

NRM2303 – Principles of Conservation Biology

Course Syllabus - Spring 2017

Instructor

Name: Richard B. Mrozinski
Office: RAS 116
Office Hours: Mon, Wed, Fri 2-3. Also by appointment. Plus I have "Open Door Office Hours". Feel free to stop by anytime you see me in my office, typically Mon-Fri 10-4.
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Course Description

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

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.

Student Learning Objectives for the B.S. in Natural Resource Management, required by the Southern Association of Colleges and Schools:

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.

Class Meeting Time/Place

Time: Monday, Wednesday, Friday 1:00 pm - 1:50 pm
Place: RAS 129

Text and Supplies

1. Essentials of Conservation Biology by Richard Primack (6th Edition, Sinauer and Associates). (**Required**)

Course Outline (Numbers given are the associated chapters in the textbook)

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| 1. What is Conservation Biology? | 4. Ecological Economics |
| 2. What is Biodiversity? | 5. Indirect Use Value |
| 3. Where is the World's Biodiversity Found? | 6. Ethical Values |
| 7. Extinction | 15. Establishing Protected Areas |
| 9. Habitat Destruction, Fragmentation, etc.. | 17. Managing Protected Areas |
| 10. Overexploitation, Invasive Species, & Disease | 18. Conservation Outside Protected Areas |
| 12. Applied Population Biology | 22. An Agenda for the Future |
| 11. Problems of Small Populations | |

Course Grade

In-Class Participation / Quizzes / Assignments	20%
Conservation Research Project / Presentation	30%
Fieldwork and Report	10%
Midterm Exam	15%
Final Exam	25%

Overall Grade Assignment

<60 = F, 60-69 = D, 70-79 = C, 80-89 = B, 90-100 = A.

In-Class Participation / Quizzes / Assignments 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, but is ultimately the responsibility of the student. 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).

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 cover in class. Each assignment will build on the previous ones and together they will add up to a research paper. You will 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.

Late assignments

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.

Submitting Written Assignments

Assignments that are completed in class (e.g. quizzes, essays) must be submitted at the end of the class (handwritten hard copy). Assignments that are completed outside of class (e.g. semester-long group project, field report) must be submitted by e-mail or as a typed-hard copy.

Always include your first and last name, the course number or name, date submitted, and a document title on the front page of assignments.

All typed assignments should follow the following formatting requirements:

- Line spacing: Double spaced;
- Margins: 1" on all sides;
- Font: Times New Roman, size 12, black. You may choose different formatting for headings.
- Paper: White, no background colors or images.

Class Organization and Policy

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.

General Expectations

We will cover a lot of material in this course. To maximize learning in this course, we should have some expectations of each other:

I expect from you:

- ATTEND lecture; be on time as a courtesy to others.
- ASK whenever something is unclear. It is likely that others have the same question.
- PARTICIPATE in lecture.
- READ the required sections from the text. If you come to me with a question and it is clear that you haven't read the book or the lecture notes, I will direct you to the reading first.
- BE HONEST in all your work.

What you can expect from me:

- GIVE 100% effort in teaching you the best I can.
- Make myself AVAILABLE to help outside of class.
- ANSWER all questions to the best of my knowledge, and if I don't know the answer I will find out.
- Be FAIR in all grading.
- Provide you with timely, constructive FEEDBACK regarding your work.

Reasonable Accommodations

It is Sul Ross State University Policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodations because of physical, mental, or learning disability, please contact the ADA Coordinator for Program Accessibility. If you anticipate that you will need accommodations, it is important that you request them early in the semester. Contact information for ADA Coordinator for Program Accessibility:

Mary Schwartze, M.Ed., LPC, mschwartz@sulross.edu, 432-837-8203, Ferguson Hall, Rm #112

