

FORMAT 5

Submit originals and one copy and electronic copy to Governance/Faculty Senate Office (email electronic copy to fysenat@uaf.edu)

PROGRAM/DEGREE REQUIREMENT CHANGE (MAJOR/MINOR)

SUBMITTED BY:

Department	UA Geography Program	College/School	SNRAS
Prepared by	de Wit and Heiser	Phone	7494
Email Contact	c.dewit@alaska.edu pheiser@alaska.edu	Faculty Contact	Cary de Wit

See <http://www.uaf.edu/uafgov/faculty/cd> for a complete description of the rules governing curriculum & course changes.

PROGRAM IDENTIFICATION:

DEGREE PROGRAM	Geography
Degree Level: (i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)	B.S.

A. CHANGE IN DEGREE REQUIREMENTS: (Brief statement of program/degree changes and objectives)

We are proposing minor changes to our existing concentration in GIS&T, changing the name of the concentration to *Geospatial Sciences* and integrating a new course GEOS/GEOS 222 Fundamentals of Geospatial Sciences. This is part of a collaborative effort with the Department of Geology and Geophysics to better align the geospatial course offerings on campus, and to mutually strengthen both programs.

B. CURRENT REQUIREMENTS AS IT APPEARS IN THE CATALOG:

Geography

School of Natural Resources and Agricultural Sciences
 UA Geography Program
 907-474-7494
www.uagp.uaf.edu

B.A., B.S. Degrees; Minor

Downloadable PDF

Minimum Requirements for Degrees: 120 credits

Geography provides a holistic view of the earth, its distinct and varied regions, as well as the types of and interaction between human activities and the physical world. Geography is the two-way bridge between the physical and social sciences as it explores the interrelationships between the earth's physical and biological systems and how these environmental systems provide a natural resource base for human societies. Geography also provides the framework for the integration of new and emerging technologies such as GIS and remote sensing with studies in a broad range of academic disciplines.

Geographers are interested in patterns and processes of physical and social change, including climate change, geographic information science and technologies, human settlement patterns, natural resources distribution and management, environmental studies, and in the inherent

"sense of place" among peoples throughout the world. Geographic methodologies include observation, measurement, description and analysis of places including likenesses, differences, interdependence and importance.

The geography B.A. degree provides broad cultural training and background in the liberal arts with an emphasis on the circumpolar North and Pacific Rim. The B.A. also provides a geographic perspective based on these regions and prepares students for careers in management, policy, teaching, field-based research, regional planning and private sector careers. The B.A. also provides an excellent foundation for advanced studies in a wide range of academic disciplines.

Three emphasis options are available to students pursuing the B.S. degree: environmental studies, landscape analysis and climate change studies, and geographic information science and technology.

Environmental studies provides the foundation necessary for understanding the natural and social environment, analysis of environmental issues from an interdisciplinary geographic perspective, a diverse technical and scientific approach to environmental issues, and the ability to find balanced solutions to environmental problems.

Landscape analysis and climate change studies integrate and synthesize courses in geography, climate change, physical and biological sciences, and geographic information sciences and technology. Students will gain a sound and interdisciplinary understanding of how environmental change influences landscape patterns and humans on both spatial (e.g. latitude, altitude) and temporal (e.g. past, future) scales. Senior practicum courses serve as integrating "capstone experiences" enabling students to apply what they have learned in real-world settings.

Geographic information science and technology emphasizes skills and practices in geographic information science, systems, technology and analytical aspects of geography. Courses in statistics, computer programming, GIS, GPS and remote sensing are integrated with the geography core curriculum and courses in natural sciences.

A minor in geography is also available.

