

# GEOLOGY ASSOCIATE OF SCIENCE DEGREE

The Geology Associate of Science Degree equips students with a comprehensive understanding of the Earth's history, structure, economic resources, climate, and environment. This degree program meets student needs for: (1) transfer into a geological, environmental, or Earth sciences program at a four-year institution, (2) preparing for a career within the geological sciences or related fields, including energy exploration and development, environmental protection and remediation, hydrology, meteorology, hazard analysis and mitigation, and secondary and higher education, (3) fulfilling the undergraduate general education science requirement, and (4) a better understanding of the integration of natural systems with human-environment interactions within and upon the Earth.

Students who wish to pursue a degree in geology should take GEOL 101 and 111 before enrolling in additional geology courses. GEOL 101 is a prerequisite for most geology courses offered at San Bernardino Valley College and GEOL 111 will give students a more hands-on, in-depth exposure to the geological and Earth sciences. To graduate with a specialization in geology, students must complete the following required courses plus the general breadth requirements for the Associate Degree (total = 60 units)

Code	Title	Units
<b>Required Courses</b>		
CHEM 150	General Chemistry I	5
CHEM 151	General Chemistry II	5
GEOL 101	Introduction to Physical Geology	3
GEOL 111	Introduction to Physical Geology Laboratory	1
GEOL 112	Historical Geology	4
MATH 250	Single Variable Calculus I	4
MATH 251	Single Variable Calculus II	4
<b>Select two of the following:</b>		<b>2-7</b>
GEOL 122	Environmental Geology	3
GEOL 170	Geologic History of the Great Basin Province	1
GEOL 201	Mineralogy	4
GEOL 250	Geology of California	3
GEOL 251	Geology of the National Parks and Monuments	3
GEOL 260	Introduction to Field Geology	3
GEOL 270	Geology of the Eastern Sierra Nevada	1
<b>Total Units</b>		<b>28-33</b>

Code	Title	Units
<b>Recommended Courses</b>		
BIOL 100	General Biology	4
BIOL 109	History of Life	4
	or BIOL 109H History of Life - Honors	
CS 110	Fundamentals of Computer Science	3
CS 190	Programming in C++	4
GEOG 110	Physical Geography	3
GIS 130	Introduction to Geographic Information Systems (GIS)	3
PHYSIC 151 & PHYSIC 152	General Physics for the Life Sciences I and General Physics for the Life Sciences II	8

PHYSIC 202 & PHYSIC 203 & PHYSIC 204	Physics I and Physics II and Physics III	12
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To earn an SBVC Associate Degree students must complete one of the following general education patterns:

SBVC GE requirements (<https://www.valleycollege.edu/student-services/counseling/graduation-requirements/>)

CSU GE requirements (<https://www.valleycollege.edu/student-services/counseling/csuge/>)

IGETC requirements (<https://www.valleycollege.edu/student-services/counseling/igetc/>)

## Program Learning Outcomes

At the completion of this program, students will be able to:

- Have an understanding of the significance of Plate Tectonics in the overall picture of geologic processes
- Appreciate the magnitude of geologic time in explaining how the earth has changed over the course of geologic history
- Recognize important rock-forming minerals; both as mineral samples and as they appear in common rocks
- Identify the 3 major rock types (Igneous, Sedimentary, and Metamorphic) in field exposures
- Recognize major land form features and explain what geologic processes were involved in their formation
- Be prepared to transfer to an accredited 4-year degree granting institution and compete effectively against 'native' students in the same field of study