

# Applied Wildlife Management - WILD 480, The Upshot

Spring 2020, 3 credits, TR 8:00—9:20 am, Education Building Room 313

## Instructor Information:

Dr. Joshua Millspaugh  
Office hours: Tuesdays 10:00-11:00  
Stone 113  
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## Teaching Assistant Information:

Ellen Pero  
Office hours: Thursdays 10:00-11:00 and by appointment  
Forestry 318 (within 315 office suite)  
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## Course Description:

This course is intended to apply all of the coursework during your undergraduate career to address real-world challenges in wildlife biology and management. Importantly, this will be done in accordance with the professional expectations you will encounter as you pursue a career in wildlife biology. Working individually and discussing some material in groups, we will address pressing conservation problems from a diversity of systems and species. You will develop practical solutions and make management decisions and recommendations. In doing so, you will consider ecological, social, cultural, financial, political, legal, and other important factors which are considered when addressing real world conservation problems. Some principles of Structured Decision Making will provide a broad framework for our work. Much of the course will be focused around controversies surrounding urban deer in Missoula. You will be challenged to present your findings, recommendations, and decisions in a diversity of formats.

## Tentative Class Schedule

This class schedule is tentative and will change. *All readings must be done before class on the day listed below.* We will announce readings in class ahead of time and make them available on Moodle. We will provide specific instructions for each writing assignment.

Date	Subject	Assignment Due
January 14	Course introduction and History of wildlife conservation	
January 16	History of wildlife conservation	
January 21	Overview of semester project, Introduction to Structured Decision Making, and History of wildlife conservation	
January 23	Introduction to Structured Decision Making	
January 28	Guest: Brian von Lossberg, Missoula City council chair – Missoula deer	
January 30	Introduction to Structured Decision Making	Homework #1 due (Identifying the Problem) Bring two hard copies to

		class
February 4	Estimating abundance of wildlife (Ellen Pero and Chris Hansen)	Millspaugh in Reno
February 6	No class	Millspaugh in Reno and MT TWS Meetings
February 11	Structured Decision Making	Writing assignment #1 due (Problem Statement)
February 13	Structured Decision Making	Read Mitchell et al. (2013)
February 18	Population dynamics – how populations grow and how to model them	
February 20	Population dynamics – how populations grow and how to model them	
February 25	Overabundant ungulates – The problem and management alternatives	Read Côté et al. (2004)
February 27	Overabundant ungulates – The problem and management alternatives	
March 3	Guest: Brian von Lossberg, Missoula City council chair – Missoula deer or Discussion –management alternatives	Homework #2 due (Management Alternatives)  Bring two hard copies to class
March 5	Guest: Brian von Lossberg, Missoula City council chair – Missoula deer or Discussion – management alternatives	
March 10	Graduate Discussion Panel – Careers in Wildlife Biology and Graduate School	Writing Assignment #2 due (Management Alternatives)  Millspaugh at North American Wildlife Conference
March 12	<b>Exam #2</b>	Millspaugh at North American Wildlife Conference
March 17	<i>Spring break</i>	
March 19	<i>Spring break</i>	
March 24	Lead ammunition controversy	Homework #3 Due (Lead Ammunition)  Bring two hard copies to class  Read Arnemo et al. (2016)
March 26	Lead ammunition controversy	

March 31	Work on deer project – teams report out	
April 2	Work on deer project – teams report out	Writing assignment #3 (Your Model Description)
April 7	Guest: Brian von Lossberg, Missoula City council chair – Missoula deer or TBD	
April 9	Guest: Brian von Lossberg, Missoula City council chair – Missoula deer or TBD	
April 14	Prepare and Present Missoula City Council	
April 16	Prepare and Present Missoula City Council	
April 21	Debrief after presentation	Job evaluations due
April 23	TBD	Millsbaugh at Clemson University  Writing assignment #4 (Newspaper Article)
April 28	Course wrap-up	
April 30	<b>Exam #2</b>	

## Class Format

The course will consist of 2-80 minute meetings each week. Important concepts and examples of wildlife management will be discussed with a focus on urban deer in Missoula. A typical format will involve (1) Overview of the issue by the instructor; (2) A brainstorming session and discussion to help identify and focus the problem and information needed to address it (what is the problem, what are the fundamental and means objectives, what do we think we know, what do we need to know, and what are alternative solutions); and (3) Students make recommendations or a decision and communicate that outcome in a diversity of formats. Lectures will involve frequent discussion with your peers to facilitate thought about course material. However, all graded assignments are to be completed individually.

## Grading

This course is designed so you apply critical thinking to solving demanding, real-world conservation issues. Importantly, this will be done in accordance with the professional expectations you will encounter as you pursue a career in wildlife biology. You will thus be graded on the products you produce. Your final grade will consist of:

Grading	Total Points	Due Date
Homework assignments (3 @ 25 points each)	75	You will have 3 homework assignments. Each is intended to help you with the term project and facilitate discussion.
Individual writing assignments (4 @ 50 points each)	200	There will be 4 separate writing assignments. Each will help you on your

		final term project report.
Exams (2)	250	There will be 2 exams throughout the semester (see above and below).
Job performance grade	200	This portion of your grade will be assigned based on peer evaluations of your work and my evaluation after your presentation to the Missoula City Council
Final term project	275	May 5, no later than 12:00 p.m.
Total points	1,000	

***Please note, this class is offered for traditional letter grade only, it is not offered under the credit/no credit option.***

### **Homework Assignments**

You will have 3 homework assignments throughout the semester. They are designed to help facilitate discussion in class. Please bring two hard copies of each assignment to class. I will provide you with detailed information ahead of each homework assignment.