Major -- B.S. Degree

1. Complete the [general university requirements](#).
2. Complete the [B.S. degree requirements](#).
3. Complete the following required foundation courses: *
GEOG F101--Expedition Earth: Introduction to Geography--3 credits
GEOG F111X--Earth and Environment: Elements of Physical Geography--4 credits
GEOG F312--People, Places, and Environment: Principles of Human Geography--3 credits
GEOG F338--An Introduction to GIS--3 credits
GEOG F490W,O--Geography Seminar--3 credits
4. Complete one of the following options: *

Geography Option I -- Environmental Studies

- a. Complete the following:
 - GEOG F207--Research Methods and Statistics in Geography--3 credits
 - GEOG F307--Weather and Climate--3 credits
 - GEOG F339--Maps and Landscape Analysis--3 credits
 - GEOG F402--Resources and Environment--3 credits
- b. Complete 6 credits from the following environmental studies electives:
 - GEOG F463--Wilderness Concepts--3 credits
 - NRM F303X--Environmental Ethics and Actions**--3 credits
 - NRM F407--Environmental Law--3 credits
- c. Complete 9 credits from the following environmental system electives:
 - ANTH F428--Ecological Anthropology and Regional Sustainability***--3 credits
 - BIOL F271--Principles of Ecology***--4 credits
 - BIOL/NRM F277--Introduction to Conservation Biology***--3 credits
 - GEOS F304--Geomorphology--3 credits
 - NRM F375--Forest Ecology***--3 credits
 - NRM F380W--Soils and the Environment***--3 credits
- d. Complete 3 credits from the following environmental management electives:
 - FISH F487W,O--Fisheries Management***--3 credits
 - NRM F365--Principles of Outdoor Recreation Management--3 credits
 - NRM F430--Resource Management Planning--3 credits
 - NRM/WLF F431--Wildlife Law and Policy***--3 credits
 - NRM F450--Forest Management***--3 credits
 - NRM F480--Soil Management for Quality and Conservation***--3 credits
- e. Complete one of the following techniques courses:
 - GEOG F301--Geographic Field Studies--3 credits
 - GEOG F309--Digital Cartography and Geo-Visualization--4 credits
 - GEOG F435--GIS Analysis--4 credits
 - GEOS F458--Geoscience Applications of GPS and GIS***--3 credits

Geography Option II -- Landscape Analysis and Climate Change Studies:

- a. Complete B.S. degree options, STAT F200X or 300, and prerequisite courses BIOL F115X, BIOL F116X, and CHEM F105X.
- b. Complete the following Processes requirements (geomorphology, climate, ecology, systems):
 - GEOG F307--Weather and Climate--3 credits
 - GEOG F412--Geography of Climate and Environmental Change--3 credits
 - GEOG F418--Biogeography--3 credits
 - BIOL F271--Principles of Ecology***--4 credits
 - GEOS F304--Geomorphology***--3 credits
- c. Complete one of the following Processes electives:
 - BIOL F467--Ecosystems of Alaska***--3 credits
 - or BIOL F469 O--Landscape Ecology and Wildlife Habitat (3)***
 - or NRM F370--Watershed Management (3)***
 - or NRM F380 W--Soils and the Environment(3)***
 - or a processes-oriented content course approved by Geography faculty advisor.
- d. Complete the following Patterns requirements (Field Methods, GIS/Remote Sensing

Tools):

GEOG F309--Digital Cartography and Geo-Visualization--4 credits

GEOG F339--Maps and Landscape Analysis--3 credits

GEOG F435--GIS Analysis--4 credits

GEOS F458--Geoscience Applications***--3 credits

- e. Complete at least one of the following Patterns electives:

GE F471--Remote Sensing for Engineering***--3 credits

or GEOS F422--Geoscience Applications of Remote Sensing***--3 credits

or GEOS F434--Remote Sensing of the Cryosphere***--3 credits

or NRM F641--Remote Sensing Applications in Natural Resources***--4 credits

- f. Complete the following Senior Practicum requirements (program synthesis):

GEOG F488--Geographic Assessment and Prediction of Natural Hazards--3 credits

GEOG F489W--Senior Practicum: Field Studies in Landscape Analysis and Climate Change--4 credits

Geography Option III -- Geographic Information Science and Technology (GIS&T)

- a. Complete B.S. degree options, including prerequisite course, PHYS F103X.

