

# B.S. CIVIL ENGINEERING + B.S. CONSTRUCTION ENGINEERING – ENGINEERING MATH 2020


FRESHMAN		SOPHOMORE		JUNIOR		SENIOR		
Fall (17 hrs)	Spring (16 hrs)	Fall (16.5 hrs)	Spring (16 hrs)	Fall (17 hrs)	Spring (14 hrs)	Fall (15 hrs)	Spring (15 hrs)	Fall (15 hrs)
<b>CVEEN 1000</b> Intro to Civil & Environmental Engineering F 2	<b>CVEEN 1400</b> Computer-Aided Design SP 3	<b>CVEEN 2000</b> Seminar F 0.5	CVEEN 2010 ↓ <b>CVEEN 2140</b> Strength of Materials F/SP 3	CVEEN 2140 ↓ <b>CVEEN 3210</b> Structural Loads & Analysis (QI) F/SP 3	WRTG 2010 ↓ <b>CVEEN 3100</b> Technical Communication (CW) F/SP 3	CVEEN 3210 ↓ <b>CVEEN 4221</b> Concrete I (D) F 3	CVEEN 3100 ↓ <b>CVEEN 4900</b> Professional Practice F/SP 3	CVEEN 4900, 4221 & 5510 ↓ <b>CVEEN 4910</b> Civil Design Capstone F/SP 3
MATH (1050 & 1060) or MATH 1080 ↓	MATH 1310 ↓	MATH 1310 & PHYS 2210 ↓						See catalog for individual prerequisites ↓
<b>MATH 1310</b> Engineering Calculus I (QR) F/SP 4	<b>MATH 1320</b> Engineering Calculus II F/SP/SU 4	CVEEN 2010 ↓ <b>CVEEN 2010</b> Statics F/SP 3	CVEEN 2300 ↓ <b>CVEEN 2300</b> Engineering Economics F/SP 2	CVEEN 2140 & 2310 ↓ <b>CVEEN 3410</b> Hydraulics (QI) F 3 <b>CVEEN 3415</b> Lab F 1	CVEEN 2140 & 2310 ↓ <b>CVEEN 3310</b> Geotech I (QI) F/SP 3 <b>CVEEN 3315</b> Lab F/SP 1	CVEEN 3100 ↓ <b>CVEEN 5720</b> Project Scheduling F 3	CVEEN 3100, 3700, 4221, 5510 & 5720 ↓ <b>CVEEN 4920</b> Construction Design Capstone SP 3	<b>CVEEN 5305</b> Intro to Foundations or <b>CVEEN 5500</b> Sust. Materials F/SP 3
	MATH 1310 ↓	MATH 1310 ↓	MATH 1310 ↓					
<b>General Ed. Requirement</b> F/SP/SU 3	<b>PHYS 2210</b> Physics for Sci & Engineers I F/SP/SU 4	CVEEN 2310 ↓ <b>CVEEN 2310</b> Probability & Statistics F/SP 3	<b>CVEEN 2750</b> Computer Tools SP 2	CVEEN 2140 & 2310 ↓ <b>CVEEN 3510</b> Materials F/SP 3 <b>CVEEN 3515</b> Lab F/SP 1	CHEM 1210 & CVEEN 2140 ↓ <b>CVEEN 3610</b> Environmental F/SP 3 <b>CVEEN 3615</b> Lab F/SP 1	CVEEN 3310 & 3315 ↓ <b>CVEEN 5740</b> Horizontal Construction F 3	CVEEN 3210 ↓ <b>CVEEN 5790</b> Vertical Construction SP 3	<b>Technical Elective</b> F/SP 3
WRTG 1010 ↓	See catalog for individual prerequisites ↓	MATH 1060 ↓	CVEEN 2010, PHYS 2210 & MATH 2250 ↓					
<b>WRTG 2010</b> Intermediate Writing F/SP/SU 3	<b>CHEM 1220</b> Gen Chemistry II or <b>PHYS 2220</b> Physics for Sci & Engineers II F/SP/SU 4	<b>MG EN 2400</b> Surveying F/SU 3	<b>ME EN 2030</b> Dynamics F/SP/SU 3	CVEEN 2140 & 2310 ↓ <b>CVEEN 3520</b> Transportation F/SP 3	CVEEN 3520 ↓ <b>CVEEN 5510</b> Highway Design (D) SP 3	<b>American Institutions</b> F/SP/SU 3	<b>Technical Elective</b> F/SP 3	<b>General Ed. Requirement</b> F/SP/SU 3
MATH 1050 ↓	See catalog for individual prerequisites ↓	MATH 1320 ↓						
<b>CHEM 1210</b> Gen Chemistry I F/SP/SU 4 <b>CHEM 1215</b> Lab F/SP/SU 1	<b>CHEM 1225</b> Gen Chemistry II Lab or <b>PHYS 2215</b> Physics for Sci & Engineers I Lab or <b>PHYS 2225</b> Physics for Sci & Engineers II Lab F/SP/SU 1	<b>MATH 2250</b> Differential Equations & Linear Algebra F/SP/SU 4	<b>General Ed. Requirement/DV</b> F/SP/SU 3	CVEEN 2750 ↓ <b>CVEEN 3700</b> Principles of Construction Eng. F 3		CVEEN 3100 ↓ <b>CVEEN 5710</b> Cost Estimation or <b>CVEEN 5730</b> Project Management or <b>CVEEN 5750</b> Engineering Law F 3	<b>ECON 2010</b> Microeconomics (BF) F/SP/SU 3	<b>General Ed. Requirement/IR</b> F/SP/SU 3
		<b>ARCH 1615</b> Intro to Architecture (FF) F/SP 3	<b>^ GEO 1100</b> Evolving Earth F/SP 3					


