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 107. 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 111. 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)  
   GEOG 401—Weather and Climate  
   GEOG 402—Resources and Environment  
   GEOS 101X—The Dynamic Earth  
   GEOS 112X—The History of Earth and Life  
   GEOS 225—Field and Computer Methods In Geology  
   GEOS 262—Rocks and Minerals  
   GEOS 304—Geomorphology  
   GEOS 313W—Paleoholology and Paleontology (4)  
   or BIOL 3280—Biology of Marine Organisms (3)  
   GEOS 422—Remote Sensing (3)  
   or NRM 338—Introduction to GIS (3)  
   MSL 111X—The Oceans  
   NRM 101—Natural Resource Conservation and Policy  
   PHYS 175X—Introduction to Astronomy  

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, GEOG 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.

*We strongly recommend that prospective secondary science teachers seek advising from the UA 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 UA 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 UA 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 111X .................................................................(3)  ____

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)  ____
GEOG 101X .............................................................(4)  ____
GEOG 112X .............................................................(4)  ____
GEOG 120X .............................................................(4)  ____
GEOG 125X .............................................................(4)  ____
MSL 111X ...............................................................(4)  ____
PHYS 102X .............................................................(4)  ____
PHYS 103X .............................................................(4)  ____
PHYS 104X .............................................................(4)  ____
PHYS 115X .............................................................(4)  ____
PHYS 116X .............................................................(4)  ____
PHYS 173X .............................................................(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