NRM 4305 Wildlife Management Techniques
Spring 2025
Course Syllabus

Instructor:	Ryan Luna, Ph.D.
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Class Schedule:	11-12 MWF
Classroom Location:	RAS 128
Recommended Text:	Silvy, N.J. (Ed.). 2012. The Wildlife Techniques Manual. Seventh edition. The Wildlife Society, Bethesda, Maryland, USA.

Section I. Introduction

An overview of habitat inventory and evaluation techniques, census methods, age and sex criteria; banding, data analysis, telemetry analysis, and research methods in wildlife management. Prerequisite: NRM 2302 and NRM 3202

Section II. Course Design: Communication Infused

To be successful in college and beyond, many sources (e.g., Morrealle & Pearson, 2008) indicate that communication competencies are essential. Sul Ross recognizes that the current generation of undergraduate university students should receive training to navigate a global world as competent communicators in various contexts and channels of communication.

Through our Quality Enhancement Plan (QEP) called *Compass*, Sul Ross aims to equip you to navigate excellence in the 21st century by developing your communication skills across multiple courses. This [insert program/discipline/course name] course is designed to enhance your communication skills. Therefore, this course has the following QEP Student Learning Outcome:

Section III. QEP Student Learning Outcome

QEP SLO: The student will create works that exhibit skill in prepared and purposeful communication (written, oral or visual).These skills will be assessed through an oral presentation and a research paper written in a wildlife journal format.

Section IV. Course Objectives

Program Learning Outcomes for the **B.S. in Natural Resource Management**
The graduating student will demonstrate that he/she is able to:
1. Identify species of wildland plants and wildlife common to the western United States and describe their natural history.
2. Demonstrate knowledge of the elements of an ecosystem.
3. Communicate about natural resources and conservation both verbally and in writing.
4. Conduct range and wildlife inventories in a team setting.

5. Apply knowledge of an ecosystem into an appropriate conservation management plan.

Program Learning Outcomes for the **M.Agr. in Range and Wildlife Management**
The graduating student will demonstrate that he/she is able to:
1. Apply statistical concepts and procedures to natural resource data
2. Evaluate literature and references as they apply to the natural resource field
3. Demonstrate their knowledge of the fundamentals and advanced concepts of range and wildlife management.

Program Learning Outcomes for the **M.S. in Range and Wildlife Management**
The graduating student will demonstrate that he/she is able to:
1. Apply statistical concepts and procedures to natural resource data
2. Evaluate literature and references to substantiate an applied research project.
3. Examine, select, and utilize appropriate resources, materials, and data collection instruments to implement research projects.
4. Justify and defend the research questions and design.

Section V. Course Requirements and Grading

Research Project, Presentation, and Report   **Scale:** 90-100% = A

10%	Attendance & Participation	80-89% = B
15%	Technique Summaries (5% each)	70-79% = C
10%	Lab Practical	60-69% = D
15%	Lab & Lecture Assignments, Quizzes	<60% = F
10%	Exam I	
10%	Exam II	
10%	Exam III (Final)	
10%	Project written report	
10%	Project oral presentation	

Section VII. Course Assignments

Attendance & Preparation. Ten percent of your grade is dependent upon you attending class, being prepared, and participating with a good attitude. I will keep attendance records and note trends of your preparation for class and field activities.

Technique Summaries. You are required to search the online database (provided by the library) and find *scholarly, peer-reviewed, academic journal articles* that both interest you AND relate to the trapping technique being discussed. Summaries will be a summation of the technique, how it is used, what species it is recommended for and practical applications.

Lab Practical. The lab practical will consist of field activities such as trap setting, telemetry, knot tying, etc. The practical will have various stations in which each student will individually perform skills sets that were covered throughout the semester.

Lab and lecture assignments & quizzes. There will be periodic assignments and quizzes that will pertain to the material being covered in lecture and field activities.

