

Civil Engineering

FALL		FIRST YEAR		SPRING		
CHEM 1100	Chemistry I	4		CIVL 1100	Intro to Civil & Environmental Eng ²	1
MATH 1010	Calculus I	4		MATH 1020	Calculus II	4
ENGR 1100	Intro. to Eng. Analysis	4		PHYS 1100	Physics I	4
CIVL 1200	Eng. Graphics for Civil Eng ¹	1		ENGR 2600	Modeling & Analysis of Uncertainty	3
	Hum., Arts or Soc. Sci Elective	4			Hum., Arts or Soc. Sci Elective	4
SECOND YEAR						
MATH 2400	Intro. to Differential Eqns.	4		CIVL 2030	Intro to Transportation Engineering	4
PHYS 1200	Physics II	4		CIVL 2630	Intro to Geotechnical Engineering	4
ENGR 2250	Thermal & Fluids Engineering I	4		CIVL 2670	Intro to Structural Engineering	4
ENGR 2530	Strength of Materials	4		ENVE 2110	Intro to Environmental Engineering	4
Summer Arch		THIRD YEAR		Fall		
ENVE 4310	Applied Hydrology & Hydr.	4		CSCI 1190	Beginning C Programming for Eng. ³	1
ENGR 4760	Engineering Economics	3		ENGR 2090	Engineering Dynamics	4
	CEE Intro to Engineering Design	4			CE Design Elective ⁴	3
	Hum., Arts or Soc. Sci Elective	4			Professional Development II ⁵	2
					Free Elective	4
FOURTH YEAR						
	CE Design Elective ⁴	3		CIVL 4920	CE Capstone Design	3
	CE Technical Elective ⁴	3		ENGR 4010	Professional Development III	1
	Math and Science Elective ⁶	4			Free Elective	4
	Free Elective	4			Basic Science Elective ⁷	4
	Hum., Arts or Soc. Sci Elective	4			Hum., Arts or Soc. Sci Elective	4

¹ CIVL 1200 may be replaced with ENGR 1200.

² CIVL 1100 may be replaced with ENGR 1300.

³ CSCI 1190 may be replaced with CSCI 1100.

⁴ Text below lists the allowable courses.

⁵ This course will be fulfilled from a list published at the start of each semester.

⁶ Any 4-credit course in the School of Science with a prefix of ASTR, BCBP, BIOL, CHEM, EARTH, MATH or PHYS.

⁷ Any 4-credit course in the School of Science with a prefix of ASTR, BIOL or EARTH.

128 credits minimum

CE DESIGN ELECTIVES AND CONCENTRATIONS Students must take at least two CE design electives in one concentration.

Structural Engineering

CIVL 4070 Steel Design
CIVL 4080 Concrete Design

Geotechnical Engineering

Students must take:

CIVL 4010 Foundation Engineering
And must choose a second course from the following:
CIVL 4140 Geoenvironmental Eng.
CIVL 4150 Experimental Soil Mechanics

Environmental Engineering

Students must choose two of the following courses:
ENVE 4200 Solid and Hazardous Waste Eng.
ENVE 4330 Introduction to Air Quality
ENVE 4340 Physicochemical Processes in Env. Eng.
ENVE 4350 Biological Processes in Env. Eng.

Transportation Engineering

Students must choose two of the following courses:
CIVL 4620 Mass Transit Systems
CIVL 4640 Transp. System Planning
CIVL 4660 Traffic Engineering
CIVL 4670 Highway Engineering

CE TECHNICAL ELECTIVES

CIVL 2040 Professional Practice
CIVL 4240 Intro. to Finite Elements
CIVL 4270 Construction Management
CIVL 4280 Design for Constructability

CIVL 4440 Matrix Structural Analysis
CIVL 4450 Conceptual Structural Systems
CIVL 4570 Analytical Methods in Civil Eng. Systems

Additional Courses: To satisfy the CE Technical Elective requirement, students may choose an additional CE Design Elective within any concentration or, with adviser approval, courses from related disciplines. These related disciplines include architecture, environmental engineering, earth and environmental sciences, mechanical engineering, chemical engineering, industrial engineering, and operations research. A representative list of such courses is as follows:

ENVE 4110 - Aqueous Geochemistry
ERTH 2120 - Structural Geology
ERTH 2330 - Earth Materials

ERTH 4710 - Groundwater Hydrology
MATH 4800 - Numerical Computing