

B.S. CIVIL ENGINEERING - TRADITIONAL MATH 2024

| FRESHMAN | | SOPHOMORE | | JUNIOR | | SENIOR | |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------|
| <i>Fall (14 hrs)</i> | <i>Spring (15 hrs)</i> | <i>Fall (16 hrs)</i> | <i>Spring (16 hrs)</i> | <i>Fall (14 hrs)</i> | <i>Spring (17 hrs)</i> | <i>Fall (15 hrs)</i> | <i>Spring (15 hrs)</i> |
| CVEEN 1000 Intro to Civil & Environmental Engineering F 3 | CVEEN 1400 Computer-Aided Design SP 3 | CVEEN 2000 Seminar F 1 | CVEEN 2140 Strength of Materials F/SP 3 | CVEEN 3210 Structural Loads & Analysis (QI) F/SP 3 | CVEEN 3100 Technical Communication (CW) F/SP 3 | CVEEN 4900 Professional Practice & Design I F/SP 3 | CVEEN 4910 Professional Practice & Design II F/SP 3 |
| MATH (1050 & 1060) or MATH 1080 ↓ | MATH 1210 ↓ | MATH 1210 & PHYS 2210 ↓ | See catalog for individual prerequisites ↓ | CVEEN 2140 & 2310 ↓ | CVEEN 2140 & 2310 ↓ | CVEEN 3100 ↓ | CVEEN 4900 & 2 Design Technical Electives ↓ |
| MATH 1210 Calculus I (QL) F/SP 4 | MATH 1220 Calculus II F/SP/SU 4 | CVEEN 2010 Statics F/SP 3 | CVEEN 2750 Computer Tools or COMP 1010 Programming For All F/SP 3 | CVEEN 3510 Materials (QI) 3 CVEEN 3515 Lab 1 | CVEEN 3310 Geotech (QI) 3 CVEEN 3315 Lab 1 | Design Technical Elective F/SP 3 | Technical Elective F/SP 3 |
| MATH 1050 ↓ | MATH 1210 ↓ | | CVEEN 2010, PHYS 2210 & MATH 2250 ↓ | CVEEN 2310 & 2140 ↓ | CVEEN 2140 & 2310 ↓ | | |
| CHEM 1210 Gen Chemistry I (PS) F/SP/SU 4 | PHYS 2210 Physics for Sci & Engineers I F/SP/SU 4 | CVEEN 2310 Probability & Statistics F/SP 3 | ME EN 2030 Dynamics F/SP/SU 3 | CVEEN 3520 Transportation F/SP 3 | CVEEN 3410 Hydraulics (QI) 3 CVEEN 3415 Lab 1 | Technical Elective F/SP 3 | Technical Elective F/SP 3 |
| WRTG 1010 ↓ | See catalog for individual prerequisites ↓ | | MATH 2210 & PHYS 2210 ↓ | CHEM 1210 & CVEEN 2140 ↓ | | | |
| ENGL 2010 or WRTG 2010 Intermediate Writing (WR2) F/SP/SU 3 | Science Exploration F/SP/SU 3+ | CVEEN 2320 Economics & Management F/SP 3 | MATH 2250 Diff Equations & Linear Algebra F/SP/SU 4 | CVEEN 3610 Environmental 3 CVEEN 3615 Lab 1 | Design Technical Elective F/SP 3 | Technical Elective F/SP 3 | General Ed. Requirement (BF) F/SP/SU 3 |
| | See catalog for individual prerequisites ↓ | See catalog for individual prerequisites ↓ | | | | | |
| | CHEM 1215 Gen Chemistry I Lab or PHYS 2215 Physics for Sci & Eng. I Lab F/SP/SU 1 | CVEEN 2410 Geomatics or MG EN 2400 Surveying F/SP 3 | * Additional Science CVEEN 1060 Life Science in Eng. or BIOL 1010 Bio in 21st Century (DV) or BIOL 1030 Human Biology or BIOL 1610 Fund. of Biology I (LS) F/SP/SU 3+ | | General Ed. Requirement + DV (HF + DV) F/SP/SU 3 | American Institutions (AI) F/SP/SU 3 | General Ed. Requirement + IR (FF + IR) F/SP/SU 3 |
| | | MATH 1220 ↓ | | | | | |
| | | MATH 2210 Calculus III F/SP/SU 3 | | | | | |


Have you completed 3 of the 4 shaded courses? Is your cumulative GPA ≥ 2.50? If yes, apply for Major Status!


□ Science Exploration is satisfied by taking CHEM 1220 or PHYS 2220 or any 1000+ course in the following departments: Biology, Geology & Geophysics, and Atmospheric Sciences.

