Electrical Engineering (ELEC)

Fall Hours Spring Hours CHEM 1030 Fundamentals Chemistry I 3 COMP 1220 Introduction to Computing with Python ² 2 CHEM 1031 Fundamental Chemistry I Laboratory 1 ENGL 1120 English Composition II 3 ENGL 1100 English Composition I 3 ENGR 1110 Introduction to Engineering 2 ENGR 1100 Engineering Orientation 4 PHYS 1600 Engineering Physics I 4 AMTH 1610 Calculus I 4 PHYS 1600 Engineering Physics I 4 Core Fine Arts ¹ 3 3 Sophomore Fall Hours Spring Hours ELEC 2200 Digital Logic Circuits 3 ELEC 2110 Electric Circuit Analysis 3 ELEC 2200 Digital Logic Circuits 3 ELEC 2220 Computer Systems 3 ELEC 2200 Engineering Physics II 4 MATH 2650 Linear Differential Equations 3 A ELEC 2200 Engineering Physics II 4 MATH 2650 Linear Algebra 3 ELEC 2300 Engineering Physics II 5 Pring Hours Fall Hours Spring Hours ELEC 2310 Engineering Physics II	Freshman					
CHEM 1031 Fundamental Chemistry I Laboratory 1 ENGL 1120 English Composition I 3 ENGL 1100 English Composition I 3 ENGR 1110 Introduction to Engineering 2 ENGR 1100 English Composition I 0 MATH 1620 Calculus II 4 MATH 1610 Calculus I 4 PHYS 1600 Engineering Physics I 15 Core Fine Arts¹ 3 The Calculus II 15 Sophomore Fall Burs Spring Mours ELEC 2200 Digital Logic Circuits 3 ELEC 2110 Electric Circuit Analysis 4 ENGR 2100 Fundamentals of Engineering Mechanics 3 ELEC 2220 Computer Systems 3 MATH 2630 Calculus III 4 MATH 2650 Linear Differential Equations 3 APHYS 1610 Engineering Physics II 4 MATH 2660 Topics in Linear Algebra 3 Core History¹ 3 Core History or Core Social Science¹ 3 Fall Hours Spring Hours ELEC 2210 Digital Electronics 4 ELEC 3030 RF Systems Lab 1 ELEC 2210 Digital Electronics 4 ELEC 3300 Electrical System Design Lab 1 ELEC 2310 Electronics of Applied 3 ELEC 3500 Control Systems 3 <td>Fall</td> <td>Hours</td> <td>Spring</td> <td>Hours</td> <td></td>	Fall	Hours	Spring	Hours		
ENGL 1100 English Composition 3 ENGR 1110 Introduction to Engineering 2 ENGR 1100 Engineering Orientation 0 MATH 1620 Calculus 4 MATH 1620 Calculus 4 MATH 1620 Calculus 4 PHYS 1600 Engineering Physics 4 MATH 1610 Calculus 5 Total Fine Arts	CHEM 1030 Fundamentals Chemistry I		3 COMP 1220 Introduction to Computing with Python ²		2	
MATH 1610 Calculus II	CHEM 1031 Fundamental Chemistry I Laboratory		1 ENGL 1120 English Composition II		3	
MATH 1610 Calculus I 4 PHYS 1600 Engineering Physics I 5 Core Fine Arts	ENGL 1100 English Composition I		3 ENGR 1110 Introduction to Engineering		2	
Core Fine Arts¹ 3 Sophomore Fall Hours Spring Hours ELEC 2200 Digital Logic Circuits 3 ELEC 2110 Electric Circuit Analysis 4 ENOR 2100 Fundamentals of Engineering Mechanics⁴ 3 ELEC 2220 Computer Systems 3 MATH 2630 Calculus III 4 MATH 2650 Linear Differential Equations 3 MATH 2630 Calculus III 4 MATH 2660 Topics in Linear Algebra 3 Core History¹ 3 Core History or Core Social Science¹ 3 Junior 5 Spring Hours Fall Hours Spring Hours ELEC 2120 Signals and Systems 4 ELEC 3030 RF Systems Lab 1 ELEC 2210 Digital Electronics 4 ELEC 3320 Electromagnetics for Wireless communication 3 ELEC 3310 Fundamentals of Applied Electronics 3 ELEC 3350 Control Systems 3 Eltco 3600 Electric Power Engineering 3 ELEC 3500 Control Systems 3 Ethics³ 3 ELEC 3500 Control Systems 3 Senior Fall Hours Spring Hours Senior Fall C 4010 Capstone Design I 1 ENGR 2220 Introduct	ENGR 1100 Engineering Orientation		0 MATH 1620 Calculus II		4	
