

GEOLOGY, ASSOCIATE IN SCIENCE DEGREE FOR TRANSFER

Banner Code: 2_AST_GEOL
Financial Aid Eligible

The Associate in Science in Geology transfer degree focuses on an understanding of internal processes responsible for the formation of the Earth from a scientific perspective. Students choosing the geology degree program will study a range of natural science concepts including plate tectonics, climate change, and the evolution of the dynamic planet Earth. This degree employs the scientific method to understand the formation of the Earth, including how volcanoes, and mountain building events change the geography and ecosystems of the Earth. Students will explore geologic time as it relates to the origins, and evolution of life through the fossil record. An understanding of the formation of economically important mineral and fossil fuel resources is an important aspect of the degree program. A portion of this course will focus on the diverse California geology and coastal development. Completion of this major will provide students with a well-rounded understanding of human impacts on the globe and the ways geologic hazards such as earthquakes, floods, and landslides impact human development.

Program Level Learning Outcomes

Upon completion of this program, students will be able to:

1. Define the application of the scientific method to geology and the forces, which shape the Earth.
2. Describe the processes of plate tectonics as it relates to mountain building events, volcanoes, earthquakes, and evolution of landscapes.
3. Illustrate the processes of mineral and rock formation and importance of economic resources.
4. Evaluate geologic landscapes and structures such as faults, folds and the physical forces required to develop a geologic landscape.
5. Relate geologic time and the fossil record to past climates and the tectonic and ecological environments responsible for the formation of the Earth.
6. Study past climates both warm and cool and how ice ages impacted climate and landscapes.

Associate Degree for Transfer Graduation Requirements

Associate Degrees for Transfer require students to meet the following requirements:

- Completion of 60 semester units or 90 quarter units of degree-applicable courses,
- Minimum overall grade point average of 2.0,
- Minimum grade of "C" (or "P") for each course in the major, and
- Completion of IGETC and/or CSU GE-Breadth.

Students should consult a GWC counselor in order to select the best pathway to meet their educational goals. For students who intend to

transfer, the choice of general education will be specific to both their major and transfer institution.

Course	Title	Units
Required Courses – Core		
GEOL G110	Physical Geology	4
GEOL G120	Historical Geology	4
CHEM G180	General Chemistry A	5
CHEM G185	General Chemistry B	5
MATH G180	Calculus 1	4
MATH G185	Calculus 2	4
Major Total		26
GE Pattern (CSU GE-Breadth or IGETC)		37-39
Total units that may be double-counted		7
Transferable Electives (as needed to reach 60 units)		0-2
Total Units		60

Per the SB1440 guidelines, the 60 unit total for this degree can only be met with IGETC. Students can elect to complete the CSU-GE Breadth and have the degree awarded with the understanding that they will be completing more than the 60 units under an ADT approval.

Recommended Program Sequence

These sequences are general course maps for students to finish all major and general education requirements for two-year completion of degrees, completion of short-term certificates, and/or fulfillment of transfer requirements. However, this may not be an appropriate path for all students. The two-year sequence is based on English and Math placement and meeting other course prerequisites. **Students are advised to meet with a GWC Counselor to review course selections and sequences to ensure that completion of this program will meet a student's transfer and career goals.**

Year 1:

Course	Title	Units
Semester 1		
MATH G170	Precalculus (prerequisite for MATH G180)	4
ENGL G100	Freshman Composition ^A	4
Area A1: Oral Communication course		3
Area E: Lifelong Learning & Self-Development course		3
Units		14

Course	Title	Units
Semester 2		
MATH G180	Calculus 1	4
CHEM G130	Preparation for General Chemistry (or placement - prerequisite for CHEM G180)	4
Area A3: Critical Thinking course		3-4
Area D: Social & Behavioral Science course		3
Units		14-15

Year 2:

Course	Title	Units
Semester 3		
MATH G185	Calculus 2	4

Course	Title	Units
Area C: Arts & Humanities course		3
HIST G170	History Of The United States To 1876 (Area C2: Humanities course)	3
or HIST G175	History of the United States Since 1876	
Area B2: Life Science course (without lab)		3
<i>Units</i>		<i>13</i>

Course	Title	Units
Semester 4		
CHEM G180	General Chemistry A	5
GEOL G110	Physical Geology	4
Area C1: Arts course		3
Area F: Ethnic Studies course		3
CSU Transferable elective coursework for a total of 1-2 units		1-2
<i>Units</i>		<i>16-17</i>

Course	Title	Units
Semester 5		
CHEM G185	General Chemistry B	5
GEOL G120	Historical Geology	4
PSCI G180	American Government (Area D: Social & Behavioral Science course)	3
or PSCI G181	American Government: The Politics of Race and Ethnicity	
Area D: Social & Behavioral Science course		3
<i>Units</i>		<i>15</i>
Total minimum units required		60

^a Program sequence may not be recommended for students who self-place into ENGL G100S. Students should see a Counselor for appropriate advisement.

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