



**California State Polytechnic University, Pomona
Degree Curriculum Sheet**

Plan (Major) **COMPUTER ENGINEERING**
Subplan/Option _____

Catalog Year **2014 - 2015**
Minimum Units Required **194**

Name _____
Student ID _____

| Required Core Courses | | |
|---|--------------|--------------|
| Course | | Units |
| Required of all students. A 2.0 cumulative GPA is required in core courses in order to receive a degree in the major. | | |
| Introduction to Electrical Engineering & Lab C for Engineers | ECE 109/109L | 3/1 |
| and Programming Lab for Engineers | ECE 114 | 3 |
| Discrete Structures | ECE 114L | 1 |
| Introduction to Combinational Logic & Lab | ECE 130 | 4 |
| Introduction to Sequential Logic & Lab | ECE 204/204L | 3/1 |
| Network Analysis I & Lab | ECE 205/205L | 3/1 |
| Network Analysis II & Lab | ECE 207/207L | 3/1 |
| Electronic Devices and Circuits & Lab | ECE 209/209L | 3/1 |
| Object Oriented Programming | ECE 220/220L | 4/1 |
| Electromagnetic Fields | ECE 256 | 4 |
| Data Structures for Engineers | ECE 302 | 4 |
| Discrete Time Signals and Systems & Lab | ECE 304 | 4 |
| Control Systems Engineering & Lab | ECE 306/306L | 4/1 |
| Prob, Stats, & Random Processes for ECE | ECE 309/309L | 4/1 |
| Electronic Design of Digital Circuits & Lab | ECE 315 | 4 |
| Introduction to Microcontrollers & Lab | ECE 325/325L | 3/1 |
| Computer Architecture & Lab | ECE 341/341L | 3/1 |
| Operating Systems for Embedded Applications & Lab | ECE 425/425L | 3/1 |
| Computer Networks & Lab | ECE 426/426L | 3/1 |
| or TCP/IP Internetworking & Lab | ECE 431/431L | 3/1 |
| Professional Topics for Engineers | ECE 433/433L | (3/1) |
| and Team Project III | ECE 464 | 1 |
| Software Engineering | ECE 467 | 1 |
| | ECE 480 | 4 |
| Total Units | | 85 |

| Elective Core Courses | | |
|---|--------------|--------------|
| Course | | Units |
| The electives must be satisfied by selecting courses from the following list. If a course with an associated lab is selected, both must be taken. | | |
| Computer Engineering & Lab | ECE 342/342L | (4/1) |
| Microprocessor & Lab | ECE 343/343L | (4/1) |
| Robotics & Lab | ECE 404/404L | (3/1) |
| Digital Signal Processing & Lab | ECE 408/408L | (3/1) |
| Digital Control Systems & Lab | ECE 414/414L | (3/1) |
| Digital Design using Verilog HDL & Lab | ECE 415/415L | (3/1) |
| Very Large Scale Integrated (VLSI) Circuit Design & Lab | ECE 423/423L | (4/1) |
| Digital System Design using VHDL & Lab | ECE 424/424L | (3/1) |
| Digital Signal Processing II | ECE 428 | (4) |
| Application Development Using JAVA | ECE 429 | (4) |
| Microprocessor II & Lab | ECE 432/432L | (3/1) |
| Embedded System Design and Applications | ECE 439 | (4) |
| Special Topics for Upper Division Students (with advisor approval) | ECE 499 | (1-4) |
| Total Units | | 12 |

