

# Geology

College of Natural Science and Mathematics  
Department of Geology and Geophysics  
(907) 474-7565  
www.uaf.edu/geology/

## B.S. Degree

Minimum Requirements for Degree: 130 credits

Graduates in geology have broad backgrounds in the earth sciences and firm foundations in mathematics, physics and chemistry. There are many concentrations available in the geological sciences, and the suggested curricula are intended to be flexible enough to allow students to pursue their own emphasis in the junior and senior years. The bachelor's degree prepares students for positions with industry or government or for graduate studies.

There are about 40 professional geoscientists in residence on campus and graduate students normally participate in the ongoing research of these professionals. Teaching and research assistantships are available to graduate students in many of these areas.

## Major—B.S. Degree

1. Complete the general university requirements. (See page 107. As part of the core curriculum requirements, complete MATH 200X, CHEM 105X and 106X.)
  2. Complete the B.S. degree requirements. (See page 114. As part of the B.S. degree, complete: STAT 200 or 300; PHYS 103X and 104X, or PHYS 211X and 212X.)
  3. Complete the following program (major) requirements:\*
- |   |      |
|---|------|
| GEOS 101X—The Dynamic Earth.....                      | 4    |
| GEOS 112X—The History of Earth and Life.....          | 4    |
| GEOS 213—Mineralogy.....                              | 4    |
| GEOS 214—Petrology and Petrography.....               | 4    |
| GEOS 225—Field and Computer Methods in Geology.....   | 2    |
| GEOS 304—Geomorphology.....                           | 3    |
| GEOS 314—Structural Geology.....                      | 4    |
| GEOS 315W—Paleobiology and Paleontology.....          | 4    |
| GEOS 322—Stratigraphy and Sedimentation.....          | 4    |
| GEOS 351W—Field Geology**.....                        | 6    |
| GEOS 430—Statistics and Data Analysis in Geology..... | 3    |
| MATH 201X—Calculus.....                               | 4    |
| Electives.....  | open |
4. Complete 15 credits of upper-division GEOS courses or upper-division courses as approved by the undergraduate advisor.\*
  5. Minimum credits required.....130

\* Student must earn a C grade or better in each GEOS course and in all courses that fulfill requirement 4.

\*\* GEOS 351 is offered at UAF when there is sufficient demand. In years when GEOS 351 is not offered (decision made early in fall semester), students are required to take a 6-credit field geology class at another institution. The geology and geophysics undergraduate advisor will assist students in placement in a field geology class.

Studies in geophysics: Students interested in pursuing a program in geophysics are encouraged to pursue a major in geology which includes GEOS 418 and 416 with a minor in physics. Students should consult with the geology department regarding constructing a plan of study.

## Minor

1. Complete the following:

GEOS 101X—The Dynamic Earth.....	4
Approved GEOS electives.....	12
2. Minimum credits required.....16

**Note:** Page numbers refer to the UAF 2005-2006 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## Baccalaureate Core Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATION (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
*ENGL 190H may be substituted.*

**Complete one of the following:**

ENGL 211X OR ENGL 213X ..... (3) \_\_\_\_\_

**Complete one of the following:**

COMM 131X OR COMM 141X ..... (3) \_\_\_\_\_

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete all of the following four courses:**

ANTH 100X/SOC 100X ..... (3) \_\_\_\_\_  
 ECON 100X OR PS 100X ..... (3) \_\_\_\_\_  
 HIST 100X ..... (3) \_\_\_\_\_  
 ENGL/FL 200X ..... (3) \_\_\_\_\_

**Complete one of the following three courses:**

ART/MUS/THR 200X, HUM 201X OR ANS 202X ..... (3) \_\_\_\_\_

**Complete one of the following six courses:**

BA 323X, COMM 300X, JUST 300X, NRM 303X,  
 PS 300X OR PHIL 322X ..... (3) \_\_\_\_\_

**OR** complete 12 credits from the above courses **PLUS**

- two semester-length courses in a single Alaska Native language or other non-English language **OR**
- three semester-length courses (9 credits) in American Sign Language taken at the university level.

### MATHEMATICS (3)

**Complete one of the following:**

MATH 107X, MATH 161X OR MATH 103X ..... (3-4) \_\_\_\_\_  
*\* No credit may be earned for more than one of MATH 107X or 161X.*

**OR** complete one of the following\*:

MATH 200X, MATH 201X, MATH 202X,  
 MATH 262X OR MATH 272X ..... (4) \_\_\_\_\_  
*\*Or any math course having one of these as a prerequisite*

### NATURAL SCIENCES (8)

**Complete any two (4-credit) courses:**

ATM 101X ..... (4) \_\_\_\_\_  
 BIOL 100X ..... (4) \_\_\_\_\_  
 BIOL 103X ..... (4) \_\_\_\_\_  
 BIOL 104X ..... (4) \_\_\_\_\_  
 BIOL 105X ..... (4) \_\_\_\_\_  
 BIOL 106X ..... (4) \_\_\_\_\_  
 BIOL 111X ..... (4) \_\_\_\_\_  
 BIOL 112X ..... (4) \_\_\_\_\_  
 CHEM 100X ..... (4) \_\_\_\_\_  
 CHEM 103X ..... (4) \_\_\_\_\_  
 CHEM 104X ..... (4) \_\_\_\_\_  
 CHEM 105X ..... (4) \_\_\_\_\_  
 CHEM 106X ..... (4) \_\_\_\_\_  
 GEOG 205X ..... (4) \_\_\_\_\_  
 GEOS 100X ..... (4) \_\_\_\_\_  
 GEOS 101X ..... (4) \_\_\_\_\_  
 GEOS 112X ..... (4) \_\_\_\_\_  
 GEOS 120X ..... (4) \_\_\_\_\_  
 GEOS 125X ..... (4) \_\_\_\_\_  
 MSL 111X ..... (4) \_\_\_\_\_  
 PHYS 102X ..... (4) \_\_\_\_\_  
 PHYS 103X ..... (4) \_\_\_\_\_  
 PHYS 104X ..... (4) \_\_\_\_\_  
 PHYS 115X ..... (4) \_\_\_\_\_  
 PHYS 116X ..... (4) \_\_\_\_\_  
 PHYS 175X ..... (4) \_\_\_\_\_  
 PHYS 211X ..... (4) \_\_\_\_\_  
 PHYS 212X ..... (4) \_\_\_\_\_  
 PHYS 213X ..... (4) \_\_\_\_\_

### LIBRARY AND INFORMATION RESEARCH (0-1)

Successful completion of library skills competency test **OR**  
 LS 100X or 101X prior to junior standing ..... (0-1) \_\_\_\_\_

### UPPER-DIVISION WRITING AND ORAL COMMUNICATION (0)

**Complete the following:**

Two writing intensive courses designated (W) ..... (0) \_\_\_\_\_  
 One oral communication intensive course designated (O) ..... (0) \_\_\_\_\_  
**OR** two oral communication intensive courses designated (O/2), at the upper-division level (see degree and/or major requirements) ..... (0) \_\_\_\_\_

**TOTAL CREDITS REQUIRED** ..... **38-39**