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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHEM F103X</td>
<td>Basic General Chemistry</td>
</tr>
<tr>
<td>and CHEM F104X</td>
<td>and Survey of Organic Chemistry and Biochemistry</td>
</tr>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>and CHEM F106X</td>
<td>and General Chemistry II</td>
</tr>
<tr>
<td>PHYS F103X</td>
<td>College Physics I</td>
</tr>
<tr>
<td>and PHYS F104X</td>
<td>and College Physics II</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>NRM F303X</td>
<td>Environmental Ethics and Actions</td>
</tr>
</tbody>
</table>

Program Requirements

GEOS F101X       The Dynamic Earth 4
or GEOS F120X    Glaciers, Earthquakes and Volcanoes: Past, Present and Future

GEOS F112X       The History of Earth and Life 4
or GEOS F106X    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 3
GEOS F315       Paleobiology and Paleontology 4
GEOG F483       Research Design, Writing and Presentation Methods 1

Select one course from each of the following areas: 9-12

Earth Systems

GEOG F101X     Expedition Earth: Introduction to Geography
MSL F111X      The Oceans

GEOS F213       Mineralogy

Earth Materials

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       Field and Computer Methods in Geology and Photogeology
and GEOS F408

Select one course from any two of the following areas: 6-7

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

Geoscience

GEOG 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 2

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 3
ENGL F314      Technical Writing 3
GEOG F483      Research Design, Writing and Presentation Methods 1

GEOS F304       Geomorphology 3
GEOS F380       Geological Hazards 3
GEOS F406       Volcanology 3
HSEM F301       Principles of Emergency Management and Homeland Security 3

PHYS F175X     Introduction to Astronomy 4

Select one course from each of the following areas: 9-12

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

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:

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

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)

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

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.