

B.S CONSTRUCTION ENGINEERING - ENGINEERING MATH 2025

Freshman		Sophomore		Junior		Senior	
Fall (14 hrs)	Spring (15 hrs)	Fall (14 hrs)	Spring (15 hrs)	Fall (16 hrs)	Spring (16 hrs)	Fall (15 hrs)	Spring (15 hrs)
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 1000 Intro to Civil & Environmental Engineering F (3)</p> </div> <div style="width: 48%;"> <p>CVEEN 1400 Computer-Aided Design SP (3)</p> </div> </div>		<p style="text-align: center;">CVEEN 2010 ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 2000 Seminar F (1)</p> </div> <div style="width: 48%;"> <p>CVEEN 2140 Strength of Materials F/SP (3)</p> </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 3210 Structural Loads & Analysis (QI) F/SP (3)</p> </div> <div style="width: 48%;"> <p>CVEEN 3100 Technical Communication (CW) F/SP (3)</p> </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 4221 Concrete I F (3)</p> </div> <div style="width: 48%;"> <p>CVEEN 4920 Construction Capstone SP (3)</p> </div> </div>	
<p style="text-align: center;">WRWG 1010 ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>WRWG 1010 Introduction to Writing (WR1) F/SP/SU (3)</p> </div> <div style="width: 48%;"> <p>ENGL 2010 or WRWG 2010 Intermediate Writing (WR2) F/SP/SU (3)</p> </div> </div>		<p style="text-align: center;">MATH 1310 & PHYS 221Q ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 2010 Statics F/SP (3)</p> </div> <div style="width: 48%;"> <p>CVEEN 2320 Economics & Management F/SP (3)</p> </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 3310 Geotech (QI) F/SP (3)</p> </div> <div style="width: 48%;"> <p>CVEEN 3520 Transportation F/SP (3)</p> </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 5720 Project Scheduling F (3)</p> </div> <div style="width: 48%;"> <p>CVEEN 5740 Horizontal Construction SP (3)</p> </div> </div>	
<p style="text-align: center;">MATH 1050 or MATH 1080 ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CHEM 1210 General Chemistry I (PS) F/SP/SU (4)</p> </div> <div style="width: 48%;"> <p>PHYS 2210 Physics for Sci & Engineers I F/SP/SU (4)</p> </div> </div>		<p style="text-align: center;">See catalog for individual prerequisites ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 2310 Probability & Statistics F/SP (3)</p> </div> <div style="width: 48%;"> <p>CVEEN 2750 Computer Tools or COMP 1010 Programming for All F/SP (3)</p> </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 3510 Materials (QI) F/SP (3)</p> </div> <div style="width: 48%;"> <p>CVEEN 3710 Contract Specifications SP (3)</p> </div> </div>		<p style="text-align: center;">CVEEN 3210 ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 5790 Vertical Construction F (3)</p> </div> <div style="width: 48%;"> <p>Technical Elective F/SP (3)</p> </div> </div>	
<p style="text-align: center;">CHEM 1210 or PHYS 221Q ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CHEM 1215 Gen Chemistry I Lab or PHYS 2215 Physics for Sci & Eng. I Lab F/SP/SU (1)</p> </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>Science Exploration F/SP (3)</p> </div> <div style="width: 48%;"> <p>* Additional Science CVEEN 1060 Life Science in Eng. (LS) SP (3)</p> </div> </div>		<p style="text-align: center;">CVEEN 3310 or 3510 ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 3015 Exploring Geo/Materials Lab F/SP (1)</p> </div> <div style="width: 48%;"> <p>Design Technical Elective F/SP (3)</p> </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>Technical Elective F/SP (3)</p> </div> <div style="width: 48%;"> <p>Technical Elective F/SP (3)</p> </div> </div>	
<p style="text-align: center;">MATH (1050 & 1060) or MATH 1080 ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>MATH 1310 Engineering Calculus I (QL) F/SP (4)</p> </div> <div style="width: 48%;"> <p>MATH 1320 Engineering Calculus II F/SP/SU (4)</p> </div> </div>		<p style="text-align: center;">MATH 1320 & PHYS 2210 ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>MATH 2250 Diff Equations & Linear Algebra F/SP/SU (4)</p> </div> <div style="width: 48%;"> <p>CVEEN 2410 Geomatics or MG EN 2400 Surveying F/SP/SU (3)</p> </div> </div>		<p style="text-align: center;">CVEEN 2750 ↓</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>CVEEN 3700 Principles of Construction F (3)</p> </div> <div style="width: 48%;"> <p>General Ed. Requirement + DV (HF + DV) F/SP/SU (3)</p> </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>American Institutions (AI) F/SP/SU (3)</p> </div> <div style="width: 48%;"> <p>General Ed. Requirement + IR (FF + IR) F/SP/SU (3)</p> </div> </div>	
<p>□ Science Exploration can be satisfied by taking one of the following: CHEM 1220 or PHYS 2220 or any 1000+ course in the following departments: Astronomy, Biology, Geology, and Atmospheric Sciences.</p>		<p>* Additional Science can be satisfied by taking CVEEN 1060 or one of the following: ATMOS 1120, BIOL 1010 (DV), 1030, 1120, 1610, 1620, 2420, GEO 1040, 1120, 1100. The course used to satisfy the Science Exploration cannot be double counted to satisfy the Additional Science and vice versa.</p>		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>General Ed. Requirement (BF) F/SP/SU (3)</p> </div> <div style="width: 48%;"> <p>Elective Credit F/SP/SU (1)</p> </div> </div>		<div style="border: 1px dashed black; padding: 5px;"> <p style="text-align: center;">Key</p> <p>Major Status Required </p> <p>Prerequisite </p> <p>Corequisite</p> </div>	

