# GEOGRAPHY (GEOG)

**College of Natural Science and Mathematics**
Department of Geosciences (https://www.uaf.edu/geology/academics/geography/)
907-474-7565

**GEOG F338      Introduction to Geographic Information Systems**
3 Credits
Offered Fall
Geographic data concepts including mapping systems, data sources, editing data, GIS analysis and computer mapping. Introduction to global positioning systems. GIS applications in natural resources management.
**Prerequisites:** Knowledge of PCs or Unix workstations desirable.
**Cross-listed with** NRM F338.
**Lecture + Lab + Other:** 2 + 3 + 0

**GEOG F429      Geography of the Arctic and Circumpolar North**      (s)
3 Credits
Offered Fall
An in-depth examination of the physical, cultural, social, political and economic geographies of the Circumpolar North. Special emphasis on the patterns and processes of contemporary environmental change, human adaptations to high latitude environments, Arctic geopolitics and security, and the spatial patterns of northern economic development.
**Prerequisites:** GEOS F111X.
**Cross-listed with** ACNS F429; GEOS F429.
**Stacked with** ACNS F629; GEOG F629.
**Lecture + Lab + Other:** 3 + 0 + 0

**GEOG F430      Google Earth and Neogeography**
3 Credits
Offered Spring
Neogeography describes a new generation of primarily web-based mapping techniques and technologies. This course teaches advanced use of some of the latest neogeography tools, such as Google Earth, Maps Engine and Earth Engine. The skills and techniques learned will be applicable in academic, government and industry settings as a way to produce dynamic visualizations from any dataset with a geospatial component, for purposes of data presentation, analysis and research.
**Prerequisites:** junior standing with completed course work in geographic methods (GEOG F310; GEOG F339; GEOS F304; GEOS F422; GEOS F458; NRM F338; NRM F435).
**Lecture + Lab + Other:** 3 + 0 + 0

**GEOG F435      GIS Analysis**
4 Credits
Offered Spring
GIS analysis of natural resources including spatial query, attribute query, vector, grid, image, topographic and network analysis techniques.
**Cross-listed with** NRM F435.
**Lecture + Lab + Other:** 3 + 3 + 0

**GEOG F458      Applications of GPS and GIS in Geophysics**      (n)
3 Credits
Offered As Demand Warrants
Application of Geographic Information Systems (GIS) to geospatial problems in volcanology, glaciology, environmental mapping and other geophysical disciplines. Landscape classification, linear regression modeling, and manipulation of geodatabases using ESRI's ArcGIS software. Use of model builder and Python scripting to automate geospatial processing. Hands-on experience with recreational, mapping and survey-grade GPS receivers. Differential correction of GPS solutions using real-time and post-processing methods. Course is not available for audit.
**Prerequisites:** GEOG F338 or NRM F338.
**Cross-listed with** GEOS F458.
**Stacked with** GEOS F658.
**Lecture + Lab + Other:** 2 + 3 + 0

**GEOG F629      Geography of the Arctic and Circumpolar North**
3 Credits
Offered Fall
An in-depth examination of the physical, cultural, social, political and economic geographies of the Circumpolar North. Special emphasis on the patterns and processes of contemporary environmental change, human adaptations to high latitude environments, Arctic geopolitics and security, and the spatial patterns of northern economic development.
**Prerequisites:** Graduate standing.
**Cross-listed with** ACNS F629.
**Stacked with** ACNS F429; GEOG F429; GEOS F429.
**Lecture + Lab + Other:** 3 + 0 + 0

**GEOG F692      Graduate Seminar**
1-3 Credits
Topics in natural resources management and geography explored through readings, student presentations, group discussions and guest speakers.
**Prerequisites:** Graduate standing.
**Cross-listed with** NRM F692.
**Lecture + Lab + Other:** 1-3 + 0 + 0