

## COURSE SYLLABUS

REWM 4750/5750 – Wildlife Habitat Restoration Ecology  
Spring Semester 2023 (February 28, 2023 version)

T and TH 2:45-4:00 PM – Agriculture Building 2024

### Instructor Information:

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Office Hours: T and TH 11:00 AM–1:00 PM (or appointment or Zoom)

### Substantive changes to syllabus:

*Note: This syllabus is a guide. All deadlines, requirements, and course structure are subject to change if deemed necessary by the instructor. Circumstances may alter the reading, assignments, or test schedules. I will verbalize changes in class, but you are required to check WyoCourses and your email at least once a week.*

### Prerequisites:

REWM 4330 (Rangeland Ecosystem Assessment and Monitoring) and 4850 (Rangeland Vegetation Management Techniques) are required prerequisites for REWM 4750. Undergraduate students lacking these courses, but familiar with ecological principles central to wildlife habitat ecology may gain admittance to 4750, through instructor consent.

### Course Description:

*Wildlife Habitat Restoration Ecology* is designed to provide students with knowledge and skills to restore and monitor wildlife habitats that have undergone restorative activities. Although the course will overview theoretical concepts that are applicable to many systems there will be a focus on applications to wildlife habitats in western North America. A primary goal for the course is for students to prepare critically written summaries and the outline for a restoration project plan, which synthesize literature and thought on contemporary topics. Class lectures will assist students in preparing their summaries and plans.

### Attendance and Absence policies:

1. Absences result in poor performance on assignments and exams, so please attend each class
2. University sponsored absences are cleared through the Office of Student Life
3. Other absences must be cleared through me
4. Please consult with University policies on excused absences as outlined in [UW Regulation 2-108 \(Student Attendance Policy\)](#).

**Classroom Behavior Policy:**

*At all times, treat your presence in the classroom and your enrollment in this course as you would a job. Act professionally, arrive on time, pay attention, complete your work in a timely and professional manner, and treat all deadlines seriously. You will be respectful towards your classmates and instructor. Spirited debate and disagreement are to be expected in any classroom and all views will be heard fully, but at all times we will behave civilly and with respect towards one another. Personal attacks, offensive language, name-calling, and dismissive gestures are not warranted in a learning atmosphere. As the instructor, I have the right to dismiss you from the classroom, study sessions, electronic forums, and other areas where disruptive behavior occurs.*

*Electronic devices such as mobile phones should be turned off during class. Laptops and tablets are allowed for note-taking purposes unless they become a source of disturbance. No video or audio recording during class is allowed to protect the privacy of your fellow students.*

**Classroom Statement on Diversity:**

The University of Wyoming values an educational environment that is diverse, equitable, and inclusive. The diversity that students and faculty bring to class, including age, country of origin, culture, disability, economic class, ethnicity, gender identity, immigration status, linguistic, political affiliation, race, religion, sexual orientation, veteran status, worldview, and other social and cultural diversity is valued, respected, and considered a resource for learning.

**Disability Support:**

*The University of Wyoming is committed to providing equitable access to learning opportunities for all students. If you have a disability, including but not limited to physical, learning, sensory or psychological disabilities, and would like to request accommodations in this course due to your disability, please register with and provide documentation of your disability as soon as possible to Disability Support Services (DSS), Room 128 Knight Hall. You may also contact DSS at (307) 766-3073 or [udss@uwyo.edu](mailto:udss@uwyo.edu). It is in the student's best interest to request accommodations within the first week of classes, understanding that accommodations are not retroactive. Visit the DSS website for more information at: [www.uwyo.edu/udss](http://www.uwyo.edu/udss)*

**Academic Dishonesty Policies:**

*Academic dishonesty will not be tolerated in this class. Cases of academic dishonesty will be treated in accordance with UW Regulation 2-114. The penalties for academic dishonesty can include, at my discretion, an "F" on an exam, an "F" on the class component exercise, and/or an "F" in the entire course. Academic dishonesty means anything that represents someone else's ideas as your own without attribution. It is intellectual theft – stealing - and includes (but is not limited to) unapproved assistance on examinations, plagiarism (use of any amount of another person's writings, blog posts, publications, and other materials without attributing that material to that person with citations), or fabrication of referenced information. Facilitation of another person's academic dishonesty is also considered academic dishonesty and will be treated identically.*

