

WILD 370: Wildlife Habitat Conservation and Management

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Overview

Lecture:

1100h - 1220h Tuesday and Thursday; Forestry 206

Laboratory:

1300h - 1700h Thursday at specified dates, times, and locations. Please note, we will not have lab every week, but when we do have labs attendance is mandatory.

Prerequisites:

Ecology (BIOE 370/371*) or equivalent upper-division ecology course, statistics (STAT 216 or WILD 240), and greater than or equal to junior standing in Wildlife Biology.

Grading:

This course is offered for a traditional letter grade only. It is not offered under the credit or no credit option. Please see Table 2 in this syllabus for a complete breakdown of how your grade will be calculated in this course. Students will be graded based on their performance on two exams, 10 quizzes, 10 lab reports, a review topic (paper/presentation), as well as their participation in the class.

Course Objective:

The key objectives of this course are for students to gain familiarity with the importance of habitat to wildlife in terrestrial ecosystems, and to gain proficiency with the application of theory and statistics to wildlife habitat conservation issues. Students will gain familiarity with wildlife habitat study design, data collection, and statistical modeling of wildlife habitat. Practical hands on experience will be gained on field trips during the semester where students will be expected to be able to apply theories to practical conservation issues in Montana.

Readings:

Assigned readings from textbooks, scientific journals and other readings will be posted on Moodle at least one week prior to class.

Exams:

Exam(s) will be multiple choices, true-false, short answer and short essay questions. Course material in lectures, labs, and readings will be considered for all exams. The midterm exam will cover all course content up to the class prior, and the final exam will be primarily weighted from material from the second half of the semester. But keep in mind that we will continue to build on the theoretical concepts discussed in the first half throughout! Time for exams will be allotted as the regular course time, 12:10-1:00PM, or the Final Exam time, and no extra time will be given to take exams. Students arriving at a scheduled exam AFTER the first person to finish the test has left the room will not be allowed to take the test and will be assigned a ZERO. Failure to take an exam during the regularly scheduled time will result in a grade of ZERO being assigned. Make-up exams will be scheduled only given documentation of a valid excused absence (see attendance below) 1 week prior to the regularly scheduled exam time.

Quizzes:

There will be 10 'pop' quizzes at the beginning of lecture, approximately once / week to ensure that students are reading critical background reading, reviewing concepts from previous lectures, and being active learners.

Assignments and reports:

There will be 10 'lab reports' including 3 take home assignments, 2 computer lab reports, and 3 field trip reports. Assignments will all be take-home, some will involve group work, and formats will vary between assignments - detailed instructions will be given in lecture for each assignment. In general, lab assignments will be due in the immediately following lecture. One lab assignment will be for students to attend a lecture on campus on a topic related to habitat conservation and management, and this assignment will be posted on MOODLE in week 1.

Wildlife habitat ecology and conservation review:

In this assignment, students will pick a topic of their choice on a wildlife habitat conservation issue or concept to review in written and oral presentation form. This is an example to dive into something that really interests you about wildlife habitat ecology and/or conservation, read as many papers and books you can about it, and then put it all together in an oral presentation and short written summary. We will spend time in lecture going over examples of review/syntheses papers and example topics. There are several components to the review topic that will be completed throughout the semester including completion of an annotated bibliography, an oral presentation and a 5-page final summary paper. Oral presentations will be scheduled during class & lab meeting times on the syllabus at the end of the semester in a miniature conference format.

Course website:

The course website is hosted on MOODLE. Students will need an active UM NetID to access the Moodle class webpage. Take the UM Online 101 courses to learn more about Moodle.

Final exam time:

0800 - 1000h, Tuesday May 9. The final exam schedule is posted here: Student Conduct Code. Note: final exam times are your responsibility to confirm and conflicts need to be considered during registration. If you have a conflict, it is your responsibility to change your schedule or talk

to professors early. No extra exams will be scheduled to accommodate conflicts after the last drop date.

