

Major: Electrical Engineering, B.S.: 125 units
2018-2019 Academic Year

	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
Year 1	GE Area A1: Oral Communication		3	BIO 1110 Life Science (B2)	Prereq: Undergraduate standing.	2	
	GE Area A2: Written Communication		3	MAT 1150 Calculus II (B4)	Prereq: MAT 1140, MAT 115B, MAT 1140C, AP Calc AB ≥ 3 , or AP Calc BC ≥ 3 .	4	
	MAT 1140 Calculus I (B4)	Prereq: C or better in MAT 1050 and MAT 1060, or appropriate score on MDTP or ALEKS placement test.	4	PHY 1510 Introduction to Newtonian Mechanics (B1)	Prereq: C- or better in MAT 114 or MAT 1140. Coreq: PHY 1510L.	3	
	CHM 1210 General Chemistry I (B1)	Prereq: C or better in MAT 12, 105, 106, 112, 114, 115, 116, 120, 125, 130, 191, 214, 216, 224, MAT 1050, MAT 1052, MAT 1060, MAT 1140, MAT 1150, MAT 1200, MAT 1250, MAT 1300, MAT 1310, MAT 1910, MAT 2140, MAT 2240, MAT 2250, STA 120, or STA 1200; or C- or better Coreq: CHM 1210L.	3	PHY 1510L Newtonian Mechanics Laboratory (B3)		1	
	CHM 1210L General Chemistry Laboratory I (B3)	Prereq: C or better in MAT 12, 105, 106, 112, 114, 115, 116, 120, 125, 130, 191, 214, 216, 224, MAT 1050, MAT 1052, MAT 1060, MAT 1140, MAT 1150, MAT 1200, MAT 1250, MAT 1300, MAT 1310, MAT 1910, MAT 2140, MAT 2240, MAT 2250, STA 120, or STA 1200; or C- or better Coreq: CHM 1210.	1	ECE 1310 C For Engineers	Prereq: ECE Major; and MAT 1140 or MAT 114.	3	
			0	ECE 1101 Electrical Circuit Analysis I	Prereq: ECE Major; and MAT 1140 or MAT 114.	3	
			0	ECE 1101L Electrical Circuit Analysis I Laboratory	Prereq: ECE Major; and MAT 1140 or MAT 114.	1	
			0			0	
			14			17	

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Year 2	MAT 2240 Elementary Linear Algebra and Differential Equations	Prereq: MAT 116 or MAT 1150.	3	GE Area D1: U.S. History American Ideals		3	
	PHY 1520 Introduction to Electromagnetism and Circuits	Prereq: C- or better in MAT 115 or MAT 1150; and C- or better in PHY 132, PHY 132B or PHY 1510. Coreq: PHY 1520L.	3	MAT 2140 Calculus III	Prereq: MAT 116, MAT 214, MAT 1150, or MAT 1150C.	4	
	PHY 1520L Introductory Laboratory on Electromagnetism and Circuits		1	ECE 2101 Electrical Circuit Analysis II	Prereq: ECE Major; ECE 109 or ECE 1101; MAT 224 or MAT 2240 ; PHY 133 or PHY 1520; and ECE 109L or ECE 1101L .	3	
	ECE 2200 Introduction to Microelectronics Circuits	Prereq: ECE Major; CHM 1210, CHM 1150, CHM 121, or CHM 115; and C- or better in ECE 1101, ECE 207, ECE 299, or ECE 2990.	3	ECE 2101L Electrical Circuit Analysis II Laboratory	Prereq: ECE Major; and ECE 1101L, ECE 109L, ECE 207L, ECE 299L, or ECE 2990L.	1	
	ECE 2300 Digital Logic Design	Prereq: ECE Major; ECE 114 or ECE 1310; completion of GE Area A2; C- or better in ECE 1101, ECE 109, ECE 299, or ECE 2990; and C- or better in ECE 109L, ECE 1101L, ECE 299L, or ECE 2990L.	3	ECE 2200L Introduction to Microelectronics Circuits Laboratory	Prereq: ECE Major; ECE 1101L or ECE 109L; and C- or better in ECE 2200, ECE 220, ECE 299, or ECE 2990.	1	
	ECE 2300L Digital Logic Design Laboratory	Prereq: ECE Major; ECE 1310 or ECE 114; ECE 1101, ECE 109, ECE 299, or ECE 2990; and ECE 1101L, ECE 109L, ECE 299L, or ECE 2990L.	1	ECE 3301 Introduction to Microcontrollers	Prereq: ECE Major; ECE 2300 or ECE 204; and ECE 2300L or ECE 204L. Coreq: ECE 3301L.	3	
	GE Area C1: Visual and Performing Arts		3	ECE 3301L Introduction to Microcontrollers Laboratory	Prereq: ECE Major; ECE 2300 and ECE 2300L or ECE 204 and ECE 204L. Coreq: ECE 3301.	1	
			0			0	
		Semester Total Units	17		Semester Total Units	16	

