

# Earth Science

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

## B.A. Degree

Minimum Requirements for Degree: 130 credits

This program provides broad training in various aspects of earth science. It is especially applicable to those wishing to teach earth science or who are entering a field such as resource management.

Basic course work is designed to meet the National Science Teachers Association requirements for teaching secondary school earth science. Students arrange additional required course work and specialization emphasis in consultation with an undergraduate advisor and a faculty member from the appropriate department. Students wishing to enroll in this degree program should contact the head of the geology and geophysics department.

The earth sciences B.A. degree meets the undergraduate requirements for prospective secondary earth science teachers (grades 7-12).

## Major—B.A. Degree

1. Complete the general university requirements. (See page 112. As part of the core curriculum requirements, complete: NRM 303X\*, CHEM 103X and 104X or CHEM 105X and 106X or PHYS 103X and 104X).
2. Complete the B.A. degree requirements. (See page 116. As part of the B.A. degree requirements, complete: PHIL 380 or 382 or 481 for the humanities requirement.)
3. Complete the following program (major) requirements:\*

GEOG 339—Maps and Landscape Analysis (4)	
or GEOS 408—Photogeology (2) .....	2–4
GEOG 401—Weather and Climate .....	3
GEOG 402—Resources and Environment .....	3
GEOS 101X—The Dynamic Earth .....	4
GEOS 112X—The History of Earth and Life.....	4
GEOS 225—Field and Computer Methods In Geology.....	3
GEOS 262—Rocks and Minerals.....	3
GEOS 304—Geomorphology .....	3
GEOS 315W—Paleobiology and Paleontology (4)	
or BIOL 328O—Biology of Marine Organisms (3) .....	3–4
GEOS 422—Remote Sensing (3)	
or NRM 338—Introduction to GIS (3) .....	3
MSL 111X—The Oceans .....	4
NRM 101—Natural Resource Conservation and Policy .....	3
PHYS 175X—Introduction to Astronomy .....	3
4. Complete a specialization emphasis requirement:\*
  - a. Complete an additional approved 9 credits\*\* at the 300-level or above with emphasis in geology, geography, biology, natural resources management or other earth science-related field as approved by the undergraduate advisor.
5. Complete any UAF minor except geology. If appropriate, courses used to satisfy the specialization emphasis requirement can also be applied towards the requirements for a minor.
6. Minimum credits required .....130

\* Student must earn a C grade or better in each course.

Note: The following courses are recommended to fulfill the upper-division writing and oral intensive requirements (2 "W" courses and 1 "O" course): GEOS 475WO, GEOS 463O, GEOS 315W, GEOG 482WO, NRM 304O, or NRM 380W.

Note: Geography courses taken to meet the B.A. social science requirement may also be used to fulfill the specialization emphasis and (or) minor requirements. GEOG 402, a major requirement, also satisfies the B.A. social science requirement.

Note: In consultation with an undergraduate advisor, students should prepare an undergraduate study plan that includes specific courses to satisfy the major and minor complexes. This should be completed by the end of the sophomore year.

Note: We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. The Earth Science B.A. degree requirements will apply to the UAF School of Education during spring 2006 or later for licensure in secondary earth science.

Note: Page numbers refer to the UAF 2006-2007 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**