

## COURSE SYLLABUS

### REWM 4750/5750 – Wildlife Habitat Restoration Ecology Spring Semester 2014

TR 2:45-4:00 PM, AG 2024

#### Instructor Information:

Jeffrey L. Beck

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Office Hours: W 10:00 AM–2:00 PM and TH 11:00 AM–1:00 PM (or by appointment)

#### Graduate Teaching Assistant:

Adele Collier

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Office Hours: M and T 10:00 AM–11:00 AM

**Prerequisites:** *Note: I am planning to remove these prerequisites from the 2016 class*

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 a restoration project plan, which synthesize literature and thought on contemporary topics. Class lectures will assist students in preparing their summaries and plans.

#### Disability Statement:

*If you have a physical, learning, or psychological disability and require accommodations, please let me know as soon as possible. You must register with, and provide documentation of your disability to University Disability Support Services (UDSS) in SEO, room 330 Knight Hall.*

**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

***Classroom Policies***

1. Students are expected to: be on time, read journal articles and book chapters before coming to class, and participate in class discussions and activities
2. Academic honesty and integrity are University Policies. Failure to maintain these standards may result in a failing grade and/or referral to the Dean of students
3. Derogatory language or behavior based on race, gender, religion, political affiliation, sexual orientation, or physical or mental abilities is not appropriate for class

**Text(s) and Readings:*****Required Textbook***

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% of the higher grade). *Graduate students have additional responsibilities to write a section in an article on wildlife habitat restoration for a scientific journal **and** to participate as group leaders for writing the 2-page summaries and restoration plan to earn their grade.*

- A = >90%
- B = 80–89%
- C = 70–79%
- D = 60–69%
- F = <59 %

#### *Undergraduate Students (REWM 4750)*

Assignment	Number	Point Value	Total Points
Participation	1	50	50
First exam	1	100	100
Second exam	1	100	100
Third (final) exam	1	100	100
Population ecology problem set	1	25	25
2-page summaries	2	25	50
Sage-grouse lek visit	1	25	25
Restoration plan and presentation	1	100	100
<b>Total</b>			<b>550</b>

**Graduate Students (REWM 5750)**

Assignment	Number	Point Value	Total Points
Participation	1	50	50
First exam	1	100	100
Second exam	1	100	100
Third (final) exam	1	100	100
Population ecology problem set	1	25	25
2-page summaries	2	25	50
Sage-grouse lek visit	1	25	25
Restoration plan and presentation	1	100	100
Habitat restoration paper	1	150	150
<b>Total</b>			<b>700</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.

**Attendance/Participation Policy:**

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

**Academic Honesty:**

The University of Wyoming is built upon a strong foundation of integrity, respect and trust. All members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated. [from the UW General Bulletin [http://www.uwyo.edu/registrar/university\\_catalog/honor.html](http://www.uwyo.edu/registrar/university_catalog/honor.html)]. Teachers and students should report suspected violations of standards of academic honesty to the instructor, department head, or dean. Other University regulations can be found at: <http://www.uwyo.edu/generalcounsel/new-regulatory-structure/index.html>)

**Guest Speaker Tentative Schedule:**

Date	Speaker	Affiliation	Topic
Jan 28	Dr. Pat Diebert	USFWS	Endangered Species Act
Feb 4	Julia Polasik – MS student	UW – ESM	Wyoming toad restoration
Feb 27	Dr. Greg Corace	USFWS	Ecosystem-scale restoration of forests and wetlands
Mar 27	Clay Buchanan - PhD candidate	UW - ESM	Elk response to disturbance risk in NE Wyoming
Mar 27	Adele Collier –MS student	UW - ESM	Pronghorn survival and reproduction in Red Desert
Apr 17	Dr. Kristi Hansen	UW-Ag and Applied Econ	Habitat banking for offsite mitigation

## Course Outline:

Tentative Schedule		
Week	Topic	Assignment*
1 (Jan 14 and 16)	Introduction, Operating Concepts	Ch 1, 2
2 (Jan 21 and 23)	Operating Concepts, Population concepts	Ch 2, 3
3 (Jan 28† and 30)	Population concepts	Ch 3; <b>Problem Set</b>
4 (Feb 4† and 6)	Augmenting populations, Restoration Plan Overview	Ch 3; <b>Summary 1</b>
5 (Feb 11 and 13)	<b><i>SRM Meeting in Orlando, FL – No Class</i></b>	
6 (Feb 18 and 20)	Introduced/Exotic species	Readings
7 (Feb 25 and 27†)	Habitats and quantification	Ch 4; <b>Exam 1 (Feb 25)</b>
8 (Mar 4 and 6)	Habitats and quantification, Habitat treatments	Readings
9 (Mar 11 and 13)	Habitat treatments. Assemblages	Readings, Ch 5
10 (Mar 18 and 20)	<b><i>Spring Break – No Class</i></b>	
11 (Mar 25 and 27†)	Disturbance ecology	Ch 7; <b>Summary 2</b>
12 (Apr 1 and 3)	Desired conditions, Restoration design concepts	Ch 6; <b>Grouse lek (Apr 12)</b>
13 (Apr 8 and 10)	Restoration design concepts	Ch 7; <b>Exam 2 (Apr 8)</b>
14 (Apr 15 and 17†)	Habitat mitigation	Readings,
15 (Apr 22 and 24)	Population and habitat monitoring	Ch 8, 9; *Grouse lek (Apr 26)
16 (Apr 29 and May 1)	Synthesis and <b><i>Group Presentations</i></b>	Ch 10, 11; <b>Restoration Plan</b>
17 (May 6)	<b><i>Final Exam – Tuesday, May 6 (3:30–5:30 PM)</i></b>	<b>Final Exam</b>

†Guest speaker (see schedule).

\*If needed.