

**NRM 4303 – Range Ecology**  
**Dept. of Natural Resource Management, Sul Ross State University**  
**Spring 2020 – Course Syllabus**

**Instructor:** Dr. Carlos E. Gonzalez

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**Office:** 116 RAS

**Office hours:** Monday & Wednesday, 9:00 AM to 11:00 AM.

**Lecture location:** RAS 129

**Time:** Tuesday and Thursday, 12:30 P.M. – 1:45 P.M.

### **Course Description**

Ecology is the study of how organisms interact with each other and their environment at the population, community, and ecosystem levels. The goal of this course is to familiarize the student with ecological theory and its applications.

### **Course Objectives**

- Provide an understanding of the ecological theory, which is useful for improving the range resources and facilitate its use by domestic animals and wildlife.
- To gain an understanding of the broad biological significance of ecological theory.
- To advance an understanding of the questions that ecologists study, the methods they use, and the questions that remain unanswered.

### **Attendance**

Attendance is mandatory. Each student is responsible for all material presented in lecture, handouts, text, supplemental readings, and class discussion. 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):** Thomas M. Smith (Author), Robert Leo Smith (Author). 2015. Elements of Ecology (9th Edition).

### **Student Learning Outcomes**

The students will acquire knowledge and skills to understand ecological theory and knowledge to accomplish range sustainability, range interpretation to determine the biological value of rangelands. The students will be able to understand the theory of range ecology and their application in real-life situations.

## Grading

Three comprehensive one-hour exams will be given during the semester. Additionally, assignments will be given during the semester.

<u>Grading</u>	<u>Points</u>
Exam 1	100
Exam 2	100
Exam 3	100
Exam 3	100
Final Exam	100
Class assignments	100
Class participation (attendance)	100
<b>Total possible points</b>	<b>600</b>

A = 90 - 100%

B = 80 - 89%

C = 70 - 79%

D = 60 - 69%

F = <60%

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

1. Introduction
2. Introduction: Range Ecology
3. Introduction: Multiple Use
4. Introduction: Rangeland Types
5. Climate

### EXAM I

6. Adaptation and Natural Selection
7. Terrestrial Environment
8. Animal Adaptation
9. Population Growth
10. Life History
11. Interspecific Regulation

### EXAM II

12. Structure of Communities
13. Community Dynamics
14. Ecosystem Energetics

15. Nutrient Cycling
16. Large Scale Patterns
17. Ecology of Climate Change

### EXAM III

**\*\* These dates are tentative and subject to change. \*\***

#### **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. E-mail: mschwartz@sulross.edu.

#### **Students with Special Needs:**

Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the Student's responsibility to initiate a request. Please contact me, Ms. Rebecca Greathouse Wren, M.Ed., LPC-S, Director/Counselor, Accessibility Services Coordinator, Ferguson Hall (Suite 112) at 432.837.8203; mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas 79832. Students should then contact the instructor as soon as possible to initiate the recommended accommodations.