Final Exam. The Final Exam will be comprehensive, composed of multiple-choice, short-answer, and essay questions.

Research project. The presentation will be of professional quality, should be 15 minutes (12 min presentation, 3 min questions), and will be given to NRM faculty, TPWD staff, and students. Attire should be appropriate for a professional meeting.

Rough Outline for Manuscript:
Abstract
Introduction (not labeled as such)
      Justification & Objectives
Study Area
      Land use--a history of the area
      Location--size, ecoregion, etc.
      Description--soils, topography, cover types, fauna...
Methods
      Specific to the objectives
Results
      Tables and figures referenced and cited
Discussion
      Assumptions
      Compare your results to previous literature
Conclusion
      What does it all mean? Mention future research or management
Literature Cited

Section VIII. Policies

Attendance. I expect you to be in class. You are responsible for everything that goes on, including announcements, lecture material, and material covered through field activities. Arrange with someone in the class wherein you will notify each other of relevant items in the event that one of you must be absent. As stated above, your attendance will directly impact your grade.

Classroom Demeanor. I expect the environment during class meetings to be conducive to learning. I have little tolerance for students talking among themselves when they should be listening to someone else speak. It is particularly disturbing when students talk among themselves when one of their classmates is presenting a speech, giving a report, making a comment, or observing or asking a question. I understand that some comments pertain to class material; I encourage you to share these comments with the class as a whole. Also, I would rather that cell phones **not** disrupt class. Please turn off your cell phone during class.

Academic Integrity. I expect and assume that as students you conduct yourselves in accordance with the highest standards of academic honesty. Sul Ross State University reserves the right, through due process, to place on probation, suspend or expel any student who violates academic

integrity and regulations by *plagiarism, classroom misdemeanor, or academic dishonesty*. Plagiarism includes doing and/or taking credit for someone else's work, presenting the ideas and work of others as your own, and not citing your sources if you utilize the ideas of others. Classroom misdemeanor includes cheating, allowing others to cheat, and interfering with others' ability to succeed in the course. Academic dishonesty includes procuring examination materials illegally, doing unauthorized group work, and handing in your own work for which you have already received academic credit (see Student Handbook, p. 39-40).

Late Work. You are responsible for handing in assignments when they are due. While I am willing to "hear you out" when unforeseen and/or difficult circumstances impede with your course work, I do not generally accept late work, *and especially* if you have not notified me that you're having problems before the due date arrives. If you miss a due date, you will be given full credit *only* if the assignment was missed because of a University-excused absence – which includes hospitalization or a *serious* medical condition, a family or personal *emergency*, or a University-sponsored activity. In order to be able to make up the assignment, you must notify me beforehand *and* have supporting documentation from a relevant authority that the situation or event occurred. *NOTE: There is nothing in this syllabus that requires me to accept late work; if you submit work late, then receiving credit depends on my allowing you to turn it in. If I do accept late work, it will likely be at half-credit.*

Section IX. Notes on University Programs and Policies

Students with Special Needs:
Any student who because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make necessary arrangements. If an accommodation is needed, students must present their accommodation letter, obtained from Accessibility Services, as soon as possible. Please note that instructors are not permitted to provide classroom accommodations to a student until the appropriate verification has been received. Accessibility Services is in Ferguson Hall room 112. You can make an appointment by calling Mary Schwartze Grisham at 432 837-8203."