* The course used to satisfy the Science Exploration cannot be double counted to satisfy the Additional Science and vice versa.

Recommended General Education Courses
LEAP 1501 Social & Ethical Engineering (BF) - Fall only
LEAP 1500 Humanities for Engineers (HF + DV) - Spring only

KEY

Full Major Status Required 

Prerequisite 

Corequisite



TECHNICAL ELECTIVES

Students must fulfill 6 technical elective requirements, ensuring they meet the following sub-criteria:

1. Complete at least **one** course in **4 of the 6** different areas within Complex Engineering.
2. Complete at least **two** design courses from **different areas**. These are designated by a **shaded box**.

As long as these requirements are met, students have the flexibility to choose the remaining **two** technical electives from either section.

COMPLEX ENGINEERING ELECTIVES

| <u>Environmental</u> | <u>Structures</u> | <u>Geotechnical</u> | <u>Materials</u> | <u>Transportation</u> | <u>Water Resources</u> |
|-------------------------------------------------------------|----------------------------------------|---------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------|----------------------------------------------------|
| CVEEN 3610, 3615 & 2140 ↓ | CVEEN 3210 ↓ | CVEEN 3310 & 3315 ↓ | CVEEN 3510 & 3515 ↓ | CVEEN 3520 & 2140 ↓ | CVEEN 3410 & 3415 ↓ |
| CVEEN 5605 Water and Wastewater Treatment SP 3 | CVEEN 4221 Concrete I F 3 | CVEEN 5305 Introduction to Foundations F 3 | CVEEN 5500 Sustainable Materials (IR) SP 3 | CVEEN 5510 Highway Design SP 3 | CVEEN 5410 Engineering Hydrology SP 3 |
| | CVEEN 3210 ↓ | | CVEEN 3510, 3515 & 3520 ↓ | CVEEN 3520 & 2140 ↓ | CVEEN 3410 & 3415 ↓ |
| | CVEEN 4222 Steel I SP 3 | | CVEEN 5570 Pavement Design F 3 | CVEEN 5560 Transportation Planning SP 3 | CVEEN 5420 Open-Channel F 3 |

ADDITIONAL TECHNICAL ELECTIVES

| <u>Course #</u> | <u>Course Title</u> | <u>Pre-reqs</u> | <u>Semester</u> | <u>Course #</u> | <u>Course Title</u> | <u>Pre-reqs</u> | <u>Semester</u> |
|-----------------|-----------------------------|---------------------|-----------------|-----------------|-------------------------------------------------------------------------------------------------|----------------------------------|-----------------|
| CVEEN 3700 | Principles of Construction | CVEEN 2750 | F | CVEEN 5780 | Façade Engineering | CVEEN 3210 | SP |
| CVEEN 3710 | Contracts Specifications | Major Status | SP | CVEEN 5790 | Vertical Construction | CVEEN 3210 | F |
| CVEEN 4999 | Honors Thesis | Dept. Consent | F/SP | CVEEN 5920 | Special Topics | Dept. Consent | Varies |
| CVEEN 5210 | Structural Analysis II | CVEEN 3210 | SP | NUCL 3000 | Nuclear Principles | CHEM 1220, MATH 1220, CVEEN 2010 | SP (online) |
| CVEEN 5220 | Concrete II | CVEEN 4221 | SP (even) | NUCL 3100 | Radiation Interactions | CHEM 1220, MATH 1220, CVEEN 2010 | SP |
| CVEEN 5230 | Steel II | CVEEN 4222 | F (even) | NUCL 3200 | Radiochemistry | CHEM 1220, MATH 1220, CVEEN 2010 | F (online) |
| CVEEN 5240 | Reinforced Timber/Masonry | CVEEN 3210 | F | CVEEN 6XXX | CVEEN Graduate Courses | Dept. Consent & 3.20 EGPA | F/SP |
| CVEEN 5610 | Water Chemistry | CVEEN 2140, 3610/15 | F | | Any 3+ credit, 3000+ level course from the College of Engineering or an ABET accredited program | Varies | F/SP |
| CVEEN 5710 | Cost Estimating | CVEEN 3100 | F | | | | |
| CVEEN 5720 | Project Scheduling | CVEEN 3100 | F | | | | |
| CVEEN 5730 | Project Management | CVEEN 3100 | SP | | | | |
| CVEEN 5740 | Horizontal Construction | CVEEN 3310/15 | SP | | | | |
| CVEEN 5750 | Engineering Law & Contracts | CVEEN 3100 | SU (even) | | | | |

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