

**NRM 5306 - GIS, GPS and Remote Sensing
Syllabus - Spring 2020**

Lecture/Lab Times: 1-1:50pm (lecture) 2-4:50pm (lab) in RAS126

Instructor: Joshua Cross
Office: RAS 140
Phone: 432/294-4035
Email: jcross0525@gmail.com

Required Text: None.

Course Description: An advanced course on the rapidly growing geographic technology used by natural resource managers and scientists including: geographic information systems (GIS), global positioning systems (GPS), and remote sensing methods.

Course Objective: Students will be introduced to new and advanced techniques for GIS, GPS, and remote sensing. Specifically, upon course completion students shall understand:

- The latest technologies in this field.
- How to use a GPS to collect data, import it into a GIS, and analyze it.
- How and where to find GIS and remote sensing data.
- How to access and use the web soil survey data available on the internet.
- Mapping a ranch from start to finish including providing printed report and maps

Grading: 40% Attendance/Participation
60% Final Project

Scale: 90-100% = A
80-89% = B
70-79% = C
60-69% = D
<60% = F

Attendance: Attendance and participation represents 40% of your final grade. You will be graded based on your contributions and participation during class discussions and field/lab activities. You will also be graded based on your class attendance. Because the class only meets one day a week, attendance is essential. There are only 15 regular class days and students will be allowed 2 “explained” absences. Notify instructor prior to explained absences. Additional absences will result in a 5% reduction in your grade (e.g., 3 absences = -5%, 4 absences = -10%). Students will only be counted as “present” in class if they attend the entire class period.

Final Projects: Students will be working individually on a ranch mapping project. Details will be discussed in class.

Assistance: Primary assistance by instructors will be provided during scheduled class times. Arrangements can be made for additional help as needed.

Academic Dishonesty: Academic dishonesty includes copying, sharing, or obtaining information from an unauthorized source, attempting to take credit for the intellectual work of another person, falsifying information, and giving or receiving information about a test, quiz, or assignment to another student. Any student involved in academic dishonesty will receive no credit (0) for work done and/or may be penalized in accordance with published university rules.

Accessibility Services: Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Mary Schwartze, M. Ed., L.P.C., in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8691. E-mail: mschwartze@sulross.edu.

Additional Outcome Objectives as Required by the Southern Association of Colleges and Schools:

Student Learning Outcomes for the M.S. in Natural Resource Management

1. Students will be able to apply statistical concepts and procedures to research.
2. Students will be able to evaluate literature and references to substantiate the applied research project.
3. Students will be able to justify and defend research questions and design.

Student Learning Outcomes for the M.Ag. in Natural Resource Management.

1. Students will be able to apply statistical concepts and procedures to natural resource data.
2. Students will be able to evaluate literature and references as they apply to the natural resource field
3. Students will be able to demonstrate their knowledge of the fundamentals and advanced concepts of range and wildlife management.

Course Tentative Schedule – Spring 2020

Date	Lecture/Lab
16-Jan	Introduction and project planning
23-Jan	Imagery - DOQQ, Begin Digitizing
30-Jan	Digitize - fences, roads, water, tanks, structures, powerlines
6-Feb	EMST - vegetation, habitat
13-Feb	Geology
20-Feb	Elevation, Slope
27-Feb	DRG - Topo, Historic Topo
5-Mar	Soil Database
12-Mar	Spring Break
19-Mar	Field Day (tentative date)
26-Mar	Field Day (tentative date)
2-Apr	Create products - datafiles, maps, metadata
9-Apr	Create products - datafiles, maps, metadata
16-Apr	Create products - datafiles, maps, metadata
23-Apr	Work on final product (print maps and reports during class)
30-Apr	Presentation of maps and project