CalPolyPomona

Name:
Plan: **Geology, B.S.**
SubPlan/Option:
Min. Units Required: **120 units**

2020-2021 University Catalog
Degree Curriculum Sheet

Major Required — 62 units

BIO1110 - Life Science (2) (B2)
BIO1110L - Life Science Laboratory (1) (B3)
CHM1210 - General Chemistry I (3) (B1)
CHM1210L - General Chemistry Laboratory I (1) (B3)
CHM1220 - General Chemistry II (3) (B1)
CHM1220L - General Chemistry Laboratory II (1) (B3)
GSC1110 - Principles of Geology (3) (B1)
GSC1120 - Earth, Time, and Life (3) (B1)
GSC1410L - Principles of Geology Laboratory (1) (B3)
GSC1450L - Megascopic Petrography Laboratory (1)
GSC1510L - Earth, Time, and Life Laboratory (1) (B3)
GSC2150 - Mineralogy (2)
GSC2150L - Mineralogy Laboratory (1)
GSC2550L - 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)
OR
GSC3200 - Studies of a Blue Planet (3) (B5)
OR
GSC3210 - Engineering Geology I (2) (B5) ***and***
GSC3210L - Engineering Geology I Laboratory (1) (B5)
OR
GSC3350 - Exploring Earth's Oceans: Oceanography (3) (B5)
OR
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)
OR
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)
OR
PHY1520 - Introduction to Electromagnetism and Circuits (3) ***and***
PHY1520L - Introductory Laboratory on Electromagnetism and Circuits (1)

Major Electives — 22 units

Select 4 units from the list below:

GSC4100 - Presentation, Writing and Research Skills in the Geosciences (2)
GSC4610 - Senior Project and Presentation (2)
GSC4620 - Senior Thesis (2)
GSC 3XXX/4XXX - Any 3000/4000-level GSC course(s) (2-4)

Select 18 units from courses listed below:

Any combination of courses listed below will satisfy the required 18 units. Emphases are listed to provide guidance for helping students to choose courses of interest that best fit your career goals, but there is no requirement for choosing a specific emphasis for fulfilling these units.

Geology Emphasis — 18 units

Emphasis Required — 10 units

GSC3310 - Paleontology (2) ***and***
GSC3310L - Paleontology Laboratory (1)
OR
GSC4440 - Tectonics (2) ***and***
GSC4440L - Tectonics Laboratory (1)
OR
GSC4700 - Volcanology (2) ***and***
GSC4700L - Volcanology Laboratory (1)

GSC4240 - Igneous and Metamorphic Petrology (2)
GSC4240L - Igneous and Metamorphic Petrology Laboratory (2)
GSC4910L - Field Module Laboratory (1-2) (3 units required)

Emphasis Electives — 8 units

GSC4010 - GIS Applications for Earth and Environmental Scientists (1) ***and***
GSC4010L - GIS Applications for Earth and Environmental Scientists Laboratory (2)

GSC4150 - Engineering Geology II (2) ***and***
GSC4150L - Engineering Geology II Laboratory (1)

GSC4320 - Soil Physics (2) ***and***
GSC4320L - Soil Physics Laboratory (1)

GSC4340 - Shallow Subsurface Geophysics (2) ***and***
GSC4340L - Shallow Subsurface Geophysics Laboratory (1)

GSC4400 - Exploration and Mining Geology (2) ***and***
GSC4400L - Exploration and Mining Geology Laboratory (1)

GSC4500 - Introduction to Seismology, Earthquakes and Earth Structure (2) ***and***
GSC4500L - Introduction to Seismology, Earthquakes and Earth Structure Laboratory (1)

GSC4800 - Quantitative and Computer Skills in the Geosciences (3)
GSC5030L - Field Investigations Laboratory (1)

GSC5330 - Advanced Topics in Structural Geology and Tectonics (2) ***and***
GSC5330L - Advanced Topics in Structural Geology and Tectonics Laboratory (1)

GSC5340 - Quaternary Geology (2) ***and***
GSC5340L - Quaternary Geology Laboratory (1)

GSC5850 - Isotope Geochemistry (2) ***and***
GSC5850L - Isotope Geochemistry Laboratory (1)

GSC5950 - Advanced Topics in Sedimentology/Stratigraphy (2) ***and***
GSC5950L - Advanced Topics in Sedimentology/Stratigraphy Laboratory (1)
GSC XXXX - Other GSC course by petition (varies)

Geophysics/Earth Exploration Emphasis — 18 units

Emphasis Required — 9 units

GSC3200 - Studies of a Blue Planet (3) (B5) ***or***
GSC4950 - Planetary Science (3)

