

Southern Illinois University Edwardsville
BACHELOR OF SCIENCE - CIVIL ENGINEERING

This guide provides only a suggested course of study and should be used in consultation with an advisor and the SIUE Undergraduate Catalog, available online at www.siu.edu/registrar.

LOWER-DIVISION COURSES

YEAR	FALL	SPRING		
1	IME 106 Engineering Problem Solving [^]	3	MATH 152 Calculus II (Dist NSM)	5
	CHEM 131 Engineering Chemistry (Intro NSM)+	4	PHYS 151 University Physics I	4
	CHEM 135 Engineering Chemistry Lab+	1	PHYS 151L University Physics Lab I	1
	MATH 150 Calculus I (Intro NSM)	5	ENG 102 English Composition II	3
	ENG 101 English Composition I	3	SPC 103 Interpersonal Comm. Skills (IGR)*	3
	16		16	
2	CE 204 Engineering Graphics & CAD	3	CE 206 Civil Engineering Surveying	2
	CE 240 Statics	3	CE 207L CE Computer Applications	1
	ECON 111 Macroeconomics (Intro SS)	3	CE 242 Mechanics of Solids	3
	MATH 250 Calculus III	4	MATH 305 Differential Equations I	3
	PHYS 152 University Physics II	4	ME 262 Dynamics	3
	PHYS 152L University Physics Lab II	1	Natural Science course ^{^^}	3
			Intro Fine Arts & Humanities ^{**}	3
	18		18	

Admission to upper-division courses requires satisfactory completion of lower-division core courses (see catalog for specific requirements). An "APPLICATION FOR ADMISSION TO UPPER-DIVISION ENGINEERING COURSES" form must be completed and approved. This form is available at all engineering department offices. A special five-year BS/MS degree program is available for qualified students. Contact your department office for specific details.

UPPER-DIVISION COURSES

3	CE 315 Fluid Mechanics	3	CE 343 Structural Engineering II	3
	CE 330 Engineering Materials	2	CE 354 Geotechnical Engineering	3
	CE 330L Engineering Materials Lab	1	CE 354L Geotechnical Engineering Lab	1
	CE 342 Structural Engineering I	3	CE 376 Transportation Engineering	3
	ME 310 Thermodynamics	3	CE 380 Environmental Engineering	3
	Intro Fine Arts & Humanities or Soc Sciences ^{**}	3	STAT 380 Statistics for Applications	3
			Interdisciplinary Studies (IS) ^{**}	3
	15		19	
4	CE 416 Engineering Hydrology (offered in fall) or CE 455 Foundation Design (offered in spring)#	3	CE 415L Applied Fluid Mechanics Lab	1
	CE 460 Municipal Infrastructure Design	3	CE 493 Engineering Design	3
	CE ELECTIVE I#	3	CE ELECTIVE II#	3
	ECE 210 Electrical Circuits	3	CE ELECTIVE III#	3
	PHIL 323 Engr, Ethics, & Professional (Dist FAH)	3	IME 345 Engineering Economic Analysis	3
	Preparation for Fundamental of Engineering Exam	0	Dist Social Sciences ^{**}	3
		15		16

[^] IME 106 is for incoming freshmen & transfer students with less than 16 hours. Other students should take PHIL, MATH, or FL 106.

⁺ CHEM 121a, 125a may be substituted with departmental approval.

^{*} If SPC 105 is taken instead of SPC 103, then a course from the list of Intergroup Relations in the current SIUE catalog must also be taken.

^{^^} Students must select a natural science course other than physics and chemistry. Possible courses include but are not limited to BIOL 111, BIOL 140, BIOL 468, ESCI 111, ENSC 210, ENSC 220, ENSC 404, ENSC 473, ENSC 475, GEOG 202, GEOG 210, GEOG 211, GEOG 315, GEOG 320, GEOG 321, GEOG 418, and GEOG 423. Seek approval of your advisor prior to enrolling.

^{**} It is recommended that students choose a course to meet a general education requirement, i.e. Intro Fine Arts & Humanities, and International Issues/International Cultures. If a course is not selected that meets two general education requirements, then a course from the list of II/IC course in the current SIUE Undergraduate Catalog must also be taken.

[#] Students seeking to become licensed structural engineers (SE) in the State of Illinois should take 18 hours of structural engineering in upper division: CE 342, CE 343, CE 455, and CE 493-STR plus any two structural electives can be used to meet this requirement. Two of the 400-level courses must include structural design.

