B.S., GEOGRAPHY

Concentrations: Environmental Studies, Landscape Analysis and Climate Change Studies, and Geospatial Sciences

Minimum Requirements for Degree: 120 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:
- STAT F200X Elementary Probability and Statistics

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

As part of the B.S. degree requirements, complete:
- NRM F303X Environmental Ethics and Actions
- MATH F230X Calculus Essentials with Applications or MATH F251X Calculus I

Program Requirements
- GEOG F101X Expedition Earth: Introduction to Geography 3
- GEOG F111X Earth and Environment: Elements of Physical Geography 4
- GEOG F312 People, Places, and Environment: Principles of Human Geography 3
- GEOG F483 Research Design, Writing and Presentation Methods 1 3
- GEOG F490 Geography Seminar 1 3
- GEOS F488 Undergraduate Research 1-3 or GEOG F300 Internship in Geography
- NRM F338 Introduction to Geographic Information Systems 3

Concentrations
Select one from the following concentrations: 30-56
- Environmental Studies
- Landscape Analysis and Climate Change Studies
- Geospatial Sciences

Total Credits 50-78

1 Completion of these three courses will fulfill the baccalaureate capstone requirement.

Concentrations

ENVIRONMENTAL STUDIES
As part of the general education requirements, complete:
- CHEM F105X General Chemistry I

As part of the B.S. degree requirements, complete:
- BIOL F115X Fundamentals of Biology I

LANDSCAPE ANALYSIS AND CLIMATE CHANGE STUDIES
As part of the general education requirements, complete:
- ATM F101X Weather and Climate of Alaska
- PHYS F103X College Physics I

Program Requirements
- GEOG F412 Geography of Climate and Environmental Change 3
- ATM F456 Climate and Climate Change

As part of the general education requirements, complete:
- GEOS F304 Geomorphology 3

Select three from the following: 9
GEOSPATIAL SCIENCES

Program Requirements

Select four from the following: 12-13

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS F103</td>
<td>Introduction to Computer Programming</td>
</tr>
<tr>
<td>GEOG F207</td>
<td>Research Methods and Statistics in Geography</td>
</tr>
<tr>
<td>GEOG F339</td>
<td>Maps and Landscape Analysis</td>
</tr>
<tr>
<td>GEOS F422</td>
<td>Geoscience Applications of Remote Sensing</td>
</tr>
<tr>
<td>NRM F435</td>
<td>GIS Analysis</td>
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Select three from the following: 6-7

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>GE F371</td>
<td>Remote Sensing for Engineering</td>
</tr>
<tr>
<td>GE F376</td>
<td>GIS Applications in Geological and Environmental Engineering</td>
</tr>
<tr>
<td>GEOG F309</td>
<td>Digital Cartography and Geo-Visualization</td>
</tr>
<tr>
<td>GEOS F436</td>
<td>Beyond the Mouse: Computer Programming and Automation for Geoscientists</td>
</tr>
<tr>
<td>GEOS F458</td>
<td>Applications of GPS and GIS in Geophysics</td>
</tr>
<tr>
<td>NRM F369</td>
<td>GIS and Remote Sensing for Natural Resources</td>
</tr>
<tr>
<td>NRM F638</td>
<td>GIS Programming</td>
</tr>
<tr>
<td>NRM F641</td>
<td>Natural Resource Applications of Remote Sensing</td>
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Select two from the following: 6

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>GEOG F427</td>
<td>Polar Geography</td>
</tr>
<tr>
<td>GEOG F460</td>
<td>The Dynamic Alaska Coastline</td>
</tr>
<tr>
<td>GEOG F478</td>
<td>Ice Age Alaska</td>
</tr>
<tr>
<td>GEOS F304</td>
<td>Geomorphology</td>
</tr>
</tbody>
</table>

Total Credits: 27-33

1 Graduate-level credit used to complete this undergraduate degree program may NOT be applied towards future graduate degree programs.

Note: Students and faculty advisors should carefully review prerequisites for courses outlined in each required and/or optional area. Some courses require successful completion of up to three prerequisite courses. Therefore, while students and faculty should note minimum degree credit hours are 120, the actual number of required course credits may exceed that number.