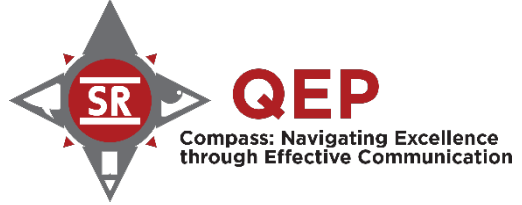


**NRM 2303 – Principles of Conservation Biology**  
**SPRING 2019**  
**Course Syllabus**



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<b>Instructor:</b>	Richard B. Mrozinski
<b>Office Hours:</b>	MW 2-3 (RAS 113), TR 11-12 (ACR 107C), F 10-12 (RAS 113)
<b>Office Location:</b>	RAS 113 (MWF), ACR 107C (TR)
<b>Telephone:</b>	RAS: (432) 837-8606, ACR (432) 837-8069
<b>Email Address:</b>	richard.mrozinski@sulross.edu
<b>Class Schedule:</b>	MWF 1:00-1:50
<b>Classroom Location:</b>	RAS 130
<b>Required Texts:</b>	<i>Essentials of Conservation Biology</i> by Richard Primack (6th Edition, Sinauer and Associates) (Required)


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**Section I. Introduction**


This is an introductory course on the fundamental issues in the discipline of conservation biology including conservation genetics, habitat fragmentation, natural resources sustainability, and island biogeography.

**Section II. Course Design: Communication Infused**

To be successful in college and beyond, many sources (e.g., Morreale & 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 21<sup>st</sup> century by developing your communication skills across multiple courses. This NRM 2303 Principles of Conservation Biology 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).

**Section IV. Course Objectives**

Students will be introduced to the general concepts of conservation biology. Specifically, upon course completion students will understand:

- The discipline of conservation biology including its past, present, and future challenges.
- The meaning and importance of biodiversity including species diversity, ecosystem diversity, and genetic diversity.


- The threats to biodiversity including mass extinctions and global change, habitat fragmentation and loss, overexploitation, and invasive exotics.
- Methods of maintaining biodiversity through management and protection of individuals, populations, and ecosystems.
- The societal, economic, and political factors influencing conservation.

**Section V. Student Learning Outcomes**

The Southern Association of Colleges and Schools requires, for the B.S. in Natural Resource Management, that 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 about elements of an ecosystem into an appropriate conservation management plan.

**Section VI. Course Requirements and Grading**

Requirement	Percent of Course	Grading Scale
In-Class Quizzes & Participation	20%	Entire Course A = 90.0-100.0% B = 80.0-89.99% C = 70.0-79.99% D = 60.0-69.99% F = < 60.0
Research Project Report & Presentation 	30%	
Fieldwork and Report	10%	
Midterm Exam	15%	
Final Exam	25%	
<b>Possible Percentage</b>	<b>100%</b>	

**Section VII. Course Assignments**

**In-Class Quizzes & Participation Grade (20%)**

You are required to read sections from the book at home prior to most classes. Most lectures will include in-class assignments, discussions, or quizzes. Attendance is crucial for the successful completion of this course and is ultimately the responsibility of the student.

**Conservation Research Project / Presentation Grade (30%)**



Throughout the semester, you will work within a small group to complete a conservation research project on an endangered species of your choice. The project is broken down into three assignments that relate to the information we covered most recently in class. Each assignment will build on the previous ones and together they will add up to a research paper that is turned in. You will also present your findings to the rest of the class at the end of the semester. Guidelines for assignments and for the final presentation will be supplied during the semester.

### Fieldwork and Report Grade (10%)

There will be at least 2 days that we will spend doing fieldwork. During the week that we do fieldwork there will be no class at the regularly scheduled time/place – instead that time will be spent outside. To allow sufficient time for fieldwork, you will be required to attend outside regularly scheduled class hours. You will be required to write a research report with introduction, methods, results, and discussion. More details will be given in class.

### Midterm (15%) and Final (25%) Exams

Two in-class examinations will be given during the semester. Exams will consist of a variety of questions, including multiple-choice, fill-in-the-blank, short-answer, and essay. No make-up exams will be given for an unexcused absence. You must notify me of an excused absence PRIOR to the exam you will miss and arrangements for make-up exams must be made BEFORE the exam is given.

## **Section VIII. Policies**

### *Attendance*

Assignments and activities done in class make up 20% of your final grade and cannot be made up unless your absence from class is excused (bring a note from your doctor, coach, club advisor, etc. explaining your absence).

