Recommended program of study

First semester	
CE 1010	Introduction to Civil and Environmental Engineering
CHEM 1111	General Chemistry I *
MATH 1231	Single-Variable Calculus I *
SEAS 1001	Engineering Orientation
UW 1020	University Writing *
One humanities, social science, or non-technical elective **	
Second semester	
CSCI 1012	Introduction to Programming with Python
MAE 1004	Engineering Drawing and Computer Graphics
MATH 1232	Single-Variable Calculus II *
PHYS 1021	University Physics I *
SUST 1001	Introduction to Sustainability **
Third semester	
APSC 2057	Analytical Mechanics I
APSC 2113	Engineering Analysis I
MATH 2233	Multivariable Calculus
PHYS 1022	University Physics II *
One humanities, social science, or non-technical elective **	

Fourth semester	
APSC 2058	Analytical Mechanics II
APSC 3115	Engineering Analysis III
CE 1020	Introduction to a Sustainable World
CE 2210	Engineering Computations
CE 2220	Introduction to the Mechanics of Solids
CE 2710	Introduction to Transportation Engineering
Fifth semester	
CE 3110W	Civil Engineering Materials
CE 3111W	Civil Engineering Materials Lab
CE 3250	Structural Analysis
CE 3604	Physical Hydrology
MAE 3126	Fluid Mechanics I
MAE 3127	Fluid Mechanics Lab
One humanities, social science, or non-technical elective **	
Sixth semester	
CE 3310	Reinforced Concrete Structures
CE 3311	Reinforced Concrete Design Project
CE 3520	Environmental Engineering Design: Drinking Water Treatment
CE 3521	Environmental Engineering Laboratory
CE 3610	Hydraulics of Open Channel Flow
CE 3611	Hydraulics Laboratory
One humanities, social science, or non-technical elective **	

Seventh semester	
CE 4410	Introduction to Geotechnical Engineering
CE 4411	Geotechnical Engineering Laboratory
CE 4320	Metal Structures
CE 4530	Wastewater Treatment Design and Reuse
One engineering elective selected from list below.	
Eighth semester	
CE 4721	Traffic Engineering and Highway Safety
PHIL 2135	Ethics in Business and the Professions **
SUST 2002	The Sustainable City (or one of the following courses: EMSE 3820, EMSE 6410, PHIL 2281)
One civil engineering elective selected from the following list:	

Civil engineering electives	
CE 6102	Application of Probability Methods in Civil Engineering
CE 6201	Advanced Strength of Materials
CE 6202	Methods of Structural Analysis
CE 6205	Theory of Structural Stability
CE 6207	Theory of Elasticity I
CE 6210	Introduction to Finite Element Analysis
CE 6301	Design of Reinforced Concrete Structures
CE 6302	Prestressed Concrete Structures
CE 6320	Design of Metal Structures
CE 6342	Structural Design to Resist Natural Hazards

CE 6401	Fundamentals of Soil Behavior
CE 6403	Foundation Engineering
CE 6501	Aquatic Chemistry
CE 6502	Environmental Engineering Design: Drinking Water Treatment
CE 6503	Principles of Environmental Engineering
CE 6505	Environmental Impact Assessment
CE 6506	Microbiology for Environmental Engineers
CE 6507	Advanced Technologies in Environmental Engineering
CE 6508	Industrial Waste Treatment
CE 6509	Introduction to Hazardous Wastes
CE 6602	Hydraulic Engineering
CE 6604	Physical Hydrology
CE 6609	Numerical Methods in Environmental and Water Resources
CE 6611	Advanced Hydrology
CE 6712	Data Science and Artificial Intelligence in Civil and Environmental Engineering
CE 6721	Traffic Engineering and Highway Safety
CE 6722	Intelligent Transportation Systems
CE 6730	Sustainable Urban Planning
CE 6731	Economics of Transportation Systems
CE 6732	Automation and Sensing in Civil and Environmental Engineering
CE 6733	Human Factors in Civil and Environmental Engineering
CE 6800	Special Topics

*Course satisfies the University general education requirement in math, science, and writing.

**Six humanities, social science, or non-technical electives are required. Two of these courses must be PHIL 2135 and SUST 1001. At least one additional social and behavioral sciences course must be selected from the University General Education Requirement list of critical thinking in the social sciences courses; at least one humanities course must be selected from the University General Education list of critical thinking in the humanities courses. The remaining courses must be selected from the University General Education list or the SEAS approved list of non-technical elective courses.