TECHNICAL ELECTIVE COURSES

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.

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 ↓

CVEEN 5305
Intro to Foundations
F (3)

CVEEN 2140 & 3520 ↓

CVEEN 5510
Highway Design
SP (3)

CVEEN 3510 & 3520 ↓

CVEEN 5570
Pavement Design
F (3)

ADDITIONAL TECHNICAL ELECTIVES

Course #	Course Title	Pre-Reqs	Semesters		Course #	Course Title	Pre-Reqs	Semesters
CVEEN 3410	Hydraulics	CVEEN 2140 & 2310	F/SP		CVEEN 5560	Transportation Planning	CVEEN 2140, 3520	F
CVEEN 3610	Environmental Engineering	CHEM 1210 & CVEEN 2140	F/SP		CVEEN 5600	Waste Management & Remediation	CVEEN 2140, 3610	F
CVEEN 4605	Intro Data Science Civil	1 core CVEEN 3000-level course	F		CVEEN 5605	Water & Wastewater Treatment	CVEEN 2140, 3610	SP
CVEEN 4222	Steel I	CVEEN 3210	SP		CVEEN 5610	Water Chemistry	CVEEN 2140, 3610	F
CVEEN 4999	Honors Thesis	Dept. Consent	F/SP		CVEEN 5615	Emerging Enviro Issues	CVEEN 2140, 3610	SP
CVEEN 5210	Structural Analysis II	CVEEN 3210	Varies		CVEEN 5920	Special Topics	Dept. Consent	Varies
CVEEN 5220	Concrete II	CVEEN 4221	Varies		NUCL 3000	Nuclear Principles	MATH 1220 & PHYS 2210	SP
CVEEN 5230	Steel II	CVEEN 4222	Varies		NUCL 3100	Radiation Interactions	CHEM 1220, MATH 1220, CVEEN 2010	SP
CVEEN 5240	Timber/Reinforced Masonry	CVEEN 3210	Varies		NUCL 3200	Radiochemistry	CHEM 1220, MATH 1220, CVEEN 2010	F
CVEEN 5410	Engineering Hydrology	CVEEN 3410	SP		CVEEN 6XXX	CVEEN Graduate Courses	3.20 GPA & Instructor Consent	F/SP
CVEEN 5420	Open Channel Flow	CVEEN 3410	F		Any 3+ credit, 3000-5999 course from the following departments: ASTR, ATMOS, BIOL, CHEM, CH EN, CMP, CS, ECE, ENGINE, GEO, MATH, ME EN, MET E, MG EN, MSE, NUCL, or PHYS.			
CVEEN 5500	Sustainable Materials (IR)	CVEEN 3510	SP					