

NRM 4307 – Range and Wildlife Habitat Management
Dept. of Natural Resource Management, Sul Ross State University
Fall 2022 – Course Syllabus

Instructor: Dr. Carlos E. Gonzalez

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Office: 116 RAS

Office hours: Monday & Wednesday, 8:00 A.M. to 10:00 A.M.

Lecture location: RAS 128

Time: Monday and Wednesday, 12:00 P.M. – 12:50 P.M.

Friday lecture will be labs in the field. Two one-day field trips on Fridays are required and will be announced in advance.

Course Description

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 throughout habitat characteristics manipulation is emphasized.

Course Objectives

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

Attendance

Attendance is not mandatory. However, 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.

Text Book (Optional): Fulbright, T.E. and J.A. Ortega-S. 2006. White-Tailed Deer Habitat Ecology and Management on Rangelands. 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 the biological and economic value of rangelands and elaboration of written reports. In addition, the students will be able to 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. You must have a 2-page double-spaced font size 12 with font Times New Roman and report on what you learned from

the field trip by the next lecture class after the field trip. You will be required to attend 2 of the 3 field trips. The trip schedule will be announced as private properties grant access to their land. If field trips are not allowed or unable to be done, 2 papers summarizing topics covered in class will still be due as part of the lab practice. Points will be deducted if the reports are less than 2 pages.

Grading. The grading scale will be A = 90-100%, B = 80-89.9%, C = 70-79.9%, D = 60-69.9%. There will be weekly quizzes covering each week's topic. Only the top 10 quizzes will be used for the final grade. One comprehensive one-hour exam will be given at the end of the semester. Additionally, 1 assignment/presentation will be given during the semester.

<u>Grading</u>	<u>Points</u>
Mid-Term Exam	100
Final Exam	100
Project Presentation	100
Lab Reports	100
Total possible points	400

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

Grades will be assigned based on student performance in the three categories outlined below:

1. Midterm exam (100 points total). The material tested on the exam covers all the information covered in class and in labs until this point.
2. Final exam (100 points total). The material tested on the exam covers all the information from the entire semester.
3. Project Presentation / Design a restoration project (100 points). Students will choose a degraded local habitat in need of restoration, visit the site, and then design a restoration plan. The project will be presented through a PowerPoint Presentation. If we cannot go to the field, an area near RAS, SRSU, or Alpine will be designated for students.
 - a) Assessment of the problem
 - b) Statement of restoration goals/targets
 - c) Restoration plan describing what should be done
 - d) Expectations
 - e) A description of the monitoring plan
4. Labs (50 pts/each – 100 points total). Labs locations and times will be discussed during class and posted on Blackboard.

Grades will be assigned based on the completeness and detail of the project design and the ability to integrate principles discussed in the lecture into the restoration proposal presentation. In addition, grades will be assigned based on the clarity and professionalism of the presentation and the ability to justify the restoration proposal convincingly.

Course Outline. **Tentative and subject to change**

1. Introduction
2. Monitoring & Range Condition Models
3. Plant Physiology
4. Grazing Introduction & Holistic Management
5. Grazing Systems & Drought
6. Stocking Rates
7. Grazing Distribution and Nutrition
8. Grazing/Fire & Fire
9. Mechanical & Chemical
10. Native seeding
11. Wildlife Requirements
12. Conclusions

Laboratory topics

1. Range plants identification
2. Estimation of biomass production
3. Estimation of brush density
4. Estimation of correct cattle stocking rate
5. Prescribed burning, herbicides, and mechanical treatments

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 e-mail 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 Schwartz, 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: mschwartz@sulross.edu.

Grading Rubric for PowerPoint Project
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- Project Presentation 100 = 25% of final grade

Content (30 Points)	Content is accurate and all required information is presented in a logical order.	Content is accurate but some required information is missing and/or not presented in a logical order, but is still generally easy to follow.	Content is accurate but some required information is missing and/or not presented in a logical order, making it difficult to follow.	Content is questionable. Information is not presented in a logical order, making it difficult to follow.	Content is inaccurate. Information is not presented in a logical order, making it difficult to follow.
Slide Creation (10 Points)	Presentation flows well and logically. Presentation reflects extensive use of tools in a creative way.	Presentation flows well. Tools are used correctly. Overall presentation is interesting.	Presentation flows well. Some tools are used to show acceptable understanding.	Presentation is unorganized. Tools are not used in a relevant manner.	Presentation has no flow. No tools used.
Slide Transitions (10 Points)	Transitions are smooth. Transitions enhance the presentation.	Smooth transitions are used on most slides.	Smooth transitions are used on some slides	Very few transitions are used and/or they distract from the presentation.	No transitions are used.
Pictures, Clip Art Background (10 Points)	Images are appropriate. Layout is pleasing to the eye.	Images are appropriate. Layout is somewhat cluttered.	Most images are appropriate. Layout is cluttered.	Images are inappropriate. Layout is very somewhat cluttered.	No images
Mechanics (20 Points)	No spelling errors. No grammar errors. Text is in authors' own words.	Few spelling errors. Few grammar errors. Text is in authors' own words.	Some spelling errors. Some grammar errors. Text is in authors' own words.	Some spelling errors. Some grammar errors. Most of text is in authors' own words.	Many spelling and or grammar errors. Text is copied.
Overall Presentation (Use of information from class) (20 Points)	No material errors or other mistakes. Many citations from lecture.	Few errors or other mistakes. Frequent citations from lecture.	Some errors or other mistakes. Some citations from lecture.	Numerous errors or other mistakes. Few citations from lecture.	Too many errors or other mistakes. No citations from lecture.

Name _____

Period _____

Subject NRM 4307

Score _____