**Duty to Report:**

*UW faculty are committed to supporting students and upholding the University's non-discrimination policy. Under Title IX, discrimination based upon sex and gender is prohibited. If you experience an incident of sex- or gender-based discrimination, we encourage you to report it. While you may talk to a faculty member, understand that as a "Responsible Employee" of the University, the faculty member MUST report information you share about the incident to the university's Title IX Coordinator (you may choose whether you or anyone involved is identified by name). If you would like to speak with someone who may be able to afford you privacy or confidentiality, there are people who can meet with you. Faculty can help direct you or you may find info about UW policy and resources at <http://www.uwyo.edu/reportit> You do not have to go through the experience alone. Assistance and resources are available, and you are not required to make a formal complaint or participate in an investigation to access them.*

**Student Resources:****CAMPUS RESOURCES**

DISABILITY SUPPORT SERVICES: [udss@uwyo.edu](mailto:udss@uwyo.edu), 766-3073, 128 Knight Hall, [www.uwyo.edu/udss](http://www.uwyo.edu/udss)

COUNSELING CENTER: [uccstaff@uwyo.edu](mailto:uccstaff@uwyo.edu), 766-2187, 766-8989 (After hours), 341 Knight Hall, [www.uwyo.edu/ucc](http://www.uwyo.edu/ucc)

ACADEMIC AFFAIRS: 766-4286, 312 Old Main, [www.uwyo.edu/acadaffairs](http://www.uwyo.edu/acadaffairs)

DEAN OF STUDENTS OFFICE: [dos@uwyo.edu](mailto:dos@uwyo.edu), 766-3296, 128 Knight Hall, [www.uwyo.edu/dos](http://www.uwyo.edu/dos)

UW POLICE DEPARTMENT: [uwpd@uwyo.edu](mailto:uwpd@uwyo.edu), 766-5179, 1426 E Flint St, [www.uwyo.edu/uwpd](http://www.uwyo.edu/uwpd)

STUDENT CODE OF CONDUCT WEBSITE: [www.uwyo.edu/dos/conduct](http://www.uwyo.edu/dos/conduct)

**Objectives/Outcomes/Standards:****Course Objectives**

1. To learn how habitat and population concepts are applied to restoration of wildlife populations
2. To become familiar with habitat terminology and relationships to habitat restoration
3. To become familiar with the methodology used to restore and monitor wildlife habitats
4. To learn how restoration plans for wildlife are developed and implemented
5. To encourage an interest in further learning about wildlife habitat restoration ecology

**Student Responsibilities**

1. Participate fully in all exercises
2. Complete assignments on time
3. Read assigned material and complete written assignments before coming to class
4. Be enthusiastic about learning – ask questions!
5. Get to know your instructor and others in the class

**Text(s) and Readings:**

**Required Textbook** (This book is available as an ebook through the University of Wyoming library. I will post PDFs of chapters when relevant to lectures)

Morrison, M. L. 2009. Restoring wildlife: Ecological concepts and practical applications. Island Press, Washington, D.C., USA.

**Additional Resources**

Falk, D. A., M. A. Palmer, and J. B. Zedler, editors. 2006. Foundations of restoration ecology. Society for Ecological Restoration International. Island Press, Washington, D.C., USA.

Monsen, S. B., R. Stevens, and N. L. Shaw, compilers. 2004. Restoring western ranges and wildlands. General Technical Report RMRS-GTR-136-vol-1. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fort Collins, Colorado. Pages 1–294 plus index.

Monsen, S. B., R. Stevens, and N. L. Shaw, compilers. 2004. Restoring western ranges and wildlands. General Technical Report RMRS-GTR-136-vol-2. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fort Collins, Colorado. Pages 295–698 plus index.

Monsen, S. B., R. Stevens, and N. L. Shaw, compilers. 2004. Restoring western ranges and wildlands. General Technical Report RMRS-GTR-136-vol-3. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fort Collins, Colorado. Pages 699–884 plus appendices and index.

Morrison, M. L., B. G. Marcot, and R. W. Mannan. 2006. Wildlife-habitat relationships: concepts and applications. Third edition. Island Press, Washington, D.C., USA.

Whisenant, S. G. 1999. Repairing damaged wildlands: a process-oriented, landscape-scale approach. Cambridge University Press, Cambridge, United Kingdom.

