

NRM 4304 Range Inventory and Analysis
Fall 2016

Instructor:

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Office Hours: 10:00-12:00 Tuesday and Thursday. I am also available at other times by appointment.

Course description:

The methodology of measuring and analyzing plant communities and populations. Statistical summarization, analysis and sampling are covered. Demonstrations of techniques used to inventory rangeland resources, such as; vegetation inventory and analysis, range condition and trend, and forage production and utilization. Upon completion of the course the student should be able to develop management plans and techniques to inventory and analyze rangeland plant communities.

Required Text:

None
Readings will be posted on Blackboard

Equipment:

Appropriate equipment will be checked out to you prior to each field day for completion of that day's work.

You will be issued an ipad mini and bad elf GPS at the first of the semester and will use it to collect all your field data in the app Numbers. You will be responsible for the ipad and bad elf through the semester and will need to return it undamaged at the end of the semester. Failure to return the equipment will result in a hold placed on your records until the equipment is returned or the value is paid to the department.

Learning objectives

1. Students will be able to list and discuss all common vegetation inventory techniques.
2. Students will be able to apply these techniques and evaluate the data collected.
3. Students will be able to apply this information in the field by designing and planning a vegetation inventory project for implementing in lab. This will be accomplished by identifying and selecting proper methods for different vegetation types.

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

1. Students will be able to identify species of wildland plants and wildlife common to the western United States and describe their natural history.
2. Students will be able to demonstrate knowledge of the elements of an ecosystem.
3. Students will be able to communicate about natural resources and conservation both verbally and in writing.

Class meetings and Tentative course outline:

Week of:	Lecture	Lab
Aug 22	Introduction and the Scientific Method and remote sensing	Introduction to field sampling concepts
Aug 29	Locating samples and sample size	Monitoring project introduction
Sep 5	Density Dominance and Frequency	Monitoring project
Sep 12	Quadrat sampling	Monitoring project
Sep 19	Line intercept	Monitoring project
Sep 26	Gap intercept	Monitoring project
Oct 3	Summary calculations for Monitoring project	Summary calculations for monitoring project
Oct 10	Summary calculations for Monitoring project Mid Term Report Due!!	Summary calculations for monitoring project
Oct 17	Soil Survey and Ecological sites	Sample location in Sid Pasture
Oct 24	Calculating carrying capacity	Biomass sampling
Oct 31	Point step and summary calculations	Biomass sampling
Nov 7	PCQ and summary calculations	Biomass sampling
Nov 14	Rangeland health and erosion	Calculation of carrying capacity based on biomass samples from Sid Pasture
Nov 21	Work on final report	No lab Thanksgiving Holiday
Nov 28	Work on final report	No lab, classes end on Wednesday
Dec 7	Final Report Due!!	

Class Organization:

1. Roll will be taken during each class meeting by participation in weekly recall and quizzes. The SRSU catalog states "The instructor may, at his discretion, drop a student from a course when the student has a total of nine absences. An absence is defined as non-attendance in fifty minutes of class. Non-attendance in a one and one-half hour class will constitute one and one-half absences."
2. Cheating on any exam or assignment will result in an F for that material and possible expulsion from the class with a grade of F.

3.. Missed exam policy: No make-up exams will be provided for unexcused missed exam. If you miss an exam without an excused absence, you will receive a score of 0 for that exam. Makeup exams will be available for authorized absences but must be completed within one week of the original exam date.

4. If you miss a lecture, you may obtain notes from a willing classmate. Handouts, and assignments may be obtained from me

5. It is Sul Ross State University Policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodations because of physical, mental, or learning disability, please contact the ADA Coordinator for Program Accessibility 837-8203.

Grades:

Monitoring Project and report	200 points
Carrying capacity Project	200 points
Field Exercises/Attendance	200 points

Grade assignment:

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