Diversity Statement:

Consistent with the UM Diversity, Equity, and Inclusion Plan, I will strive to include the representation of different identities, characteristics, experiences and perspectives of all students. I will aim to offer everyone what they need to succeed by increasing access, resources, and opportunities for all, especially for those who are systematically underrepresented and have been historically disadvantaged. I desire to create a welcoming learning environment in which differences are celebrated and everyone is valued, respected, and able to reach their full potential.

Land Acknowledgment:

The University of Montana acknowledges that we are in the aboriginal territories of the Salish and Kalispel people. Today, we honor the path they have always shown us in caring for this place for the generations to come.

Student Conduct:

Please reference the Student Conduct Code for any questions about student conduct. Briefly, do not use cell phones during class time. Cheating or plagiarism on any assignment or exam will result in a 0.

Add/Drop dates and overrides:

Please come speak with the instructor as soon as possible if there are any lingering override issues. February 6th is the last day to drop spring classes on Cyberbear with no 'W' (withdrawl) on your transcript and receive any applicable refunds. March 28th is the last day to drop the course (those who drop after Feb 6 will receive a 'W' on their transcript). Please see this webpage (<https://www.umt.edu/registrar/calendar/spring.php>) for more information.

Campus Resources

Mental Health Resources:

College students often experience issues that may interfere with academic success such as academic stress, sleep problems, juggling responsibilities, life events, relationship concerns, or feelings of anxiety, hopelessness, or depression. If you or a friend is struggling, we strongly encourage you to seek support. Helpful, effective resources are available on campus.

If you are struggling with this class, please visit during office hours or contact me by email.

Check in with your academic advisor if you are struggling in multiple classes, unsure whether you are making the most of your time at the University of Montana.

Reach out for Support-Curry Health Center Counseling-to make a counseling appointment call 406-243-4712 or email mary.rust@mso.umt.edu.

If you feel that you would benefit from general wellness skills to support your overall stress, reach out to Curry Health Center Wellness: 406-243-2809.

If you are experiencing a mental health crisis and seeking immediate help, call 911, go to the nearest hospital emergency room or call Campus Safety at (406) 243-4000.

If you have experienced sexual assault, relationship violence, bullying, intimidation, or discrimination contact Student Advocacy Resource Center (SARC): 406-243-4429; 24-hour support line: 406-243-6559.

COVID-19 Resources:

Curry Health Center is offering COVID-19 vaccines to anyone who would like one.

Curry Health Center offers free COVID-19 testing to UM students.

If you have COVID symptoms, please get a COVID test at Curry Health Center. To assist with contact tracing, please sign the self-disclosure form so that if you test positive, Curry can share this information with the health department and the University.

If you test positive for COVID, you will be required to self-isolate, per Missoula City/County Health Department protocol. Please let me know so I can help you to receive materials and keep up with the class.

If you need to attend class remotely, please take advantage of these resources for online and remote students.

Accessibility and Office for Disability Equity:

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office for Disability Equity (ODE). If you anticipate or have a disability that adversely affects your academic performance, and you have not already registered with the Office for Disability Equity (ODE), please contact ODE in Lommasson Center 154 or 406.243.2243. I will work with you and ODE to provide an appropriate modification.

Cultural Leave Policy:

UM has a Cultural and Ceremonial Leave Policy: “Cultural or ceremonial leave allows excused absences for cultural, religious, and ceremonial purposes to meet the student’s customs and traditions or to participate in related activities. To receive an authorized absence for a cultural, religious or ceremonial event the student or their advisor (proxy) must submit a formal written request to the instructor. This must include a brief description (with inclusive dates) of the cultural event or ceremony and the importance of the student’s attendance or participation. Authorization for the absence is subject to approval by the instructor. Appeals may be made to the Chair, Dean or Provost. The excused absence or leave may not exceed five academic calendar days (not including weekends or holidays). Students remain responsible for completion or make-up of assignments as defined in the syllabus, at the discretion of the instructor.”

