

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 131. 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 135. 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 F307—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
 - Complete an additional approved 9 credit specialization emphasis 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 9

4. 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.
5. 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 F490WO, NRM F304WO, 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.

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

Baccalaureate Core 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 F111X(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) _____
and 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) _____

CORE CREDITS REQUIRED 38 – 39

Minimum credits required for degree 120



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