

University of Nebraska-Lincoln Requirements for the Degree of Bachelor of Science in Civil Engineering on the Omaha campus

The Department of Civil Engineering offers a complete undergraduate program to students on the Lincoln and Omaha campuses of the University of Nebraska. Curriculum requirements are nearly identical on both campuses. The goal is to prepare students for entry into the civil engineering profession immediately after graduation or to pursue graduate-level work. The general educational objectives of the University of Nebraska civil engineering undergraduate program are to prepare our graduates to:

- successfully obtain employment in their areas of expertise in the public or private sectors;
- understand the ethical and professional demands of contemporary civil engineering practice;
- successfully enroll in graduate engineering or other professional programs;
- understand the necessity of team work in engineering practice;
- be able to communicate effectively in professional settings;
- understand and be able to account for the effects of their professional decisions on the quality of life and the environment;
- successfully pursue professional licensure; and
- continue to seek further education in a process of life-long learning.

While the Civil Engineering Department has designed the Civil Engineering curriculum to be essentially the same for both campuses, students should work with their academic advisor to make sure that all courses will transfer between campuses if the student desires to take classes on both campuses. Below is a semester by semester listing of the requirements for the degree of Bachelor of Science in Civil Engineering for students on the Omaha campus.

Semester 1	Credits	Semester 2	Credits
MATH1950 Calculus I	5	MATH1960 Calculus II	5
CHEM1180 ¹ General Chemistry I	3	PHYS2110 General Physics I-Calculus Level	4
CHEM1184 ¹ General Chemistry I Lab	1	PHYS1154 ³ General Physics I Lab	1
CIST1400 Introduction to Computer Programming	3	AE2250 Construction & Graphic Design Process	2
Humanities and Social Science Electives ²	3	SPCH1110 Public Speaking Fundamentals	3
CIVE 112 Intro to Civil Engineering	1		
	16		15
Semester 3	Credits	Semester 4	Credits
MATH1970 Calculus III	4	MATH3350 Differential Equations	3
PHYS2120 General Physics II-Calculus Level	4	EMEC3250 Mechanics of Elastic Bodies	3
EMEC2230 Engineering Statics	3	EMEC3730 Engineering Dynamics	3
Technical Writing ⁴	3	CIVE 361 Highway Engineering	4
CIVE 221 Geometric Control Systems	3	Humanities and Social Science Electives ²	3
	17		16
Semester 5	Credits	Semester 6	Credits
STAT3800 Statistics	3	CIVE 334 Intro to Geotechnical Engineering	4
CIVE 310 Fluid Mechanics	3	CIVE 352 Intro to Water Resources Engineering	4
CIVE 319 Hydraulics Lab	1	CIVE 378 Materials of Construction	3
CIVE 326 Intro to Environmental Engineering	3	Computational Methods ⁵	3
CIVE 327 Environmental Engineering Lab	1	Humanities and Social Science Electives	3
CIVE 341 Intro to Structural Engineering	4		
	15		17
Semester 7	Credits	Semester 8	Credits
CIVE 490 Intro to Civil Engineering Practice	1	CIVE 495 Senior Design	3
Design Electives ⁶	6	Design Elective ⁶	3
Technical Electives ⁷	6	Technical Electives ⁷	6
Humanities and Social Science Electives ²	3	Humanities and Social Science Electives ²	6
	16		18
		Minimum Credit Hours	130

¹CHEM1190 and CHEM1194 are acceptable substitutes.

²See Humanities and Social Science Requirements (Omaha campus) on the following page

³PHYS1164 is an acceptable substitute if taken in parallel with PHYS2120

⁴See Technical Writing Requirement on the following page.

⁵MATH2050 Linear Algebra, CSCI/MATH3300 Numerical Methods or CSCI/MATH4300 Operations Research I

⁶See Design Electives Requirement on the following page.

⁷See Technical Electives Requirement on the following page.

