

B.S. IN ARCHITECTURAL 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
ENGL 102 or 108 First-Year Composition	3	ENGL 101 or ENGL 107
PHYS 141 Introductory Mechanics or PHYS 161H	4	MATH 122B or 125 or appropriate Math Placement Level
Tier I General Education	3	
Tier I General Education	3	
Semester Total		16
3RD SEMESTER		
ARCE 295 Intro to Architectural Engineering	1	MATH 122B or 125 or Dept. consent
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	4	For PHYS 241 or 261H: PHYS 141 or 161H; MATH 129 or appropriate Math Placement Level
ARC 220 History of Applied Building Technology - # See Note Below – Tier II Humanities option	3	ENGR 102A/B or 102
AME 230 Thermodynamics	3	PHYS 141
Semester Total		18
4TH SEMESTER		
CE 215 Mechanics of Materials	3	CE 214
MATH 254 Intro to Ordinary Differential Equations	3	MATH 129 or 223 with C or better
ARCE 210 Build Information Modeling for Engineers	3	ENGR 102A/B or 102
ARCE 223 Building Technology III, EAS I	3	
Tier I General Education	3	
Semester Total		15

If ARC 220 fulfills the Tier II Humanities requirement, then an additional technical elective needed to fulfill the unit requirement. If not used as a Tier II Humanities, then ARC 220 will fulfill the course requirement and no additional technical elective needed.

COURSE NUMBER AND TITLE	UNITS	PREREQUISITES
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)		
5TH SEMESTER		
CE 218 Mechanics of Fluids	3	
CE 301 Engineering Communications	3	
CE 310 Probability and Statistics in Civil Engineering	3	
CE 333 Elementary Structural Analysis	3	
ARCE 340 Introduction to Mechanical Systems in Building Design	3	
ENGR 211M Circuits	1	
	Semester Total	16
6TH SEMESTER		
CE 335 Structural Design in Concrete	3	
CE 381 Construction Engineering Management	3	
ARCE 320 Power Systems Engineering	3	
ARCE 330 On Light: Lighting	3	
CE 389 Materials Lab	1	
Tier II General Education	3	
	Semester Total	16
7TH SEMESTER		
ARC 400A Senior Engineering Design Studio	6	
ARCE 408A Issues in Professional Practice	1	
CE 334 Structural Design in Steel	3	
ENGR 211P Engineering Economics	1	
ENGR 211I Dynamics	1	
Technical Elective	3	
	Semester Total	15
8TH SEMESTER		
ARCE 400B Senior Engineering Design	3	
ARCE 408B Issues in Professional Practice II	1	
CE 438 Behavioral and Design Structural Systems	3	
Technical Elective	3	
Technical Elective	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.