NRM 4307 – Range and Wildlife Habitat Management
Dept. of Natural Resource Management, Sul Ross State University
Fall 2025 – Course Syllabus

Instructor: Dr. Eduardo A. Gonzalez
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Office: RAS 108
Office hours: Tuesday & Thursday 1:00-3:00 PM
Lecture location: RAS 128
Lectures time: Monday & Wednesday, 1:00 PM – 1:50 PM.
Lab. Friday 1:00-2:50 pm

Course Description
We will cover the application of knowledge to enhance the productive potential of the rangeland for all uses. Methods for brush management, revegetation, conservation, and grazing are included. Improvement for optimum livestock and wildlife through habitat characteristics manipulation is emphasized. Two or three one-day field trips on Saturdays are required and will be announced in advance.

Course Objectives
- Provide an understanding of the unique treatments, developments, and structures helpful in improving the range resources and facilitating its use by domestic animals and wildlife.
- Provide training in the application of range improvements to optimize habitat for wildlife and domestic animals.
- Analyze the economic feasibility of improvement practices application.

Attendance
Attendance is mandatory. Each student is responsible for all material presented in lectures, handouts, text, supplemental readings, and class discussions. If the student is absent from the lecture, it is the student's responsibility to get the lecture material from another classmate.

Recomended Books:

Vallentine, J.F. 1989. Range Development and Improvements. Academic Press, Inc. San Diego, CA.

Scifres, C.J. 1980. Brush Management, Principles and Practices for Texas and the Southwest. Texas A&M University Press.

W. Hamilton, A. McGinty, D. Ueckert, W Hanselka, M. Lee. Brush Management, past present, and future. 2004. Texas A&M University Press.

Student Learning Outcomes

The students will acquire knowledge and skills to develop range evaluation and monitoring programs to accomplish range sustainability, range data analysis, and interpretation to determine rangelands' biological and economic value and elaboration of written reports. The students will understand the practical value of range ecology methods and their application in real-life situations.

Field Trips

Short field trips during class time will be required to observe different grazing methods, brush control, rangeland improvements, biomass, and density sampling. The schedule for the trips will be announced as private properties grant access to their land.

Grading

Exam 1	100 points
Exam 2	100
Exam 3	100
Final (Optional)	100
Field Practice	100

A = 90 - 100%
B = 80 – 89.9%
C = 70 – 79.9%
D = 60 – 69.9%
F = <60%

Dates to remember (tentative):

Exam 1: September 24
Exam 2: October 22
Exam 3: November 19

Course Outline

A. Introduction to range improvements

a) The role of range improvements
b) Definition of range manipulation
c) Ecological deterioration and justification for range improvements
d) Benefits from range improvements
e) Desirability of range plants
f) Rangeland wildlife/livestock management objectives
g) Selecting range improvements
h) Economics

B. Grazing management

a) Grazing as a tool for improving rangelands
b) Carrying capacity
c) Livestock and white-tailed deer
d) Stocking rate
e) The gun
f) Biological plant control
g) Control by grazing
h) Control by insects and diseases

C. Water development

D. Prescribed Burning

a) The role of fire on rangeland
b) Purposes of burning
c) Burning practices and safe guards
d) Burning effects on soil
e) Burning effects on vegetation

F. Noxious Plant Management and Control

a) Definitions
b) Factors causing increase, spread, and invasion of noxious plants
c) Philosophies and approach
d) Establishing objectives for plant control (considering multiple use objectives)
e) Ecological considerations in management and control practices
f) Habitat requirements for white-tailed deer and quail.

G. Mechanical Plant Control

H. Herbicidal Plant Control

a) Application methods
b) Specific herbicides for plant control

J. Rangeland Seeding

a) Seeding decision (single species or mixtures)
b) Seedbed preparation
c) Seeding methods
d) Seed quality and seed sources
e) Species selection
f) Management of seeded stands

K. Integrated Resource Management

Class etiquette. Please turn cell phones off at the beginning of each class. Put away all computers during lectures and do not web surf or email during class.

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 other students. 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.

Counseling and 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. Email: mschwartze@sulross.edu.

Disability Statement:

Students with disabilities, including learning disabilities, who wish to request accommodations in this class, should notify the Services with Disabilities office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide documentation of his/her disability to the SSD coordinator.

Academic Missconduct

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with the Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of Academic Dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism."

Nonacademic Misconduct

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1)the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct statement

Sexual harassment of students or employees is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action