- b. Complete the following GIS&T breadth:

CS F103--Introduction to Computer Programming***--3 credits

STAT F200X--Elementary Probability and Statistics***--3 credits

GEOG F339--Maps and Landscape Analysis--3 credits

GEOG F435--GIS Analysis--3 credits

GEOG F300--Internship in Natural Resources Management and Geography--3 credits

- c. Complete at least two courses of remote sensing electives:

GE F471--Remote Sensing for Engineering***--3 credits

GEOS F422--Geoscience Applications of Remote Sensing***--3 credits

GEOS F434--Remote Sensing of Cryosphere***--3 credits

NRM F641--Remote Sensing Applications in Natural Resources--4 credits

- d. Complete at least two courses of GIS electives:

GE F376--GIS in Geological and Environmental Engineering***--3 credits

GEOG F309--Digital Cartography and Geo-Visualization--4 credits

GEOS F458--Geoscience Applications of GPS and GIS***--3 credits

NRM F638--GIS Programming†--3 credits

- e. Complete at least two courses in Landscape electives:

BIOL F469O--Landscape Ecology and Wildlife Habitat***--3 credits

GEOS F304--Geomorphology***--3 credits

GEOS F408--Photogeology***--3 credits

GEOS F430--Statistics and Data Analysis in Geology***--3 credits

Minimum credits required--120 credits

* Students must earn a C grade (2.0) or better in each course.

** If used to fulfill core requirements, NRM F303X may not also count towards geography major.

*** Prerequisites required.

‡ 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. In some instances, courses, either in geography or other fields require successful completion of from 1 - 3 prerequisite courses. Therefore, students and faculty should note minimum degree credit hours are 120, but the actual number of required course credits may exceed that number.

Minor

1. Complete the following:
 - GEOG F101--Expedition Earth: Introduction to Geography (3)
 - or GEOG F203--World Economic Geography (3)--3 credits
 - GEOG F111X--Earth and Environment: Elements of Physical Geography--4 credits
 - GEOG electives--8 - 9 credits
2. Minimum credits required--15 credits

C. *PROPOSED REQUIREMENTS AS IT WILL APPEAR IN THE CATALOG WITH THESE CHANGES:*
(*Underline new wording ~~strike through old wording~~ and use complete catalog format*)

Geography

School of Natural Resources and Agricultural Sciences
 UA Geography Program
 907-474-7494
www.uagp.uaf.edu

[B.A.](#), [B.S.](#) Degrees; [Minor](#)

[Downloadable PDF](#)

Minimum Requirements for Degrees: 120 credits

General Description

Geography is a broad holistic study of the interactions among various natural /environmental, political, cultural, and economic systems, and how those interactions create the world we see today at both local and global scales. Geography takes a synthesizing and inherently interdisciplinary approach to develop an integrated understanding of climate change, resource development, energy use and conservation, geopolitics, sustainable development, assessment of natural and human-caused environmental hazards, land-use change, regional conflicts, and economic and political developments all over the world. Geography also provides the framework for the integration of emerging technologies such as GIS, Remote Sensing, and Geovisualization into a broad range of academic and professional fields.

The Geography B.A. and B.S. degrees are built upon a group of required courses that provide students with a firm grounding in the fundamental components of the discipline, including global geographic perspectives, geography of the earth's natural systems,

geography of human systems, geospatial sciences (GIS, remote sensing, geovisualization), and the synthesis of these core perspectives through an integrating capstone experience.

BA Description

The geography B.A. degree provides broad cultural training and background in the liberal arts with an emphasis on geographic understanding of the **Circumpolar North and Pacific Rim**. The B.A. prepares students for careers in management, policy, teaching, field-based research, regional planning, and private sector careers. The B.A. also provides an excellent foundation for advanced studies in a wide range of academic disciplines.

