

Department of Geological Sciences
School of Natural Sciences, Mathematics, and Engineering

Department Chair: Dirk Baron

Department Office: Science Building II, 340

Telephone: (661) 654-3027

email: dbaron@csub.edu

Website: www.csub.edu/Geology

Faculty: D. Baron, J. Guo, W. Krugh, D. Miller, T. Rathburn

Emeritus: J. Coash, J. Gillespie, R. Horton, R. Negrini

Program Description

Geology is the study of the Earth and our neighboring planets in space, their composition, processes, and history. The degrees offered are the Bachelor of Arts, the Bachelor of Science and the Master of Science in Geology. The curriculum includes basic courses in geology and other cognate subjects and provides for independent research, field application, and Environmental Studies, when desired.

The curriculum and courses offered in Geology stress the physical framework of the environment and its relationships to organisms and to man. The college is located in an excellent geologic area with easy access to several mountain ranges, deserts, oil fields, agricultural areas, and the Pacific Coast.

At the completion of their Geology degree programs students will have basic knowledge and understanding of the content of modern geology, will have acquired knowledge and demonstrated skills to collect and analyze Earth's minerals and rocks, and will understand the philosophical, mathematical and physical science foundations of geology.

Graduates with degrees in Geology have excellent employment opportunities both locally and elsewhere in petroleum and minerals exploration, water resources, land use, and waste disposal management. The degree program also provides a strong foundation for secondary school science teaching or graduate study in geology. Students planning on attending graduate school are advised to pursue the BS degree as the course work for this degree, particularly the cognate courses, generally represents the minimum requirements for acceptance into a graduate program, including the Master of Science program in Geology at CSUB. Visit our website at <http://www.csub.edu/geology>.

The Department of Geological Sciences offers two tracks leading to a major in Geology and one track leading to a minor for a major in another field:

- Bachelor of Science in Geology
- Bachelor of Arts in Geology
- Minor in Geology

Requirements for the Bachelor of Science Degree in Geology

Total Units Required to Graduate	120 units
Major Requirements	66 units
Geology Courses	53
Cognates	13
Minor Requirement	0 units
General Education Requirements	41 units
First-Year Seminar	2
LD Area A Foundational Skills	9*
LD Area B Natural Sciences	3**
LD Area C Arts and Humanities	6
LD Area D Social and Behavioral Sciences	6
American Institutions	6
SELF	0***
Junior Year Diversity Requirement	3
UD Thematic Areas C and D	6
Capstone	0**
GWAR (Exam) or Class	0***
Additional Units	13 units

*Area A4 satisfied in cognate

**Area B1, B3, and Capstone satisfied in major and cognates.

***The SELF requirement is met by completing a LD Area B, C, or D course with a SELF component. The GWAR may be satisfied by exam.

Requirements for the Major, Bachelor of Science Degree in Geology (66 units)

1. **Lower Division** (8 units)
 - a. GEOL 2010, 2040 [Satisfies Areas B1 and B3]
2. **Upper Division** (45 units)
 - a. GEOL 3010, 3020, 3030, 3040, 3070, 3090, 4090*, and 4908 (33 units) [Satisfies Capstone]
 - b. Three additional courses selected from the following options: GEOL 3080, 4010, 4020, 4050, 4060, 4770, 4800 (12 units)
Graduate level classes may be substituted with advisor approval.
3. **Cognates** (13 units)
 - a. CHEM 1000, 1100 (5 units)
 - b. MATH 2010 or 2510 (4 units)
 - c. PHYS 2110 or 2210 (4 units)

The minimum GPA for these 66 units is 2.0

*GEOL 4090 is generally taken during the Summer following the senior year.

The following additional courses are strongly recommended for students planning graduate studies:

1. CHEM 1600 (2 units)
2. MATH 2020 or 2520 (4 units)
3. PHYS 2120 or 2220 (4 units)

GEOLOGY

Requirements for the Bachelor of Arts Degree in Geology

Total Units Required to Graduate	120 units
Major Requirements	53 units
Geology Courses	40
Cognates	13
Minor Requirement	16 units
General Education Requirements	41 units
First-Year Seminar	2
LD Area A Foundational Skills	9*
LD Area B Natural Sciences	3**
LD Area C Arts and Humanities	6
LD Area D Social and Behavioral Sciences	6
American Institutions	6
SELF	0***
Junior Year Diversity Requirement	3
UD Thematic Areas C and D	6
Capstone	0**
GWAR (Exam) or Class	0***
Additional Units	10 units

Courses required as cognates for the major cannot count toward the minor. Minor must be approved by your major advisor or Department Chair.

*Area A4 satisfied in cognate

**Area B1, B3, and Capstone satisfied in major and cognates.

***The SELF requirement is met by completing a LD Area B, C, or D course with a SELF component. The GWAR may be satisfied by exam.

Requirements for the Bachelor of Arts Major in Geology (53 units)

- Lower Division** (8 units)
 - GEOL 2010, 2040 [Satisfies Areas B1 and B3]
- Upper Division** (32 units)
 - GEOL 3010, 3020, 3030, 3040, 3070, 3090, and 4908 (28 units) [Satisfies Capstone]
 - Three additional courses selected from the following options: GEOL 3080, 4010, 4020, 4050, 4060, 4770, 4800 (12 units)
- Cognates** (13 units)
 - CHEM 1000, 1100 (5 units)
 - MATH 1060 or 2510 (4 units)
 - PHYS 2110 or 2210 (4 units)

The minimum acceptable GPA for these 53 units is 2.0

Requirements for the Minor in Geology

A minor in Geology is available, consisting of 16 units, at least 8 of which must be in upper division courses that count toward the major. One lower division course must be GEOL 1009 or 1209 or 2010. The other must be GEOL 2040. The upper division courses then available without other prerequisites are GEOL 3040, 3080, and 4050.

Requirements for Teaching Credential: Science Teacher Preparation Program Leading to a Degree in Natural Sciences, Primary Concentration in Geology

CSUB has developed a degree program, the Bachelor of Arts in Natural Sciences, to prepare prospective science teachers for subject matter certification in California via the California Subject Matter Examinations for Teachers (CSET) in Science. See the catalog section under Natural Sciences for information about this degree program. Additional information may be obtained from the Geological Sciences Department office (661- 654-3027).

Note: One semester unit of credit normally represents 50 minutes of lecture or 150 of laboratory study. For every unit, students are expected to devote 2-3 hours of outside study per week.