Have you completed 3 of the 4 shaded courses? If yes, apply for Full Major Status!

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

^ GEO 1100 - can be substituted with GEO 1110 & 1115 Earth Systems and Lab (4)

**KEY**

Full Major Status Required 

Prerequisite 

Corequisite

# TECHNICAL ELECTIVES (choose 3)

## Water Resources

CVEEN 3410 & 3415 ↓

**CVEEN 5410**  
Engineering Hydrology  
F 3

CVEEN 3410 & 3415 ↓

**CVEEN 5420**  
Open-Channel  
SP 3

CVEEN 3610 & 3615 ↓

**CVEEN 5605**  
Water & Wastewater Treatment  
F 3

CVEEN 3610 & 3615 ↓

**CVEEN 5610**  
Water Chemistry  
F 3

## Geotech & Materials

CVEEN 3310 & 3315 ↓

**CVEEN 5305 ^**  
Intro to Foundations  
F 3

CVEEN 3510 & 3515 ↓

**CVEEN 5500 ^**  
Sustainable Materials  
SP 3

CVEEN 3510, 3515, 3520 ↓

**CVEEN 5570**  
Pavement Design  
F 3

## Structures

CVEEN 3210 ↓

**CVEEN 4222**  
Steel I  
SP 3

CVEEN 3210 ↓

**CVEEN 5210**  
Structural Analysis II  
SP 3

CVEEN 4221 ↓

**CVEEN 5220**  
Concrete II  
SP 3

CVEEN 4222 ↓

**CVEEN 5230**  
Steel II  
F 3

CVEEN 3210 ↓

**CVEEN 5240**  
Reinforced Timber/Masonry  
F 4

## Transportation

CVEEN 3520 ↓

**CVEEN 5560**  
Transportation Planning  
SP 3

## Nuclear Engineering

CHEM 1220, MATH 1220 & PHYS 2220 ↓

**NUCL 3000**  
Nuclear Principals in Engineering & Science  
F 3

NUCL 3000 ↓

**NUCL 3100**  
Neutron Based Engineering  
SP 3

## Other (Max 1)

Any 3000+ level course from the College of Engineering or an ABET accredited program ^  
3+

^ Courses cannot be used to satisfy two requirements