

B.S. CONSTRUCTION ENGINEERING – ENGINEERING MATH 2024


FRESHMAN		SOPHOMORE		JUNIOR		SENIOR	
Fall (14 hrs)	Spring (15 hrs)	Fall (17 hrs)	Spring (15 hrs)	Fall (16 hrs)	Spring (16 hrs)	Fall (15 hrs)	Spring (15 hrs)
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 2010 ↓ See catalog for individual prerequisites ↓	CVEEN 3210 Structural Loads & Analysis (QI) F/SP 3 CVEEN 2140 ↓	CVEEN 3100 Technical Communication (CW) F/SP 3 WR TG 2010 ↓	CVEEN 4221 Concrete I F 3 CVEEN 3210 ↓	CVEEN 4920 Design Capstone SP 3 CVEEN 3100, 3700, 4221, 5720, & 1 Design Tech Ele ↓
MATH (1050 & 1060) or MATH 1080 ↓	MATH 1310 ↓	MATH 1310 & PHYS 2210 ↓	See catalog for individual prerequisites ↓	CVEEN 2140 & 2310 ↓	CVEEN 2140 & 2310 ↓	CVEEN 3100 ↓	CVEEN 3310 & 3315 ↓
MATH 1310 Engineering Calculus I (QL) F/SP 4	MATH 1320 Engineering Calculus II F/SP/SU 4	CVEEN 2010 Statics F/SP 3	CVEEN 2410 Geomatics or MG EN 2400 Surveying F/SP 3	CVEEN 3310 Geotech (QI) F/SP 3 CVEEN 3315 Lab F/SP 1	CVEEN 3510 Materials (QI) F/SP 3 CVEEN 3515 Lab F/SP 1	CVEEN 5720 Project Scheduling F 3	CVEEN 5740 Horizontal Construction SP 3
MATH 1050 or 1080 ↓	MATH 1310 ↓		MATH 1310 ↓	CVEEN 2310 & 2140 ↓		CVEEN 3210 ↓	CVEEN 3210 ↓
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	CVEEN 2750 Computer Tools F/SP 3	CVEEN 3520 Transportation F/SP 3	CVEEN 3710 Contract Specifications SP 3	CVEEN 5790 Vertical Construction F 3	CVEEN 5780 Facade I SP 3
WR TG 1010 ↓	See catalog for individual prerequisites ↓			CVEEN 2750 ↓			
ENGL 2010 or WR TG 2010 Intermediate Writing (WR2) F/SP/SU 3	Science Exploration F/SP/SU 3+	CVEEN 2320 Economics & Management F/SP 3	General Ed. Requirement + DV (HF + DV) F/SP/SU 3	CVEEN 3700 Principles of Construction F 3	Design Technical Elective F/SP 3	Technical Elective F/SP 3	Technical Elective F/SP 3
	See catalog for individual prerequisites ↓	MATH 1320 & PHYS 2210 ↓	* Additional Science				
	CHEM 1215 Gen Chemistry I Lab or PHYS 2215 Physics for Sci & Eng. I Lab F/SP/SU 1	MATH 2250 Diff Equations & Linear Algebra F/SP/SU 4	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 F/SP/SU (LS) 3+	General Ed. Requirement (BF) F/SP/SU 3	American Institutions (AI) F/SP/SU 3	Technical Elective F/SP 3	International Requirement (IR) F/SP/SU 3
<input type="checkbox"/> 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.							
		General Ed. Requirement (FF) 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!

* 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 4 technical elective requirements, ensuring they meet the following sub-criteria:

1. Complete at least **one** course from the primary technical elective section.
2. Complete at least **one** course from the design technical elective section. 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 any section.

PRIMARY TECHNICAL ELECTIVES

CVEEN 3100 ↓

CVEEN 5710

Cost Estimation
& Proposal Writing

F 3

CVEEN 3100 ↓

CVEEN 5730

Project Management
& Contract Admin

SP 3

CVEEN 3100 ↓

CVEEN 5750

Engineering Law
& Contracts

SU 24/26 3

DESIGN TECHNICAL ELECTIVES

CVEEN 3310 & 3315 ↓

CVEEN 5305

Introduction to
Foundations

F 3

CVEEN 3520 & 2140 ↓

CVEEN 5510

Highway Design

SP 3

ADDITIONAL TECHNICAL ELECTIVES

Course #	Course Title	Pre-reqs	Semester	Course #	Course Title	Pre-reqs	Semester
CVEEN 3410/15	Hydraulics	CVEEN 2140 & 2310	F/SP	CVEEN 5610	Water Chemistry	CVEEN 2140, 3610/15	F
CVEEN 3610/15	Environmental Engineering	CHEM 1210 & CVEEN <u>2140</u>	F/SP	CVEEN 5920	Special Topics	Dept. Consent	Varies
CVEEN 4222	Steel I	CVEEN 3210	SP	NUCL 3000	Nuclear Principles	CHEM 1220, MATH 1220, CVEEN 2010	SP (online)
CVEEN 4999	Honors Thesis	Dept. Consent	F/SP	NUCL 3100	Radiation Interactions	CHEM 1220, MATH 1220, CVEEN 2010	SP
CVEEN 5210	Structural Analysis II	CVEEN 3210	SP	NUCL 3200	Radiochemistry	CHEM 1220, MATH 1220, CVEEN 2010	F (online)
CVEEN 5220	Concrete II	CVEEN 4221	SP (even)	CVEEN 6XXX	CVEEN Graduate Courses	3.20 GPA & Instructor Consent	F/SP
CVEEN 5230	Steel II	CVEEN 4222	F (even)		Any 3+ credit, 3000+ level course from the College of Engineering or an ABET accredited program	Varies	F/SP
CVEEN 5240	Reinforced Timber/Masonry	CVEEN 3210	F				
CVEEN 5410	Engineering Hydrology	CVEEN 3410/15	SP				
CVEEN 5420	Open Channel Flow	CVEEN 3410/15	F				
CVEEN 5500	Sustainable Materials (IR)	CVEEN 3510/15	SP				
CVEEN 5570	Pavement Design	CVEEN 3510/15	F				
CVEEN 5605	Water & Wastewater Treat.	CVEEN 3610/15	SP				

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