California State Polytechnic University, Pomona
Degree Curriculum Sheet

Plan (Major) **GEOLOGY** Catalog Year **2014 - 2015** Name _____

Subplan/Option _____ Minimum Units Required **180** Student ID _____

Required Core Courses

Course		Units
Required of all students. A 2.0 cumulative GPA is required in Geololgy core courses to receive a degree in the major		
Principles of Geology	GSC 111	4
Earth, Time and Life	GSC 112	3
Principles of Geology Lab	GSC 141L	1
Megascopic Petrography Lab	GSC 145L	1
Earth, Time and Life Lab	GSC 151L	1
Mineralogy	GSC 215/215L	3/1
Field Methods Lab	GSC 255L	2
Intro to Geochemistry	GSC 300/300L	3/1
Intro to Global Geophysics	GSC 307/307L	3/1
Geomorphology	GSC 323/323L	3/1
Structural Geology	GSC 333/333L	3/1
Hydrogeology	GSC 360/360L	3/1
Earth Science Seminar	GSC 410	2
GIS Applications for Earth Scientists I	GSC 401/401L	1/2
or GIS Applications for Earth Scientists II	GSC 411/411L	(1/2)
	Total Units	**41**

Elective Core Courses

Course		Units
Select 6 units from the list below:		*6*
Senior Project	GSC 461	(2)
and Senior Presentation	GSC 462	(2)
Senior Thesis	GSC 463	(2)
300- or 400-level GSC course(s)	GSC 3XX/4XX	(2-6)
Writing for the Professions	ENG 301	(4)
or Technical Communications and Documentation	CE 362/362A	(2/1)
	Total Units	**6**

Required Support Courses

Course		Units
The following required support courses should be taken to satisfy the indicated GE Requirements to achieve the minimum units to degree listed at the top of this sheet.		
Life Science & Lab (B2, B3)	BIO 110/111L	3/1
or Basic Biology (B2, B3)	BIO 115/115A/115L	(3/1/1)
General Chemistry & Lab (B1,B3)	CHM 121/121L	3/1
General Chemistry & Lab	CHM 122/122L	3/1
General Chemistry & Lab	CHM 123/123L	3/1
Natural Disasters (B5)	GSC 350	4
Analytic Geometry and Calculus I (B4)	MAT 114	4
Analytic Geometry and Calculus II	MAT 115	4
Analytic Geometry and Calculus III	MAT 116	4
or Quantitative Applications in the Earth Sciences	GSC 225	(4)
College Physics & Lab	PHY 121/121L	3/1
or General Physics & Lab	PHY 131/131L	(3/1)
College Physics & Lab	PHY 122/122L	3/1
or General Physics & Lab	PHY 132/132L	(3/1)
College Physics & Lab	PHY 123/123L	3/1
or General Physics & Lab	PHY 133/133L	(3/1)
	Total Units	**44-45**

Restricted Support Electives

Course	Units
Choose 34 units from a chosen Emphasis on the back side.	34
Total Units	**34**

Unrestricted Electives

Course	Units
Select a sufficient number of courses so that the total from "Required Support", "GE", and "Unrestricted Electives" is at least 99 units.	0-3
Total Units	**0-3**

General Education Requirements

Area	Units
Area A Communication & Critical Thinking	12
1. Oral Communication	
2. Written Communication	
3. Critical Thinking	
Area B Mathematics & Natural Sciences	16
Select at least one lab course from subarea 1 or 2.	
1. Physical Science	
2. Biological Science	
3. Laboratory Activity	
4. Math/Quantitative Reasoning	
5. Science & Technology Synthesis	
Area C Humanities	16
1. Visual and Performing Arts	
2. Philosophy and Civilization	
3. Literature and Foreign Language	
4. Humanities Synthesis	
Area D Social Sciences	20
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
Total Units	**68**

American Institutions — 8
Courses that satisfy this requirement may also satisfy GE Area D1

American Cultural Perspectives Requirement — 4
Refer to catalog for 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.

Geology Emphasis: **34 Units**

Optical Mineralogy	GSC 325/325L	2/2
Invertebrate Paleontology	GSC 331/331L	3/1
Sedimentary Geology	GSC 423/423L	3/2
Igneous and Metamorphic Petrology	GSC 424	3
Igneous and Metamorphic Petrology Lab	GSC 425L	2
Ore Deposits	GSC 433/433L	3/1
or Geotectonics	GSC 444/444L	3/1
Summer Field Geology Lab	GSC 490L	8
or Field Module Lab	GSC 491L	8
300 or 400 level GSC course(s)	GSC 3XX/4XX	4

