

**Technical Electives
Civil Engineering Program**

Construction Management and Transportation Courses

Course #	Title	Credit	Pre- & Co-Requisite
CE 45000	Transportation, Planning, and Policy	3	P: CE 34500, Junior Standing
CE 45100	Traffic Engineering	3	P: CE 34500
BUS 30102	Operations Management	3	P: PPOL 34800 and senior standing.
BUS 30200	Management of Organizations and People	3	P: consent of instructor
PPOL 34800	Management Science	3	P: PPOL 30000/ STAT 30100, MA 15300

Environmental and Water Resources Courses

Course #	Title	Credit	Pre- & Co-Requisite
CE 46500	Water and Wastewater Engineering	3	P: CHM 11500, Junior Standing
CHM 11600	General Chemistry	4	P: CHM 11500 (C or better), C: MA 16500
CHM 24100	Introductory Inorganic Chemistry	4	P: CHM 11600, MA 16500
CHM 26100	Organic Chemistry	3	P: CHM 11600

Geotechnical and Geo-environmental Courses

Course #	Title	Credit	Pre- & Co-Requisite
CE 44800	Geotechnical Site Characterization	3	P: CE 38000 and CE 38100
EAPS 30000	Environmental and Urban Geology	3	P: two college-level science courses
EAPS 32300	Structural Geology	3	P: consent of instructor
EAPS 45100	Principles of Hydrogeology	3	P: EAPS 33400 or consent of instructor

Structural and Materials Courses

Course #	Title	Credit	Pre- & Co-Requisite
CE 47500	Design of Steel Structures	3	P: CE 37500
CE 48000	Finite Element Analysis	3	P: CE 31800, CE 37500

Special Topics

Course #	Title	Credit	Pre- & Co-Requisite
CE 48400	Research in Civil Engineering	3	GPA \geq 3.0 and consent of faculty advisor
CE 48800	Civil Engineering Design Project II	3	P: CE 48700
CE 49000	Selected Topics in Civil Engineering	3	P: consent of instructor
CET 20900	Land Surveying and Subdivision	3	P: CET 20600/CE 21000
ME 20000	Thermodynamics	3	P: CHM 11500, C: MA 26100
ME 47100	Vibrations Analysis	3	P: CE/ME 25100
ME 50900	Intermediate Fluid Mechanics	3	P: CE/ME 31800
PPOL 46500	GIS for Public and Environmental Affairs	3	P: ETCS 10600
SE 52000	Engineering Economics	3	P: senior or graduate standing
STAT 51200	Applied Regression Analysis	3	P: STAT 511, or 517, or 528 with C or higher

Notes:

- A maximum of two elective courses can be taken from non-civil engineering courses.
- Other courses may be approved with the consent of the advisor with consultation with the civil engineering curriculum committee.
- Effective starting fall semester 2019.