### Major Required
- BIO1110 - Life Science (2) (B2)
- BIO1110L - Life Science Laboratory (1) (B3)
- CHM1210 - General Chemistry I (3) (B1)
- CHM1220 - General Chemistry II (5) (B1)
- CHM1220L - General Chemistry Laboratory II (1) (B3)
- GSC1110 - Principles of Geology (3) (B1)
- GSC1110L - Principles of Geology Laboratory (1) (B3)
- GSC1410L - Megascopic Petrography Laboratory (1)
- GSC1510L - Earth, Time, and Life Laboratory (1) (B3)
- GSC2150 - Mineralogy (2)
- GSC2150L - Mineralogy Laboratory (1)
- GSC2500L - Field Methods Laboratory (1)
- GSC3000 - Geochemistry (2)
- GSC3000L - Geochemistry Laboratory (1)
- GSC3070 - Introduction to Global Geophysics (2)
- GSC3070L - Introduction to Global Geophysics Laboratory (1)
- GSC3230 - Geomorphology (2)
- GSC3230L - Geomorphology Laboratory (1)
- GSC3330 - Structural Geology (2)
- GSC3330L - Structural Geology Laboratory (1)
- GSC3600 - Hydrogeology (2)
- GSC3600L - Hydrogeology Laboratory (1)
- GSC4230 - Sedimentary Geology (2)
- GSC4230L - Sedimentary Geology Laboratory (1)
- GSC4910L - Field Module Laboratory (1-2) (1 unit required)
- GSC3040 - Meteorology (3) (B5)
- GSC3040L - Meteorology Laboratory (3)
- GSC3210 - Engineering Geology I (3) (B5)
- GSC3210L - Engineering Geology I Laboratory (1) (B5)
- GSC3350 - Exploring Earth's Oceans: Oceanography (3) (B5)
- GSC3500 - Natural Disasters (3) (B5)
- MAT1140 - Calculus I (4) (B4)
- MAT1150 - Calculus II (4) (B4)
- PHY1210 - Physics of Motion, Fluids, and Heat (3) (B1) and PHY1210L - Physics of Motion, Fluids, and Heat Laboratory (1) (B3)
- PHY1510 - Introduction to Newtonian Mechanics (3) (B1) and PHY1510L - Newtonian Mechanics Laboratory (1) (B3)
- PHY1220 - Physics of Electromagnetism, Circuits, and Light (3) and PHY1220L - Electromagnetism, Circuits, and Light Laboratory (1) (B3)
- PHY1520 - Introduction to Electromagnetism and Circuits (3) and PHY1520L - Introductory Laboratory on Electromagnetism and Circuits (1)

### Major Electives
- Select 4 units from the list below:
  - GSC4100 - Presentation, Writing and Research Skills in the Geosciences (2)
  - GSC4100L - Senior Project and Presentation (2)
  - GSC4620 - Senior Thesis (2)
  - GSC XXXX/4XXX - Any 3000/4000-level GSC course(s) (2-4)

### Select 18 units from courses listed below to fulfill a chosen Emphasis:

#### Geology Emphasis
- **Emphasis Required**
  - GSC3310 - Paleontology (2) and
  - GSC430L - Paleontology Laboratory (1)
  - GSC440 - Tectonics (2) and
  - GSC440L - Tectonics Laboratory (1)
  - GSC4710 - Volcanology (2)

#### Emphasis Electives
- Select 6 units from the list below:
  - GSC4010 - GIS Applications for Earth and Environmental Scientists (1) and
  - GSC4010L - GIS Applications for Earth and Environmental Scientists Laboratory (1)
  - GSC4150 - Engineering Geology II (2) and
  - GSC4150L - Engineering Geology II Laboratory (1)
  - GSC420 - Soil Physics (2) and
  - GSC420L - Soil Physics Laboratory (1)
  - GSC430 - Shallow Subsurface Geophysics (2) and
  - GSC430L - Shallow Subsurface Geophysics Laboratory (1)
  - GSC440 - Exploration and Mining Geology (2)
  - GSC440L - Exploration and Mining Geology Laboratory (1)
  - GSC4600 - Introduction to Seismology, Earthquakes and Earth Structure (2)
  - GSC4600L - Introduction to Seismology, Earthquakes and Earth Structure Laboratory (1)
  - GSC4800 - Quantitative and Computer Skills in the Geosciences (3)

#### Interdisciplinary General Education
- **Completion of IGE Courses Satisfies GE Requirements**
  - IGE 1100, IGE 1200
  - IGE 2100, IGE 2200
  - IGE 3100
  - IGE 4100

### General Education Requirements
- **48 Units**
  - Students should consult the Academic Programs website [https://www.cpp.edu/~academic-programs/general-education-course-listing.shtml](https://www.cpp.edu/~academic-programs/general-education-course-listing.shtml) for current information regarding this requirement. Unless specific courses are required, please refer to the list of approved courses under General Education Requirements, Areas A through E.

