

BS in Civil Engineering

Program Codes:

20FQ0106BS

Degree Requirements

To earn a Bachelor of Science in Civil Engineering degree from UIC, students need to complete university, college, and department degree requirements. The Department of Civil and Materials Engineering degree requirements are outlined below. Students should consult the *College of Engineering* section for additional degree requirements and college academic policies.

All students must take the Fundamentals of Engineering Examination (FE Exam) by graduation.

Code	Title	Hours
Summary of Requirements		
Nonengineering and General Education Requirements		55
Required in the College of Engineering		64
Technical Electives		9
Total Hours		128

Nonengineering and General Education Requirements

Code	Title	Hours
Required Courses		
ENGL 160	Academic Writing I: Writing in Academic and Public Contexts	3
ENGL 161	Academic Writing II: Writing for Inquiry and Research	3
	Exploring World Cultures course ^a	3
	Understanding the Creative Arts course ^a	3
	Understanding the Past course ^a	3
	Understanding the Individual and Society course ^a	3
	Understanding U.S. Society course ^a	3
MATH 180	Calculus I ^b	4
MATH 181	Calculus II ^b	4
MATH 210	Calculus III ^b	3
MATH 220	Introduction to Differential Equations	3
MATH 310	Applied Linear Algebra	3
	or STAT 38 Applied Statistical Methods I	
PHYS 141	General Physics I (Mechanics) ^b	4
PHYS 142	General Physics II (Electricity and Magnetism) ^b	4
CHEM 122	General Chemistry I Lecture ^{b,c}	4
CHEM 123	General Chemistry Laboratory I ^{b,c}	1
	Select one of the following:	4
	EAES 101 Global Environmental Change ^b	
	EAES 111 Earth, Energy, and the Environment ^b	
Total Hours		55

^a Students should consult the General Education (<http://catalog.uic.edu/ucat/degree-programs/general-education>) section of the catalog for a list of approved courses in this category.

- ^b This course is approved for the Analyzing the Natural World General Education category.
- ^c General Education credit is given for successful completion of both CHEM 122 and CHEM 123.

Required in the College of Engineering

Code	Title	Hours
Required Courses		
ENGR 100	Engineering Orientation ^a	1
CS 109	C/C ++ Programming for Engineers with MatLab	3
CME 201	Statics	3
CME 203	Strength of Materials	3
CME 205	Structural Analysis I	3
CME 211	Fluid Mechanics and Hydraulics	3
CME 260	Properties of Materials	3
CME 300	Composition and Properties of Concrete	2
CME 301	Behavior and Design of Metal Structures	3
CME 302	Transportation Engineering	3
CME 310	Design of Reinforced Concrete Structures	3
CME 311	Water Resources Engineering	3
CME 315	Soil Mechanics and Laboratory	4
CME 322	Environmental Engineering	3
CME 396	Civil Engineering Systems Design	2
CME 402	Geometric Design of Highway Facilities	3
CME 405	Foundation Analysis and Design	3
CME 434	Finite Element Analysis I	3
CME 497	Capstone Design	2
IE 201	Financial Engineering	3
ME 210	Engineering Dynamics	3
ME 250	Introduction to Engineering Design and Graphics	3
ECE 210	Electrical Circuit Analysis	3
	or ME 205 Introduction to Thermodynamics	
Total Hours		64

^a ENGR 100 is a one-semester-hour course, but the hour does not count toward the total hours required for graduation.

Technical Electives

Code	Title	Hours
Courses		
Select at least two of the following to strengthen the design content:		6
CME 400	Advanced Design of Reinforced Concrete Structures	
CME 401	Advanced Design of Metal Structures	
CME 403	Hydraulic Design	
CME 404	Railroad Track Engineering	
CME 406	Bridge Design I	
CME 408	Traffic Engineering and Design	
CME 410	Design of Prestressed Concrete Structures	
CME 413	Design of Wood Structures	
CME 414	Design of Masonry Structures	

CME 415	Environmental Geotechnology	
CME 421	Water Treatment Design	
CME 422	Wastewater Treatment Design	
CME 425	Environmental Remediation Engineering	
CME 427	Engineering Hydrology	
CME 454	Structural Analysis and Design of Tall Buildings	
CME 485	Construction Engineering and Management	
CME 486	Construction Equipment and Design Methods	
Additional 400-level CME courses (except CME 493 and CME 496), including any of the courses listed above.		3
CME 494 (Special Topics in Civil Engineering, Mechanics and Materials) may be used under some circumstances only after receiving PRIOR departmental approval.		
Total Hours		9

Note: Students who are interested in taking the Illinois Structural Engineering Licensure Examination must take two courses in the structural design area. This statement is not a degree requirement and the availability of the structural design courses varies from time to time.

Sample Course Schedule

Course	Title	Hours
Freshman Year		
First Semester		
MATH 180	Calculus I	4
CHEM 122	General Chemistry I Lecture	4
CHEM 123	General Chemistry Laboratory I	1
ENGL 160	Academic Writing I: Writing in Academic and Public Contexts	3
General Education Core course		3
ENGR 100	Engineering Orientation ^a	1
	Hours	15
Second Semester		
MATH 181	Calculus II	4
PHYS 141	General Physics I (Mechanics)	4
ENGL 161	Academic Writing II: Writing for Inquiry and Research	3
ME 250	Introduction to Engineering Design and Graphics	3
General Education Core course		3
	Hours	17
Sophomore Year		
First Semester		
MATH 210	Calculus III	3
PHYS 142	General Physics II (Electricity and Magnetism)	4
CS 109	C/C ++ Programming for Engineers with MatLab	3
CME 201	Statics	3
IE 201	Financial Engineering	3
	Hours	16
Second Semester		
MATH 220	Introduction to Differential Equations	3

MATH 310	Applied Linear Algebra	3
or STAT 381	or Applied Statistical Methods I	
CME 203	Strength of Materials	3
ME 210	Engineering Dynamics	3
CME 211	Fluid Mechanics and Hydraulics	3
General Education Core course		3
	Hours	18

Junior Year

First Semester

CME 205	Structural Analysis I	3
CME 302	Transportation Engineering	3
CME 315	Soil Mechanics and Laboratory	4
CME 322	Environmental Engineering	3
EAES 101	Global Environmental Change	4
or EAES 111	or Earth, Energy, and the Environment	
	Hours	17

Second Semester

CME 310	Design of Reinforced Concrete Structures	3
CME 311	Water Resources Engineering	3
ME 205	Introduction to Thermodynamics	3
or ECE 210	or Electrical Circuit Analysis	
CME 260	Properties of Materials	3
CME 300	Composition and Properties of Concrete	2
General Education Core course		3
	Hours	17

Senior Year

First Semester

CME 301	Behavior and Design of Metal Structures	3
CME 396	Civil Engineering Systems Design	2
CME 434	Finite Element Analysis I	3
CME Technical Elective I		3
CME Technical Elective II		3
	Hours	14

Second Semester

CME 402	Geometric Design of Highway Facilities	3
CME 405	Foundation Analysis and Design	3
CME 497	Capstone Design	2
CME Technical Elective III		3
General Education Core course		3
	Hours	14
	Total Hours	128

^a ENGR 100 is a one-semester-hour course, but the hour does not count toward the total hours required for graduation.