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Year 3	GE Area C2a: Philosophy and Civilization		3	ECE 3200L Analog Microelectronics Laboratory	Prereq: ECE Major; ECE 3200 or ECE 320; ECE 2200L, ECE 220L, ECE 299L, or ECE 2990L.	1	<i>Graduation Writing Test must be taken before completion of 75 units.</i>		
	GE Area D2: U.S. Constitution and California Government		3	ECE 3250 Electromagnetic Fields	Prereq: ECE Major; MAT 2140 or MAT 215; MAT 2240 or MAT 224; and PHY 1520 or PHY 133; and C- or better in ECE 2200, ECE 220, ECE 299, or ECE 2990.	3			
	ECE 3101 Signals and Systems	Prereq: ECE Major; ECE 2101 or ECE 209.	3	ECE 3715 Probability, Statistics, and Random Processes for Electrical and Computer Engineers	Prereq: ECE Major; MAT 2140 or MAT 215; and ECE 3101 or ECE 306.	3			
	ECE 3101L Signals and Systems Laboratory	Prereq: ECE Major; ECE 2101 or ECE 209.	1	ECE 3810 Introduction to Power Engineering	Prereq: ECE Major; and ECE 2101 or ECE 209.	3			
	ECE 3200 Microelectronic Devices and Circuits	Prereq: ECE Major; C- or better in ECE 2101 or ECE 209; and C- or better in ECE 2200, ECE 220, ECE 299, or ECE 2990.	3	Major Elective	Select from Curriculum Sheet	3			
	ECE 3709 Control Systems Engineering	Prereq: ECE Major; and ECE 2101 or ECE 209.	3	ECE 4064 Professional Engineering Practice	Prereq: ECE Major; Junior or Senior standing; and completion of GWT, CPU 4010, or CPU 401; and completion of all 1000 & 2000 level courses.	1			
	ECE 3709L Control Systems Engineering Laboratory	Prereq: ECE Major.	1			0			
			0			0			
	<i>Take the Graduation Writing Test</i>								
	Semester Total Units		17	Semester Total Units		14			

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Year 4	GE Area C2b: Literature and Language Other than English		3	GE Area C3: Arts and Humanities Synthesis		3	
	GE Area D3: Social Sciences: Principles, Methodologies, Value Systems, and Ethics		3	GE Area D4: Social Science Synthesis		3	
	ECE 3810L Power Engineering Laboratory	Prereq: ECE Major.	1	GE Area E: Lifelong Learning and Self-Development		3	
	ECE 4705 Communication Systems	Prereq: ECE Major; and ECE 3715 or ECE 315.	3	ECE 4705L Communication Systems Laboratory	Prereq: ECE Major.	1	
	EGR 4810 Project Design Principles and Applications (B5)		1	EGR 4830 Project Design Principles and Applications (B5)		1	
	EGR 4820 Project Design Principles and Applications (B5)		1	Major Elective	Select from Curriculum Sheet	4	
	Major Elective	Select from Curriculum Sheet	3			0	
			0			0	
	<i>File an application to graduate</i>						
	Semester Total Units		15	Semester Total Units		15	
Total Units					125		