

BS in Civil Engineering Curriculum - Total 120 units

Course	Units	Title	Prerequisites	Sem / Yr	Grade	Notes
GENERAL EDUCATION COURSES: 24 UNITS						
MATHEMATICS COURSES: 19 UNITS						
MATH 150A	4	Calculus I	MSE Qualifying Examination			
MATH 150B	4	Calculus II	MATH 150A			
MATH 250A	4	Calculus III	MATH 150B			
MATH 250B	4	Introduction to Linear Algebra & Diff. Equations	MATH 250A			
EGCE 308	3	Engineering Analysis	PHYS 226, MATH 250B			
SCIENCE COURSES: 11 UNITS						
PHYS 225	3	Fundamental Physics: Mechanics	MATH 150A			
PHYS 225L	1	Fundamental Physics: Mechanics Lab	PHYS 225 ***			
PHYS 226	3	Fundamental Physics: Electricity and Magnetism	PHYS 225, MATH 150B			
PHYS 226L	1	Fundamental Physics: Electricity and Magnetism Lab	PHYS 226 ***			
CHEM 123	3	Chemistry for Engineers	NONE			
BASIC SCIENCES ELECTIVE COURSE : 3 UNITS						
BIOL 101	3	Elements of Biology	NONE			
GEOL 101	3	Physical Geology	NONE			
CORE COURSES : 50 UNITS						
EGCE 201	3	Statics	MATH 150B, PHYS 225			
EGCE 104	1	Computer-Aided Architectural and CE Drafting	NONE			
EGCE 110	2	Engineering Surveying	EGCE 110LL ***			
EGCE 110L	1	Engineering Surveying Laboratory	EGCE 110 ***			
EGCE 203	3	Mechanics of Materials	MATH 250A, EGCE 201			
EGCE 202	3	Dynamics	MATH 250A, EGCE 201			
EGCE 204	1	Technical Comm. and Computing for Civil Engineers	EGCE 104, ENGL 101			
EGCE 340	3	Soil Mechanics	EGCE 203			
EGCE 341L	1	Soil Mechanics Laboratory	EGCE 340, ENGL 101			
EGCE 320	3	Structural Analysis	EGCE 203			
EGCE 321L	1	Structural Analysis Laboratory	EGCE 320, EGCE 377, ENGL 101			
EGCE 401	3	Engineering Economy and Professionalism	MATH 150A, Junior or Senior Standing			
EGCE 406	1	Computer Applications in Civil Engineering Analysis and Design	EGCE 204, 340, 320, 330, 350			
EGCE 311L	1	Civil Engineering Materials Laboratory	EGCE 203, ENGL 101			
EGCE 325	3	Reinforced Concrete Design	EGCE 320			
EGCE 342	3	Foundation Design	EGCE 340			
EGCE 330	3	Engineering Hydraulics	EGCE 202			
EGCE 331L	1	Engineering Hydraulics Lab	EGCE 330, ENGL 101			
EGCE 326	3	Structural Steel Design	EGCE 320			
EGCE 370	3	Environmental Engineering	CHEM 123, MATH 250B			
EGCE 350	3	Construction Engineering	EGCE 203, EGCE 401			
EGCE 494A*	3	Senior Design	EGCE 325, 326			
EGCE 494B*	1	Senior Design				
TECHNICAL ELECTIVES COURSES : 13 UNITS						
EGCE 360	3	Transportation Engineering	EGCE 202 and Senior Standing			
EGCE 410	3	Advanced Construction Materials-Concrete Emphasis	EGCE 325, 311L			
EGCE 415 **	3	Architectural Design	EGCE 104, EGCE 325, and EGCE 326			
EGCE 420 **	3	Structural Systems Emphasis on Highrise Structures	EGCE 325, 326			
EGCE 422	3	Structural Dynamics	EGCE 320			
EGCE 425 **	3	Precast & Prestressed Concrete Design	EGCE 325			
EGCE 430	3	Design of Hydraulic Structures	EGCE 330			
EGCE 431	3	Engineering Hydrology	EGCE 330 ***			
EGCE 450	3	Proj Management & Constr Engr Practices	EGCE 350			
EGCE 470	3	Solid Waste Management and Air Pollution Control	EGCE 370			
EGCE 471	3	Water Quality Engineering	EGCE 370			
EGCE 490	1	Senior Seminar in Civil Engineering	Senior Standing			
EGCE 497	1-3	Senior Project	Senior Standing (Approval of CEE Dept.)			
EGCE 499	1-3	Independent Study	Senior Standing (Approval of CEE Dept.)			
EGCE 4XX	1-3	Other elective courses offered by CEE	CEE Department approval			

* Meets Upper Division Writing Requirements if the grade is "C" or better. Minimum 6 units required.

** Required Course for BS in Civil Engineering with Architectural Engineering Emphasis

*** Corequisite