

**Wildlife Habitat Use and Management**  
**FW 477**  
**Fall 2014**

**Instructor: Dr. George Wittemyer**

Assist. Professor: Department of Fish, Wildlife, and Conservation Biology

Office: 237 Wagar

Office hours: 10:00-11:30 W or by appointment

Phone: 970-491-6598

e-mail: g.wittemyer@colostate.edu

**COURSE DESCRIPTION:** (3 cr) Wildlife habitat evaluation, classification, and improvement; management of natural and altered environments for wildlife; planning and implementation of management plans.

**PREREQUISITES:** FW 260 (enforced) and NR322 or equivalent

**COURSE OBJECTIVES:**

1. Students will be introduced to habitat management strategies that are used to enhance wildlife.
2. Students will become familiar with current habitat evaluation and classification techniques.
3. Students will develop a habitat management plan.
4. Students will be able to discuss the dynamic nature of ecosystems and the effects of human activities on these.
5. Students will be able to discuss approaches to assess spatial use and wildlife habitat selection.

**TEXT/READINGS:**

There is no required text for this class. Weekly readings will be on RamCT. Larger documents (in excess of 20 pages) are primarily for reference material, with specific sections or chapters assigned for more in depth reading. If not specified, students should be familiar with the content, and refer to specific sections that are pertinent to a field trip or assignment.

**COURSE FORMAT:**

1. Schedule: **Lecture** – Wed, 9:00-9:50a, 107 Wagar; **Recitation** – Friday 8:00-8:50a, 107 Wagar; **Lab** – Friday 9:00-11:50noon, 107 Wagar. One Saturday field trip (all field trips are required).
2. Come to class having read the assigned pages.
3. If you miss a class meeting, it is your responsibility to get the notes from a classmate and to check to see if there were any assignments. I do not give out my notes.
4. Please bring questions to class and ask them. Discussion in class is important and mandatory during discussion sessions.

**COURSE GRADING:**

1. Assignments (excluding Habitat Management Plan)	35%
2. Habitat Management Plan (including presentation)	25%
3. Discussion/participation	5%
4. Exams (Final and Midterm)	35%

Pass/Fail is NOT a grading option. Cutoffs for grades typically will be based on the following percentages: 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, < 59 = F.

**EXAMs:**

The midterm and finals exam will cover material presented in lecture, recitation, and lab (including movies and reading assignments). Altered exam scheduling will be offered for catastrophes, truly beyond your control—hospitalization, unmerited imprisonment, family death—and then I must be notified before the exam or class, unless that is truly impossible. An “I” is given only for such exceptional circumstances. I reserve the right to use a restricted average of other scores, instead of a makeup, e.g., for an excused absence from lab or field trip.

**DISCUSSION:**

Readings will be assigned. All class members will read the material and should be well prepared for discussion. Participation is expected both in the classroom and on field trips.

**ASSIGNMENTS:**

Assignments include take-home memos or in-class GIS labs. NOTE: you will lose one grade per day for assignments turned in late. If you are going to be gone on the due date, then you need to turn in the assignment before that date.

**MANAGEMENT PLAN:**

More details will be forthcoming. This is a group assignment; however, if an individual is not participating, they will be warned, and if not rectified, will be taken off of the group and given a 0 for the project. The plan will be graded largely on content but also on clarity and neatness of presentation.

**PRESENTATION OF MANAGEMENT PLANS:**

Groups will have 15-20 minutes for presentation of management plans with an additional 5 minutes of questions from the rest of the class. You can use powerpoint, handouts, etc.

**ATTENDANCE:**

You are expected to attend all classes and field trips unless prior arrangements have been made with me. Do not be late, field trip departure times are not negotiable. You will be left behind and lose credit for the trip and associated assignment.

**HELPFUL HINTS:** (1) Ask questions!! (2) Tape the lectures. (3) Rewrite your lecture notes. (4) Read your memo assignments out loud to assess the quality of writing. (5) Consult the writing center. (7) Study and with a partner or group. (8) Come to help sessions before tests. (9) Keep up with the material (you should be studying 6-9 hrs/wk for a 3 cr class!).

**ACADEMIC DISHONESTY AND DISRUPTIVE BEHAVIORS:** Cheating and plagiarism will not be tolerated in class. If found cheating, you will receive a failing grade. Distractive behaviors such as talking to neighbors, reading newspapers, regularly coming to class late (unless prior authorization has been given), or leaving class early also are not acceptable; students engaged in such activities may be asked to leave the class. Instances of academic dishonesty and disruption also may be referred to the Office of Judicial Affairs, which can result in University disciplinary action (see Student Rights & Responsibilities section of the CSU General Catalog for more information). As an instructor it is my responsibility to ensure all students have an equal opportunity to learn the material without disruption or distraction. I take that responsibility seriously and will not tolerate such disturbances.

Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, we will ask to you sign the CSU Honor Pledge as part of completing all of our major assignments. While you will not be required to sign the honor pledge, we will ask each of you to write and sign the following statement on your papers and exams:

***"I have not given, received, or used any unauthorized assistance."***

**SPECIAL NEEDS:** Please let us know as soon as possible if you have any special needs.

**FW477 Habitat Management**  
**Lecture & Discussion Schedule** (subject to change)

**George Wittemyer, Fall 2014**

<b>Week</b>	<b>Date</b>	<b>Topic</b>	<b>Required lecture readings</b> <b>(Wednesday)</b>	<b>Discussion readings</b> <b>(Friday)</b>	<b>Assignments</b> <b>+ Field Trips</b>
1	Aug 27	General Habitat Concepts Review	Syllabus	Laliberte and Ripple 2003 (suggested Laliberte and Ripple 2004)	<i>Discussion: Historic versus contemporary wildlife distribution</i>
2	Sept 3	Conservation Planning Process; Resource Cons. Goals	NRCS Conservation Planning; Nature Cons 2010 (Reference materials!)	Range Assessment	<i>Field Trip 1: Field Site (8:00 meeting-BRING BICYCLES);</i> <b>Introduction to Habitat Management Plan Project</b>
3	Sept 10	Rangeland-Agriculture and short Grass Prairie  (David Augustine)	Fuhlendorf & Engle 2001; Augustine & Derner 2012	Augustine & Derner 2012	<i>Field Trip 2: Field Trip 2: Pawnee National Grassland (8:00 departure);</i> <b>Assign 1: Memo on species and disturbance regimes</b>
4	Sept 17	Tools for Habitat Management	Tools Handbook 2006	Laramie Foothills Project; TNC Activities	<i>Field Trip 3: Phantom Canyon (8:00 departure)</i> <b>Assign 2: Memo on Landscape Planning</b> <b>Assign 1 DUE (Sept 19)</b>
5	Sept 24	Urban Wildlife Habitat  (Sarah Reed)	Hansen 2005  (Maestas 2003)	Johnson 2007	<i>Field Trip 4: Fort Collins Natural Areas</i> <b>Assign 3: Memo natural area planning for urban wildlife</b> <b>Assign 2 DUE (Sept 21)</b>

6	Oct 1	Stream Restoration (Stream Visual Assessment)	Fausch et al. 2002; For reference: Cowardin 1979_USFWS Wetland classification	Stream Visual Assessment Protocol; Two Floods reading	<i>Field Trip 4: Poudre Flood Plane Restoration Creek</i> <b>Assign 4: Memo on riparian restoration</b> <b>Habitat Management Plan Outline Due (Sept 28)</b>
7	Oct 8	Forest Ecology (Jonas Feinstein)	Larson & Churchill 2012 (focus on meta-analysis and synthesis); Reynolds et al. 2006	NRCS Forest WHEGS	<i>Roosevelt Forest Plots (7:30 departure)</i> <b>Assign 5: Memo forests, fire, and restoration</b>
8	Oct 15	Wildlife Impacts on Habitat	Ripple and Beschta 2004	Packard 1942; RMNP Elk Plan Exec Summary; Letters from the Public	Discussion: Elk management plan <b>Assign 6: Elk Range Assessment-RMNP</b> <b>Assign 5 DUE (Oct 12)</b>
Sat	Oct 18	<i>Rocky Mnt. NP Field Trip 6 (6-8 hrs) Depart 8:00</i>			
9	Oct 22	Midterm		Johnson 2007	Discussion
10	Oct 29	Animal Space Use	<b>Assign 6 Due (Oct 24)</b>	<i>Intro GIS Lab1 Calculating Area and Density</i>	<b>Habitat Management Plan Presentations</b>
11	Nov 5	Assessing Animal Habitat Use	Krebs 2001: Chapt. 5 Habitat Selection	Computer Lab (GTL) 232 Natural Resources	<i>GIS Lab 2 Calculating Use, Availability, Preference and Selection Redefining Availability</i>
12	Nov 12	Habitat Selection	Morris 2003 (Introduction): Habitat Selection Review	Computer Lab (GTL) 232 Natural Resources	<i>GIS Lab 3 Resource Selection Functions RSF</i>
13	Nov	Home Range	Millspaugh &	Computer	<i>GIS Lab 4</i>

	19	Analysis	Marzluff Chapt. 5 Pg. 125-140 (recommended 140-154)	Lab (GTL) 232 Natural Resources	<i>Home Range Analysis: MCP, Kernel and LoCoH</i>  <b>Habitat Management Plans Due</b>
14	Nov 26	Fall Recess			
15	Dec 3	Whale Foraging	Croll et al. 2005  (Recommended Santora et al. 2011)	Computer Lab (GTL) 232 Natural Resources	<i>GIS Lab 5</i>  <i>Accelerometry data</i>
16	Dec 10	Movement Ecology  Conclusions	Lima and Zollner 1996; (Recommended Nathan et al. 2008)	Computer Lab (GTL) 232 Natural Resources	<i>GIS Lab 6</i> <i>Movement</i>
		<b>FINAL EXAM</b>			