Required Core Courses
CE 127/127L - Civil Engineering CAD I/Laboratory (1/1)
CE 128L - Civil Engineering CAD II Laboratory (1)
CE 134/134L - Elementary Surveying/Laboratory (2/2)
CE 221/221L - Civil Engineering Materials/Laboratory (2/1)
CE 304 - Structural Analysis I (4)
CE 305 - Structural Analysis II (4)
CE 305L - Structural Design Laboratory (1)
CE 306L - Structural Testing Laboratory (1)
CE 250 - Geotechnical Engineering I (2)
CE 260 - Geotechnical Engineering II (3)
CE 272L - Geotechnical Engineering Laboratory (1)
CE 332/332L - Hydraulic Engineering/Laboratory (3/1)
CE 363A - Technical Communications and Documentation/Activity (2/1)
CE 421 - Structural Design-Reinforced Concrete (4)
CE 451 - Engineering Hydrology (4)
MAT 114 - Analytic Geometry and Calculus I (4)
MAT 116 - Analytic Geometry and Calculus II (4)
MAT 118 - Analytic Geometry and Calculus III (4)
MAT 214 - Calculus of Several Variables I (3)
MAT 224 - Elementary Linear Algebra and Differential Equations (4)
ME 214 - Vector Statics (3)
ME 215 - Vector Dynamics (4)
ME 218 - Strength of Materials I (3)
ME 311 - Fluid Mechanics I (3)

Total Units 69

Required Support Courses
PHY 131 - General Physics (3) (B1) and
PHY 131L - General Physics Laboratory (1) (B3)
PHY 132 - General Physics (3)
PHY 132L - General Physics Laboratory (1) (B3)
PHY 133 - General Physics (3) and
PHY 133L - General Physics Laboratory (1)

Total Units 35

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:

<table>
<thead>
<tr>
<th>Year</th>
<th>Completion of IGE Courses</th>
<th>Satisfies GE Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>IGE 120, IGE 121, IGE 122</td>
<td>A2 as well as any 2 courses from C1-C3</td>
</tr>
<tr>
<td>Sophomore</td>
<td>IGE 220, IGE 221, IGE 222</td>
<td>D1 (8 units) and D3</td>
</tr>
<tr>
<td>Junior</td>
<td>IGE 223, IGE 224</td>
<td>D2 and Area E</td>
</tr>
</tbody>
</table>

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.