B.A. students are encouraged to coordinate minors, electives, and internships to develop further expertise within a chosen region or topic (see #5, below), to take advantage of the considerable topical and regional expertise found throughout the UAF community, and also to underscore the important role other disciplines play within the field of Geography.

BS Description

Four specialized concentrations are available to students pursuing the B.S. degree: environmental studies, landscape analysis and climate change studies, geospatial sciences, and environmental decision making.

Environmental Studies provides the foundation necessary for understanding interactions between natural and human systems, analysis of environmental issues from an interdisciplinary geographic perspective, a diverse technical and scientific approach to environmental issues, and the ability to design balanced solutions to environmental problems.

Landscape Analysis and Climate Change Studies concentration integrates and synthesizes courses in geography, climate, geologic and biological sciences, as well as geospatial sciences and technology. Students will gain a sound and interdisciplinary understanding of how environmental change influences landscape patterns and human activity and welfare, on both spatial (e.g. latitude, altitude) and temporal (e.g. past, future) scales. Senior practicum courses serve as integrating "capstone experiences" enabling students to apply what they have learned in real-world settings.

Geospatial Sciences concentration emphasizes skills and practices in geographic information systems, remote sensing, geovisualization, and analysis of spatial patterns. Courses in GIS, remote sensing, GPS, map design, spatial statistics, and computer programming are integrated with the geography foundation curriculum and courses in natural sciences.

Major -- B.S. Degree

1. Complete the [general university requirements](#).
2. Complete the [B.S. degree requirements](#). See individual B.S. concentrations for [specific course requirements](#).
3. Complete the following required [Geography Foundation](#) ~~foundation~~ courses: *
 - GEOG F101--Expedition Earth: Introduction to Geography--3 credits
 - GEOG F111X--Earth and Environment: Elements of Physical Geography--4 credits

- ~~GEOG F312--People, Places, and Environment: Principles of Human Geography--3 credits~~
 GEOG F338--~~An~~ Introduction to GIS--3
 OR
 GEOG F435 GIS Analysis--4 cr
~~GEOG F490W,O--Geography Seminar--3 credits~~
4. Complete one of the following ~~options~~ Geography Concentrations:*
- Geography ~~Option~~ Concentration I -- Environmental Studies
- Complete the following:
 - GEOG F207--Research Methods and Statistics in Geography--3 credits
 - GEOG F307--Weather and Climate--3 credits
 - GEOG F312--People, Places, and Environment: Principles of Human Geography--3 credits
 - GEOG F339--Maps and Landscape Analysis--3 credits
 - GEOG F402--Resources and Environment --3 credits
 - NRM F303X--Environmental Ethics and Actions**--3 credits
 - GEOG F490W,O--Geography Seminar --3 credits
 - Complete ~~6 credits~~ two courses from the following Environmental Studies environmental studies electives:
 - GEOG F463--Wilderness Concepts--3 credits
 - NRM F303X--Environmental Ethics and Actions**--3 credits
 - NRM F407--Environmental Law--3 credits
 - Complete ~~9 credits~~ three courses from the following Environmental System environmental system electives:
 - ANTH F428--Ecological Anthropology and Regional Sustainability--3 credits
 - BIOL F271--Principles of Ecology--4 credits
 - BIOL/NRM F277--Introduction to Conservation Biology--3 credits
 - GEOS F304--Geomorphology--3 credits
 - NRM F375--Forest Ecology--3 credits
 - NRM F380W--Soils and the Environment--3 credits
 - Complete ~~3 credits from one of the following~~ Environmental Management environmental management electives:
 - FISH F487W,O--Fisheries Management--3 credits
 - NRM F365--Principles of Outdoor Recreation Management--3 credits
 - NRM F430--Resource Management Planning--3 credits
 - NRM/WLF F431--Wildlife Law and Policy--3 credits
 - NRM F450--Forest Management--3 credits
 - NRM F480--Soil Management for Quality and Conservation***--3 credits
 - Complete one of the following Techniques electives techniques courses:
 - GEOG F301--Geographic Field Studies--3 credits
 - GEOG F309--Digital Cartography and Geo-Visualization--4 credits
 - GEOG F435--GIS Analysis--4 credits (can fulfill Techniques requirement only if NOT used in Geography Foundation)
 - GEOS F458--Geoscience Applications of GPS and GIS--3 credits
- Geography ~~Option~~ Concentration II -- Landscape Analysis and Climate Change Studies:
- ~~Complete B.S. degree options, STAT F200X or 300, and prerequisite courses BIOL F115X, BIOL F116X, and CHEM F105X.~~

