B.A., EARTH SCIENCE

Concentrations: Earth Systems Science, Geological Hazards and Mitigation, Secondary Education

Minimum Requirements for Degree: 120-130 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (http://catalog.uaf.edu/bachelors)

General Education Requirements
Complete the general education requirements. (http://catalog.uaf.edu/bachelors/general-education-requirements)

As part of the general education requirements, complete:

Select one from the following:

- CHEM F103X Basic General Chemistry
- CHEM F104X and Survey of Organic Chemistry and Biochemistry
- CHEM F105X and General Chemistry I
- CHEM F106X and General Chemistry II
- PHYS F103X and College Physics I
- PHYS F104X and College Physics II

B.A. Degree Requirements
Complete the B.A. degree requirements. (http://catalog.uaf.edu/bachelors/summary-of-bachelors-degree-reqs/#bachelorofartsandbacheloroffineartstext)

As part of the B.A. degree requirements, complete:

- NRM F303X Environmental Ethics and Actions

Program Requirements

GEOS F101X or GEOS F120X

The Dynamic Earth

Glaciers, Earthquakes and Volcanoes: Past, Present and Future

GEOS F112X

or GEOS F106X

The History of Earth and Life

Life in the Age of Dinosaurs

Concentrations

Select one from the following concentrations:

31-49

Earth Systems Science

Geological Hazards and Mitigation

Secondary Education

Total Credits 39-57

Concentrations

EARTH SYSTEMS SCIENCE

GEOS F304 Geomorphology

GEOS F315 Paleobiology and Paleontology

GEOG F483 Research Design, Writing and Presentation Methods

Select one course from each of the following areas:

9-12

Earth Systems

GEOG F101X Expedition Earth: Introduction to Geography

MSL F111X The Oceans

NRM F101 Natural Resources Conservation and Policy

PHYS F175X Introduction to Astronomy

Earth Materials

GEOS F213 Mineralogy

GEOS F262 Rocks and Minerals

Geospatial Sciences

GEOG F338 Introduction to Geographic Information Systems

GEOS F225 and GEOS F408 Field and Computer Methods in Geology and Photogeology

Select one course from any two of the following areas:

Weather and Climate

ATM F101X Weather and Climate of Alaska

GEOS F307 Weather and Climate

Natural Resources

GEOG F302 Geography of Alaska

GEOS F332 Ore Deposits and Structure

Geoscience

GEOS F309 Tectonics

GEOS F322 Stratigraphy and Sedimentation

Geobiology

GEOS F485 Mass Extinctions, Neocatastrophism and the History of Life

GEOS F486 Vertebrate Paleontology

9 additional credits at the F300 level or above

Total Credits 34-38

1 Fulfills the baccalaureate capstone requirement.

2 These credits should have an emphasis in geology, geography, biology, natural resources management or other Earth science-related field as approved by the undergraduate advisor.

GEOLOGICAL HAZARDS AND MITIGATION

As part of the general education requirements, complete:

SOC F101X Introduction to Sociology

As part of the B.A. requirements, complete:

COJO F300X Communicating Ethics

STAT F200X Elementary Probability and Statistics

Program Requirements

ED F486 Media Literacy

ENGL F314 Technical Writing

GEOG F483 Research Design, Writing and Presentation Methods

GEOS F304 Geomorphology

GEOS F380 Geological Hazards

GEOS F406 Volcanology

HSEM F301 Principles of Emergency Management and Homeland Security

PHYS F175X Introduction to Astronomy

Select one course from each of the following areas:

9-12

Earth Materials

GEOS F213 Mineralogy
GEOS F262  Rocks and Minerals

Geospatial Sciences

GEOS F338  Introduction to Geographic Information Systems

GEOS F225 and GEOS F408  Field and Computer Methods in Geology and Photogeology

Weather and Climate

ATM F101X  Weather and Climate of Alaska

GEOG F307  Weather and Climate

Select two courses from one of the following specialized areas: 6

Mitigation

HSEM F412  Emergency Planning and Preparedness

HSEM F423  Disaster Response Operations and Management

HSEM F434  All-Hazards Risk Analysis

Communications

COJO F335  Organizational Communication

COJO F353  Conflict, Mediation and Communication

COJO F441  Persuasion

Total Credits 40-43

1  Fulfills the baccalaureate capstone requirement.

SECONDARY EDUCATION

As part of the general education requirements, complete:

GEOG F101X  Expedition Earth: Introduction to Geography

PSY F101X  Introduction to Psychology

Program Requirements

GEOS F262  Rocks and Minerals 3

GEOS F315  Paleobiology and Paleontology 4

GEOS F475  Presentation Techniques in the Geosciences 2

GEOS F497  Individual Study1

MSL F111X  The Oceans 4

PHYS F175X  Introduction to Astronomy 4

Select one course from each of the following areas: 14-17

Landform Analysis

GEOG F111X  Earth and Environment: Elements of Physical Geography

GEOS F304  Geomorphology

Geospatial Sciences

GEOS F225  Field and Computer Methods in Geology

GEOG F338  Introduction to Geographic Information Systems

Weather and Climate

ATM F101X  Weather and Climate of Alaska

GEOG F307  Weather and Climate

Natural Resources

GEOG F302  Geography of Alaska

GEOS F332  Ore Deposits and Structure

Evolutionary Processes

GEOS F309  Tectonics

GEOS F485  Mass Extinctions, Neocatastrophism and the History of Life

GEOS F486  Vertebrate Paleontology

Minor in secondary education (http://catalog.uaf.edu/bachelors/bachelors-degree-programs/education/secondary-minor) 16

Additional requirements in secondary education licensure program (http://catalog.uaf.edu/bachelors/bachelors-degree-programs/education/secondary-postbacc-licensure) 19

Total Credits 66-69

1  Fulfills the baccalaureate capstone requirement.

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.