Sophomore Fall	MATH 1610 Calculus I		4 PHYS 1600 Engineering Physics I		4	
Sophomore Fall Hours Spring Hours ELEC 2200 Digital Logic Circuits 3 ELEC 2110 Electric Circuit Analysis 4 ENCR 2100 Fundamentals of Engineering Mechanics ⁵ 3 ELEC 2220 Computer Systems 3 MATH 2630 Calculus III 4 MATH 2650 Linear Differential Equations 3 MATH 2630 Calculus III 4 MATH 2660 Topics in Linear Algebra 3 Core History ¹ 3 Core History or Core Social Science ¹ 3 Core History or Core Social Science ¹ 4 Junior 5 4 ELEC 3030 RF Systems Lab 1 ELEC 2120 Signals and Systems 4 ELEC 3040 Electrical System Design Lab 1 ELEC 2120 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 310 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 310 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 310 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 3 ELEC 3100 Electric Power Engineering 3 ELEC 3000 Control Systems 3 ELEC 3600 Electric Power Engineering 5 ELEC 3800 Random Signals and Systems 3 </td <td>Core Fine Arts¹</td> <td></td> <td>3</td> <td></td> <td></td>	Core Fine Arts ¹		3			
Fall Hours Spring Hours ELEC 2200 Digital Logic Circuits 3 ELEC 2110 Electric Circuit Analysis 4 ENCR 2100 Fundamentals of Engineering Mechanics ⁶ 3 ELEC 2220 Computer Systems 3 MATH 2630 Calculus III 4 MATH 2650 Linear Differential Equations 3 ADMINIST Service 4 MATH 2660 Topics in Linear Algebra 3 Core History ¹ 3 Core History or Core Social Science ¹ 3 Junior 5 4 ELEC 3030 RF Systems Lab 1 ELEC 2120 Signals and Systems 4 ELEC 3040 Electrical System Design Lab 1 ELEC 2210 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 2310 Fundamentals of Applied 3 ELEC 3220 Electromagnetics for Wireless Communication 3 ELEC 3800 Electric Power Engineering 3 ELEC 3500 Control System 3 ELEC 3800 Random Signals and Systems 3 ELEC 3800 Random Signals and Systems 3 ELEC 3400 Communication Systems 3 ELEC 3500 Captrol System Service 3 ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design I 3 ELEC 4010 Capstone Design I 1 ENGR 2200 In			14		15	
Section Sect	Sophomore					
Serior S	Fall	Hours	Spring	Hours		
Mechanics 6 4 MATH 2630 Calculus III 4 MATH 2650 Linear Differential Equations 3 PHYS 1610 Engineering Physics II 4 MATH 2660 Topics in Linear Algebra 3 Core History 1 3 Core History or Core Social Science 1 3 Junior Fall Hours Spring Hours ELEC 2120 Signals and Systems 4 ELEC 3030 RF Systems Lab 1 ELEC 2210 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 3310 Fundamentals of Applied 3 ELEC 3320 Electromagnetics for Wireless 2 ELEC 3600 Electric Power Engineering 3 ELEC 3500 Control Systems 3 ELEC 3700 Analog Electronics 3 ELEC 3800 Random Signals and Systems 3 ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design I 1 ELEC 4010 Capstone Design I 1 ENGR 2220 Introduction To Thermodynamics, Fluids 3 Research Teamster 5.6 INSY 3600 Engineering Economy 3 Core Literature 1 3 ELEC Elective 6 3 Free Elective 5 <td rowsp<="" td=""><td>ELEC 2200 Digital Logic Circuits</td><td></td><td>3 ELEC 2110 Electric Circuit Analysis</td><td></td><td>4</td></td>	<td>ELEC 2200 Digital Logic Circuits</td> <td></td> <td>3 ELEC 2110 Electric Circuit Analysis</td> <td></td> <td>4</td>	ELEC 2200 Digital Logic Circuits		3 ELEC 2110 Electric Circuit Analysis		4
