

Syllabus
NRM 4303 and NRM 5303 Rangeland Ecology
Spring 2016

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Office Hours: 10:00-11:30 Tuesday and Thursday; 2:30-4:00 Monday; Other times by appointment

Course Description

Study of Rangeland communities and community classification, plant identification, sampling methods, resource planning, autecology and synecology of rangelands, study of plant succession and climax in relation to management, grazing and ecological condition.

Class Meeting Times

Lecture: MWF 10:00-10:50

Learning Objectives

1. Students will learn to define rangeland communities and classify land areas into a specific community type.
2. Students will develop an understanding of the biotic and abiotic environment in an ecosystem and how they function within the ecosystem
3. Students will apply this knowledge in the creation of a land management plan

Tentative Course Outline:

Lecture	Topic
1	Introduction and Definition and history of ecology
2-3	Global, Local and Microclimate
4-6	Communities and Ecological Site Descriptions
7	Soils
8	Light, Temperature and Energy Cycles
9	Hydrologic Cycling
10	Species adaptations to the abiotic environment
11	Midterm
12-14	Herbivory
15-17	Livestock Behavior
18-19	Life History Patterns
20-21	Succession
22-25	Ecological Land Management
26-27	Nutrient Cycling
28	Nutrient Cycling
	Final Presentations

Class Organization:

1. 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." Come to class! Attendance and class participation will be considered when assigning a final grade.
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 an 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 or on Blackboard
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 at 837 8203 or FH room 112.
6. The Ranch management plan will be due on Monday May 2nd. There will be 2 mandatory field trips to the O2 Ranch for the ranch plan and will count for 15 points on the overall ranch plan grade. If you do not go on either trip the highest grade that you can make is an 85. Undergrads will work in groups. Graduate students will develop a plan as individuals, and will need to have a 10 page research paper focusing on a specific management objective rather than the broader literature review.

Grades

Ranch Management Plan	100 points	<u>Grade Assignment:</u> <60 = F, 60-69 = D, 70-79 = C, 80-89 =B, 90-100 = A.
Literature Review	50 points	
Mid Term	100 points	
Critical Thinking/Planning Assignments	50 points	
Final Presentations	100 points	

Program Learning Outcomes

The ranch plan in the lecture is designed to meet B.S. PLO 3 and PLO 5.

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

The graduating student will demonstrate that he/she is able to:

1. Identify species of wildland plants and wildlife common to the western United States and describe their natural history.
2. Demonstrate knowledge of the elements of an ecosystem.
3. Communicate about natural resources and conservation both verbally and in writing.
4. Conduct range and wildlife inventories in a team setting.
5. Apply knowledge about elements of an ecosystem into an appropriate conservation management plan.

Program Learning Outcomes for the M.Agr. in Range and Wildlife Management

The graduating student will demonstrate that he/she is able to:

1. Apply statistical concepts and procedures to natural resource data
2. Evaluate literature and references as they apply to the natural resource field
3. Demonstrate their knowledge of the fundamentals and advanced concepts of range and wildlife management.

Program Learning Outcomes for the M.S. in Range and Wildlife Management

The graduating student will demonstrate that he/she is able to:

1. Apply statistical concepts and procedures to natural resource data
2. Evaluate literature and references to substantiate an applied research project.
3. Examine, select, and utilize appropriate resources, materials, and data collection instruments to implement research projects.
4. Justify and defend the research questions and design.