#### Area A. English Language Communication and Critical Thinking (9 units)
- At least 3 units from at least one of the following:
  - 1. Oral Communication
  - 2. Written Communication
  - 3. Critical Thinking

#### Area B. Scientific Inquiry and Quantitative Reasoning (12 units)
- At least 3 units from at least one of the following:
  - 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 at least one of the following:
  - 1. Visual and Performing Arts
  - 2. Literature, Modern Languages, Philosophy and Civilization
  - 3. Arts and Humanities Synthesis

#### Area D. Social Sciences (12 units)
- At least 3 units from at least one of the following:
  - 1. U.S. History and American Ideals
  - 2. U.S. Constitution and California Government
  - 4. Social Science Synthesis

### Interdisciplinary General Education
- An alternate pattern for partial fulfillment of GE Areas A, C, and D and 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:

<table>
<thead>
<tr>
<th>Year</th>
<th>Completion of IGE Courses</th>
<th>Satisfies GE Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>IGE 1100, IGE 1200</td>
<td>A2 and C2</td>
</tr>
<tr>
<td>Second/Third</td>
<td>IGE 2100, IGE 2200</td>
<td>C1 and D2</td>
</tr>
<tr>
<td>Third/Fourth</td>
<td>IGE 2300, IGE 2400</td>
<td>D1 and D3</td>
</tr>
<tr>
<td></td>
<td>IGE 3100</td>
<td>C3 or D4</td>
</tr>
</tbody>
</table>

### American Institutions
- **6 Units**
  - Courses that satisfy this requirement may also satisfy GE Area D1 and D2.

### American Cultural Perspectives Requirement
- **3 Units**
  - 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.

### 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.
<table>
<thead>
<tr>
<th>Emphasis Electives</th>
<th>9 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSC3040 - Meteorology (3)</td>
<td>(B5)</td>
</tr>
<tr>
<td>GSC3210 - Engineering Geology I (2) (B5) and GSC3210L - Engineering Geology I Laboratory (1) (B5)</td>
<td></td>
</tr>
<tr>
<td>GSC4010 - GIS Applications for Earth and Environmental Scientists (1) and GSC4010L - GIS Applications for Earth and Environmental Scientists Laboratory (2)</td>
<td></td>
</tr>
<tr>
<td>GSC4150 - Engineering Geology II (2) and GSC4150L - Engineering Geology II Laboratory (1)</td>
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<tr>
<td>GSC4320 - Soil Physics (2) and GSC4320L - Soil Physics Laboratory (1)</td>
<td></td>
</tr>
<tr>
<td>GSC4440 - Tectonics (2) and GSC4440L - Tectonics Laboratory (1)</td>
<td></td>
</tr>
<tr>
<td>GSC4700 - Volcanology (2) and GSC4700L - Volcanology Laboratory (1)</td>
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<tr>
<td>GSC4800 - Quantitative and Computer Skills in the Geosciences (3)</td>
<td></td>
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<tr>
<td>GSC4910L - Field Module Laboratory (1-2)</td>
<td></td>
</tr>
<tr>
<td>GSC5330 - Advanced Topics in Structural Geology and Tectonics (2) and GSC5330L - Advanced Topics in Structural Geology and Tectonics Laboratory (1)</td>
<td></td>
</tr>
<tr>
<td>GSC5640 - Advanced Shallow Subsurface Geophysics (2) and GSC5640L - Advanced Shallow Subsurface Geophysics Laboratory (1)</td>
<td></td>
</tr>
<tr>
<td>GSC5680 - Topics in Advanced Seismology (2) and GSC5680L - Topics in Advanced Seismology Laboratory (1)</td>
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<tr>
<td>GSC XXXX - Other GSC course by petition (varies)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental Resources Emphasis</th>
<th>18 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSC3040 - Meteorology (3) (B5) or GSC3020 - Studies of a Blue Planet (3) (B5)</td>
<td></td>
</tr>
<tr>
<td>GSC3350 - Exploring Earth's Oceans: Oceanography (3) (B5)</td>
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</tr>
<tr>
<td>GSC4010 - GIS Applications for Earth and Environmental Scientists (1)</td>
<td></td>
</tr>
<tr>
<td>GSC4010L - GIS Applications for Earth and Environmental Scientists Laboratory (2)</td>
<td></td>
</tr>
<tr>
<td>GSC4320 - Soil Physics (2) and GSC4320L - Soil Physics Laboratory (1)</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Emphasis Electives</th>
<th>6 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO3040 - Environment and Society (3) (B5)</td>
<td></td>
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<tr>
<td>GEO3020 - Climatology (3) (B5)</td>
<td></td>
</tr>
<tr>
<td>GEO4400 - Advanced GIS (2) and GEO4400L - Advanced GIS Laboratory (1)</td>
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<tr>
<td>GEO4430 - Quantitative Spatial Analysis (2) and GEO4430L - Quantitative Spatial Analysis Laboratory (1)</td>
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<tr>
<td>GSC1100 - Water in a Changing World (3) (B1)</td>
<td></td>
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<tr>
<td>GSC4340 - Shallow Subsurface Geophysics (2) and GSC4340L - Shallow Subsurface Geophysics Laboratory (1)</td>
<td></td>
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<tr>
<td>GSC4910L - Field Module Laboratory (1-2)</td>
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<tr>
<td>GSC5450 - Advanced Hydrogeology (2) and GSC5450L - Advanced Hydrogeology Laboratory (1)</td>
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<tr>
<td>GSC5850 - Isotope Geochemistry (2) and GSC5850L - Isotope Geochemistry Laboratory (1)</td>
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<tr>
<td>PLT2310 - Basic Soil Science (2) and PLT2310L - Basic Soil Science Laboratory (1)</td>
<td></td>
</tr>
<tr>
<td>PLT4310 - Soil Chemistry (2) and PLT4310L - Soil Chemistry Laboratory (1)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Emphasis Electives</th>
<th>0-3 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS4200 - Watershed Restoration (2) and RS4200L - Watershed Restoration Laboratory (1)</td>
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</tr>
<tr>
<td>URP4820 - California Water (3) (D4)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Unrestricted Electives</th>
<th>0-3 units</th>
</tr>
</thead>
</table>

Select a sufficient number of courses so that the total from "Major Required", "Major Electives", "GE", and "Unrestricted Electives" is at least 120 units.