MAJOR IN ENVIRONMENTAL ENGINEERING

Major Completion Map

Distinctive Requirements for Degree Program:
TO DECLARE MAJOR: Engineering is a controlled major: students are admitted into the major only if they meet established academic standards. Please see competitive major requirements or the advisor in the Department for more information.
TO PREPARE FOR FIRST SEMESTER: The curriculum for this major assumes students enter college prepared to take calculus. To qualify for graduation, Environmental Engineering majors must achieve a minimum 2.000 grade point average at CSU in all courses in engineering, mathematics, computer science, statistics, physics, and chemistry as well as courses taken as technical electives.

Freshman

Semester 1		**Critical**	**Recommended**	**AUCC**	**Credits**
CHEM 111	General Chemistry I (GT-SC2)	X		3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)	X		3A	1
ENGR 111	Fundamentals of Engineering	X			3
MATH 160	Calculus for Physical Scientists I (GT-MA1)	X		1B	4
Arts and Humanities (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)			X	3B	3
	Total Credits				**15**

Semester 2		**Critical**	**Recommended**	**AUCC**	**Credits**
CO 150	College Composition (GT-CO2)	X		1A	3
ENGR 114	Engineering for Grand Challenges	X			3
MATH 161	Calculus for Physical Scientists II (GT-MA1)	X		1B	4
PH 141	Physics for Scientists and Engineers I (GT-SC1)	X		3A	5
	Total Credits				**15**

Sophomore

Semester 3		**Critical**	**Recommended**	**AUCC**	**Credits**
CHEM 113	General Chemistry II	X			3
CHEM 114	General Chemistry Lab II	X			1
CIVE 202	Numerical Modeling and Optimization	X			3
CIVE 260	Engineering Mechanics-Statics	X			3
MATH 261	Calculus for Physical Scientists III	X			4
Select four credits from the following course or course pair:					4
Group A:					
BZ 110	Principles of Animal Biology (GT-SC2)			3A	
BZ 111	Animal Biology Laboratory (GT-SC1)			3A	
Group B:					
BZ 120	Principles of Plant Biology (GT-SC1)			3A	
Group C:					
LIFE 102	Attributes of Living Systems (GT-SC1)		X	3A	
	Total Credits				**18**

Semester 4		**Critical**	**Recommended**	**AUCC**	**Credits**
CIVE 203	Engineering Systems and Decision Analysis	X			3
CIVE 261	Engineering Mechanics-Dynamics	X			3
CIVE 360	Mechanics of Solids	X			3
MATH 340	Intro to Ordinary Differential Equations		X		4
MECH 237	Introduction to Thermal Sciences	X			3
	Total Credits				**16**

Junior

Semester 5		**Critical**	**Recommended**	**AUCC**	**Credits**
CHEM 245	Fundamentals of Organic Chemistry		X		4
CIVE 300	Fluid Mechanics	X			3
CIVE 301	Fluid Mechanics Laboratory		X		1

CIVE 355	Geotechnical Engineering	X			3
CIVE 356	Geotechnical Engineering Laboratory		X		1
Select one course from the following:					3
AREC 202	Agricultural and Resource Economics (GT-SS1)			3C	
ECON 202	Principles of Microeconomics (GT-SS1)			3C	
	Total Credits				**15**
Semester 6		**Critical**	**Recommended**	**AUCC**	**Credits**
CIVE 322	Basic Hydrology		X		3
CIVE 339	Environmental Engineering Concepts	X			3
CIVE 442	Air Quality Engineering	X			3
MIP 300	General Microbiology		X		3
Advanced Writing (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)			X	2	3
Historical Perspectives (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)			X	3D	3
	Total Credits				**18**
Senior					
Semester 7		**Critical**	**Recommended**	**AUCC**	**Credits**
CIVE 401	Hydraulic Engineering		X		3
CIVE 402	Senior Design Principles	X		4A,4B	3
CIVE 439	Applications of Environmental Engr Concepts	X			3
ERHS 446	Environmental Toxicology	X			3
Engineering Technical Elective (See List on Requirements tab)		X			3
1C (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#aucc)			X	1C	3
	Total Credits				**18**
Semester 8		**Critical**	**Recommended**	**AUCC**	**Credits**
CIVE 403	Senior Project Design	X		4C	3
CIVE 441	Water Quality Analysis and Treatment	X			3
Additional Technical Elective (See List on Requirements Tab)		X			3
Engineering Technical Elective (See List on Requirements tab)		X			3
Arts and Humanities (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)			X	3B	3
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.		X			
	Total Credits				**15**
	Program Total Credits:				**130**