- a. As part of the baccalaureate core requirements, complete CHEM F105X, STAT F200X.
- b. As part of the B.S. degree requirements complete BIOL F115X and BIOL F116X.
- c. Complete the following required geography courses:
GEOG F312--People, Places, and Environment: Principles of Human Geography--3 credits
GEOG F490W,O--Geography Seminar--3 credits
- d. Complete the following Processes requirements (geomorphology, climate, ecology, systems):
 GEOG F307--Weather and Climate--3 credits
 GEOG F412--Geography of Climate and Environmental Change--3 credits
 GEOG F418—Biogeography--3 credits
 BIOL F271--Principles of Ecology--4 credits
 GEOS F304--Geomorphology--3 credits
- e. Complete one of the following Processes electives:
~~BIOL F467 Ecosystems of Alaska*** 3 credits~~
 or ~~BIOL F469 O Landscape Ecology and Wildlife Habitat (3)***~~
 or NRM F370--Watershed Management (3)
 or NRM F380 W--Soils and the Environment(3)\
 or a processes-oriented content course approved by Geography faculty advisor.
- f. Complete the following Patterns requirements (Field Methods, GIS/Remote Sensing Tools):
GEOG F222--Fundamentals of Geospatial Sciences--3 credits

 GEOG F309--Digital Cartography and Geo-Visualization--4 credits
 GEOG F339--Maps and Landscape Analysis--3 credits
 GEOG F435--GIS Analysis--4 credits (can fulfill Patterns requirement only if NOT used in Geography Foundation)
 or GEOS F458--Geoscience Applications GPS and GIS---3 credits
- g. Complete at least one of the following Patterns electives:
 GE F471--Remote Sensing for Engineering---3 credits
 or GEOS F422--Geoscience Applications of Remote Sensing---3 credits
~~or GEOS F434 Remote Sensing of the Cryosphere—3 credits~~
 or NRM F641--Remote Sensing Applications in Natural Resources---4 credits
- h. Complete the following Senior Practicum requirements (program synthesis):
 GEOG F488--Geographic Assessment and Prediction of Natural Hazards--3 credits
 GEOG F489W--Senior Practicum: Research Design and Presentation Methods --4 credits

~~Geography Option Concentration III -- Geographic Information Science and Technology (GIS&T) Geospatial Sciences (Remote Sensing and GIS)~~

~~Complete B.S. degree options, including prerequisite course, PHYS F103X~~

- a. Complete the following required Geography courses:

GEOG F312--People, Places, and Environment: Principles of Human Geography--3 credits

