

B.S. IN CIVIL ENGINEERING

CATALOG YEAR 2021-2022

Below is the *advised sequence* of courses for this degree program and prerequisites as of 12/18/20.

The official degree requirements and prerequisites found in the University General Catalog and the prerequisites are subject to change.

COURSE NUMBER AND TITLE	UNITS	PREREQUISITES
1ST SEMESTER		
MATH 122A/B or MATH 125 Calculus I with Applications	5/3	Appropriate Math Placement
CHEM 151 General Chemistry I or CHEM 161/163	4	Appropriate Math Placement
ENGL 101 or 107 or 109H First-Year Composition	3	
ENGR 102A/102B Introduction to Engineering or ENGR 102	3	<u>ENGR102A</u> : MATH 112; <u>ENGR102B</u> : Concurrently enrolled or completion of MATH 122B or 125; FR & SOPH Status
Tier I General Education	3	
Semester Total		18/16
2ND SEMESTER		
MATH 129 Calculus II	3	MATH 122B or 125 with C or better
MCB 181R/L Introductory Biology I or GEOS 251 Physical Geology	4	
PHYS 141 Introductory Mechanics or PHYS 161H	4	MATH 122B or 125 or appropriate Math Placement Level
ENGL 102 or 108 First-Year Composition	3	ENGL 101 or ENGL 107
Tier I General Education	3	
Semester Total		17
3RD SEMESTER		
CE 210 Engineering Graphics - Fall Only	1	
CE 214 Statics	3	PHYS 141 or 161H; MATH 129
MATH 223 Vector Calculus	4	MATH 129 with C or better
PHYS 241 Introductory Electricity and Magnetism or PHYS 261H or CHEM152 General Chemistry II or CHEM 162/164	4	For PHYS 241 or 261H: PHYS 141 or 161H, MATH 129; For CHEM 152 or CHEM 162/164: CHEM 151 or 161/163
Tier I General Education	3	
Semester Total		15
4TH SEMESTER		
CE 215 Mechanics of Solids	3	CE 214
CE 218 Mechanics of Fluids	3	CE 214 or (ENGR 211C for EEN majors only)
MATH 254 Intro to Ordinary Differential Equations	3	MATH 129 or 223 with C or better
CE 251 Elementary Surveying	3	CE 210 Pre/Co-requisite
CE 260 Computer Programming in Civil Engineering – Spring Only	1	MATH 223
Tier I General Education	3	
Semester Total		16

COURSE NUMBER AND TITLE	UNITS
CURRENT PREREQUISITES FOR UPPER DIVISION COURSES CAN BE FOUND IN THE UA GENERAL CATALOG	
ADVANCED STANDING IS REQUIRED FOR 3XX AND 4XX COURSES (SEE ADVISOR FOR REQUIREMENTS). Students cannot advance to 400 level courses with 3 or more 'Ds' in 300 level courses.	
5TH SEMESTER	
CE 301 Engineering Communications	3
CE 303 Numerical Analysis for Civil Engineers	3
CE 310 Probability and Statistics in Civil Engineering	3
CE 333 Elementary Structural Analysis	3
CE 363 Transport Engineering and Pavement Design	4
Semester Total	16
6TH SEMESTER	
CE 323 Hydraulic Engineering and Design	4
CE 335 Structural Design in Concrete or Technical Elective	3
CE 343 Soil Mechanics	3
CE 370R Environmental and Water Engineering or CE 381 Construction Engineering Management	3
CE Lab Elective – See major advisor for course approval of CE 329 or 349 or 389	1
ENGR 211P & I Engineering Science Elective Modules	2
Semester Total	16
7TH SEMESTER	
CE 408A Issues in Civil Engineering Practice	3
CE 334 Structural Design in Steel or Technical Elective	3
CE 440 Foundation Engineering	3
CE Technical Elective	3
CE Technical Elective	3
CE Lab Elective – See major advisor for course approval of CE 329 or 349 or 389	1
Semester Total	16
8TH SEMESTER	
CE 408B Civil Engineering Senior Capstone Design	3
CE Technical Elective	3
CE Technical Elective	3
CE Lab Elective – See major advisor for course approval of CE 329 or 349 or 389	1
Tier II General Education	3
Tier II General Education	3
Semester Total	16

*Tier I and II General Education Courses must meet University general education requirements. One course must be recognized by the university as meeting the Diversity Requirement.