NRM 4305
Wildlife Management Techniques
Tentative Schedule-Spring 2025

	Week	Chapters	Subjects

	1	NA	Course Outline, Class Introductions, Resumes
	2	2	Scientific Writing, Presentations, and Wildlife Literature
	3	3, 4	Scientific Method, Research Design, and Statistical Methods, **Summary I Due**
	4	15, 18, 20	Habitat Measurements, Maps, GPS, GIS, Remote Sensing, **Literature Cited, EXAM I**
	5	7, 10	Trapping
	6	10, 11	Chemical Immobilization
	7	12, 13	Age and Sex Criteria, Marking Techniques, **Summary II Due**
	8	14	Radiotelemetry, **First Draft of Report**
	9		**SPRING BREAK**
	10	14, 6	Population Analysis; **EXAM II**
	11	5, 6	Population Estimates I,
	12	5, 6	Population Estimates II, **Summary III Due**
	13	17	Habitat and Food Use
	14	21, 23, 24	Animal Behavior, Conservation Genetics, Wildlife Nutrition
	15	NA	**Reports Due and Presentations**
	16	NA	**Lab Practical; Revised Resume and Final Review**
	_	NA	**EXAM III (Finals week)**

NRM 4305-LAB
Wildlife Management Techniques
Tentative Schedule-Spring

Dates	Week	Subjects

|			
		1	No Lab
		2	Research Projects
		3	Trapping
		4	OPEN
		5	Compass, Maps, and Surveying; GPS, GIS, Remote Sensing, Habitat Measurements
		6	Chemical Immobilization, Marking Techniques
		7	Age and Sex Criteria
		8	Radiotelemetry
		9	**SPRING BREAK**
		10	Radiotelemetry, Home Range, Movements in GIS
		11	Population Estimates
		12	Population Estimates
		13	Habitat and Food Use
		14	Research Projects
		15	**Review**
		16	**Lab Practical**

QEP MAPPED CLASS CARDINAL RUBRIC

Definition

The process of sending, receiving and interpreting messages through written, oral, or nonverbal communication chan
information, and/or by which two or more people reach understanding.

Framing Language
Communication is transmitted through a variety of modes (oral, written, or visual). This rubric is specifically designe
in an academic environment to determine that the central message is conveyed, reinforced by multiple supporting ma
organized. Communication in an academic environment may include: a variety of written works such as academic pa
webpages, personal essays; oral presentations of sufficient length such that a central message is conveyed, supported
visual media, including but not limited to posters, PowerPoints, videos, graphic art, and infographics.
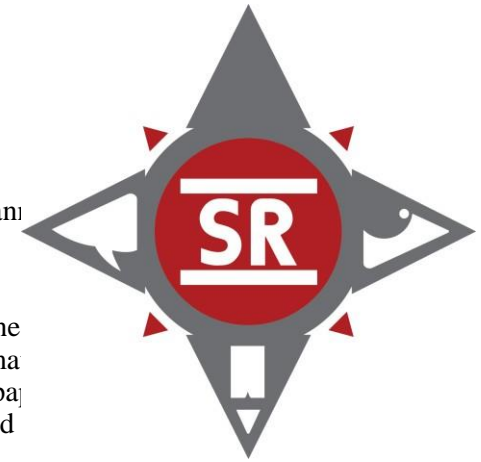
Glossary

The definitions below serve to clarify terms and concepts used in this rubric only.

- Organization: The grouping and sequencing of ideas and supporting material. Organizational patterns supporting effectiveness typically include an introduction, one or more identifiable sections in the body and a conclusion. An organizational pattern should be purposeful and make the content easy to follow. Potential patterns might include a chronological pattern, a problem-solution pattern, or an analysis-of-parts pattern.
- Content Development: The ways in which a topic is explored and represented in relation to its audience and purpose.
- Purpose: The main point/thesis/"bottom line"/"take-away" of a message. A clear purpose is easy to identify. For example, is the message meant to persuade or to inform, to report or to summarize, or to amuse?
- Academic Language: Language supporting the effectiveness of a central message is appropriate to the topic, genre/discipline, audience, is grammatically correct, and clear. Language enhancing the effectiveness may also be vivid, imaginative, and expressive.
- Supporting Material: In communication, students draw upon sources to extend, develop, define, or shape their ideas. Digital citizenship, the careful consideration of copyright and fair use of images is important. The student considers reliability of communication to include an understanding of accuracy, applicability, currency, liability, and completeness.
- Technique: Execution or performance of communication skills given the mode of communication. For example, in writing, technique may include mechanics and use of style; in oral communication, it may include nonverbal cues and use of voice; in visual works, it may include the use of the medium.