PHYS 1610 Engineering Physics II 4 MATH 2660 Topics in Linear Algebra 3 Core History¹ 3 Core History or Core Social Science¹ 3 Junior Fall Hours Fall Hours Spring Hours ELEC 2120 Signals and Systems 4 ELEC 3030 RF Systems Lab 1 ELEC 2210 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 3310 Fundamentals of Applied Electromagnetics 3 ELEC 3320 Electromagnetics for Wireless Communication 3 ELEC 3600 Electric Power Engineering 3 ELEC 3500 Control Systems 3 Ethics³ 3 ELEC 3700 Analog Electronics 3 ELEC 3800 Random Signals and Systems 3 Senior 1 Hours Spring Hours Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design II 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer ^{5,6} 3 INSY 3600 Engineering Economy 3 Core Literature¹ 3 3 Core Social Science¹ 3 Fice Elec			3 ELEC 2220 Computer Systems		3	
Core History 1	MATH 2630 Calculus III		4 MATH 2650 Linear Differential Equations		3	
17	PHYS 1610 Engineering Physics II		4 MATH 2660 Topics in Linear Algebra		3	
Fall Hours Spring Hours ELEC 2120 Signals and Systems 4 ELEC 3030 RF Systems Lab 1 ELEC 2210 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 3310 Fundamentals of Applied Electromagnetics 3 ELEC 3320 Electromagnetics for Wireless Communication 3 ELEC 3600 Electric Power Engineering 3 ELEC 3500 Control Systems 3 Ethics³ 3 ELEC 3700 Analog Electronics 3 ELEC 3800 Random Signals and Systems 3 Senior Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design I 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer⁵.6 3 INSY 3600 Engineering Economy 3 Core Literature¹ 3 Core Social Science¹ 3 ELEC Elective⁵ 3 ELEC Elective⁶ 3 Free Elective⁵ 3 Technical Elective⁴ 3 UNIV 4AAO Achieve the Creed 0	Core History ¹		3 Core History or Core Social Science ¹		3	
Fall Hours Spring Hours ELEC 2120 Signals and Systems 4 ELEC 3030 RF Systems Lab 1 ELEC 2210 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 3310 Fundamentals of Applied Electromagnetics 3 ELEC 3320 Electromagnetics for Wireless Communication 3 ELEC 3600 Electric Power Engineering 3 ELEC 3500 Control Systems 3 Ethics ³ 3 ELEC 3700 Analog Electronics 3 ELEC 3800 Random Signals and Systems 3 Senior 1 Hours Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design II 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer ^{5,6} 3 INSY 3600 Engineering Economy 3 Core Literature 1 3 Core Social Science 1 3 ELEC Elective 6 3 3 Free Elective 5 3 4 ELEC 3000 Random Signals and Systems 3 5 ELEC 4010 Capstone Design II 3 6 ELEC 4010 Capstone Design II 3 7 ELEC 4010 Capstone Design II			17		16	
ELEC 2120 Signals and Systems 4 ELEC 3030 RF Systems Lab 1 ELEC 2210 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 3310 Fundamentals of Applied Electromagnetics 3 ELEC 3320 Electromagnetics for Wireless Communication 3 ELEC 3600 Electric Power Engineering 3 ELEC 3500 Control Systems 3 Ethics ³ 3 ELEC 3700 Analog Electronics 3 ELEC 3800 Random Signals and Systems 3 ELEC 3800 Random Signals and Systems 3 Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design I 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer ^{5,6} 3 INSY 3600 Engineering Economy 3 Core Literature ¹ 3 Core Social Science ¹ 3 ELEC Elective ⁶ 3 Technical Elective ⁴ 3 UNIV 4AAO Achieve the Creed 0	Junior					
