

MAJOR IN CIVIL ENGINEERING

Major Completion Map

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, Civil Engineering majors must achieve a minimum 2.000 grade point average at CSU in all courses in engineering, mathematics, physics, and chemistry as well as courses taken as technical electives.

Distinctive Requirements for Degree Program:

TO PREPARE FOR FIRST SEMESTER: The curriculum for this major assumes students enter college prepared to take calculus.

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
CIVE 202	Numerical Modeling and Optimization	X			3
CIVE 260	Engineering Mechanics-Statics	X			3
MATH 261	Calculus for Physical Scientists III	X			4
Historical Perspectives (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)			X	3D	3
Total Credits					16

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
CIVE 300	Fluid Mechanics	X			3
CIVE 301	Fluid Mechanics Laboratory		X		1
CIVE 302	Evaluation of Civil Engineering Materials	X			3
CIVE 367	Structural Analysis		X		3
Science Technical Elective (see list below)			X		3
Social and Behavioral Sciences (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences)			X	3C	3
Total Credits					16

Semester 6		Critical	Recommended	AUCC	Credits
CIVE 303	Infrastructure and Transportation Systems	X			3
CIVE 322	Basic Hydrology		X		3
CIVE 355	Geotechnical Engineering	X			3
CIVE 356	Geotechnical Engineering Laboratory		X		1
CIVE 467	Design of Reinforced Concrete Structures	X			3
Advanced Writing (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)			X	2	3
CIVE 367 must be completed by the end of Semester 6.		X			
Total Credits					16
Senior					
Semester 7		Critical	Recommended	AUCC	Credits
CIVE 401	Hydraulic Engineering	X			3
CIVE 402	Senior Design Principles	X		4A,4B	3
CIVE 466	Design and Behavior of Steel Structures	X			3
Civil Engineering Technical Electives (See list on Major Requirements Tab)			X		6
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 438	Fundamentals of Environmental Engr	X			3
Civil Engineering Technical Electives (See list on Major Requirements tab)		X			9
Arts and Humanities (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)				3B	3
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.					
Total Credits					18
Program Total Credits:					130