Cardinal Rubric was adapted from the Association of American Colleges and Universities oral communication VALUE rubric, the National Communication Association's Speaking and Listening Competencies for College Students, Texas A&M University's Visual Communication rubric, Otis College of Arts and Design's Fine Arts rubric, Lane Community College Communicating Effectively Rubric, and Stephen F. Austin State University's assessment rubric for Oral and Visual Communication.

QEP MAPPED CLASS CARDINAL RUBRIC

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet formative (cell one) level performance.

	4 = Exemplary	3 = Satisfactory	2 = Developing	1 = Formative
Organization	Organizational pattern is clearly and consistently observable, skillful, and makes the content of the message cohesive.	Organizational pattern is clearly and consistently observable; contains elements of logical development; contains clear transitions; has a recognizable flow of ideas.	Organizational pattern is intermittently observable; lacks organization; it is sometimes disjointed and/or awkward.	Organizational pattern is not observable; has no discernible organizational structure; contains random unconnected elements.
Content Development	Uses appropriate, relevant, and compelling content to illustrate mastery of the topic, conveying understanding or a useful perspective.	Uses appropriate, relevant, and compelling content to explore ideas within the context. It is clear, accurate and appropriate.	Uses appropriate and relevant content to develop and explore ideas but may have inaccuracies or may be unclear at times. Provides limited insight or information.	Uses appropriate and relevant content to develop simple ideas in some parts of the work. May contain misinformation, or may be confusing or misleading.
Purpose	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work. The purpose of the message is clearly conveyed.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context). The purpose of the message can be discerned with some effort.	Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience's perceptions and assumptions). The purpose of the message is vague or unclear.	Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).The purpose of the message is not at all apparent or is missing.
Academic Language	Communication is grammatically correct. Language choices are imaginative, memorable, compelling, and demonstrate constructive knowledge, connects with audience and flows well. Error free.	Communication is grammatically correct. Language choices are thoughtful and generally effective, demonstrate constructive knowledge, connects with audience and flows well. Limited errors.	Grammar occasionally interferes with communication. Language choices are mundane, commonplace, and partially effective. Language is moderately appropriate to audience. Includes some errors.	Errors in grammar and format. Language choices are questionable and minimally effective. Language is not appropriate to audience. Uses language that sometimes impedes meaning.
Supporting Material	Demonstrates skillful use of a variety of supporting material that are high-quality, credible, relevant sources to develop ideas that are appropriate for the intended message or discipline.	Demonstrates consistent use of credible, relevant sources to support ideas that are are appropriate for the intended message or discipline. Though limited, it refers to supporting information or analysis, or establishes credibility ot authority on the topic. Generally attributes sources as appropriate.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the intended message or discipline. Makes reference to weak/partial supporting information or analysis. Sources are inconsistently attributed.	Demonstrates an attempt to use sources to support ideas but it insufficiently makes reference to information or analysis that minimally supports the intended message or topic. Fails to attribute sources as appropriate.
Technique	Demonstrates exemplary appropriateness and quality of technique for the chosen mode. For example, skillful execution of genre and disciplinary conventions on written works; skillful oral delivery; exemplary craftsmanship of visual works.	Demonstrates appropriateness and quality of technique for the chosen mode. For example, appropriate execution of genre and disciplinary conventions on written works; or, effective oral delivery; or, notable craftsmanship of visual works.	Attempts to demonstrate appropriateness and quality of technique for the chosen mode. For example, follows expectations of execution of genre and disciplinary conventions on written works; satisfactory oral delivery; satisfactory craftsmanship of visual works.	Marginal demonstration of appropriateness and quality of technique for the chosen mode. For example, attempts to execute basic genre and disciplinary conventions on written works; poor oral delivery; poor craftsmanship of visual works.