ELEC 2210 Digital Electronics 4 ELEC 3040 Electrical System Design Lab 1 ELEC 3310 Fundamentals of Applied Electromagnetics 3 ELEC 3320 Electromagnetics for Wireless Communication 3 ELEC 3600 Electric Power Engineering 3 ELEC 3500 Control Systems 3 Ethics³ 3 ELEC 3700 Analog Electronics 3 ELEC 3800 Random Signals and Systems 3 Elec 3800 Random Signals and Systems 3 Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design II 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer.5.6 3 INSY 3600 Engineering Economy 3 Core Literature.1 3 Core Social Science.1 3 ELEC Elective.6 3 3 Free Elective.5 3 4 ELEC 3000 Electrical Systems 3 ELEC 4010 Capstone Design I 3 5 ELEC 4020 Elective.6 3 6 ELEC Elective.6 3 7 Free Elective.6 3 8 ELEC Elective.6 3 9 ELEC Elective.6 3 10 E	Fall	Hours	Spring	Hours		
ELEC 3310 Fundamentals of Applied Electromagnetics 3 ELEC 3320 Electromagnetics for Wireless Communication 3 ELEC 3500 Control Systems 3 ELEC 3500 Control Systems 3 ELEC 3500 Control Systems 3 ELEC 3700 Analog Electronics 3 ELEC 3700 Analog	ELEC 2120 Signals and Systems		4 ELEC 3030 RF Systems Lab		1	
Electromagnetics Communication ELEC 3600 Electric Power Engineering 3 ELEC 3500 Control Systems 3 Ethics³ 3 ELEC 3700 Analog Electronics 3 ELEC 3800 Random Signals and Systems 3 Total Total Senior Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design II 3 ELEC 4010 Capstone Design II 3 ELEC Elective 5 Fish 3 Select Elective 5 Fish 3 ELEC Elective 5 3 ELEC	ELEC 2210 Digital Electronics		4 ELEC 3040 Electrical System Design Lab		1	
Ethics ³ 3 ELEC 3700 Analog Electronics 3 ELEC 3800 Random Signals and Systems 3 ELEC 3800 Random Signals and Systems 14 Senior Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design II 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer ^{5,6} 3 Core Literature ¹ 3 Core Literature ¹ 3 ELEC Elective ⁶ 3 ELEC Elective ⁶ 3 Free Elective ⁵ 3 ELEC Elective ⁶ 3 Free Elective ⁵ 3 UNIV 4AA0 Achieve the Creed 0					3	
ELEC 3800 Random Signals and Systems 3 Senior Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design II 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer 5.6 3 INSY 3600 Engineering Economy 3 Core Literature 1 3 Core Social Science 1 3 ELEC Elective 6 3 Free Elective 5 3 Technical Elective 4 3 UNIV 4AA0 Achieve the Creed 0	ELEC 3600 Electric Power Engineering		3 ELEC 3500 Control Systems		3	
Senior Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design II 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer 5,6 INSY 3600 Engineering Economy 3 Core Literature 1 3 Core Social Science 1 3 ELEC Elective 6 3 ELEC Elective 6 3 Free Elective 5 3 Technical Elective 4 3 UNIV 4AA0 Achieve the Creed 0	Ethics ³		3 ELEC 3700 Analog Electronics		3	
Fall Hours Spring Hours ELEC 3400 Communication Systems 3 ELEC 4020 Capstone Design II 3 ELEC 4010 Capstone Design I 1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer 5,6 INSY 3600 Engineering Economy 3 Core Literature 1 3 Core Social Science 1 3 ELEC Elective 6 3 ELEC Elective 6 3 Free Elective 5 3 Technical Elective 4 3 UNIV 4AAO Achieve the Creed 0			ELEC 3800 Random Signals and Systems		3	
