

Name: \_\_\_\_\_  
 Plan: Electrical Engineering, B.S.  
 SubPlan/Option: \_\_\_\_\_  
 Min. Units Required: **125 units**

Major Required	81 units	Major Electives	11 units	General Education Requirements	48 Units															
BIO1110 - Life Science (2) (B2) CHM1150 - General Chemistry for Engineers (3) ECE1101 - Electrical Circuit Analysis I (3) ECE1101L - Electrical Circuit Analysis I Laboratory (1) ECE1310 - C For Engineers (3) ECE2101 - Electrical Circuit Analysis II (3) ECE2101L - Electrical Circuit Analysis II Laboratory (1) ECE2200 - Introduction to Microelectronics Circuits (3) ECE2200L - Introduction to Microelectronics Circuits Laboratory (1) ECE2300 - Digital Logic Design (3) ECE2300L - Digital Logic Design Laboratory (1) ECE3101 - Signals and Systems (3) ECE3101L - Signals and Systems Laboratory (1) ECE3200 - Microelectronic Devices and Circuits (3) ECE3200L - Analog Microelectronics Laboratory (1) ECE3250 - Electromagnetic Fields (3) ECE3301 - Introduction to Microcontrollers (3) ECE3301L - Introduction to Microcontrollers Laboratory (1) ECE3709 - Control Systems Engineering (3) ECE3709L - Control Systems Engineering Laboratory (1) ECE3715 - Probability, Statistics, and Random Processes for Electrical and Computer Engineers (3) ECE3810 - Introduction to Power Engineering (3) ECE3810L - Power Engineering Laboratory (1) ECE4064 - Professional Engineering Practice (1) ECE4705 - Communication Systems (3) ECE4705L - Communication Systems Laboratory (1) EGR4810 - Project Design Principles and Applications (1) (B5) EGR4820 - Project Design Principles and Applications (1) (B5) EGR4830 - Project Design Principles and Applications (1) (B5) MAT1140 - Calculus I (4) (B4) MAT1150 - Calculus II (4) (B4) MAT2140 - Calculus III (4) MAT2240 - Elementary Linear Algebra and Differential Equations (3) PHY1510 - Introduction to Newtonian Mechanics (3) (B1) PHY1510L - Newtonian Mechanics Laboratory (1) (B3) PHY1520 - Introduction to Electromagnetism and Circuits (3) PHY1520L - Introductory Laboratory on Electromagnetism and Circuits (1)	Select 11 units from the following list (a maximum of 4 units may be taken at the 3XXX level): ECE3201 - Instrumentation Systems (3) ECE3201L - Instrumentation Systems Laboratory (1) ECE3300 - Digital Circuit Design Using Verilog (3) ECE3300L - Digital Circuit Design Using Verilog Laboratory (1) ECE3310 - Data Structures and Algorithms (3) ECE3320 - Microprocessor-based system design (3) ECE3320L - Microprocessor-based System Design Laboratory (1) ECE4200 - CMOS Analog Circuits (3) ECE4200L - CMOS Analog Circuits Laboratory (1) ECE4201 - Advanced Analog Circuit Design (3) ECE4201L - Advanced Analog Circuit Design Laboratory (1) ECE4203 - VLSI (Very Large Scale Integrated) Circuit Design (3) ECE4203L - VLSI (Very Large Scale Integrated) Circuit Design Laboratory (1) ECE4250 - Fields and Waves in RF Electronics (3) ECE4251 - RF Design (3) ECE4260 - Introduction to Photonics (3) ECE4300 - Computer Architecture (3) ECE4303 - TCP / IP Internetworking (3) ECE4303L - TCP / IP Internetworking Laboratory (1) ECE4304 - Discrete System Design Using VHDL (3) ECE4304L - Discrete System Design Using VHDL Laboratory (1) ECE4305 - Digital Design Using Verilog HDL (3) ECE4305L - Digital Design Using Verilog HDL Laboratory (1) ECE4310 - Operating Systems for Embedded Applications (3) ECE4311 - Network Forensics (3) ECE4317 - Intelligence Systems for Engineering (3) ECE4318 - Software Engineering (3) ECE4319 - Application Development Using JAVA (3) ECE4704 - Robotics (3) ECE4708 - Digital Signal Processing (3) ECE4709 - Digital Communication Systems (3) ECE4719 - Advanced Control Systems (3) ECE4735 - Biomedical Signals, Instrumentation and Measurements (3) ECE4821 - Power Transmission Lines (3) ECE4821L - Power Transmission Lines Laboratory (1) ECE4822 - Power System Analysis (3) ECE4822L - Power System Analysis Laboratory (1) ECE4868 - Power Systems Electronics (3) ECE4868L - Power Systems Electronics Laboratory (1) ECE4869 - Power Electronics (3) ECE4869L - Power Electronics Laboratory (1) ECE4875 - Wind and Solar Power Systems (3) ECE4890 - Illumination Engineering (3) ECE4890L - Introduction to Illumination Engineering Laboratory (1)			Students should consult the Academic Programs website <a href="https://www.cpp.edu/~academic-programs/general-education-course-listings.shtml">https://www.cpp.edu/~academic-programs/general-education-course-listings.shtml</a> for current information regarding this requirement. Unless specific courses are required, please refer to the list of approved courses under General Education Requirements, Areas A through E. <b>Area A. English Language Communication and Critical Thinking (9 units)</b> <i>At least 3 units from each sub-area</i> 1. Oral Communication 2. Written Communication 3. Critical Thinking (Satisfied by completion of undergraduate Engineering degree) <b>Area B. Scientific Inquiry and Quantitative Reasoning (12 units)</b> <i>At least 3 units from B1, B2, B4, and B5 including 1 unit of lab from B1 or B2 to fulfill B3</i> 1. Physical Sciences 2. Life Sciences 3. Laboratory Activity 4. Mathematics/Quantitative Reasoning 5. Science and Technology Synthesis <b>Area C. Arts and Humanities (12 units)</b> <i>At least 3 units from each sub-area and 3 additional units from sub-areas 1 and/or 2</i> 1. Visual and Performing Arts 2. Literature, Modern Languages, Philosophy and Civilization 3. Arts and Humanities Synthesis <b>Area D. Social Sciences (12 units)</b> <i>At least 3 units from each sub-area</i> 1. U.S. History and American Ideals 2. U.S. Constitution and California Government 3. Social Sciences: Principles, Methodologies, Value Systems, and Ethics 4. Social Science Synthesis <b>Area E. Lifelong Learning and Self-Development (3 units)</b>																
<b>Interdisciplinary General Education</b>					<b>21 Units</b>															
An alternate pattern for partial fulfillment of GE Areas A, C, and D available for students is the Interdisciplinary General Education (IGE) program. Students should see an advisor for specific GE coursework required by their major. Please refer to the University Catalog General Education Program section for additional information. <div><b>How IGE fulfills General Education Requirements:</b><table><tr><th>Year</th><th>Completion of IGE Courses</th><th>Satisfies GE Requirements</th></tr><tr><td>First</td><td>IGE 1100, IGE 1200</td><td>A2 and C2</td></tr><tr><td>Second/Third</td><td>IGE 2100, IGE 2200</td><td>C1 and C2</td></tr><tr><td></td><td>IGE 2300, IGE 2400</td><td>D1 and D3</td></tr><tr><td>Third/Fourth</td><td>IGE 3100</td><td>C3 or D4</td></tr></table></div>					Year	Completion of IGE Courses	Satisfies GE Requirements	First	IGE 1100, IGE 1200	A2 and C2	Second/Third	IGE 2100, IGE 2200	C1 and C2		IGE 2300, IGE 2400	D1 and D3	Third/Fourth	IGE 3100	C3 or D4	
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Third/Fourth	IGE 3100	C3 or D4																		
<b>American Institutions</b>					<b>6 Units</b>															
Courses that satisfy this requirement may also satisfy GE Area D1 and D2.																				
<b>American Cultural Perspectives Requirement</b>					<b>3 Units</b>															
Refer to the University Catalog General Education Program section for a list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements.																				
<b>Graduation Writing Test</b>																				
All persons who receive undergraduate degrees from Cal Poly Pomona must pass the Graduation Writing Test (GWT). The test must be taken by the semester following completion of 60 units for undergraduates.																				