

**REQUIREMENTS FOR THE DEGREE OF
BACHELOR OF SCIENCE IN ARCHITECTURAL ENGINEERING
CURRICULUM 2017-2018**

Below is the advised sequencing of courses for this degree, the official degree requirements are found in the University General Catalog. This plan assumes that you start in the fall semester. Notice that 300/400 level courses are only offered once a year. See the five year course plan on the web site (civil.arizona.edu) for the information when courses are offered.

FRESHMAN YEAR

ENGL 101 1 st Year Comp	3	ENGL 102 1 st Year Comp 2 (ENGL 101).....	3
MATH 122A/B or 124 or 125 Calculus I	5/3	MATH 129 Calculus II (MATH 122/124/125)	3
CHEM 151 Chemistry I with lab.....	4	PHYS 141 Introductory Mechanics (Math 122/124/125).....	4
ENGR 102A/B Introduction to Engineering	3	TIER I General Education (Trad/Indv)	3
TIER I General Education (Trad/Indv)	3	TIER I General Education (Trad/Indv)	3
18/16		16	

SOPHOMORE YEAR

MATH 223 Calculus III (MATH 129).....	4	MATH 254 Differential Equations (MATH 223).....	3
PHYS 241 Introductory Electricity and Magnetism (PHYS 141).....	4	ARCE 210 Building Information Modeling (ENGR 102).....	3
ARCE 295 Introduction to Architectural Engineering (MATH 122/125)..	1	ARCE 223 Environmental Adaptive Systems (PHYS 141).....	3
ARC 220 History of Applied Building Technology	3	CE 215 Mechanics of Materials (CE 214).....	3
CE 214 Statics (PHYS 141 or 161H/MATH 129 or 250B).....	3	CE 218 Mechanics of Fluids (CE 214)	3
		Tier I General Education (Trad/Indv)	3
15		18	

ADVANCED STANDING IS REQUIRED FOR ALL 300/400 LEVEL COURSES WITH A GPA => 2.25

FALL ONLY

AME 230 Thermodynamics (PHYS 141).....	3
ENGR 211M Circuits	1
CE 301 Engineering Communications	3
CE 310 Probability & Statistics in CE (Math 122/124/125).....	3
CE 333 Elementary Structural Analysis (CE 215).....	3
CE 381 Construction Engineering Management	3
16	

JUNIOR YEAR

AME 442 HVAC System Design (AME 230 and CE 218).....	3
ARCE 320 Power System Engineering (ENGR 211M)	3
ARCE 330 Architectural Lighting.....	3
CE 334 Structural Design Steel (CE 333).....	3
CE 389 Materials Lab (CE 215).....	1
Tier 2 General Education	3
16	

SPRING ONLY

SENIOR YEAR

ARCE 400A Capstone Design Studio	6	ARCE 400B Senior Capstone Design.....	3
ARCE 408A Issues in Professional Practice	2	CE 438 Behavioral and Design of Structural Systems (CE 334).	3
CE 335 Structural Design in Concrete (CE 333)	3	ARCE Technical Elective.....	3
ENGR 211P Engineering Economics (MATH 129).....	1	ARCE Technical Elective	3
ENGR 211I Dynamics (CE 214).....	1	Tier 2 General Education	3
Math/Science Elective	3		
16		15	

TOTAL UNITS FOR DEGREE = 128

Math/ Science Electives

CE 303 (Numerical Analysis in CE – 3 units), **CE 402** (Introduction to Finite Element Analysis – 3 units), **AME 301** (Engineering Analysis – 3 units), **Math 310** (Applied Linear Algebra – 3 units), **RNR 351** (Ecosystem Services: Science and Management – 3 units), **RNR 427** (Earth's Changing Carbon Cycle – 3 units)

ARCE Technical Electives

ARC 321 (Building Materials and Methods III – 3 units), **ARC 326** (Site Analysis and Planning – 2 units), **ARC 421** (Building Technology V, EAS II – 3 units), **ARC 461A** (Water Efficiency in Buildings – 3 units), **ARC 461D** (Computer Energy Analysis – 3 units), **ARC 461E** (Sustainable Design and the LEED Initiative – 3 units), **CE 432** (Advance Steel Design – 3 units), **CE 434** (Wood and Masonry Design – 3 units), **CE 435** (Prestressed Concrete Design), **CE 437** (Advanced Structural Design in Concrete -3 units), **CE 482** (Construction Project Planning and Scheduling -3 units), **CE 483** (Construction Cost Estimating – 3 units), **CE 485** (Construction Materials and Methods – 3 units), **SBE 301** (Introduction to Design Thinking - 4 units)