVEEN 5500
  - Sustainable Materials

Geotech & Materials

- CVEEN 5570
  - Pavement Design

Transportation

- CVEEN 5510
  - Highway Design
- CVEEN 5560
  - Transportation Planning
- CVEEN 5420
  - Open-Channel

Water Resources

- CVEEN 5410
  - Engineering Hydrology
- CVEEN 3410 & 3415

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.

Environmental

- CVEEN 3610 & 3615
- CVEEN 3610
- CVEEN 3615
- CVEEN 5610
  - Water Chemistry

Structures

- CVEEN 4221
  - Concrete II
- CVEEN 4222
  - Steel I
- CVEEN 4223
  - Reinforced Timber/Masonry

Construction Management (Max 1)

- CVEEN 5710
  - Cost Estimation & Proposal Writing
- CVEEN 5720
  - Project Scheduling
- CVEEN 5730
  - Engineering Law & Contracts

Nuclear Engineering

- CHEM 1220, PHYS 2220, MATH 1220
- NUCL 3000
  - Nuclear Principles in Engineering & Science
- NUCL 3100
  - Neutron Based Engineering

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.