

# WILD 370: Wildlife Habitat Conservation & Management

## Fall 2020 – 4 Credits



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**Office Hours:** by appointment either in-person or via Zoom (your preference)

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### Overall Course Description

To gain a familiarity with the theoretical underpinnings of the importance of habitat to wildlife species in terrestrial ecosystems, and to gain proficiency with the application of this theoretical basis 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 and course activities (primarily during laboratory hours) where students will be expected to be able to apply theories to practical conservation issues. This is a hybrid course that can be taught entirely remotely, or with in-person lab activities if preferred. Please let us know if you need an entirely remote option asap.

- **Lecture (section 00):** *Tuesdays and Thursdays 11 AM - 12:20 PM;* remote via Zoom- see lecture information below for more Zoom access information.
- **Lab (section 01):** *Tuesdays 1 PM - 5 PM;* indoor activities will be remote via Zoom, and outdoor activities will be in-person outdoors unless you choose to exclusively complete the course remotely. Participation in lab is mandatory. Missing lab activities will result in deduction in your overall course grade by one letter grade per absence.

**Prerequisites:** General Ecology (BIOE 370) and General Ecology Lab (BIOE 371) prior, *not concurrent;* and STAT 216 or WILD 240; or approval by instructor. Additionally, students must have senior or junior level standing in Wildlife Biology.

**Course Website:** MOODLE (<https://moodle.umt.edu/login/index.php>). If you have not used Moodle in prior courses, there is 'Moodle 101 for Students' tutorial that can assist you in learning the basics. You need to login to Moodle to access this tutorial, so please ask for assistance if you are unable to login to Moodle. Course emails will be sent through Moodle using your email account information in Moodle.

## **Lecture (WILD 370-00) Description**

We will be using Zoom as our remote learning software. You should access the course through your UM Zoom account (<https://umontana.zoom.us/>) using the meeting ID: 977 2410 3751. I will be using various functions in Zoom including polling, annotating, and breakout groups. If you do not use your UM Zoom account, you will be limited in your abilities to use these various functions in Zoom. In addition, we will be using other software (e.g., Google Docs) which you will not need to download to use. Students must participate by audio and VIDEO mode. If you have technology issues, such as no/old laptop or electronic device, or intermittent or no internet service, please let me know ASAP. Cell phones, iPads, and other smaller devices are NOT a suitable electronic device because they are limited in their ability to use Zoom functions. Lectures will NOT be recorded in Zoom.

When I provide information using presentation software such as Powerpoint/Keynote/Slides in lecture, I will provide the presentation materials to you PRIOR to class for you to download, pre-view, and follow along in class. Some topics will be covered using 'flipped classroom' style in which you MUST prepare prior to class to actively participate. When assigned viewing of lecture videos/presentations, readings from textbooks, scientific papers, or other materials will be posted on Moodle PRIOR to class – students are expected to completed these activities prior to class and be prepared to discuss them in class. I will provide notice when these pre-class activities need to be done in class and also through email.

### **Tentative Topics Covered in Lecture\*:**

1. Definitions – Wildlife, Habitat, Conservation, and Management
2. Niche Theory
3. Habitat and the Niche
4. Theories of Habitat Selection
5. Habitat Selection
6. Measuring/Modeling Wildlife Habitat
7. Applying Habitat Models to Conservation
8. Island Biogeography Theory
9. Habitat Fragmentation
10. Restoration Ecology
11. Community Ecology
12. Human Dimensions
13. Corridors and Connectivity
14. Community-Based Conservation
15. Endangered Species Planning and Policy
16. Landscape Conservation
17. Focal Species and Ecosystem Management
18. Habitat and Climate Change

**\*Note:** I'm happy to entertain ideas you have on topics

### **Lecture Assignments:**

There will be ~ 6 lecture based assignments throughout this course. The focus of these assignments is to provide some foundational context in the applications of wildlife habitat conservation and management. A few activities are listed

below. Additional activities maybe added or substituted for the ones listed below; it's a dynamic time right now.

### *1. Definitions*

In this course we will go over the various definitions for terms often used in our field. Specifically those in the title of this course. Students will be given an exercise to illustrate the various definitions for term(s) and how these slight or substantial differences come into play when developing management strategies.

### *2. Engaging Multiple Stakeholders, specifically Private Landowners in Conservation*

Conservation spans outside the world of one piece of land or one management agency. We'll be discussing this topic with some numerous individuals highly involved with efforts of partnership-based conservation.

### *3. Additional Assignments ~4*

There may be additional assignments assigned during the semester.

### **Lecture Exams/Quizzes:**

There will be a few (~4 Exams/Quizzes) that will occur within the allotted lecture period. Some will be planned, a few may not.

### **Lab (WILD 370-01) Description**

We have an exciting opportunity this fall to provide a Wildlife Habitat Management Plan to a conservation organization, the Rocky Mountain Elk Foundation, for one of their nearby properties (~ 30 miles from campus). We will spend the bulk of our lab developing this plan that has numerous steps (e.g., meet with RMEF personnel to learn more, develop objectives, methods for data collection and collect data, data analyses and interpretation, write plan, develop social media information).