GSC4340 - Shallow Subsurface Geophysics (2)
GSC4340L - Shallow Subsurface Geophysics Laboratory (1)
GSC4500 - Introduction to Seismology, Earthquakes and Earth Structure (2)
GSC4500L - Introduction to Seismology, Earthquakes and Earth Structure Laboratory (1)

General Education Requirements — 48 Units

Students should consult the Academic Programs website
https://www.cpp.edu/~academic-programs/general-education-course-listings.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 each sub-area
1. Oral Communication
2. Written Communication
3. Critical Thinking

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 (12 units)
At least 3 units from each sub-area
1. U.S. History and American Ideals
2. U.S. Constitution and California Government
3. Social Sciences: Principles, Methodologies, Value Systems, and Ethics
4. Social Science Synthesis

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

Interdisciplinary General Education — 21 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:

Year	*Completion of IGE Courses*	*Satisfies GE Requirements*
First	*IGE 1100, IGE 1200*	*A2 and C2*
Second/Third	*IGE 2100, IGE 2200*	*C1 and C2*
	IGE 2300, IGE 2400	*D1 and D3*
Third/Fourth	*IGE 3100*	*C3 or D4*

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.

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SubPlan/Option:
Min. Units Required: **120 units**

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Emphasis Electives **9 units**

GSC3040 - Meteorology (3) (B5)

GSC3210 - Engineering Geology I (2) (B5) ***and***
GSC3210L - Engineering Geology I Laboratory (1) (B5)

GSC4010 - GIS Applications for Earth and Environmental Scientists (1) ***and***
GSC4010L - GIS Applications for Earth and Environmental Scientists Laboratory (2)

GSC4150 - Engineering Geology II (2) ***and***
GSC4150L - Engineering Geology II Laboratory (1)

GSC4320 - Soil Physics (2) ***and***
GSC4320L - Soil Physics Laboratory (1)

GSC4440 - Tectonics (2) ***and***
GSC4440L - Tectonics Laboratory (1)

GSC4700 - Volcanology (2) ***and***
GSC4700L - Volcanology Laboratory (1)

GSC4800 - Quantitative and Computer Skills in the Geosciences (3)
GSC4910L - Field Module Laboratory (1-2)

GSC5330 - Advanced Topics in Structural Geology and Tectonics (2) ***and***
GSC5330L - Advanced Topics in Structural Geology and Tectonics Laboratory (1)

GSC5640 - Advanced Shallow Subsurface Geophysics (2) ***and***
GSC5640L - Advanced Shallow Subsurface Geophysics Laboratory (1)

GSC5680 - Topics in Advanced Seismology (2) ***and***
GSC5680L - Topics in Advanced Seismology Laboratory (1)
GSC XXXX - Other GSC course by petition (varies)

Environmental Resources Emphasis **18 units**

Emphasis Required **12 units**

GSC3040 - Meteorology (3) (B5) ***or***
GSC3200 - Studies of a Blue Planet (3) (B5)

GSC3350 - Exploring Earth's Oceans: Oceanography (3) (B5)
GSC4010 - GIS Applications for Earth and Environmental Scientists (1)
GSC4010L - GIS Applications for Earth and Environmental Scientists Laboratory (2)
GSC4320 - Soil Physics (2)
GSC4320L - Soil Physics Laboratory (1)

Emphasis Electives **6 units**

BIO3040 - Environment and Society (3) (B5)
GEO3030 - Climatology (3) (B5)

GEO4400 - Advanced GIS (2) ***and***
GEO4400L - Advanced GIS Laboratory (1)

GEO4430 - Quantitative Spatial Analysis (2) ***and***
GEO4430L - Quantitative Spatial Analysis Laboratory (1)

GSC1100 - Water in a Changing World (3) (B1)

GSC4340 - Shallow Subsurface Geophysics (2) ***and***
GSC4340L - Shallow Subsurface Geophysics Laboratory (1)

GSC4910L - Field Module Laboratory (1-2)

GSC5450 - Advanced Hydrogeology (2) ***and***
GSC5450L - Advanced Hydrogeology Laboratory (1)

GSC5850 - Isotope Geochemistry (2) ***and***
GSC5850L - Isotope Geochemistry Laboratory (1)

PLT2310 - Basic Soil Science (2) ***and***
PLT2310L - Basic Soil Science Laboratory (1)

PLT4310 - Soil Chemistry (2) ***and***
PLT4310L - Soil Chemistry Laboratory (1)

RS4200 - Watershed Restoration (2) ***and***
RS4200L - Watershed Restoration Laboratory (1)

URP4820 - California Water (3) (D4)

Unrestricted Electives **0-3 units**

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