### *Classroom Demeanor*

I expect a high level of engagement in lecture to enhance everyone's learning. This includes interacting with the instructor and other students, asking questions during class, completing outside class assignments and readings, and being prepared to participate in class discussions.

Roll will be taken in each class meeting. The SRSU catalog states "The Instructor will drop a student from a course when the student has a total of nine absences. An absence is defined as nonattendance to 50 minutes of class." Any time class is missed, for any reason, it will be recorded as an absence. College-related events that conflict with class will not be considered an absence ONLY WITH my prior approval.

All lectures and assignments will be posted in Blackboard. If you miss class, it is advised you obtain any hand-taken notes from a classmate.

The use of personal laptops, cell phones, iPads, and other electronic devices can create distractions for learning, both for yourself and others. However, such devices can also be great tools to aid learning. Therefore, using electronic devices for class purposes (e.g. taking notes, working out problems, searching the internet) is allowed in silent mode. If you choose to use electronic devices in class, do so in a professional manner that does not impede others' learning. The use of internet-capable devices (e.g. smartphones) is not allowed for exams.

### *Academic Integrity*

On all work submitted for credit by students at the university, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Unauthorized aid 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.

***Grading***

Research Project reports, PowerPoint presentations, and oral delivery will be graded utilizing the attached QEP Mapped Class Cardinal Rubric, as will the Fieldwork Report.

***Late Work***

Late assignments will be accepted at the discretion of the instructor, with a 10% penalty for each day that it is late (i.e. 10% for 0-24 hours late, 20% for 24-48 hours late, etc.) Late assignments are not accepted after seven days. Extended due dates may be allowed due to college-related conflicts ONLY WITH my approval PRIOR to the due date. In case of emergencies, arrangements for completing assignments should be made immediately upon return to SRSU.

**Section IX. Notes on University Programs and Services**

***ADA.*** It is Sul Ross University policy to provide reasonable accommodations to students with disabilities. If you would like to request such accommodations because of a physical, psychological, or learning impairment/disability/challenge, please contact the ADA Coordinator for Program Accessibility located in FH 112 or call 837-8203. E-mail: [mschwartz@sulross.edu](mailto:mschwartz@sulross.edu)