Food Pantry Program:

UM offers a food pantry that students can access for emergency food. The pantry is open on Tuesdays from 12 to 5 PM and Fridays from 10 AM to 5 PM. The pantry is located in UC 119 (in

the former ASUM Childcare offices). Pantry staff operate several satellite food cupboards on campus (including one at Missoula College). For more information about this program, email umpantry@mso.umt.edu, visit the UM Food Pantry website or contact the pantry on social media (@pantryUm on twitter, @UMPantry on Facebook, um_pantry on Instagram).

ASUM Renter Center:

The Renter Center has compiled a list of resources (<https://medium.com/griz-renter-blog>) for UM students at risk of homelessness or food insecurity. Students can schedule an appointment with Renter Center staff to discuss their situation and receive information, support, and referrals.

TRiO Student Support Services:

TRiO serves UM students who are low-income, first-generation college students or have documented disabilities. TRiO services include a textbook loan program, scholarships and financial aid help, academic advising, coaching, and tutoring. Students can check their eligibility (www.umt.edu/trioss/apply.php) for TRiO services online. If you are comfortable, please see members of the teaching team. We will do our best to help connect you with additional resources.

Table 1. Tentative lecture and lab schedule.

Date	Day	Approximate Lecture Topic	Lab Topic
		Section I. Theory	
17 Jan	Tue	1. Introduction/Syllabus	
19 Jan	Thu	2. Wildlife and population dynamics	
24 Jan	Tue	3. Conservation, management, and habitat	
26 Jan	Thu	4. Niche Theory	
31 Jan	Tue	5. Niche Theory	
2 Feb	Thu	6. Habitat selection/ecological traps	Occupancy/Radiotelemetry (field)
7 Feb	Tue	7. Density-dependent habitat selection	
9 Feb	Thu	8. Measuring habitat use	Occupancy/Radiotelemetry (lab)
14 Feb	Tue	9. Measuring habitat selection	
16 Feb	Thu	10. Resource selection	Occupancy/Radiotelemetry (lab)
21 Feb	Tue	11. Island biogeography theory	
23 Feb	Thu	12. Island biogeography exercise	
28 Feb	Tue	13. Habitat fragmentation I	
2 Mar	Thu	14. Habitat fragmentation II	Occupancy/Radiotelemetry (lab)
7 Mar	Tue	Review	
9 Mar	Thu	Midterm	
		Section II. Application	
14 Mar	Tue	15. Power analysis	
16 Mar	Thu	16. Cost-benefit analysis	Highway 93 Field Trip
21 Mar	Tue	Spring Break	
23 Mar	Thu	Spring Break	
28 Mar	Tue	17. Applying habitat models	
30 Mar	Thu	18. Community-based conservation	
4 Apr	Tue	19. Ecosystem management	
6 Apr	Thu	20. Road ecology	
11 Apr	Tue	21. Corridors and Connectivity	
13 Apr	Thu	22. Yellowstone to Yukon	
18 Apr	Tue	23. Fire and Wildlife	
20 Apr	Thu	24. Wildlife and climate change	
25 Apr	Tue	25. Sage grouse: case study	
27 Apr	Thu	Semester Review	Student Presentations
2 May	Tue	Student Presentations	
4 May	Thu	Student Presentations	Student Presentations
9 May	Thu	Final	

Table 2. Grading.

Category	Description	Points	%
Exams	Midterm	100	20
	Final	100	20
Quizzes	Weekly quizzes focused on readings	50	10
Lab reports	Lab reports	100	20
Review topic	Problem statement and bibliography	50	10
	Oral presentation	25	5
	Summary paper	50	10
Participation	Participation during discussions, labs, and field trips	25	5
Total		500	

Table 3. Review topic assignments due.

Date	Assignment
26 Jan	1. Research proposal topic due
14 Feb	2. Problem statement and 10 initial primary sources due
7 Mar	3. Literature review due
28 Mar	4. Proposal and budget draft due
11 Apr	5. Final draft due
4 May	6. Final paper due