FallHoursSpringHoursELEC 3400 Communication Systems3 ELEC 4020 Capstone Design II3ELEC 4010 Capstone Design I1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer 5,63INSY 3600 Engineering Economy3 Core Literature 13Core Social Science 13 ELEC Elective 63ELEC Elective 53 Free Elective 53Technical Elective 43 UNIV 4AA0 Achieve the Creed0			17		14	
ELEC 3400 Communication Systems3 ELEC 4020 Capstone Design II3ELEC 4010 Capstone Design I1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer 5,63INSY 3600 Engineering Economy3 Core Literature 13Core Social Science 13 ELEC Elective 63ELEC Elective 53 Free Elective 53Technical Elective 43 UNIV 4AA0 Achieve the Creed0	Senior					
ELEC 4010 Capstone Design I1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer 5,63INSY 3600 Engineering Economy3 Core Literature 13Core Social Science 13 ELEC Elective 63ELEC Elective 53 Free Elective 53Technical Elective 43 UNIV 4AA0 Achieve the Creed0	Fall	Hours	Spring	Hours		
And Heat Transfer ^{5,6} INSY 3600 Engineering Economy 3 Core Literature ¹ 3 Core Social Science ¹ 3 ELEC Elective ⁶ 3 ELEC Elective ⁴ 3 UNIV 4AA0 Achieve the Creed 0	ELEC 3400 Communication Systems		3 ELEC 4020 Capstone Design II		3	
Core Social Science 3 3 ELEC Elective 3 3 ELEC Elective 5 3 Technical Elective 4 3 UNIV 4AA0 Achieve the Creed 0	ELEC 4010 Capstone Design I		1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer ^{5,6}		3	
ELEC Elective3 Free Elective3Technical Elective3 UNIV 4AA0 Achieve the Creed0	INSY 3600 Engineering Economy		3 Core Literature ¹		3	
Technical Elective ⁴ 3 UNIV 4AA0 Achieve the Creed 0	Core Social Science ¹		3 ELEC Elective ⁶		3	
	ELEC Elective ⁶		3 Free Elective ⁵		3	
16 15	Technical Elective ⁴		3 UNIV 4AA0 Achieve the Creed		0	
			16		15	

Total Hours: 124

2 Electrical Engineering (ELEC)

- The AU Bulletin lists the University Core Curriculum requirements for students in the College of Engineering. Students must complete a sequence in either Literature or History. Because of the discipline specific requirements for the Humanities courses, it is recommended that a History sequence be completed in the Social Sciences courses.
- Students take the C-programming version of COMP 1200, or they may opt for the 3 credit course COMP 1210 Fundamentals of Computing I. Only two credits of COMP 1210 will count in place of COMP 1200, and the third hour may count toward free elective credit.
- Ethics course options: PHIL 1020 Introduction to Ethics, PHIL 1030 Ethics and the Health Sciences, PHIL 1040 Business Ethics, and PHIL 1110 Ethical and Conceptual Foundations of Science.
- Technical elective is chosen from an approved list of MATH/SCIENCE, ELEC, and other College of Engineering electives.
- For students completing the ROTC program, the first ROTC course may be used as the 3-hour free elective, and the second ROTC course may be substituted for ENGR 2200.
- Students accepted into a Specialization will replace ENGR 2100, ENGR 2200, and the two ELEC electives with elective courses approved for the Specialization. See the Department Advisor for details.

ELEC and Technical Elective: see adviser for approved course listing.