NR 493 - Seminar on GIS and Remote Sensing Applications
SYLLABUS - Spring 2020
Warner College of Natural Resources, Colorado State University

COURSE DETAILS

Instructor: **Elizabeth Tulanowski** | Email: *E.Tulanowski@colostate.edu*
Office hours: Wednesdays 10:00-11:00am in NESB A126B
Thursdays 11am – 12pm in WCNR 230 (GTL computer classroom)

Meeting time: Mondays, 4:00pm – 4:50pm, MSNR building, Rm 243

Course Website: **Canvas- https://colostate.instructure.com**

Course Description: Techniques and use of remote sensing and GIS technologies for forest, range, wildlife, water, geology, recreation, and other resource management applications.

COURSE MATERIALS
No required textbook for this course, however, online readings and activities will be assigned periodically.

COURSE DESCRIPTION & OBJECTIVES
Techniques and use of remote sensing, GIS technologies for forest, range, wildlife, water, geology, recreation, and other resource management applications.
By the end of this course, students will:
- Better understand how geospatial technology is used for natural resources applications
- Have practical experience with select geospatial technologies not covered in other WCNR courses
- See how other researchers and professionals have used geospatial technology in their work, through guest lectures and presentations

COURSE FORMAT
- Class sessions will be a mix of guest speakers and hands-on activities on geospatial topics with a short introductory lecture.
- Course materials and data will be posted to the N:\ drive and sometimes Canvas.
- Any assignments will be submitted electronically through Canvas.
- Participation, attendance, and completion of the exercises comprise your final grade.

EXPECTATIONS
- **Attend each class session**. Come to class ready to learn, ask questions, and participate.
- Complete assignments on time
- Adhere to the **academic code of conduct** *(continued next page…)*

- **Communicate**. Contact the instructor if you are having trouble (ie, understanding the material, keeping up with assignments, issues with a classmate)
- Be **respectful** of others. We can all learn from one another's stories, backgrounds, and ideas.
- **Help each other** when appropriate. Within the limits of the code of conduct, help each other out, study together, explain a difficult concept to a classmate who doesn't get it. Learn from each other, teach each other.

GRADING

Category	Description
Attendance & Participation *50%*	Students are expected to attend class, ask and answer questions, complete exercises, and participate in discussions.
Exercises *50%*	Students will complete hands-on exercises using GIS software and Web-based tools as well as short written assignments summarizing or reflecting on material in class.

This course is Pass/Fail, and is graded using the following scheme:

Grade	Score
Pass	70-100%
Fail	Below 70%

NOTE:
A computer account on the Natural Resources network is required for the course. Enrollment in this course should automatically create one for you, but if you have any trouble logging in, check with IT.

POLICIES

Attendance Policy and Participation: Students are expected to attend class sessions. If you are forced to miss a class, please contact the instructor prior to the missed class, or at your earliest convenience.

Late assignments / Make-up work: Late assignments will not be accepted without a valid written excuse. If you must miss class, contact the instructor and try to complete the lab assignment early. This is the responsibility of the student.

Special Needs: Any student who needs special accommodations or has special needs is encouraged to speak with me about those needs within the first two weeks of the semester.

Academic Responsibility: All work in this course must be completed in accordance with the CSU academic honesty policy (http://catalog.colostate.edu/front/policies.aspx). Plagiarism or failing to meet the academic honesty policy in other ways will result in dismissal from class and will be reported. By participating in this course, you agree to abide by the following honor pledge, "I will not give, receive, or use any unauthorized assistance in this course."

Need Other Help?
CSU is a community that cares for you. Counseling Services has trained professionals who can help. Contact 970-491-6053 or go to https://health.colostate.edu/mental-health-resources/. "Tell Someone" by calling 970-491-1350 to discreetly discuss your concerns (http://safety.colostate.edu/tell-someone.aspx).

Tentative NR493 Semester Schedule   *Subject to change. Check Canvas for updates.*

Right now, on the <u>tentative</u> schedule, we'll cover topics such as:
- Spatial analysis of gambel oak, GIS for environmental science and ecology, LiDAR stuff, Cartography, GPS
- I am also looking into speakers on GIS for Climate Change, LiDAR for Avalanche mitigation, Remote sensing and land use change, wolves in Colorado, Eutrophication of lakes
  - The remaining dates will be filled in depending on the speakers I can confirm.

WEEK	Date	Topic
2	Jan. 27	Introduction and Review
3	Feb. 3	Spatial Analysis of Gambel oak distribution Arian Brazenwood – Presentation & Hands-on
4	Feb. 10	Spatial Analysis of Gambel oak distribution Arian Brazenwood– Presentation & Hands-on
5	Feb. 17	Cartography – Making maps great again
6	Feb. 24	Niah Venable – ecological restoration with AlloTerra
7	March 2	Cartography – Making maps great again, again
8	March 9	QGIS
9	March 16	Spring break
10	March 23	Class cancelled
11	March 30	Predicting landslide risk from earthquakes |Dr. Sean Gallen, Geosciences
12	April 6	QGIS online course
13	April 13	Pick an Esri web course of your choice! See Canvas course home page for suggestions: StoryMaps, Insights, Dashboards, Python, ArcGIS R-Bridge
14	April 20	Mapping the environmental burden of the cannabis industry Presented by Hailey Summers
15	April 27	Guest speaker: Using drones for natural resources management Presented by Neal Swayze, FRS
16	May 4	Field data collection / High accuracy GPS: Videos and DIY activities posted soon.