



Geology AS-T Degree - California State University

GE Breadth

Geology is the study of the origin and evolution of the earth, utilizing the principles of mathematics, chemistry, physics, and biology. The concept of geologic time and uniformitarianism principles help geologists understand the processes that shape the earth and its environments. Geologists study rocks, minerals, and fossils to conclude the earth's observable surface processes that meet the eye and the earth's interior.

Total Units: 75

First Year

Semester 1

16 Units

COURSE	UNITS	PRE-REQS [^]	SEMESTERS OFFERED*	GE AREA
GEOL 300 ^Z Physical Geology	3	Advisory: Co-req: GEOL 301	F, S	CSU Area B1
GEOL 301 ^Z Physical Geology Laboratory	1	Pre- or co-req: GEOL 300	F, S	CSU Area B3
CHEM 300 ¹ ^Z Beginning Chemistry	4	Elementary Algebra or higher	F, S, Su	CSU Area B1
MATH 335 ² ^Z Trigonometry with College Algebra	5	MATH 120	F, S, Su	CSU Area B4
CSU Area A2-Written Communication ^Z	3	Recommend meeting with a counselor	F, S, Su	CSU Area A2

^Z At least one section of this course is offered with free textbooks and is labeled as zero textbook costs (ZTC). If it is a GE area class or elective, there may be several ZTC offerings to fulfill the GE requirement. Use the Free Textbook filter to find these courses. Learn more on the [ZTC page of the college website](#).

¹ CHEM 300 may be waived with 1 year of HS CHEM w/ lab and MATH 120 or equivalent. CHEM 300 is pre-req for CHEM 400. Recommend meeting with a counselor to see which course you need to start with.

² MATH 335 is pre-req for MATH 370; MATH 370 is pre-req for MATH 400; Recommend meeting with a counselor to see which course you need to start with.

Semester 2

19 Units

COURSE	UNITS	PRE-REQS [^]	SEMESTERS OFFERED*	GE AREA
CHEM 400 ^Z General Chemistry I	5	Elementary Algebra and CHEM 300, 305, 309 or 1 yr of HS Chem with Lab	F, S, Su	CSU Area B1 & B3

Career

Options/Outlook:

Geological Sample Test Technicians test or analyze geological samples, crude oil, or minerals to detect the presence of petroleum, gas, or mineral deposits indicating the potential for exploration or production or to determine physical or chemical properties to ensure that products meet quality standards. **Career opportunities require more than an associate degree.**

A sample of reported job titles:

Core Inspector, Electron Microprobe Operator, Environmental Field Services Technician, Environmental Sampling Technician, Laboratory Technician, Materials Technician, Organic Section Technical Lead, Physical Science Technician, Quality Control Technician (QC Technician), Research Associate

Projected job openings in California (2020-2030):

150

Projected growth in California (2020-2030):

9% growth

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*	GE AREA
MATH 370 ¹ Z Pre-Calculus Mathematics	5	MATH 335	F, S	CSU Area B4
CSU Area A3-Critical Thinking Z	3		F, S, Su	CSU Area A3
CSU Area D-Social & Behavioral Sciences ² Z	3		F, S, Su	CSU Area D
CSU Area C1-Arts or C2-Humanities Z	3		F, S, Su	CSU Area C1

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¹ MATH 335 is pre-req for MATH 370; MATH 370 is pre-req for MATH 400; Recommend meeting with a counselor to see which course you need to start with.

² Suggestion-select a course that will also meet CSU Graduation Requirements.

Semester 3

4 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*	GE AREA
GEOL 310 Historical Geology	3	Advisory: GEOL 300 or 305	Su	CSU Area B2
GEOL 311 Historical Geology Laboratory	1	Co-req: GEOL 310; Advisory: GEOL 300 & 301	Su	CSU Area B3

Year 2

Semester 3

19 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*	GE AREA
CHEM 401 Z General Chemistry II	5	CHEM 400	F, S	CSU Area B1 & B3
MATH 400 Z Calculus I	5	MATH 370	F, S	CSU Area B4
CSU Area A1-Oral Communication Z	3		F, S, Su	CSU Area A1
CSU Area C1-Arts Z	3		F, S, Su	CSU Area C1

Median Salary in California with advanced degree (2021):

\$61,930/yr

Source:

<https://www.onetonline.org/link/summary/19-4041.02>

Transfer notes:

Please meet with a counselor for specific transfer course evaluation or transferring to a specific 4-year institution.

General Education (GE):

Non-specified GE courses identified by CRC Area, CSU Area or IGETC Area without pre- or co-requisite can be taken at any semester.

Honors option:

The CRC Honors Program is designed specifically for academically accomplished students and for students with the potential for high achievement. Students who complete 15 units or more in honors-designated courses will earn special recognition as an Honors Scholar, a distinction that may entitle the student to guaranteed transfer and scholarship opportunities at select transfer colleges and universities.

About this program map:

This program map represents one possible pathway to complete the program. Please see a counselor to create an education plan customized to meet your needs. This map is not a guarantee of course availability or financial aid applicability.

COURSE	UNITS	PRE-REQS [^]	SEMESTERS OFFERED*	GE AREA
CSU Area E- Lifelong Learning & Self-Development ^Z	3		F, S, Su	CSU Area E

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Semester 4

17 Units

COURSE	UNITS	PRE-REQS [^]	SEMESTERS OFFERED*	GE AREA
MATH 401 ^Z Calculus II	5	MATH 400	F, S	CSU Area B4
CSU Area C2- Humanities ^Z	3		F, S, Su	CSU Area C2
CSU Area B2-Life Science ^Z	3		F, S, Su	CSU Area B2
CSU Area D-Social & Behavioral Sciences ¹ ^Z	3		F, S, Su	CSU Area D
CSU Area F-Ethnic Studies ^Z	3		Check Class Schedule for offering	CSU Area F

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[^]You must have passed the prerequisite course(s) with a "C" or better; Corequisite must be taken during the same semester; Advisory means it is recommended but not required to enroll in the course.

*(O) = online available (P) = partially online

¹ Suggestion-select a course that will also meet CSU Graduation Requirements.

Zero Textbook Costs (ZTC):

The Zero Textbook Costs designation and logo are added to any course that provides free access to all required instructional materials. These are typically shared with students through Canvas. Courses that are designated as ZTC may still require students to purchase supplemental materials such as lab coats, a calculator, art supplies, etc. See full definitions and searching tips on the [Zero Textbook Costs page](#) of the college website.

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