

NRM 5305  
Range and Wildlife Research Methods  
Spring  
2017

Lecture Times: 2:00-4:30 Tuesday

Instructor: Dr. Ryan S. Luna  
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Office: RAS 113  
Office Hours: T 8-10

**Required Texts:**

Krebs, C. J. 1999. Ecological methodology. Benjamin/Cummings, Menlo Park, California. 620pp.  
Guthery, F.S. 2008. A primer on natural resource science. Texas A&M University Press, College Station, Texas. 190pp.

**Optional Text:**

Morrison, M. L., W. M. Block, M.D. Strickland, and W. L. Kendall. 2001. Wildlife study design. Springer-Verlag, Inc., New York, New York. 210pp.

**Catalog Description:** Design and analysis of research projects pertaining to the management and ecology of wildlife species, and the range management discipline. Specific problems pertaining to the Trans-Pecos region will be stressed, but regional and national issues will be discussed. Methods discussed in the classroom will be applied in field situations.

**Course Objective:** The objective of this course is to: (1) promote professionalism in graduate students; (2) invoke an understanding and appreciation of the processes of scientific research and writing; (3) foster a skeptical attitude about current knowledge; and (4) present the theory and application of classical methods for analyzing wildlife populations and rangeland systems.

This course addresses Program Learning Outcomes 2 and 4 for the M.S. program which state that students should be able to: (2) Evaluate literature and references to substantiate an applied research project, and (4) justify and defend research questions and design. It also addresses the Program Learning Outcomes 2 and 3 for the M.Ag. Program which state that students should be able to: (2) evaluate literature and references as they apply to the natural resource field, and (3) demonstrate their knowledge of the fundamentals and advanced concepts of range and wildlife management.

**Grading:**

Exams (2 @ 20%)	40%	Scale: 90-100% = A
Problem Sets	20%	80-89% = B
Reading Assignments and Participation	15%	70-79% = c
Writing Assignments and Presentation	25%	60-69% = D
		<60% = F

**Attendance:** We fully appreciate the value of professional development and field research. You will not be penalized for *valid* absences. You will receive a 0 for any late assignments.

It is Sui Ross State University to provide reasonable accommodations to students with disabilities. If you would like to request such accommodations because of physical, mental, or learning disabilities please contact the coordinator for Disability Services in University Center in Room 211 or call 432-837-8178.

**NRM5305**  
**Range and Wildlife Research Methods**  
**Tentative Schedule-Spring**

<b>Dates</b>	<b>Week</b>	<b>Subjects</b>	<b>Writing Assignments Due</b>	<b>Problem Sets Due</b>
1/17	1	Introductions, Syllabus, Course Overview, Graduate School		
1/24	2	JWM Guidelines,		read chapters 1, 2, 15 in Guthery; Grad School article
1/31	3	Library Orientation		-
2/7	4	Scientific Writing, Romesburg	Biography, picture, and abstracts due	PSJ, PS1b-Romesburg and style
2/14	5	Romesburg, Skepticism	Title, authorship, objective	PS2-Rornesburg
2/21	6	Scientific Method	Outlet, guidelines	PS3-skepticism and style
2/28	7	Experimental Design	Literature references, outline	PS4-grants
3/7	8	<b>EXAMI I</b>		PS5-journals
3/14	9	<b>SPRING BREAK</b>		
3/21	10	Review	1st draft	
3/28	11	Publishing		PS6-JWM abs, stats;
4/4	12	Estimating Abundance	Return 1st draft	PS7-stats in science
4/11	13	Estimating Abundance		PS8-mark-recap, CIR
4/18	14	Survival Analysis, Resource Selection	Final draft	PS9-dist. sampling
4/25	15	Presentations	Presentations	PS10-survival
5/2	16	<b>EXAM II</b>		

## Philosophy

1. Graduate students at Sui Ross State University are a highly select group of professionals.
2. Graduate instructors at Sui Ross State University can expect a high level of professionalism in the performance of graduate students.
3. Demanding courses benefit students more than easy courses.
4. Graduate instructors are imperfect.

## Assumptions and Expectations

1. Because graduate students have completed the baccalaureate degree, they are highly proficient in use of the English language. Therefore, the instructor can expect flawless execution of English on assignments, tests, and papers. Flawless execution means correct spelling, proper word usage, lucid construction of sentences and paragraphs, sound organization of thoughts, and proper use of grammatical constructs.

If you feel insecure in your knowledge and use of English, study Chapter 3 (CBE Style Manual 1972) and Manuscript Guidelines for The Journal of Wildlife Management. Where recommendations in these publications differ, use the recommendations in the JWM guidelines. You will be subject to all information in these reading materials on assignments and examinations.

2. Graduates students understand mathematical symbols and processes through college algebra and basic statistics. They can apply this knowledge on tests and assignments without review.

## Policy and Definitions

1. Materials distributed in class or assigned readings are meant to be studied, not merely read. Study means reread several times, highlight and study highlighted material, outline, or do whatever you find most effective in committing information to memory. Highly specific questions from reading materials will appear on examinations.

2. You are expected to understand the meaning of any word you encounter in lectures, handouts, and reading assignments. If you do not understand a word, use your dictionary. These words will appear on examinations. Students should develop a list of words and definitions and exchange lists among themselves.

This policy may seem frivolous and arbitrary. However, how can you understand concepts if you do not understand the words used to construct the concepts?

3. Feel free to ask questions espouse opinions, and relate experiences during lectures.

## Examinations

1. You are responsible for knowing all previous lecture and reading material, Chapter 3 in the CBE Style Manual (1972), JWM guidelines, and all words encountered in lecture and reading material and handouts.

2. Tests will be largely objective (short answer, multiple choice, mathematical problems, short essay, etc.). You will have to interpret situations and apply knowledge gained from lecture, reading assignments, handouts, and exercises. In other words, some test questions will require you to think and creatively apply knowledge you have gained. Other questions can be answered from memory.