



Name: _____
 Plan: Electromechanical Systems Engineering Technology, B.S.
 SubPlan/Option: _____
 Min. Units Required: 124 units

**2021-2022 University Catalog
 Degree Curriculum Sheet**

Major Required 86 units

- CHM1150 - General Chemistry for Engineers (3)
- EGR1000 - Engineering, Society, and You (2) (E)
- EGR1000L - Engineering, Society, and You Laboratory (1) (E)
- EGR4810 - Project Design Principles and Applications (1) (B5)
- EGR4820 - Project Design Principles and Applications (1) (B5)
- EGR4830 - Project Design Principles and Applications (1) (B5)
- ETE1151 - C/C++ Programming (3)
- ETE1151L - C/C++ Programming Laboratory (1)
- ETE2011 - Electrical Networks (3)
- ETE2011L - Electrical Networks Laboratory (1)
- ETE3211 - Electronic Systems (3)
- ETE3211L - Electronic Systems Laboratory (1)
- ETE4751 - Introduction to Robotics Control and Application (3)
- ETE4751L - Introduction to Robotics Control and Applications Laboratory (1)
- ETM2101 - Applied Statics (3)
- ETM2111 - Applied Dynamics (3)
- ETM2171 - Material Science for Engineering Technology (3)
- ETM2201 - Strength of Materials (3)
- ETM2201L - Strength of Materials Laboratory (1)
- ETM3061 - Applied Thermodynamics I (3)
- ETM3081 - Applied Heat Transfer (3)
- ETM3101 - Applied Fluid Mechanics I (3)
- ETM3121 - Applied Fluid Mechanics II (3)
- ETM3141L - Thermal Fluids Laboratory (1)
- ETM3151 - Machine Elements (3)
- ETM3151L - Machine Elements Laboratory (1)
- ETM3301 - Instrumentation and Control (3)
- ETM3301L - Instrumentation and Control Laboratory (1)
- ETM3341 - Heating Ventilation and Air Conditioning I (3)
- IME4020 - Ethical Concepts in Technology and Applied Science (3) (B5 or C3)
- MAT1300 - Technical Calculus I (4) (B4)
- MAT1310 - Technical Calculus II (4)
- MFE1260 - Engineering Graphics I (1)
- MFE1260L - Engineering Graphics I Laboratory (1)
- MFE2010 - Manufacturing Systems and Processes (2)
- MFE2010L - Manufacturing Systems and Processes Laboratory (1)
- PHY1210 - Physics of Motion, Fluids, and Heat (3) (B1)
- PHY1210L - Physics of Motion, Fluids, and Heat Laboratory (1) (B3)
- PHY1220 - Physics of Electromagnetism, Circuits, and Light (3)
- PHY1220L - Electromagnetism, Circuits, and Light Laboratory (1)

Major Electives 9 units

- ETM3051 - Engineering Economics (3)
- ETM4871 - Human Factors (3)
- ETM3351 - Heating Ventilation and Air Conditioning II (3)
- ETM4101 - Internal Combustion Engines (3) *and*
- ETM4101L - Internal Combustion Engines Laboratory (1)
- ETM4151 - Renewable Energy Systems (3)
- ETE3501 - Feedback Control Systems (3) *and*
- ETE3501L - Feedback Control Systems Laboratory (1)
- ETM4191 - Applied Thermodynamics II (3)
- ETM4211 - Hydraulics (3)
- ETM4851 - Mechanical Building Systems (3)
- ETM4990 - Special Topics for Upper Division Students (1-3) *
- ETM4990L - Special Topics for Upper Division Students Laboratory (1-3) **

Note(s):

* Topics include but not limited to: Turbomachinery, Mechatronics, Finite Element Method for Analysis and Design of Structures.

** Topics include but not limited to: Mechatronics Laboratory, Finite Element Method for Analysis and Design of Structures Laboratory.

General Education Requirements 48 Units

Students should view their Degree Progress Report (DPR) for information regarding their General Education requirements. Unless specific GE courses are required for their major, please refer to the list of approved courses in the General Education Program in the University Catalog, catalog.cpp.edu. When viewing the catalog, students should select the catalog year associated with the GE requirements listed in their Degree Progress Report.

Area A. English Language Communication and Critical Thinking (9 units)

- At least 3 units from each sub-area*
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)

- At least 3 units from B1, B2, B4, and B5 including 1 unit of lab from B1 or B2 to fulfill B3*
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)

- At least 3 units from each sub-area and 3 additional units from sub-areas 1 and/or 2*
1. Visual and Performing Arts
 2. Literature, Modern Languages, Philosophy and Civilization
 3. Arts and Humanities Synthesis

Area D. Social Sciences (9 units)

- At least 3 units from each sub-area*
1. U.S. History and American Ideals
 2. U.S. Constitution and California Government
 4. Social Science Synthesis

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

Area F. Ethnic Studies (3 units)

Interdisciplinary General Education 18 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:

<i>Year</i>	<i>Completion of IGE Courses</i>	<i>Satisfies GE Requirements</i>
<i>First</i>	<i>IGE 1100, IGE 1200</i>	<i>A2 and C2</i>
<i>Second/Third</i>	<i>IGE 2150, IGE 2250</i>	<i>D1 and C2</i>
	<i>IGE 2350</i>	<i>C1</i>
	<i>IGE 3100</i>	<i>C3 or D4</i>

American Institutions 6 Units

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

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.