California State Polytechnic University, Pomona
Degree Curriculum Sheet

Plan (Major) **ELECTRICAL ENGINEERING, B.S.** Catalog Year **2017-2018** Name _____

Subplan/Option _____ Minimum Units Required **194** Student ID _____

Required Core Courses

Required of all students. A 2.0 cumulative GPA is required in core courses in order to receive a degree in the major.

ECE 109 - Introduction to Electrical Engineering (3) and
ECE 109L - Introduction to Electrical Engineering Laboratory (1)

ECE 114 - C for Engineers (3) and
ECE 114L - Programming Laboratory for Engineers (1)

ECE 204 - Introduction to Digital Logic Design (4) and
ECE 204L - Introduction to Digital Logic Design Laboratory (1)

ECE 205 - Digital Circuit Design Using Verilog (3) and
ECE 205L - Digital Circuit Design Using Verilog Laboratory (1)

ECE 207 - Network Analysis I (3) and
ECE 207L - Network Analysis I Laboratory (1)

ECE 209 - Network Analysis II (3) and
ECE 209L - Network Analysis II Laboratory (1)

ECE 220 - Electronic Devices and Circuits (4) and
ECE 220L - Electronics Laboratory (1)

ECE 256 - Object Oriented Programming (4) or
ECE 257 - Programming for Engineering Applications (4)

ECE 302 - Electromagnetic Fields (4)

ECE 306 - Discrete Time Signals and Systems (4) and
ECE 306L - Discrete Time Signals and Systems Laboratory (1)

ECE 307 - Network Analysis III (3)

ECE 309 - Control Systems Engineering (4) and
ECE 309L - Control Systems Laboratory (1)

ECE 310 - Introduction to Power Engineering (4) and
ECE 310L - Power Engineering Laboratory (1)

ECE 315 - Probability, Statistics, and Random Processes for Electrical and Computer Engineering (4)

ECE 320 - Linear Active Circuit Design (3) and
ECE 320L - Basic Active Circuit Laboratory (1)

ECE 330 - Introduction to Semiconductor Devices (3)

ECE 341 - Introduction to Microcontrollers (3) and
ECE 341L - Introduction to Microcontrollers Laboratory (1)

ECE 405 - Communications Systems (4) and
ECE 405L - Communications Systems Laboratory (1)

ECE 464 - Professional Topics for Engineers (1)
ECE 467 - Team Project III (1)

Total Units 78

Required Support Courses

The following major support courses should be used to satisfy the indicated GE requirements. If these courses are not used to satisfy GE, the total units to degree may be more than 194 units.

CHM 121 - General Chemistry (3) and
CHM 121L - General Chemistry Laboratory (1) (B3)
or
CHM 115 - General Chemistry for Engineers (4)

EGR 481 - Project Design Principles and Applications (2) (B5) and
EGR 482 - Project Design Principles and Applications (2) (B5)

MAT 114 - Analytic Geometry and Calculus I (4) (B4)
MAT 115 - Analytic Geometry and Calculus II (4) (B4)
MAT 116 - Analytic Geometry and Calculus III (4) (B4)
MAT 214 - Calculus of Several Variables I (3)
MAT 215 - Calculus of Several Variables II (3)
MAT 224 - Elementary Linear Algebra and Differential Equations (4)

PHY 131 - General Physics (3) (B1) and
PHY 131L - General Physics Laboratory (1) (B3)

PHY 132 - General Physics (3) and
PHY 132L - General Physics Laboratory (1)

PHY 133 - General Physics (3) and
PHY 133L - General Physics Laboratory (1)

Total Units 42

Elective Core Courses

ECE Upper Division Electives (19)

12 of the 19 units must be 400 level courses. If a course has an associated lab, both must be taken.

Total Units 19

Interdisciplinary General Education

An alternate pattern for partial fulfillment of GE Areas A, C, D, and E available for students is the Interdisciplinary General Education (IGE) program. Students should see an advisor for specific GE coursework required by their major. Students must be exempt from or score at least 147 on the EPT to qualify for IGE. 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 120, IGE 121, IGE 122	A2 as well as any 2 courses from C1-C3
Sophomore	IGE 220, IGE 221, IGE 222	D1 (8 units) and D3
Junior	IGE 223, IGE 224	D2 and Area E

Total Units 32

General Education Requirements

Area A Communication & Critical Thinking (12 units)
1. Oral Communication
2. Written Communication
3. Critical Thinking

Area B Mathematics & Natural Sciences (16 units)
1. Physical Science
2. Biological Science
3. Laboratory Activity
4. Math/Quantitative Reasoning
5. Science & Technology Synthesis

Area C Humanities (16 units)
1. Visual and Performing Arts
2. Philosophy and Civilization
3. Literature and Foreign Language
4. Humanities Synthesis

Area D Social Sciences (20 units)
1. U.S. History, Constitution, American Ideals
   a. United States History
   b. Introduction to American Government
2. History, Economics and Political Science
3. Sociology, Anthropology, Ethnic & Gender Studies
4. Social Science Synthesis

Area E Lifelong Understanding & Self Development (4 units)

Total Units 68

American Institutions Courses that satisfy this requirement may also satisfy GE Area D1	8

American Cultural Perspectives Requirement 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.	4

All persons who receive undergraduate degrees from Cal Poly Pomona must pass the Graduation Writing Test (GWT). The test must be taken by the quarter following completion of 120 units for undergraduates.