Geophysics/Earth Exploration Emphasis: **34 Units**

Intro to Astronomy	GSC 116	4
or Intro to Oceanography	GSC 120	4
or Earthquake Country	GSC 195	4
Studies of a Blue Planet	GSC 320	4
or Planetary Science	GSC 495	4
Engineering Geology	GSC 321/321L	3/1
Engineering GeologyII and Lab	GSC 415/415L	3/1
Shallow Subsurface Geophysics	GSC 434/434L	3/1
Intro to Seismology, Earthquakes and Earth Structure	GSC 450/450L	3/1
Field Module Lab	GSC 491L	2
Intro to C++	CS 128	4
or Intro to Computer Science	CS 140	4
300 or 400 level GSC course(s)	GSC 3XX/4XX	4

Environmental Resources Emphasis: **34 units**

Water in a Changing World	GSC 110	4
Meteorology	GSC 304	4
Studies of a Blue Planet	GSC 320	4
Exploring the Oceans: Oceanography	GSC 335	4
Soil Physics	GSC 432/432L	3/1
Shallow Subsurface Geophysics	GSC 434/434L	3/1
Field Module Lab	GSC 491L	2
Planetary Science	GSC 495	4
Environment and Society	BIO 304	4
Environmental Engineering	CE 351/351L	3/1
Water Resource Management	EC 439	4
Climatology	GEO 303	4
Advanced Geographic Info Systems I	GEO 442/442A	3/1
Advanced Geographic Info Systems II	GEO 443/443A	3/1
Ethical Considerations in Tech and App Sci	IME 402	4
Energy and Society	PHY 301	4
Basic Soil Science	PLT 231/231L	3/1
Soil Chemistry	PLT 431/431L	3/1
Current Applications in Regenerative Studies	RS 414/414L	3/1
California Water	URP 482	4

Subject Matter Preparation - Program for Prospective Teachers of Science with a Concentration in Geology:

Note: The listed curriculum is pending approval by the State Commission on Teacher Credentialing. Anyone interested please check with the Department of interest for current status. Continue next column

Breadth Courses:

Biological Courses:

Foundations of Biology: Energy and Matter - Cycles and Flows	BIO 121/121L	3/2
Foundations of Biology: Reproduction and Development	BIO 122/122L	3/2
Foundations of Biology: Biodiversity	BIO 123/123L	3/2

Chemistry:

General Chemistry	CHM 121	3
General Chemistry Laboratory	CHM 121L	1
General Chemistry	CHM 122	3
General Chemistry Laboratory	CHM 122L	1
General Chemistry	CHM 123	3
General Chemistry Laboratory	CHM 123L	1

Geosciences:

Principles of Geology	GSC 111	4
Principles of Geology Laboratory	GSC 141L	1
Introduction to Astronomy	GSC 116	4
Natural Disasters	GSC 350	4

Physics:

College Physics*	PHY 121	3 *
College Physics Laboratory*	PHY 121L	1 *
College Physics*	PHY 122	3 *
College Physics Laboratory*	PHY 122L	1 *
College Physics*	PHY 123	3 *
College Physics Laboratory*	PHY 123L	1*

Note(s):
*PHY 131/PHY 131L, PHY 132/PHY 132L, and PHY 133/PHY 133L are acceptable substitutes.

Interdisciplinary Science:

Special Study for Lower Division Students	SCI 200	1-2
or Special Topics for Lower Division Students	SCI 299/299A/299L	1-4/1-4/1-4
or Special Study for Upper Division Students	SCI 400	1-2
or Special Topics for Upper Division Students with permission of department	SCI 499/499A/499L	1-4/1-4/1-4
Senior Research I	SCI 461	2
Senior Research II	SCI 462	2
Senior Seminar	SCI 463	4
Ways of Doing: Technology and Human Purpose	IGE 222	4
and Ways of Living: The Contemporary World	IGE 223	4
~OR~		
Intro to Science, Technology, and Society	STS 201	4
and Philosophy of Science	PHL 483	4

Depth Courses in Geological Sciences:

Earth, Time and Life	GSC 112	3
Earth, Time and Life Laboratory	GSC 151L	1
Intro to Oceanography	GSC 120	4
Megascopic Petrography	GSC 145L	1
Mineralogy	GSC 215/215L	3/1
Field Methods Laboratory	GSC 255L	2
Intro to Geochemistry	GSC 300/300L	3/1
Meteorology	GSC 304	4
GIS Applications for Earth Scientists I	GSC 401/401L	2/1
or GIS Applications for Earth Scientists II	GSC 411/411L	1/2
Studies of a Blue Planet	GSC 320	4
Engineering Geology I	GSC 321/321L	3/1
Geomorphology	GSC 323/323L	3/1
Groundwater Geology	GSC 360/360L	3/1