NRM F338 Introduction to Geographic Information Systems

Course information and Syllabus

Fall 2020 3 credits CRN: 74812, 74813

General Information:

Time: Lecture: TR 9:45 11:15 am
Lab: T 2 5 pm (F01); W 11:15 am 2:15 pm (F02)

Place: Online

Instructor: Santosh Panda, Geophysical Institute, UAF
Ph: 474-7539; skpanda@alaska.edu
Office: West Ridge Research Building 108D
(office hours: TR: 11:15 am 12:15 pm /by appointment)

Anushree Badola

Email: abadola@alaska.edu
Office: West Ridge Research Building 104.A
(office hours: Thu.: 2:30 pm 4:30 pm /by appointment)

Course type: Combined Lecture/Lab (online)

Course Description: 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.

Instructional Methods: Lecture, discussion, and lab exercises

Quiz (along with general course information and handouts) will be posted on Blackboard (classes.uaf.edu).

Lectures and labs will be the primary mode of instruction. Some lectures will be supplemented with computational examples to prepare students for quiz.

All lectures will be recorded and shared with only enrolled students

Course Goals: This class covers introduction to various geographic data and science concepts and application of geospatial methods including application of GIS in the field of natural resources. It includes analyses of points, lines, polygons, raster, and 3D data in ESRI ArcGIS Pro software. We will analyze feature data (points, lines, and polygons) during the first-half of the course, and raster and 3D elevation data during the second-half of the course.

Student Learning Outcomes: Successful completion of the course will allow students to:

- Be proficient in handling geospatial data in ESRI ArcGIS Pro program
- Be proficient in the application of Geoprocessing tools in

- Communicate GIS results through maps and graphs

Evaluation:

Grades are based on the points (and point percentage) that are attributed as follows:

Weekly quizzes, 20 points each
One mid-term exam, 100 points
One final exam, 100 points
Weekly lab completion, 20 points each

Grading criteria:
A (A+: > 94%, A-: > 90%)
B (B+: > 80%, B-: > 70%)
C (C+: > 60%, C-: > 50%)
D (D+: > 45%, D-: > 40%)

Course Policies:

Attendance: All students are expected to attend and participate in all lectures and labs.

Participation and Preparation: Students are expected to come to class with assigned reading and other assignments completed as noted in the syllabus.

Late quiz will be accepted with a 5% penalty per day late.

Special Needs: Every qualified student is welcome in my classroom. As needed, I am happy to etc. to find reasonable accommodations. Students with learning or other disabilities who may need classroom accommodations are encouraged to visit the Disabilities website at

you report to a faculty member or any university employee, they must notify the UAF Title IX Coordinator about the basic facts of the incident. Your choices for reporting include:

1. You may access confidential counseling by contacting the Student Health & Counseling Center at 474-7043; https://uaf.edu/chc/
2. You may access support and file a Title IX report by contacting the UAF Title IX Coordinator at 474-7300; https://uaf.edu/titleix/contact.php
3. You may file a criminal complaint by contacting the University Police Department at 474-7721.

University of Alaska is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: alaska.edu/nondiscrimination.

Effective communication: Students who have difficulties with oral presentations and/or writing

Center (907-474-5470, speak@uaf.edu Writing Center (907-474-5314, Gruening 8th floor).

Students should keep up-to-
COVID-19 by regularly checking this
website: https://sites.google.com/alaska.edu/coronavirus/uaf/uaf-students. Further, students are
es and are subject to
disciplinary actions if they do not comply.

Technology requirements: ESRI ArcGIS Pro software. Students will get access to this software from 3 sources: 1) have it on their personal computer, 2) through OIT virtual lab space, and 3)

Course Calendar:

The course will proceed by weekly topics:

Week 1

Week 12	Geospatial analysis and spatial joins
Week 13	Map layout and cartography
Week 14	Wrap up
Week 15	Final exam