

MAJOR IN CONSTRUCTION ENGINEERING

Requirements Effective Fall 2025

Freshman

		AUCC	Credits
CHEM 111	General Chemistry I (GT-SC2)	3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)	3A	1
CO 150	College Composition (GT-CO2)	1A	3
ENGR 111	Fundamentals of Engineering		3
ENGR 114	Engineering for Grand Challenges		3
MATH 160	Calculus for Physical Scientists I (GT-MA1)	1B	4
MATH 161	Calculus for Physical Scientists II (GT-MA1)	1B	4
PH 141	Physics for Scientists and Engineers I (GT-SC1)	3A	5
Arts and Humanities (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)			3
Total Credits			30

Sophomore

CIVE 260	Engineering Mechanics-Statics		3
CIVE 261	Engineering Mechanics-Dynamics		3
CIVE 360	Mechanics of Solids		3
CON 101	Introduction to Construction Management		3
CONE 103	Virtual Design and Construction I		3
CONE 201	Construction Systems and Decision Analysis		3
CONE 203	Virtual Design and Construction II		3
GEOL 120	Geology and Society (GT-SC2)	3A	3
MATH 261	Calculus for Physical Scientists III		4
MECH 237	Introduction to Thermal Sciences		3
Total Credits			31

Junior

CIVE 300	Fluid Mechanics		3
CIVE 302	Evaluation of Civil Engineering Materials		3
CIVE 303	Infrastructure and Transportation Systems		3
CIVE 322	Basic Hydrology		3
CIVE 367	Structural Analysis		3
CONE 301	Engineering Contracts		1
CONE 302	Preconstruction and Project Control Systems		5
CONE 401	Construction Safety Engineering		3
CONE 404	Production Planning of Construction Operation		3
CONE 487	Construction Engineering Internship		1
MATH 340	Intro to Ordinary Differential Equations		4
Design Focus Area Electives (select one course from one Focus Area):			3
Heavy Civil/Infrastructure:			
CIVE 401	Hydraulic Engineering		
CIVE 455	Applications in Geotechnical Engineering		
CIVE 466	Design and Behavior of Steel Structures		

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CIVE 467	Design of Reinforced Concrete Structures		
Structures/Buildings:			
CIVE 455	Applications in Geotechnical Engineering		
CIVE 466	Design and Behavior of Steel Structures		
CIVE 467	Design of Reinforced Concrete Structures		
CONE 405	Virtual Design and Construction III		
Water/Environmental Facilities:			
CIVE 330	Ecological Engineering		
CIVE 401	Hydraulic Engineering		
CIVE 405	Sustainable Civil/Environmental Engineering		
CIVE 413	Environmental River Mechanics		
CIVE 423	Groundwater Engineering		
CIVE 437	Wastewater Treatment Facility Design		
CIVE 438	Fundamentals of Environmental Engr		
CIVE 440	Nonpoint Source Pollution		
CIVE 441	Water Quality Analysis and Treatment		
CIVE 458	Environmental Geotechnics		
CONE 410	Environmental Systems in Construction		
Total Credits			35
Senior			
CIVE 355	Geotechnical Engineering		3
CIVE 356	Geotechnical Engineering Laboratory		1
CONE 402	Senior Project Design I	4A,4B	3
CONE 403	Senior Project Design II	4A,4C	3
Design Focus Area Electives (select the same Focus Area as Junior year above):			6
Heavy/Civil Infrastructure - select one course from the following not previously taken:			
CIVE 401	Hydraulic Engineering		
CIVE 455	Applications in Geotechnical Engineering		
CIVE 466	Design and Behavior of Steel Structures		
CIVE 467	Design of Reinforced Concrete Structures		
Structures/Buildings - select one course from the following not previously taken:			
CIVE 455	Applications in Geotechnical Engineering		
CIVE 466	Design and Behavior of Steel Structures		
CIVE 467	Design of Reinforced Concrete Structures		
CONE 405	Virtual Design and Construction III		
Water/Environmental Facilities - select one course from the following not previously taken:			
CIVE 330	Ecological Engineering		
CIVE 401	Hydraulic Engineering		
CIVE 405	Sustainable Civil/Environmental Engineering		
CIVE 413	Environmental River Mechanics		
CIVE 423	Groundwater Engineering		
CIVE 437	Wastewater Treatment Facility Design		
CIVE 438	Fundamentals of Environmental Engr		
CIVE 440	Nonpoint Source Pollution		
CIVE 441	Water Quality Analysis and Treatment		
CIVE 458	Environmental Geotechnics		
CONE 410	Environmental Systems in Construction		
1C (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#aucc)		1C	3
Advanced Writing (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)		2	3

Arts and Humanities (<https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities>) 3B 3

Historical Perspectives (<https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives>) 3D 3

Social and Behavioral Sciences (<https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences>) 3C 3

Total Credits **31**

Program Total Credits: **127**