

# 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 124. As part of the core curriculum requirements, complete: NRM F303X\*, CHEM F103X and CHEM F104X or CHEM F105X and CHEM F106X or PHYS F103X and PHYS F104X).
  2. Complete the B.A. degree requirements. (See page 128. As part of the B.A. degree requirements, complete: PHIL F481 for the humanities requirement.)
  3. Complete the following program (major) requirements:\*
- |   |       |
|---|-------|
| GEOG F339—Maps and Landscape Analysis (4)         |       |
| or GEOS F408—Photogeology (2)                     | 2 – 4 |
| GEOG F401—Weather and Climate                     | 3     |
| GEOG F402—Resources and Environment               | 3     |
| GEOS F101X—The Dynamic Earth                      | 4     |
| GEOS F112X—The History of Earth and Life          | 4     |
| GEOS F225—Field and Computer Methods In Geology   | 3     |
| GEOS F262—Rocks and Minerals                      | 3     |
| GEOS F304—Geomorphology                           | 3     |
| GEOS F315W—Paleobiology and Paleontology (4)      |       |
| or BIOL F328O—Biology of Marine Organisms (3)     | 3 – 4 |
| GEOS F422—Remote Sensing (3)                      |       |
| or NRM F338—Introduction to GIS (3)               | 3     |
| MSL F111X—The Oceans                              | 4     |
| NRM F101—Natural Resource Conservation and Policy | 3     |
| PHYS F175X—Introduction to Astronomy              | 3     |
4. Complete a specialization emphasis requirement:\*
- a. Complete an additional approved 9 credits\*\* at the F300-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 F475WO, GEOS F463O, GEOS F315W, GEOG F482WO, NRM F304O, or NRM F380W.

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 F402, 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.

## 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 F111X ..... (3) \_\_\_\_\_  
ENGL F190H may be substituted.

Complete one of the following:

ENGL F211X OR ENGL F213X ..... (3) \_\_\_\_\_

Complete one of the following:

COMM F131X OR COMM F141X ..... (3) \_\_\_\_\_

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete all of the following four courses:

ANTH F100X/SOC F100X ..... (3) \_\_\_\_\_  
ECON F100X OR PS F100X ..... (3) \_\_\_\_\_  
HIST F100X ..... (3) \_\_\_\_\_  
ENGL/FL F200X ..... (3) \_\_\_\_\_

Complete one of the following three courses:

ART/MUS/THR F200X, HUM F201X OR ANS F202X ..... (3) \_\_\_\_\_

Complete one of the following six courses:

BA F323X, COMM F300X, JUST F300X, NRM F303X,  
PS F300X OR PHIL F322X ..... (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 F103X, MATH F107X, MATH F161X OR  
STAT F200X ..... (3 – 4) \_\_\_\_\_  
\* No credit may be earned for more than one of MATH F107X or F161X.

OR complete one of the following:

MATH F200X, MATH F201X, MATH F202X,  
MATH F262X OR MATH F272X ..... (4) \_\_\_\_\_

\*Or any math course having one of these as a prerequisite.

### NATURAL SCIENCES (8)

Complete any two (4-credit) courses:

ATM F101X ..... (4) \_\_\_\_\_  
BIOL F100X ..... (4) \_\_\_\_\_  
BIOL F103X ..... (4) \_\_\_\_\_  
BIOL F104X ..... (4) \_\_\_\_\_  
BIOL F111X ..... (4) \_\_\_\_\_  
BIOL F112X ..... (4) \_\_\_\_\_  
BIOL F115X ..... (4) \_\_\_\_\_  
BIOL F116X ..... (4) \_\_\_\_\_  
CHEM F100X ..... (4) \_\_\_\_\_  
CHEM F103X ..... (4) \_\_\_\_\_  
CHEM F104X ..... (4) \_\_\_\_\_  
CHEM F105X ..... (4) \_\_\_\_\_  
CHEM F106X ..... (4) \_\_\_\_\_  
GEOG F205X ..... (4) \_\_\_\_\_  
GEOS F100X ..... (4) \_\_\_\_\_  
GEOS F101X ..... (4) \_\_\_\_\_  
GEOS F112X ..... (4) \_\_\_\_\_  
GEOS F120X ..... (4) \_\_\_\_\_  
GEOS F125X ..... (4) \_\_\_\_\_  
MSL F111X ..... (4) \_\_\_\_\_  
PHYS F102X ..... (4) \_\_\_\_\_  
PHYS F103X ..... (4) \_\_\_\_\_  
PHYS F104X ..... (4) \_\_\_\_\_  
PHYS F115X ..... (4) \_\_\_\_\_  
PHYS F116X ..... (4) \_\_\_\_\_  
PHYS F175X ..... (4) \_\_\_\_\_  
PHYS F211X ..... (4) \_\_\_\_\_  
PHYS F212X ..... (4) \_\_\_\_\_  
PHYS F213X ..... (4) \_\_\_\_\_

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

Successful completion of library skills competency test OR  
LS F100X or F101X 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