California State Polytechnic University, Pomona
Degree Curriculum Sheet

Plan (Major)  CIVIL ENGINEERING
Subplan/Option  Environmental Engineering

Catalog Year  2016 - 2017
Minimum Units Required  194

**Required Core Courses**
- CE 122/L - Civil Engineering CAD Lab (1/1)
- CE 128/L - Civil Engineering CAD II Lab (1)
- CE 134/134L - Elementary Surveying/Lab (2/2)
- CE 221/221L - Civil Engineering Materials/Lab (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 325 - Geotechnical Engineering I (2)
- CE 326 - Geotechnical Engineering II (3)
- CE 327L - Geotechnical Engineering Laboratory (1)
- CE 332/332L - Hydraulic Engineering/Lab (3/1)
- CE 362/362A - 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 III (4)
- MAT 224 - Calculus of Several Variables I (3)
- MAT 115 - Analytic Geometry and Calculus II (4)
- MAT 116 - Analytic Geometry and Calculus III (4)
- MAT 224 - Calculus of Several Variables I (3)
- MAT 222 - Calculus of Several Variables II (4)
- ME 214 - Vector Statics (3)
- ME 218 - Strength of Materials I (3)
- ME 215 - Vector Dynamics (4)
- ME 216 - Strength of Materials I (3)
- ME 311 - Fluid Mechanics I (3)
- CE 301 - Engineering Economics (4)
- CE 303/303A - Computer Programming and Numerical Methods/Activity (2/1)
- CE 351/351L - Environmental Engineering/Lab (3/1)
- CE 431/431L - Water Treatment Engineering/Lab (3/1)
- CE 432/432L - Wastewater Treatment Engineering/Lab (3/1)
- CE 456/456L - Groundwater Mechanics, Solute Transport, Contamination and Remediation/Lab (3/1)
- CE 491 - Comprehensive Civil Engineering Design I (1)
- CE 492 - Comprehensive Civil Engineering Design II (2)
- CE 493 - Comprehensive Civil Engineering Design III (1)
- ME 301 - Thermodynamics I (4)

**Total Units 69**

**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 (B1)
- CHM 121L - General Chemistry Laboratory (1) (B3)
- CHM 122 - General Chemistry (3) and (B1)
- CHM 122L - General Chemistry Laboratory (1) (B3)
- EGR 445 - Role of Design Professionals in Society (4) (D4)
- GSC 321/321L - Engineering Geology I (3/1) (B5)
- IME 402 - Ethical Considerations in Technology and Applied Science (4) (C4)
- IME 301 - Application of Statistics in Engineering (3) or STA 309 - Statistical Methods in Engineering and the Physical Sciences (3)
- MAT 114 - Analytic Geometry and Calculus I (4) (B1)
- PHY 131 - General Physics (3) (B1) and (B4)
- PHY 131L - General Physics Laboratory (1) (B3)
- PHY 132 - General Physics (3) and (B1)
- PHY 132L - General Physics Laboratory (1)

**Total Units 35**

**Elective Subplan/Option Core Courses**

- Technical Electives CE XXX (4)**

**Upper Division Civil Engineering Courses approved in advance by advisor.

**Total Units 11**

**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>
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<tr>
<td>Sophomore</td>
<td>IGE 220, IGE 221, IGE 222</td>
<td>D1 (8 units) and D3</td>
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<tr>
<td>Junior</td>
<td>IGE 223, IGE 224</td>
<td>D2 and Area E</td>
</tr>
</tbody>
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**Total Units 32**

**General Education Requirements**

**Area A Communication & Critical Thinking (12 units)**
- Oral Communication
- Written Communication
- Critical Thinking

**Area B Mathematics & Natural Sciences (16 units)**
- Physical Science
- Biological Science
- Laboratory Activity
- Math/Quantitative Reasoning
- Science & Technology Synthesis

**Area C Humanities (16 units)**
- Visual and Performing Arts
- Philosophy and Civilization
- Literature and Foreign Language
- Humanities Synthesis

**Area D Social Sciences (20 units)**
- U.S. History, Constitution, American Ideals
  - United States History
  - Introduction to American Government
- History, Economics and Political Science
- Sociology, Anthropology, Ethnic & Gender Studies
- 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

**Total Units 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.

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.