Name: _____

Plan: **Electrical Engineering, B.S.** _____

SubPlan/Option: _____

Min. Units Required: **125 units**

Major Required Core
82 units

BIO1110 - Life Science (2) (B2)
CHM1210 - General Chemistry I (3) (B1)
CHM1210L - General Chemistry Laboratory I (1) (B3)
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)

Major Electives
10 units

Select 10 units from the following list of Technical Elective Courses:
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)

General Education Requirements
48 Units

Students should consult the Academic Programs website
https://www.cpp.edu/~academic-programs/general-education-course-listings.shtml
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.

Area A. English Language Communication and Critical Thinking (9 units)
    1. Oral Communication
    2. Written Communication
    3. Critical Thinking (Satisfied by completion of undergraduate Engineering degree)

Area B. Scientific Inquiry and Quantitative Reasoning (12 units)
    1. Physical Sciences
    2. Life Sciences
    3. Laboratory Activity
    4. Mathematics/Quantitative Reasoning
    5. Science and Technology Synthesis

Area C. Arts and Humanities (12 units)
    1. Visual and Performing Arts
    2a. Philosophy and Civilization
    2b. Literature and Language Other than English
    3. Arts and Humanities Synthesis

Area D. Social Sciences (12 units)
    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

Area E. Lifelong Learning and Self-Development (3 units)

Interdisciplinary General Education
21 Units

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.

How IGE fulfills General Education Requirements:

Year	Completion of IGE Courses	Satisfies GE Requirements
Freshman	IGE 1100, IGE 1200	A2 and C2b
Sophomore	IGE 2100, IGE 2200	C1 and C2a
Junior	IGE 2300, IGE 2400	D1 and D3
Senior	IGE 3100	C3 or D4

American Institutions
6 Units

Courses that satisfy this requirement may also satisfy GE Area D1 and D2.

American Cultural Perspectives Requirement
3 Units

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.

Graduation Writing Test

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.