| Required Support Courses | | |
|---|--------------|--------------|
| Course | | Units |
| The following required support courses should be taken to satisfy the indicated GE Requirements to achieve the minimum units to degree listed at the top of this sheet. | | |
| General Chemistry for Engineers | CHM 115 | 4 |
| or General Chemistry & Lab (B1, B3) | CHM 121/121L | (3/1) |
| Project Design Principles & Applications (B5) | EGR 481 | 2 |
| and Project Design Principles & Applications (B5) | EGR 482 | 2 |
| Analytic Geometry and Calculus I (B4) | MAT 114 | 4 |
| Analytic Geometry and Calculus II | MAT 115 | 4 |
| Analytic Geometry and Calculus III | MAT 116 | 4 |
| Calculus of Several Variables I | MAT 214 | 3 |
| Calculus of Several Variables II | MAT 215 | 3 |
| Elem. Linear Algebra and Differential Equations | MAT 224 | 4 |
| General Physics & Lab (B1, B3) | PHY 131/131L | 3/1 |
| General Physics & Lab | PHY 132/132L | 3/1 |
| General Physics & Lab | PHY 133/133L | 3/1 |
| Total Units | | 42 |

| General Education Requirements | |
|---|--------------|
| Area | Units |
| Area A Communication & Critical Thinking | 12 |
| 1. Oral Communication | |
| 2. Written Communication | |
| 3. Critical Thinking | |
| Area B Mathematics & Natural Sciences | 16 |
| <i>Select at least one lab course from subarea 1 or 2.</i> | |
| 1. Physical Science | |
| 2. Biological Science | |
| 3. Laboratory Activity | |
| 4. Math/Quantitative Reasoning | |
| 5. Science & Technology Synthesis | |
| Area C Humanities | 16 |
| 1. Visual and Performing Arts | |
| 2. Philosophy and Civilization | |
| 3. Literature and Foreign Language | |
| 4. Humanities Synthesis | |
| Area D Social Sciences | 20 |
| 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 |
| Total Units | 68 |

| American Institutions | Units |
|---|--------------|
| Courses that satisfy this requirement may also satisfy G.E. Area D1 | 8 |

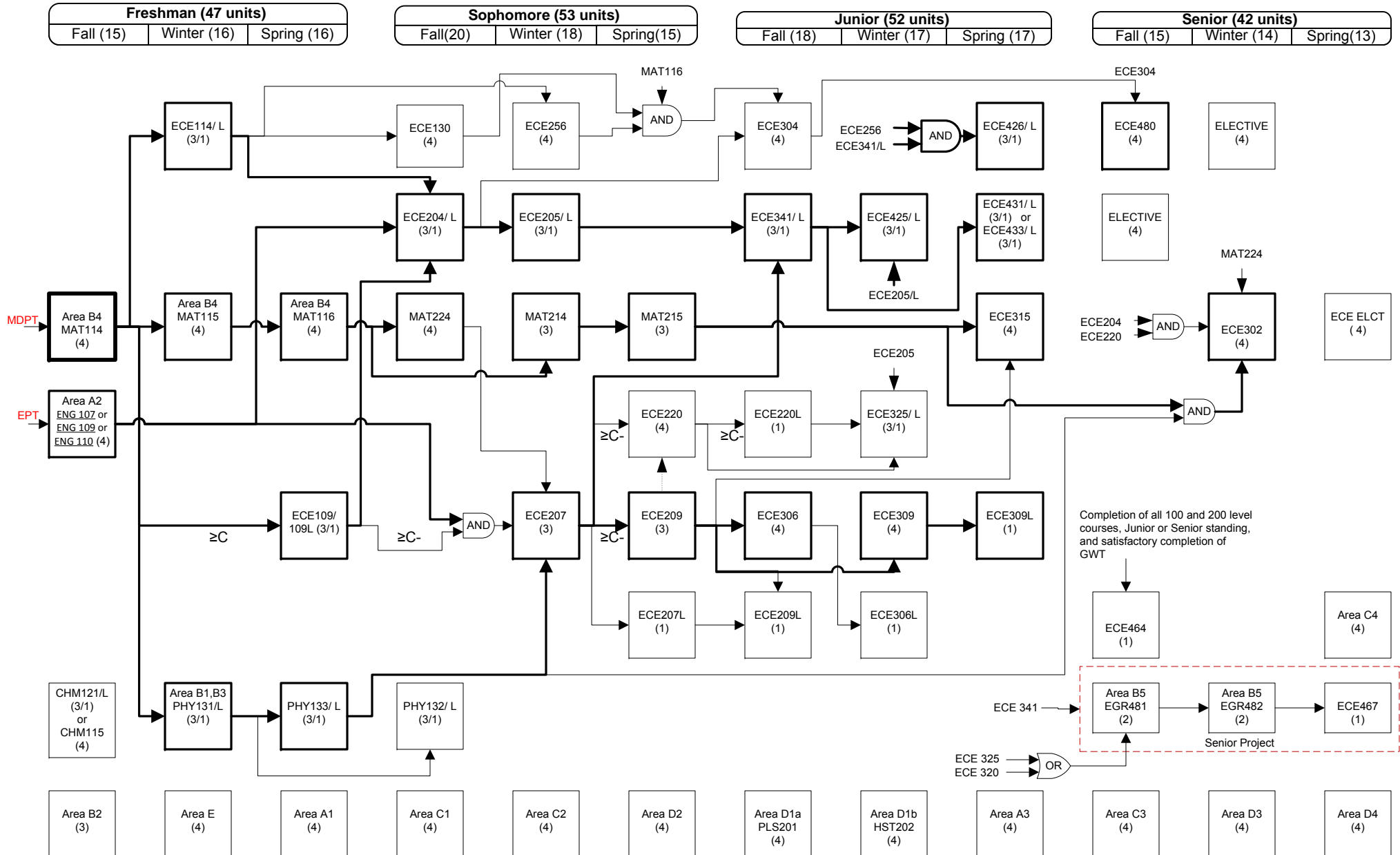
| American Cultural Perspectives Requirement | Units |
|--|--------------|
| Refer to catalog for list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements. | 4 |