For additional information contact the Civil Engineering Department, EB 2056, 650-2533, or Engineering Student Services, EB 2012, 650-5300.

NOTE: The General Education courses listed in the Curriculum Guide meet Option A of the Skills requirement. A student who wishes to select Option B may replace IME 106 and SPC 103 with two semesters of a foreign language (101 and 102). An appropriate course is required to meet the Intergroup Relations requirement for students selecting Option B (see catalog).

CE ELECTIVES

Not all elective courses are offered every year. The courses to be offered are selected from the list below on the basis of student demand and faculty availability.

<u>Environmental/Water Resources</u>	<u>Transportation</u>	<u>Structural</u>
CE 412 Hydrology	CE 435 Pavement Design	CE 435 Pavement Design
CE 416 Engineering Hydrology	CE 473 Transportation Site Selection	CE 441 Design of Timber Structures
CE 480 Environmental Analysis	CE 475 Urban Transportation	CE 443 Design of Masonry Structures
CE 486 Wastewater Treatment Design	CE 476 Traffic Studies	CE 445 Structural Analysis II
CE 487 Water Treatment Design		CE 446 Advanced Concrete Design
CE 488 Hazardous Waste Management		CE 449 Advanced Steel Design
		CE 455 Foundation Design

EVENING AND SECOND COURSE OFFERINGS

CE courses are offered during either the Fall or Spring Semester as shown on the reverse side of this page. Additional offerings of many CE courses are available as shown below. (The department reserves the right to cancel these offerings because of lack of student demand or faculty availability.)

Daytime

<u>FALL</u>	<u>SPRING</u>	<u>SUMMER</u>
CE 206 CE Surveying	CE 207L CE Computer Applications	None
CE 207L CE Computer Applications	CE 240 Statics	
CE 242 Mechanics of Solids	CE 315 Fluid Mechanics	
CE 330 Engineering Materials	CE 342 Structural Engineering I	
CE 330L Engineering Materials Lab	CE 460 Municipal Infrastructure	
CE 343 Structural Engineering II		
CE 376 Transportation		
CE 380 Environmental Engineering		
CE 493 Engineering Design		

Evening

<u>FALL</u>	<u>SPRING</u>	<u>SUMMER</u>
CE 204 Graphics: CAD	CE 204 Engineering Graphics & CAD	CE 240 Statics
CE ELECTIVES	CE 207L CE Computer Applications	CE 242 Mechanics of Solids
	CE 354 Geotechnical Engineering	CE 315 Fluid Mechanics
	CE 354L Soil Mechanics Lab	CE ELECTIVES
	CE 455 Foundation Design	
	CE ELECTIVES	

Other engineering courses of interest to CE students:

<u>FALL</u>	<u>SPRING</u>	<u>SUMMER</u>
IME 345 Engineering Economics Analysis	ECE 210 Electrical Circuits	ECE 210 Electrical Circuits
	IME 106 Engineering Problem Solving	IME 345 Engineering Economics Analysis
		ME 262 Dynamics
		ME 310 Thermodynamics

Declaration of Major: Students interested in any of the majors offered by the School of Engineering should seek advisement from the School of Engineering when they initially enroll in the University and should declare a major as soon as possible. Students admitted to programs offered by the School of Engineering shall have met University admission requirements, successfully completed any required academic development and high school deficiency courses, eligibility to enroll in MATH 125 – Pre-Calculus Math with Trigonometry, and have a cumulative GPA of 2.0 or better in any completed University course work.

Students with high school deficiencies, those with AD (academic development) requirements, and those starting in a mathematics course before MATH 150 - Calculus I, will require more than the eight (8) academic semesters shown in this curriculum guide. This may require a summer session(s) or an extra semester(s).

Enrollment in Upper-Division CE Courses: The requirements for enrollment in upper-division CE courses are: satisfactory completion of all University and School of Engineering admission requirements; satisfactory completion (C or better) of CHEM 131, 135; CE 204, 206, 207L, 240, 242; ENG 101, 102; IME 106; MATH 150, 152, 250, 305; ME 262; PHYS 151, 151L, 152, 152L; and SPC 103, with a GPA of 2.0 for non-transfer students, transfer students from articulated programs, and Illinois resident transfer students (2.25 for other transfer students); and an approved application for enrollment in upper-division engineering courses.