Tentative Course Schedule

Class Date	Reading Due	# Pages	Other Due	Lecture Topic
Wednesday, January 18, 2017	N/A	0		Course Overview & Syllabus
Friday, January 20, 2017	Chapter 1 pp 3-10	8		What is Conservation Biology? The New Science of Conservation Biology
Monday, January 23, 2017	Chapter 1 pp 10-18	9		What is Conservation Biology? The Origins of Conservation Biology
Wednesday, January 25, 2017	Chapter 1 pp 18-20	3	Timeline Contributions	What is Conservation Biology? A New Science is Born
Friday, January 27, 2017	Chapter 2 pp 23-34	12		What is Biodiversity? Species Diversity
Monday, January 30, 2017	Chapter 2 pp 34-36	3		What is Biodiversity? Genetic Diversity
Wednesday, February 1, 2017	Chapter 2 pp 36-50	15		What is Biodiversity? Ecosystem Diversity
Friday, February 3, 2017	Chapter 3 pp 53-58	6		Where is the World's Biodiversity Found? Diverse Ecosystems & Patterns of Diversity
Monday, February 6, 2017	Chapter 3 pp 60-62	3		Where is the World's Biodiversity Found? How Many Species Exist Worldwide? Project Overview
Wednesday, February 8, 2017		0	Project Groups Formed	Literature Search Skills
Friday, February 10, 2017	Chapter 7 pp 135-143	9		Extinction: Past Mass Extinctions, Current Human-Caused Extinction, Background Extinction Rates
Monday, February 13, 2017	Chapter 7 pp 152-154	3		Extinction: Local Extinctions. Intro to De-Extinction (Not in book)
Wednesday, February 15, 2017		0	Prepare for Debate	De-Extinction Debate
Friday, February 17, 2017	Chapter 9 pp 175-189	15		Habitat: Human Population Growth/Impact & Habitat Destruction
Monday, February 20, 2017	Chapter 9 pp 189-197	9		Habitat: Fragmentation
Wednesday, February 22, 2017	Chapter 9 pp 197-205	9		Habitat: Degradation and Pollution
Friday, February 24, 2017	Chapter 9 pp 205-214	10		Habitat: Global Climate Change
Monday, February 27, 2017	Chapter 10 pp 217-227	11		Other Threats: Overexploitation
Wednesday, March 1, 2017	Chapter 10 pp 227-238	12		Other Threats: Invasive Species
Friday, March 3, 2017	Chapter 10 pp 238-243	6	Project Part I	Other Threats: Disease
Monday, March 6, 2017	Chapter 12 pp 275-285	11		Applied Population Biology: Methods for Studying Populations
Wednesday, March 8, 2017	Chapter 12 pp 285-292, 295	9		Applied Population Biology: Population Viability Analysis & Metapopulations; Exam Prep
Friday, March 10, 2017		0	Study for Midterm Exam	MIDTERM EXAM
Monday, March 13, 2017	N/A	0		SPRING BREAK
Wednesday, March 15, 2017	N/A	0		SPRING BREAK
Friday, March 17, 2017	N/A	0		SPRING BREAK
Monday, March 20, 2017	Chapter 11 pp 249-266	18		Problems of Small Populations: Concepts
Wednesday, March 22, 2017	Chapter 11 pp 266-271	6		Problems of Small Populations: Other Factors & Extinction Vortices
Friday, March 24, 2017		0	Project Part II	Field Work Preparation; Writing Skills
Monday, March 27, 2017		0		Field Work - Evening Class
Wednesday, March 29, 2017		0	Field Report: Intro, Methods	Field Work - Evening Class
Friday, March 31, 2017	Chapter 4 pp 75-85	10		Ecological Economics
Monday, April 3, 2017	Chapter 5 pp 95-109, 114-117	19		Indirect Use Value
Wednesday, April 5, 2017	Chapter 6 pp 117-130	14		Ethical Values of Biodiversity, Evolving Perspectives, and Deep Ecology
Friday, April 7, 2017	Chapter 15 pp 343-350	8	Final Field Reports	Establishing Protected Areas: Types and Classification & Existing Protected Areas
Monday, April 10, 2017	Chapter 15 pp 350-362, 366 summary	12		Establishing Protected Areas: Creating New Protected Areas & Selecting Areas
Wednesday, April 12, 2017	Chapter 17 pp 391-403	13		Managing Protected Areas: Monitoring & Managing Threats & Managing Habitat
Friday, April 14, 2017				HOLIDAY: GOOD FRIDAY
Monday, April 17, 2017	Chapter 17 pp 403-415	13		Managing Protected Areas: Managing Water & Keystone Resources & Local Communities & Regulating & Park Challenges
Wednesday, April 19, 2017	Chapter 18 pp 419-428	10		Conservation Outside Protected Areas: Value of Unprotected Habitat & Conservation in Urban & Agricultural Areas
Friday, April 21, 2017	Chapter 18 pp 428-439	12		Conservation Outside Protected Areas: Multiple Use Habitat & Ecosystem Management & Case Studies
Monday, April 24, 2017	Chapter 22 pp 523-536	14		An Agenda for the Future
Wednesday, April 26, 2017		0	Final Project Report Due - All Groups	Project Presentations
Friday, April 28, 2017		0		Project Presentations
Monday, May 1, 2017		0		Project Presentations
Wednesday, May 3, 2017		0		Project Presentations; Exam Prep
Friday, May 5, 2017	Study for Final Exam			FINAL EXAM, 12:30-2:30