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 under graduations.

Computer Engineering Curriculum Flow Chart

Year 2014/2015

Name: _____



The Electives must be satisfied by selecting courses from the following list. If a course with an associated Lab (The lab is listed as corequisite to the Lecture) is selected both must be taken.

ECE 342/L ECE 343/L ECE 404/L ECE 414/L ECE 415/L ECE 423 ECE 423L ECE 424/L
ECE 408/L ECE428 ECE 429 ECE 432/L ECE 439 ECE 499 (with advisor approval)

Electrical and Computer Engineering Department
Computer Engineering Major Curriculum Year:
2014-2014

*Your department has developed this road plan, taking into account prerequisites and schedule restrictions.
 You should pay attention to these concerns when deviating from this plan.*

| Year 1 | Fall | Units | Winter | Units | Spring | Units | Comment |
|--------------------|--|--------------------|---|--------------------|---|-----------------------------|--|
| | CHM 121/L or CHM 115 Major Support | 4 | ECE 114/114L Major Core | 4 | ECE 109/109L Major Core | 4 | <i>Students in this major are expected to maintain a GPA of at least 2.00 in all core courses. MAT 114, PHY 131/131L, CHM 121L, EGR 481, and EGR 482 satisfy both major and general education requirements</i> |
| | MAT 114 GE Area B4 | 4 | MAT 115 Major Support | 4 | MAT 116 Major Support | 4 | |
| | ENG 107 or ENG 109 or ENG 110 GE Area A2 | 4 | PHY 131/131L GE Area B1, B3 | 4 | PHY 133/133L Major Support | 4 | |
| | GE Area B2 | 3 | GE Area E Any approved course in area E | 4 | GE Area A1 Any approved course in area A1 | 4 | |
| | | | | | | | |
| Total Units | 15 | Total Units | 16 | Total Units | 16 | Total Units for Year | 47 |

