B.S. IN ELECTRICAL & COMPUTER ENGINEERING CATALOG YEAR 2017-2018

Below is the *advised sequence* of courses for this degree program and prerequisites as of 3/07/17. The official degree requirements and prerequisites can be found in the University General Catalog and the prerequisites are subject to change.

1st SEMESTER MATH 122A/B or MATH 125 Calculus I with Applications CHEM 151 General Chemistry I or CHEM 105A/106A 4 Appropriate Math Placement ENGL 101 or 107 or 109H First-Year Composition 3 Concurrent earollment or completion of MATH 122B or 125 ENGR 102 Introduction to Engineering or ENGR 102A and ENGR 102B or 125 Tier I General Education 3 MATH 122B or 125 with C or better ECE 175 Computer Programming for Engineering Applications 3 MATH 122B or 125 with C or better ECE 175 Computer Programming for Engineering Applications 3 Concurrent enrollment or completion of MATH 122B or 125. Concurrent enrollment or completion of MATH 122B or 125. Concurrent enrollment or completion of MATH 129 and England Eng	COURSE NUMBER AND TITLE	UNITS	PREREQUISITES
CHEM 151 General Chemistry I or CHEM 105A/106A 4 Appropriate Math Placement ENGL 101 or 107 or 109H First-Year Composition 3 FNGR 102 Introduction to Engineering or ENGR 102A and ENGR 102B and ENGR 102B or 125 or 125 or 125 Tier I General Education 3 200 SEMESTER MATH 129 Calculus II 3 MATH 122B or 125 with C or better ECE 175 Computer Programming for Engineering Applications 3 MATH 122B or 125 (Concurrent enrollment or completion of MATH 122B or 125 or	1 ST SEMESTER		
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Tier I General Education 3 4 TH SEMESTER ECE 220 Basic Circuits 5 MATH 129, PHYS 241, Concurrent enrollment or completion of MATH 254 PHYS 143 Introductory Optics and Thermodynamics or PHYS 142 or PHYS 162H 2 PHYS 161H, MATH 129 MATH 243 Discrete Mathematics in Computer Science or CSC 245 Intro to Discrete Structures 3 CSC 245: Grade of C or better in CSC 120 or 127B or 227 MATH 254 Intro to Ordinary Differential Equations 3 MATH 129 or 223 with C or better	MATH 223 Vector Calculus	4	MATH 129 with C or better
4 TH SEMESTER ECE 220 Basic Circuits 5 MATH 129, PHYS 241, Concurrent enrollment or completion of MATH 254 PHYS 143 Introductory Optics and Thermodynamics or PHYS 142 or PHYS 162H MATH 243 Discrete Mathematics in Computer Science or CSC 245 Intro to Discrete Structures 3 CSC 245: Grade of C or better in CSC 120 or 127B or 227 MATH 254 Intro to Ordinary Differential Equations 3 MATH 129 or 223 with C or better	PHYS 241 Introductory Electricity and Magnetism or PHYS 261H	4	PHYS 141 or 161H; MATH 129
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		3	
Tier II General Education 3	MATH 254 Intro to Ordinary Differential Equations	3	MATH 129 or 223 with C or better
	Tier II General Education	3	

ELECTRICAL O	PTION	
COURSE NUMBER AND TITLE	UNITS	
CURRENT PREREQUISITES FOR UPPER DIVISION COURSES OF	AN BE FOUN	D IN THE UA GENERAL CATALOG
ADVANCED STANDING IS REQUIRED FOR 3XX AND 4XX CO	JRSES (SEE A	DVISOR FOR REQUIREMENTS)
5 TH SEMESTER		
ECE 310 Applications of Engineering Mathematics	4	
ECE 320A Circuit Theory	3	
ECE 381A Introductory Electromagnetics	4	
Technical Elective – See major advisor for course approval	3	
ECE 311 Engineering Ethics	1	
6 TH SEMESTER		
ECE 340A Introduction to Communications	3	
ECE 351C Electronic Circuits	4	
ECE 372A Microprocessor Organization	4	
ECE 352 Device Electronics	3	
Tier I General Education	3	
7 TH SEMESTER		
ENGR 498A Cross-disciplinary Design (Fall Only) – Senior Status	3	
Engineering Elective Course II	3	
Technical Elective – See major advisor for course approval	3	
Technical Elective – See major advisor for course approval	3	
Technical Elective – See major advisor for course approval	3	
8 TH SEMESTER		
ENGR 498B Cross-disciplinary Design (Spring Only) – Senior Status	3	

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Technical Elective – See major advisor for course approval

Technical Elective - See major advisor for course approval

Technical Elective – See major advisor for course approval

Tier II General Education

^{*}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.

COMPUTER OPTION				
COURSE NUMBER AND TITLE	UNITS			
CURRENT PREREQUISITES FOR UPPER DIVISION COURSES C	AN BE FOU	ND IN THE UA GENERAL CATALOG		
ADVANCED STANDING IS REQUIRED FOR 3XX AND 4XX COL	JRSES (SEE	ADVISOR FOR REQUIREMENTS)		
5 [™] SEMESTER				
ECE 310 Applications of Engineering Mathematics	4			
ECE 369A Fundamentals of Computer Organization	4			
ECE 320A Circuit Theory	3			
ECE 373 Object-Oriented Software Design	3			
ECE 311 Engineering Ethics	1			
6 TH SEMESTER				
Technical Elective – See major advisor for course approval	3			
ECE 351C Electronic Circuits	4			
ECE 340A Introduction to Communications	3			
ECE 372A Microprocessor Organization	4			
Tier I General Education	3			
7 TH SEMESTER				
ENGR 498A Cross-disciplinary Design (Fall Only) – Senior Status	3			
Required Computer Course	3			
Technical Elective – See major advisor for course approval	3			
Technical Elective – See major advisor for course approval	3			
Technical Elective – See major advisor for course approval	3			
8 TH SEMESTER				
ENGR 498B Cross-disciplinary Design (Spring Only) – Senior Status	3			
Technical Elective – See major advisor for course approval	3			
Technical Elective – See major advisor for course approval	3			
Technical Elective – See major advisor for course approval	3			

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Tier II General Education