## Tentative Course Calendar (subject to change)

Week	Date	Lecture Topic	Reading Due Before Class	# Pages	Other Due	In-Class Activity
1	1/23	Course Overview & Syllabus	N/A	0		
	1/25	What is Conservation Biology? The New Science of Conservation Biology	Chapter 1 pp 3-10	8		
2	1/28	What is Conservation Biology? The Origins of Conservation Biology	Chapter 1 pp 10-18	9		
	1/30	What is Conservation Biology? Origins (concluded); A New Science is Born	Chapter 1 pp 18-21	4		
	2/1	What is Biodiversity? Species Diversity	Chapter 2 pp 23-34	12		Ch1 Quiz
3	2/4	What is Biodiversity? Species Diversity (concluded); Genetic Diversity	Chapter 2 pp 34-36	3		
	2/6	What is Biodiversity? Ecosystem Diversity; Semester Research Project Overview	Chapter 2 pp 36-50	15		
	2/8	Where is the World's Biodiversity Found? Ecosystem Diversity (concluded); Diverse Ecosystems & Patterns of Diversity	Chapter 3 pp 53-58	6		Ch2 Quiz
4	2/11	Where is the World's Biodiversity Found? How Many Species Exist Worldwide?	Chapter 3 pp 58-62, 66-67, 70	5		
	2/13	Communication: Scientific Writing Essentials	Catch-up on reading	-		Ch3 Quiz
	2/15	Extinction: Past Mass Extinctions, Current Human-Caused Extinction, Background Extinction Rates	Chapter 7 pp 135-146	12	Project Groups Formed	
5	2/18	Extinction: Island Extinctions, Island Biogeography Model, Local Extinctions	Chapter 7 pp 146-154	9		
	2/20	Vulnerability to Extinction: Rare & Endemic Species, Categories of Vulnerability. IUCN, US, & TX Cons. Categories	Chapter 8 pp 157-173	17		
	2/22	Communication: Powerpoint Chartsmanship Essentials	Catch-up on reading	-		Ch7&8 Quiz
6	2/25	Habitat: Human Population Growth/Impact	Chapter 9 pp 175-189	15		
	2/27	Habitat: Habitat Destruction; Fragmentation	Chapter 9 pp 189-197	9		
	3/1	Habitat: Degradation and Pollution	Chapter 9 pp 197-205	9	Project Report Part I	
7	3/4	Habitat: Global Climate Change	Chapter 9 pp 205-214	10		
	3/6	Other Threats: Overexploitation	Chapter 10 pp 217-227	11		Ch9 Quiz
	3/8	Other Threats: Invasive Species	Chapter 10 pp 227-238	12		
8	3/11	Other Threats: Disease; Applied Population Biology: Methods for Studying Populations	Chapter 10 pp 238-243	6		
	3/13	Communication: ETS Proficiency Profile	Catch-up on reading	-		
	3/15	<b>MIDTERM EXAM</b>	Catch-up on reading	-	Study for Midterm	EXAM
9	3/18	SPRING BREAK	N/A	-		
	3/20	SPRING BREAK	N/A	-		
	3/22	SPRING BREAK	N/A	-		
10	3/25	Applied Population Biology: Population Viability Analysis	Chapter 12 pp 275-285	11		Midterm Exam Results
	3/27	Applied Population Biology: Population Viability Analysis; Metapopulations	Chapter 12 pp 285-292, 295	9		
	3/29	CMR Lincoln-Petersen --- Field Work Overview ---	Catch-up on reading	-	Project Report Parts I-II	Population Estimation
11	4/1	Problems of Small Populations: Concepts	Chapter 11 pp 249-266	18		Ch12 Quiz
	4/3	Problems of Small Populations: Other Factors & Extinction Vortices	Chapter 11 pp 266-271	6		
	4/5	--- Field Work Day 1 ---	Catch-up on reading	-		Field Work Day 1
12	4/8	Establishing New Populations	Chapter 13 pp 297-311	14		Ch11 Quiz
	4/10	Ex-Situ Conservation Strategies	Chapter 14 pp 315-317, 326-329, 339	7		
	4/12	--- Field Work Day 2 ---	Catch-up on reading	-		Field Work Day 2
13	4/15	Establishing Protected Areas: Types and Classification & Existing Protected Areas	Chapter 15 pp 343-350	8		Ch13&14 Quiz
	4/17	Establishing Protected Areas: Creating New Protected Areas & Selecting Areas	Chapter 15 pp 350-362, 366 summary	12		
	4/19	HOLIDAY: GOOD FRIDAY	N/A	-		
14	4/22	Designing Networks of Protected Areas	Chapter 16 369-377, 387-388	10	Final Field Reports	
	4/24	Conservation Outside Protected Areas: Value of Unprotected Habitat & Conservation in Urban & Agricultural Areas	Chapter 18 pp 419-428	10		Ch15&16 Quiz
	4/26	Conservation Outside Protected Areas: Multiple Use Habitat & Ecosystem Management & Case Studies	Chapter 18 pp 428-439	12		
15	4/29	Communication: Public Speaking Essentials	Ch. 19 pp 441-460	20	Final Project Reports	
	5/1	Restoration Ecology; An Agenda for the Future	Ch. 22 pp 523-536	14		
	5/3	Communication: Project Presentations (3)	Catch-up on reading	-	Final Project Powerpoints	Project Presentations
16	5/6	Communication: Project Presentations (3)	Catch-up on reading	-		Project Presentations
	5/8	Communication: Project Presentations (3)	Catch-up on reading	-		Project Presentations
	5/10	<b>FINAL EXAM, 12:30-2:30</b>	Study for Final Exam	-	Study for Midterm	EXAM

## QEP MAPPED CLASS CARDINAL RUBRIC

### Definition

The process of sending, receiving and interpreting messages through written, oral, or nonverbal communication channels to effectively convey 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 designed to evaluate communication in an academic environment to determine that the central message is conveyed, reinforced by multiple supporting materials and purposefully organized. Communication in an academic environment may include: a variety of written works such as academic papers, lab reports, poetry, webpages, personal essays; oral presentations of sufficient length such that a central message is conveyed, supported and purposely organized; 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.*

	<b>4 = Exemplary</b>	<b>3 = Satisfactory</b>	<b>2 = Developing</b>	<b>1 = Formative</b>
<b>Organization</b>	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.
<b>Content Development</b>	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.
<b>Purpose</b>	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.
<b>Academic Language</b>	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.
<b>Supporting Material</b>	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 appropriate for the intended message or discipline. Though limited, it refers to supporting information or analysis, or establishes credibility of 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.
<b>Technique</b>	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.