



CIVIL FOCUS AREA: Student Tailored

Department of Civil and Environmental Engineering

General Education (19 sh) sh

ALL	RHET:1030 Rhetoric	4
F/S	Diversity & Inclusion	3
ALL	Be Creative	3
ALL	Approved Gen Ed Course	3
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Math & Basic Science Core (24 sh) sh

F/S	MATH:1550 Math I: Single Variable Calculus (P: ALEKS score ≥ 75 or MPT Level 3 score ≥ 9)	4
ALL	MATH 1560 Math II: Multivariable Calculus (P: MATH:1550)	4
ALL	MATH:2550 Math III: Matrix Algebra (P: MATH:1550)	2
ALL	MATH:2560 Math IV: Differential Equations (P: MATH:1560 & MATH:2550)	3
F/S	STAT:2020 Probability & Statistics For Engr & Phys Sci (P: MATH:1560)	3
ALL	CHEM:1110 Principles of Chemistry I (P: ALEKS score ≥ 55 or MPT Level 3 score ≥ 9)	4
ALL	PHYS:1611 Introductory Physics I / Lab (C: MATH:1550)	4

Engineering Core (7 sh) sh

F	ENGR:1000 Engineering Success for First-Year Students (First semester standing)	1
F	ENGR:1100 Intro to Engineering Problem Solving	3
F/S	ENGR:1300 Intro to Engineering Computing (C: MATH:1550)	3

Civil Engineering Requirements (45 sh) sh

ALL	CHEM:1120 Principles of Chemistry II (P: CHEM:1110)	4 OR
F/S	PHYS:1612 Introductory Physics II / Lab (P: PHYS:1611; C: MATH:1560)	4
ALL	ENGR:2110 Statics (P: MATH:1550; C: MATH:1560 & PHYS:1611)	2
ALL	ENGR:2130 Thermodynamics (P: CHEM:1110 & PHYS:1611; C: MATH:1560)	3
F/S	ENGR:2510 Fluid Mechanics (P: MATH:2560 & ENGR:2710; C: ENGR:2130)	4
ALL*	ENGR:2710 Dynamics (P: ENGR:2110 & MATH:1550)	3
ALL*	ENGR:2750 Mechanics of Deformable Bodies (P: ENGR:2110; C: MATH:2560)	3
ALL	CEE:1030 Intro to Earth Science (no lab required)	3
F	CEE:2015 Civil Engineering Tools	2
S	CEE:3155 Principles of Environmental Engineering (P: CHEM:1110)	4
S	CEE:3371 Principles of Hydraulics and Hydrology (P: ENGR:2510)	3
F	CEE:3530 Geomechanics (P: ENGR:2750)	4
F	CEE:3533 Principles of Structural Engineering (P: ENGR:2750)	4
S	CEE:3586 Civil Engineering Materials (P: ENGR:2750)	3
S	CEE:3763 Principles of Transportation Engineering (C: ENGR:1100)	3

Capstone Design Courses (3 sh) sh

F/S	CEE:4850 Project Design & Management in CEE (P: final semester; C: CEE:3003)	3
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CEE Professional Skills (4 sh) sh

S	CEE:2010 Professional Practice and Ethics	1
F	CEE:3001 Leadership Skills for Engineers (junior standing)	1
S	CEE:3002 Technical Communication in CEE (junior standing)	1
F	CEE:3003 Project Management Skills (senior standing)	1

Required: Student Tailored (0 sh) sh

None required

Electives: Student Tailored (27 sh) sh

CEE Design Course* sh

select 2 courses from this list

F	CEE:4157 Environmental Engineering Design (P: CEE:3155)	3
F	CEE:4374 Water Resource Design (P: CEE:3371)	3
F	CEE:4506 Design of Concrete Structures (P: CEE:3533)	3
OR S	CEE:4535 Design of Steel Structures (P: CEE:3533)	3
F	CEE:4762 Design of Transportation Systems (P: CEE:3763)	3

Electives: Focus Area, Minor, Certificate, etc. sh

select 2 courses from the list below

Any additional CEE Design Course(s) listed above		
S	CEE:3783 Surveying & Remote Sensing (P: ENGR:1100)	3
S	CEE:3790 Resilient Infrastructure and Emergency Response	3
F	CEE:4102 Groundwater	3
F	CEE:4158 Solid and Hazardous Wastes	3
S	CEE:4159 Air Pollution Control Technology	3
F	CEE:4119 Hydrology (P: ENGR:2510)	3
S	CEE:4371 Water Resources Engineering (C: CEE:3371)	3
F	CEE:4539 Foundations of Structures (P: CEE:3530)	3
F	CEE:4763 Traffic Engineering (P: CEE:3763)	3

Any additional 3000 level or above elective course(s) in CEE

Electives: Focus Area, Minor, Certificate, etc. sh

select 5 courses (15 sh) based on the following guidelines

- 1 The set of courses chosen must support the student's career or life plan (which the student must explain on the Student Tailored Focus Area form). The explanation must be acceptable to the advisor and the CEE Curriculum Committee.
- 2 A non-technical Focus Area must be completed as part of a minor in that field or as part of a certificate program, and therefore each course must be part of a sequence of an increasingly challenging curriculum.
- 3 The set of courses chosen must demonstrate depth of learning in a particular area. An assortment of introductory courses is unacceptable.

Note that a non-technical Focus Area may require additional courses (beyond the 27 sh required for the Focus Area) to meet the requirements of a minor, or to show exposure and depth in a particular area. These courses will not count as Focus Area Elective courses, but may be used to satisfy General Education Component (GEC) requirements.

The CEE web site contains instructions for submitting a Student Tailor Focus Area for review and approval by the CEE Curriculum Committee.