CIVIL ENGINEERING, BSCV

Requirements for Students Matriculating in or before Academic Year 2024-2025. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 128

Code	Title	Hours
General Education Requirements		
All General Education coursework requirements are satisfied upon completion of this degree plan		
English Composition		
See Academic Regulation 3.5 (http://catalog.okstate.edu/university-academic-regulations/#english-composition)		
ENGL 1113	Composition I	3
or ENGL 1313	Critical Analysis and Writing I	
ENGL 3323	Technical Writing	3
or ENGL 1213	Composition II	
or ENGL 1413	Critical Analysis and Writing II	
American History & Government		
Select one of the following:		3
HIST 1103	Survey of American History	
HIST 1483	American History to 1865 (H)	
HIST 1493	American History Since 1865 (DH)	
POLS 1113	American Government	3
Analytical & Quantitative Thought (A)		
MATH 2144	Calculus I (A)	4
MATH 2153	Calculus II (A)	3
Humanities (H)		
Courses designated (H)		6
Natural Sciences (N)		
Must include one Laboratory Science (L) course.		
CHEM 1414	General Chemistry for Engineers (LN) [1]	4
or CHEM 1314	Chemistry I (LN)	
BIOL 1114	Introductory Biology (LN)	4
or BIOL 1113 & BIOL 1111	Introductory Biology (N) and Introductory Biology Laboratory (LN)	
or GEOL 1114	Physical Geology (LN)	
PHYS 2014	University Physics I (LN)	4
Social & Behavioral Sciences (S)		
SPCH 2713	Introduction to Speech Communication (S)	3
Hours Subtotal		**40**
Diversity (D) & International Dimension (I)		
May be completed in any part of the degree plan.		
Select at least one Diversity (D) course		
Select at least one International Dimension (I) course		
College/Departmental Requirements		
UNIV 1111	First Year Seminar (or other approved first year seminar course)	1
Basic Science		
Select one of the following options: [1]		5
PHYS 2114 & CIVE 2081	University Physics II (LN) and Environmental Chemistry for Engineers [1]	
or		
CHEM 1515	Chemistry II (LN) [1]	
Mathematics		
MATH 2163	Calculus III	3
Engineering		
ENGR 1322	Engineering Design with CAD	2
ENGR 1412	Introductory Engineering Computer Programming	2
Engineering Science		
ENSC 2113	Statics	3
ENSC 2123	Elementary Dynamics	3
ENSC 2143	Strength of Materials	3
ENSC 2141	Strength of Materials Lab	1
Civil Engineering		
CIVE 2041	Civil and Environmental Engineering Seminar	1
CIVE 3614	Engineering Surveying	4
CIVE 3813	Environmental Engineering Science	3
Hours Subtotal		**31**
Major Requirements		
Mathematics		
MATH 2233	Differential Equations	3
STAT 4033	Engineering Statistics	3
or STAT 4073	Engineering Statistics with Design of Experiments	
Engineering Science		
ENSC 3233	Fluid Mechanics	3
ENSC 3231	Fluids and Hydraulics Lab	1
Civil Engineering		
CIVE 3413	Structural Analysis	3
CIVE 3513	Structural Steel Design	3
CIVE 3523	Reinforced Concrete Design	3
CIVE 3623	Engineering Materials Laboratory	3
CIVE 3633	Transportation Engineering	3
CIVE 3714	Introduction to Geotechnical Engineering	4
CIVE 3833	Applied Hydraulics	3
CIVE 3843	Hydrology I	3
CIVE 4041	Engineering Practice	1
CIVE 4043	Senior Design	3
CIVE 4273	Construction Engineering and Project Management	3
CIVE 4833	Unit Operations in Environmental Engineering	3
Industrial Engineering & Management		
IEM 3503	Engineering Economic Analysis	3
Hours Subtotal		**48**
Electives		
Select 9 hours of the following:		9
CIVE 4010	Civil Engineering Research	
CIVE 4013	Aquatic Chemistry	
CIVE 4033	GIS Applications for Water Resources	

CIVE 4050	Special Topics in Civil & Environmental Engineering
CIVE 4103	Construction Simulation
CIVE 4113	Construction Business Management
CIVE 4123	The Legal & Regulatory Environment of Civil Engineering
CIVE 4133	Construction Contracts and Specifications
CIVE 4153	Contract Administration
CIVE 4163	Construction Equipment Management
CIVE 4183	Construction Estimating
CIVE 4193	BIM for Construction
CIVE 4243	Use and Design of Geosynthetics
CIVE 4283	Numerical Methods in Geotechnical Engineering
CIVE 4293	Design and Analysis of Earth Retaining Structures
CIVE 4303	Systems Analysis for Civil Engineers
CIVE 4313	Highway Traffic Operations
CIVE 4323	Civil Infrastructure Systems
CIVE 4343	Urban Transportation Planning
CIVE 4363	Design and Planning of Airports
CIVE 4373	Design of Traffic Control Systems
CIVE 4383	Geometric Design of Highways
CIVE 4403	Advanced Strength of Materials
CIVE 4413	Classical and Matrix Methods of Structural Analysis
CIVE 4513	Advanced Reinforced Concrete Design
CIVE 4523	Advanced Steel Structure Design
CIVE 4533	Prestressed Concrete
CIVE 4563	Structural Dynamics
CIVE 4573	Timber Design
CIVE 4653	Asphalt Materials and Mix Design
CIVE 4673	Concrete Materials and Mix Design
CIVE 4693	Pavement Design and Analysis
CIVE 4723	Foundation Engineering
CIVE 4733	Soil Mechanics
CIVE 4773	Soil-Structure Interaction
CIVE 4743	Project Engineering and Management
CIVE 4753	Engineering Soil Stabilization
CIVE 4873	Air Pollution Control Engineering
CIVE 4863	Advanced Unit Operations in Environmental Engineering
CIVE 4913	Groundwater Hydrology
CIVE 4923	Environ Risk Assessment
CIVE 4933	Water Treatment
CIVE 4943	Risk and Failure Analysis of Dams
CIVE 4983	Residuals & Solid Waste Management
CIVE 4963	Open Channel Flow
CIVE 4973	Concrete Durability

ENGR 4043 or ENGR 4060 may be used as one of the CIVE electives.

Hours Subtotal	**9**
Total Hours	**128**

[1]

Chem 1515 fulfills the requirements for both CHEM 1414 and CIVE 2081.

Other Requirements

Graduation Requirements

1. A minimum 2.00 Technical GPA. The technical GPA is calculated from all courses counting in the curriculum with a prefix belonging to the degree program, or substitutions for these courses.
2. If “B” or higher is not earned in ENGL 1113 Composition I, then ENGL 1213 Composition II must be completed.
3. A "C" or better is required in all CIVE, ENSC, and Math prefixed courses required in the degree.
4. The major engineering design experience, capstone course, is satisfied by CIVE 4043 Senior Design.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2030.