GEOG F490W,O--Geography Seminar--3 credits

- b. Complete the following ~~GIS&T~~ Geospatial breadth courses:
- CS F103--Introduction to Computer Programming---3 credits
 - GEOS F222--Fundamentals of Geospatial Sciences--3 credits
 - STAT F200X--Elementary Probability and Statistics---3 credits
 - GEOG F339--Maps and Landscape Analysis--3 credits
 - GEOG F435--GIS Analysis--3 credits
 - GEOG F300--Internship in Natural Resources Management and Geography--3 credits
- c. Complete at least two ~~courses of~~ Remote Sensing ~~remote sensing~~ electives:
- GE F471--Remote Sensing for Engineering---3 credits
 - GEOS F422--Geoscience Applications of Remote Sensing---3 credits
 - ~~GEOS F434--Remote Sensing of Cryosphere---3 credits~~
 - NRM F641--Remote Sensing Applications in Natural Resources--4 cr
- d. Complete at least two ~~courses of~~ GIS electives:
- GE F376--GIS in Geological and Environmental Engineering---3 cr
 - GEOG F309--Digital Cartography and Geo-Visualization--4 credits
 - GEOS F458--Geoscience Applications of GPS and GIS---3 credits
 - NRM F638--GIS Programming‡--3 credits
- e. Complete at least two ~~courses in~~ Landscape electives:
- BIOL F469O--Landscape Ecology and Wildlife Habitat---3 credits
 - GEOS F304--Geomorphology---3 credits
 - GEOS F408--Photogeology--- 3-2 credits
 - GEOS F430--Statistics and Data Analysis in Geology---3 credits

Minimum credits required--120 credits

* Students must earn a C grade (2.0) or better in each course.

** If used to fulfill core requirements, NRM F303X may not also count towards geography major.

‡ 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. In some instances, courses, either in geography or other fields require successful completion of from 1 - 3 prerequisite courses. Therefore, students and faculty should note minimum degree credit hours are 120, but the actual number of required course credits may exceed that number.

Minors

Geography offers two minors. One, in general Geography, allows students majoring in other fields to integrate geographic thought and also to perhaps focus on a geographic region as part of a minor. A minor in Geographic Information Systems (GIS) provides a valuable geospatial skill for students majoring in Natural Resource Management and other natural or

social sciences.1. Geography Minor

Complete the following:

GEOG F101--Expedition Earth: Introduction to Geography--3 credits (3)

~~or GEOG F203--World Economic Geography (3)--3 credits~~

GEOG F111X--Earth and Environment: Elements of Physical Geography--4 credits

GEOG electives--8 - 9 credits

Minimum credits required Geography Minor 15-16

(Refer to New Minor Form for Impacts, Justification, etc. for the following)

2. Geographic Information Systems (GIS) Minor

Complete the following:

GEOG F111X Earth and Environment: Introduction to Physical Geography--4 credits

GEOG/GEOS F222 Fundamentals of Geospatial Sciences--3 credits

GEOG F309 Digital Cartography and Geo-visualization--4 credits

GEOG F338 Introduction to GIS--3 credits

Complete one of the following:

GEOG F435 GIS Analysis--4 credits

GEOG F430 Google Earth and Neogeography--3 credits

NRM F369 GIS and Remote Sensing for Natural Resources

GEOG F300 Internship in Geography - in GIS (approved by Geog Dept Chair) --3 credits

OR any GIS related course approved by Geography Department chair

Minimum credits required GIS Minor 17

D. **ESTIMATED IMPACT**

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

The proposed changes are relatively minor and involve revisions or updates of course names, choices in some elective areas, and in the categories under which they are listed. All are intended to make the concentrations descriptions more uniform and cohesive. We have re-named one concentration and added a minor as well. These revisions improve the overall coherence of the BS, clarify the scope of concentration areas, and provide our students with a more updated and improved Geospatial Sciences concentration.

The revisions to our existing GIST concentration were done in collaboration with Dept of Geology and Geophysics, in an effort to create more cohesive and integrative degree opportunities in Geospatial Sciences. The name of the concentration will change to better reflect content and to reflect the cross-departmental collaboration. One new course, *GEOG/GEOG F222 Fundamentals of Geospatial Sciences* is being proposed. This new introductory course was designed collaboratively, will be taught by faculty from both departments, and is required by students from both majors. Impacts on space, budget, and faculty are minimal and have been approved by department chairs and deans from both colleges (see *GEOG/GEOG F222 New Course proposal*).