Some of the labs will be conducted remotely, again using Zoom. Some labs will be outside in which social distancing can be adhered. However, please note that masks maybe required even when we can adhere to social distancing. This is a safety precaution for you, your fellow students, and guests assisting us in the course. Also, if individuals chose not to participate in outside activities, we will do our best to accommodate (e.g., use Zoom or video record the activity).

We will be using a separate course website in Moodle for the lab (section 01). On the course website, we will post information such as Zoom meeting ID, tentative schedule, group activities, discussion forum, etc. Again, note tentative. The schedule may change along with the activity.

**Final Project:** 10:10 AM -12:10 PM, Friday, November 20<sup>th</sup>, 2020. **If you have a conflict, it is your responsibility to change your schedule or talk to talk to me ASAP! See:**

<https://www.umn.edu/registrar/students/Finals%20Week%20Schedules.php>. The final for this course will be a project students will turn in by the end of the scheduled Final Exam time for the course – Friday, Nov 20<sup>th</sup> from 10:10 AM to 12:10 PM (thus, you must turn it in to me by 12:10 PM on Friday, Nov 20<sup>th</sup>).

## Tentative Overall Grading

Please note, grading is subject to change given the dynamic nature of this semester, and this class is currently offered for traditional letter grade only. We will inform you of any changes made as they occur.

Category	Description	Marks	%
<u>Lecture</u>			
<b>Assignments</b>	1	20	4.44%
	2	20	4.44%
	3	20	4.44%
	4	20	4.44%
	5	20	4.44%
	6	20	4.44%
<b>Exams/Quizzes</b>	1	20	4.44%
	2	20	4.44%
	3	20	4.44%
	4	20	4.44%
<b>Participation</b>	Assessed via participation in class discussion	40	8.89%
<u>Lab</u>			
<b>Assignments</b>	#1 _Writing Assignment	10	2.22%
	#2_ Group Objectives, Questions, Goals	10	2.22%
	#3_Present proposed work	20	4.44%
	#4_Data Collection (remote or field)	10	2.22%
	#5_Data Collection (remote or field)	10	2.22%
	#6_Analyses	10	2.22%
	#7_Draft #1 & peer review	20	4.44%
	#8_Draft #2	20	4.44%
	#9_Social Media blog	20	4.44%
	#10_Final Group Project	40	8.89%
<b>Participation</b>	Multiple Assessments	40	8.89%
<u>Final Project</u>	Due by the end of Finals	80	17.78%
<u>Total</u>		450	100.00%

## General Course Policies

### **Attendance Policy:**

Attendance will be part of your participation grade in the lecture and lab. This course is likely the first in which you take the scientific knowledge you have learned and apply it management activities and conservation agenda. Your desire to learn this content will dictate your presence. Students are individually responsible for all information presented in lectures, guest lectures, and on the course Moodle website. No make-up exams/quizzes will be scheduled. In the case of medical or

family emergency (e.g., legitimate, planned absences) I will work with the student individually in terms of rescheduling and providing course context. Formal health care documentation will be required for legitimate emergencies.

### Academic Dishonesty:

Trust between students, instructor, and teaching assistant is of paramount importance in academic settings. The University of Montana expects all students to conduct themselves as honest, responsible, and law-abiding members of the academic community and to respect the rights of other students, members of the faculty and staff and the public to use, enjoy and participate in the University programs and facilities. All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the [Student Conduct Code \(http://www.umt.edu/student-affairs/dean-of-students/default.php\)](http://www.umt.edu/student-affairs/dean-of-students/default.php).

### Plagiarism:

Paraphrasing or quoting another's work without explicitly citing the source is plagiarism and a form of academic misconduct. Even inadvertent or unintentional misuse of appropriation of another's work (such as relying heavily on source material that is not expressly acknowledged) is considered plagiarism. If you have any questions about using and citing sources, you are expected to ask for clarification. This includes websites like Wikipedia that may not be scientifically valid.

### Credit for Work from Another Class:

*Submission of materials that were written for credit in another class is not permitted, (as per the University of Montana Student Conduct Code).* In other words, you are expected to turn in original work for this course. If you have any questions, whatsoever, it is better to ask before you get a zero for an assignment.

### Mobile (Cell) Phone Policy:

Mobile phone use is disruptive to you and your fellow students' learning and my teaching. I encourage you to shut off your cell phones or put them on silent during our course and lab meetings.

### Email Policy:

Students are encouraged to send emails to myself and the teaching assistant through the course Moodle website. We get a lot of emails. I have set up in Moodle to flag emails from students in the course and response to those first.

### Students with Disabilities:

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with DSS, please contact DSS in Lommason 154 or 406.243.2243. I will work with you and DSS to provide an appropriate modification.

### Dropping/Adding:

Drop/Add dates see [Office of the Registrar calendar \(https://www.umt.edu/registrar/calendar/autumn-2020.php\)](https://www.umt.edu/registrar/calendar/autumn-2020.php).

Deadline	Description	Date
Class day 15	Students can drop classes on CyberBear with refund	Sept 9 = last day
<b>Through</b> Class Day 45	A class drop requires a form with instructor and advisor signature, a \$10 fee per add/drop, student will receive a 'W' on transcript, no refund.	Oct 21 = last day
<b>After</b> Class Day 45	Add a course requires instructor and advisor approval, \$10 fee. Drop requires instructor, advisor, and Dean (of course) approval, \$10 fee, "WP" or "WF" will appear, no refund.	Nov 18 = last day