| Year 2 | Fall | Units | Winter | Units | Spring | Units | Comment |
|--------------------|--|--------------------|--|--------------------|---|-----------------------------|-----------|
| | ECE 204/204L Major Core | 4 | ECE 205/205L Major Core | 4 | ECE 209 Major Core | 3 | |
| | ECE 130 Major Core | 4 | ECE 207 Major Core | 3 | ECE 220 Major Core | 4 | |
| | MAT 224 Major Support | 4 | ECE 256 Major Core | 4 | ECE 207L Major Core | 1 | |
| | PHY 132/132L Major Support | 4 | MAT 214 Major Support | 3 | MAT 215 Major Support | 3 | |
| | GE Area C1 Any approved course in area - C1 | 4 | GE Area C2 Any approved course in area C2 | 4 | GE Area D2 Any approved course in D2 | 4 | |
| | | | | | | | |
| Total Units | 20 | Total Units | 18 | Total Units | 15 | Total Units for Year | 53 |

| Year 3 | Fall | Units | Winter | Units | Spring | Units | Comment |
|-----------------------------|---|--------------------|-----------------------------------|--------------------|--|-----------|--|
| | ECE 304 Major Core | 4 | ECE 425/L Major Core | 4 | ECE 426/L Major | 4 | <i>Upper division ECE elective units may vary depending on selection of ECE 431/433.</i> |
| | ECE 341/341L Major Core | 4 | ECE 325/325L Major Core | 4 | ECE 315 Major Core | 4 | |
| | ECE 220L Major Core | 1 | ECE 309 Major Core | 4 | ECE 431/431L or ECE 433/433L Major | 4 | |
| | ECE 306 Major Core | 4 | ECE 306L Major Core | 1 | ECE 309L Major Core | 1 | |
| | ECE 209L Major Core | 1 | HST 202 GE D1b | 4 | Any approved course in area A3 | 4 | |
| | PLS 201 GE Area D1a | 4 | | | | | |
| | <i>Take the Graduation Writing Test</i> | | | | | | |
| Total Units | 18 | Total Units | 17 | Total Units | 17 | | |
| Total Units for Year | | | | | | 52 | |

| Year 4 | Fall | Units | Winter | Units | Spring | Units | Comment |
|-----------------------------|---|--------------------|---|-----------------------------------|---|---|---|
| | ECE 480 Major Core | 4 | ECE UD Elective Major Core | 4 | ECE UD Elective Major Core | 4 | <i>All GE Area A courses and all lower division GE courses in a GE area must be completed before taking the GE Synthesis course in that area. ECE Upper Division Electives: At least 12 of the electives must be satisfied by selecting courses from the following list. The rest of the elective units can be satisfied by selecting courses from the UD ECE courses. If a course with an associated lab is selected both must be taken. ECE 342/342L, ECE 404/404L, ECE 408/408L, ECE 414/414L, ECE 415/415L, ECE 423, ECE 423L, ECE 424/424L, ECE 428, ECE 429, ECE 432/432L, ECE 439, ECE 499(with advisor approval).</i> |
| | ECE UD Elective Major Core | 4 | ECE 302 Major Core | 4 | ECE 467 Major Core | 1 | |
| | ECE 464 Major Core | 1 | GE Area D3 Any approved course in D3 | 4 | GE Area C4 Any approved course in area | 4 | |
| | EGR 481 GE Area B5 | 2 | EGR 482 GE Area B5 | 2 | GE Area D4 Any approved course in area D4 | 4 | |
| | GE Area C3 Any approved course in area C3 | 4 | | | | | |
| | | | | <i>Request a graduation check</i> | | <i>File an application for graduation</i> | |
| Total Units | 15 | Total Units | 14 | Total Units | 13 | | |
| Total Units for Year | | | | | | 42 | |

| | |
|------------------------------------|------------|
| Total Units on Plan | 194 |
| Major Core Units | 97 |
| Major Support Units | 29 |
| General Education Units | 68 |
| Unrestricted Elective Units | 0 |