Instructor: Dr. Carlos E. Gonzalez
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Office: 114 RAS
Office hours: Monday & Wednesday, 8:00 AM to 10:00 AM.

Lecture location: RAS 129
Time: Monday, Wednesday & Friday 9:00 AM to 9:50 AM

Description. The practice of Natural Resource Management has been conducted in some form or another for hundreds of years. In contemporary societies, management efforts have focused on returning a disturbed ecosystem to some perceived historical condition defined by the stakeholders. Modern ecosystems' management attempts to recover these complex systems' composition, structure, and function. Restoration Ecology is interdisciplinary and must consider social, political, economic, and scientific issues to be successful. The class integrates principles from ecology used to repair ecosystems that have been degraded, damaged, or destroyed.

In this course, we will focus on what ecological science contributes to restoration ecology; more specifically, students will develop an understanding of ecological theory as it is applied to the restoration of ecosystems and natural resources. The goal is to acquire the knowledge needed to restore the structure of biological communities and ecological functions and improve ecosystem services. This course will cover topics for students who see themselves practicing or participating in natural resource management projects during their careers.

Using a combination of lectures, readings, field trips, and project work, we will cover the conceptual and theoretical foundations that underlie restoration efforts and link these to the real-world applications in the past and ongoing restoration projects. In addition, we will take advantage of projects ongoing in the Chihuahuan Desert to reinforce principles discussed in class.

Course Objectives:

1. Understand the ecological concepts relevant for restoring ecosystems and critically consider the scientific/logistic challenges of applying these concepts to a restoration plan.
2. Learn how to think critically regarding the structure and relationships of ecosystem modules.
3. Learn the ecological processes that control the structure and function of a specific ecosystem by participating in an ongoing restoration project and developing a restoration plan.

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

1. Introduction
2. Restoration
3. Natural Renewable Resources
4. Ecosystem Services
5. Sustainability

6. Land Fragmentation
7. Invasive Species
8. Wildlife Reintroductions
9. Wildlife Corridors/Connectivity
10. Ecological Dynamics and Ecology
11. Stream Restoration
12. A Resilience Approach
13. Rangeland Conservation

Grading. The grading scale will be A = 90-100%, B = 80-89.9%, C = 70-79.9%, D = 60-69.9%.

One midterm one-hour exam will be given at mid-semester. One comprehensive final one-hour exam will be given at the end of the semester. Additionally, 1 assignment/presentation will be given during the semester.

Grading	Points
Quizzes	100
Midterm Exam	100
Final Exam	100
Project Presentation	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. *Quizzes (20 points each / 100 points total)*. Quizzes will cover all content of lectures and reading assignments. The format will include multiple-choice, true/false, short answer, and essay questions
2. *Midterm exam (100 points total)*. The material tested on the exam covers all the information seen in class until the point of the exam.
3. *Final exam (100 points total)*. The material tested on the exam covers all the information from the entire semester.
4. *Project Presentation / Design a restoration project (100 points).* Students will choose a degraded local habitat needing restoration, visit the site, and then design a restoration plan. The project will be presented through a PowerPoint Presentation.

    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

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.

Attendance. Attendance in lectures is not required but strongly encouraged, as we will cover material in class that students cannot get from any other source.

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.

Grading Rubric for PowerPoint Project

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 3302_____   Score_____