E. IMPACTS ON PROGRAMS/DEPTS:

What programs/departments will be affected by this proposed action? Include information on the Programs/Departments contacted (e.g., email, memo)

Geospatial Concentration:

The Geospatial Concentration was revised (from GIST) in collaboration with faculty from Geology and Geophysics, and is an effort to better integrate geospatial science course offerings across campus. Both programs will be impacted. The impact on Geography is minimal as the revision involves primarily a name change of the concentration and the addition of one course to the program. It was determined that one new course, *GEOG/GEOG 222 Fundamentals of Geospatial Sciences*, was needed to better prepare students for the concentration, integrate sub-fields of geospatial science, and to free upper division courses from needing to cover fundamental topics. Adjustment of course requirements will not increase the overall credit hours for Geography majors. Faculty from both departments will contribute to the design and/or delivery of the new course, and assignments fit into existing faculty workloads.

Both departments are making revisions to their respective programs and curriculum. Collaboration on concentrations areas ensures that programs are not duplicated, creates a stronger and more integrated concentration, and allows the sharing of resources and expertise across departments and schools. While Geography has had this concentration since 2006, this collaboration and program change will strengthen the Geography course offerings. At the same time, it will positively impact and benefit Geology & Geophysics by allowing them to offer a new concentration in geospatial sciences for *geology majors* without having to replicate, justify duplication, or compete with an established program. Students, while pursuing a shared concentration or emphasis area from their home department, will still be *majoring in their respective degrees* and will have all the required background and course work intended and expected within that degree. For example, geology majors will still take the standard series of required core geology courses, and be considered ‘geologists’ upon graduation. Likewise, Geography majors will have a standard Geography course load including human geography, cartography, and will be ‘geographers’.

Department chairs and deans from both departments and schools have encouraged and supported this program integration, the sharing of courses, and the collaboration of faculty.

F. IF MAJOR CHANGE - ASSESSMENT OF THE PROGRAM:

Description of the student learning outcomes assessment process.)

These are considered minor changes within the Geography B.S. and all outcome assessment efforts are already in place for the major.

JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize program/degree change applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you drop a course, is it because the material is covered elsewhere? Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the program is not compromised as a result.

Geospatial Sciences:

Collaboration and cooperation between departments offering similar areas of study is a productive and positive way to leverage resources, foster collegiality and collaboration, and strengthen programs by combining/sharing expertise and resources. The justification for this action has already been stated aptly in the course proposal for GEOS/GEOG 222 by Geology and Geophysics Chair, instigator and collaborator, Anupma Prakash:

“This program revision and course proposal is a result of such a cooperation and collaboration between the

faculty and leadership of the Department of Geology and Geophysics and the UA Geography Program. With the increasing demand from the industry in the area of geospatial science (that involves remote sensing, GIS, GPS) students in both departments are increasingly gravitating toward taking more classes in these thematic areas. Students in both departments need some common core skills, followed by some specialized application courses that are specific for the respective departments.”

For Geography, the program revisions have resulted in an additional introductory level class that improves the overall strength of our concentration. The name change better reflects the scope of the concentration and the cross-department collaboration. As stated above, this collaboration and shared option allows the Department of Geology & Geophysics to offer a B.S. concentration without duplicating or competing with an existing program. As a result of these revisions and the addition of GEOS/GEOG 222 to both departments’ curricula, we are certain that the quality of programs offered by both departments will be improved.

Finally, collaboration among faculty and the sharing of resources sets an example for other departments that wish to strengthen their programs, but find themselves limited by ‘territorial’ claims of overlapping disciplines, and the unfortunate reality of competition among programs to generate credit hours.

APPROVALS :

	Date	
Signature, Chair, Program/Department of:	Geography	

	Date	
Signature, Chair, College/School Curriculum Council for:	School of Natural Resources and Agricultural Sciences	

	Date	
Signature, Dean, College/School of:	Natural Resources and Agricultural Sciences	

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		