**Course Requirements/Assignments:****Grading Standards**

Grades will be assigned on the basis of percentage of total points earned. Extra credit points may be available, and may tip the scale for border-line grades (within 1.0% of the higher grade). *Graduate students have additional responsibilities to lead 1 lecture, including assigning readings, presenting the lecture and group discussion, and providing questions for an exam.*

A = >90%

B = 80–89%

C = 70–79%

D = 60–69%

F = <59 %

**Undergraduate Students (REWM 4750)**

Assignment	Number	Point Value	Total Points
Population ecology problem set	1	25	25
First exam	1	125	125
Second exam	1	125	125
Sage-grouse lek visit	1	25	25
2-page summaries	3	40	120
Grizzly bear and gray wolf recovery plan discussion	1	30	30
Restoration plan outline/presentation	1	50	50
<b>Total</b>			<b>500</b>

**Graduate Students (REWM 5750)**

Assignment	Number	Point Value	Total Points
Population ecology problem set	1	25	25
First exam	1	125	125
Second exam	1	125	125
Sage-grouse lek visit	1	25	25
2-page summaries	3	40	120
Grizzly bear and gray wolf recovery plan discussion	1	30	30
Restoration plan outline/presentation	1	50	50
Class lecture	1	150	150
<b>Total</b>			<b>650</b>

**Late Assignments**

Written assignments are due at the beginning of class on assigned due dates. Assignments will lose a half letter grade if submitted later that day, and will not be accepted more than 1 day past the due date. However, I can make accommodations for valid emergencies.

**Guest Speaker Schedule:**

Date	Speaker	Affiliation	Topic
Feb 7	Julie Reeves	USFWS	Endangered Species Act
March 9	Bill Rudd	Wyoming Migration Initiative	Ungulate Migration and Wyoming Migration Initiative
April 20	Matt Hoobler	Pathfinder Ranches	Habitat Mitigation/Offset Credits

**Graduate Student Class Lecture Tentative Schedule:**

Date	Speaker	Course Topic	Focus
Feb 21	Jane Fulgate	Captive Breeding and Release	Captive breeding to restore whooping cranes
Mar 21	Albert Mason	Animal movement	Barriers to ungulate movement
Apr 6	Alyssa Baldwin	Surrogate Species and Restoration	Beaver as a keystone species/engineer

## Course Outline: (Tentative February 28, 2023)

<b>Tentative Schedule</b>		
Week	Topic	Assignment*
<b>Part 1</b>	<b>Restoration Concepts</b>	
1 (Jan 17 and 19) 2 (Jan 24 and 26) 3 (Jan 31 and Feb 2)	Course Introduction; Conservation History Population concepts, Operating Concepts Augmenting populations	Pop'n Ecology Prob Set (Musk ox) Summary 1 (California condor recovery)
4 (Feb 7† and 9)	Captive breeding, ESA	
<b>5 (Feb 14 and 16)</b>	<b>76th Annual SRM Meeting, Boise, Idaho – No Class</b>	
6 (Feb 21‡ and 23) 7 (Feb 28 and Mar 2)	Introduced/Exotic species Animal Movement	Summary 2 (Pronghorn crossing I-80)
8 (Mar 7 and 9†)	Disturbance Ecology, Energy Development	
<b>9 (Mar 14 and 16)</b>	<b>Spring Break – No Class</b>	
10 (Mar 21‡ and 23)	Habitats, Habitat treatments	Exam 1 (Mar 23)
<b>11 (Mar 28 and 30)</b>	<b>Wyoming TWS Meeting and GRSG Modeling – No Class</b>	
12 (Apr 4 and 6‡)	Assemblages/Assembly rules	Summary 3 (Mountain quail restoration plan outline)
13 (Apr 11 and 13) 14 (Apr 18† and 20)	Desired conditions, Restoration design concepts Habitat mitigation	Grouse lek (Sat, Apr 15) WGFD Grizzly Bear or CPW Wolf Plan discussions (Apr 20)
15 (Apr 25 and 27) 16 (May 2 and 4)	Population and habitat monitoring Restoration Plan Outline Presentations	Exam 2 (Apr 27) Plan Presentations
<b>17 (May 8–12)</b>	<b>Finals Week – No Final</b>	No Final

†Guest speaker (see schedule).

‡Graduate student lecture (see schedule).