

GEOLOGY EMPHASIS, AS - WITH PORTLAND STATE UNIVERSITY

Program Code: AS.PSUGEOLOGY

The Associate of Science with an emphasis in Geology prepares students to complete a Bachelor of Science degree in Geology. Courses establish the foundations in understanding of plate tectonics, geologic time, rock and mineral systems, rock and mineral identification, seismology, fossil formation, surface processes, map reading and geologic structures.

For information contact Sarah Hoover, 503-594-3354 or sarah@clackamas.edu

Outcomes

Program Outcomes

Upon successful completion of this program, students should be able to:

- assess geological environments and explain human impact on the environment, hazards associated with them and how these hazards affect society;
- use geologic tools to gather, assess, interpret and explain data relative to a geologic setting, tools include: rocks and minerals, maps, fossils compasses and GPS;
- communicate complex ideas by demonstrating an ability to gather and analyze data, construct evidence-based arguments and critically evaluate information;
- demonstrate an understanding of the basic principles that guide the science of geology, these include: plate tectonics, Earth's structure, seismology, rock and mineral formation, rock and mineral identification, fossil formation, geologic time and dating, surface processes, and Earth's history.

Requirements

First Year

Fall Term		Credits
COMM-111Z	Public Speaking	4.00
G-201	General Geology	4.00
& G-201L General Geology Lab		
MTH-095 or placement in MTH-111Z ¹		
WR-121Z	Composition I	4.00
Credits		12

Winter Term

CS-120	Survey of Computing	4.00
G-202	General Geology	4.00
& G-202L General Geology Lab		
MTH-111Z	Precalculus I: Functions	4.00
WR-122Z	Composition II	4.00
Credits		16

Spring Term

G-203	General Geology	4.00
& G-203L General Geology Lab		
MTH-112Z	Precalculus II: Trigonometry	4.00

General Elective (p. 1)		5.00-6.00
Credits		13-14
Summer Term Option		
G-145 or G-148		
Credits		0
Second Year		
Fall Term		
MTH-251Z	Differential Calculus	4.00
PH-201	General Physics	5.00
Social Science General Education Elective (p. 1)		4.00
Select one of the following: ²		4.00
General Elective (p. 1)		
CH-150	Preparatory Chemistry	
Credits		17
Winter Term		
CH-221	General Chemistry	5.00
MTH-252Z	Integral Calculus	4.00
Social Science General Education Elective (p. 1)		4.00
General Elective (p. 1) ³		3.00-4.00
Credits		16-17
Spring Term		
CH-222	General Chemistry	5.00
COMM-140	Introduction to Intercultural Communication	4.00
STAT-243Z	Elementary Statistics I	4.00
General Elective (if not taken summer term) (p. 1)		3.00-4.00
Credits		16-17
Total Credits		90-93

General Electives

Any 3-4 credit course 100 level or above

Recommended courses that would complement upper division courses at Portland State University include:

Code	Title	Credits
MTH-253Z	Calculus: Sequences and Series	4.00
MTH-256	Differential Equations	4.00

World Languages: **ASL, FR, GER, SPN**

GIS Courses

- ¹ MTH-095 Algebra III does not count toward the degree
- ² Take CH-150 Preparatory Chemistry if needed to meet requisites for CH-221 General Chemistry
- ³ BI-165D Natural History of the Western Deserts recommended if summer courses not taken

Social Science Electives

Any Social Science General Education course as listed in the **AAOT**

Recommended:

Code	Title	Credits
ANT-101	Biological Anthropology	4.00
ANT-102	Archaeology & Prehistory	4.00
GEO-100	Introduction to Physical Geography	4.00
GEO-130	Introduction to Environmental Geography	4.00
GEO-208	Geography of the United States & Canada	4.00
HST-137	History of Science, Medicine, & Technology in Western Civilization	4.00
PS-297	Introduction to Environmental Politics	4.00

Careers

Career opportunities include:

- Working with federal, state, and local governments as well as private companies focusing on such things as:
 - environmental geology
 - volcanology
 - paleontology
 - water resources
 - earthquakes
 - flooding
 - mineral resources
 - geochemistry
 - landslides
 - hazard mitigation