### **Individual Writing Assignments**

You will be responsible for 4 separate writing assignments that will be completed individually. We will discuss some of these topics in groups in class, but ultimately, you will be responsible for writing them up individually. Each assignment will provide an opportunity to communicate in a different format and to a different audience. Specific details for each assignment will be provided. For each assignment, you will be required to submit both an electronic and hard copy.

### **Exams**

There will be 2 exams, one about halfway through the semester and the other on the last day of classes. Both exams will attempt to determine your understanding of the application and limitations of the concepts, theory, and application we have discussed and applied throughout the semester. Consequently, exams will require you to integrate information from lectures, discussions, and readings. Exams are cumulative.

### **Job Performance Evaluation**

One of the objectives of the course is for you to develop a sense of being a professional. The demeanor you present in the classroom, your contribution to class problem solving efforts, the courtesy you show others during debate of issues, the work ethic you demonstrate, the degree of your participation in the team project process, and the professional image you present are all part of my assessment of you as a professional. Other factors in my assessment will be absenteeism, tardiness to meetings (class), lateness of assignments, etc. (see below). Your fellow classmates, who are assigned to your term project team, will provide feedback on your work as well (anonymously). You will also complete a self-evaluation of your work performance. Professional evaluations will be made at the end of the semester because most of the group work necessary to make a presentation will be done at that time. Specifically you will be graded on your participation, preparedness, collegiality, contribution, and leadership you display. You will receive the specific rubric used to evaluate your performance.

Regular participation in class discussion is important, but the value of your comments is of greater significance than how frequently you say something. A question that helps elucidate a concept, a suggestion that helps frame a solution, or a piece of information that puts the question in a new

light is of greater use than more frequent, less thoughtful comments. You will be drawing on readings, previous class lectures or discussions, and from previous courses for contributions to the class. Additionally, how you contribute to your team's effort to solve assigned problems and how you conduct yourself in the classroom (absenteeism, tardiness, tolerance of other opinions, regard for others, and timeliness with assignments) and in interactions with me and the TA will affect your grade.

The final job evaluation score you receive will be based on two different group functions including (1) your contribution to the management alternatives and (2) your contribution to the presentation. Each will be worth 100 points.

### **Final Term Project**

We will all be focused on urban deer management in Missoula. We will be working together on this project but each of you will need to individually write up your term project.

At a minimum, your term project must (1) be developed within the context of structured decision making; (2) offer a decision (recommendation) that is based on the principles of structured decision making; (3) consider at least 3 management alternatives; (4) consider some aspect of human dimensions, legal/political factor along with ecological considerations; (5) apply a simulation model that you develop (population model, habitat model, etc.); and (6) be supported by peer-reviewed literature which is referenced appropriately. Other attributes of the project are in the term project handout.

### **Attendance Policy**

Attendance is required. Attendance is the most fundamental part of being successful. If you have a legitimate excuse for missing class, tell me and provide evidence. Legitimate excuses include: (1) participation in University activities and programs; (2) personal illness; or (3) family and/or other compelling circumstances. Further, 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 must submit a formal written request to the instructor. Similarly, you are expected to arrive on time for class before we begin. If you have another commitment before class begins that might make you late, notify the instructor. Attendance will be considered as part of your job performance grade.

If you miss 6 or more classes for unexcused reasons, you will be given a "F" grade for the class. We will notify you at your university email address when you reach 4, 5, and 6 unexcused absences.

### **Classroom Etiquette and Lecture Discussion Groups**

There is a no laptop policy in lecture. If you have a legitimate reason why you need to use a laptop during our class meetings please see the instructor. Further, no use of iPods, iPads, cell phones, text messaging, surfing the internet, or other disruptive activities, such as twittering or tweetering and carrying out a conversation with the person sitting next to you, are allowed. These activities are disruptive to your fellow classmates and the instructor and will not be tolerated.

You are expected to fully participate and engage in our discussions. Thus, it is expected you will have read assignments before class. Turn off your cell phones before entering class. Show respect for others and be open to different opinions which will be shared and explored.

## **Late and Missed Assignments**

All assignments are due at the start of the class period. For all assignments, there will be a 50% per day penalty for assignments turned in late. In other words, if an assignment is worth 50 points and you do not turn it in at the start of the class when it is due, you could only receive a maximum of 25 points if the assignment is submitted within 24 hours after the due date. Between 24-48 hours past due, you could receive up to 12.5 points and so on, under this scenario. If you have questions, please ask me.

If you have a legitimate excuse for missing an assignment or turning one in late, notify me as soon as a problem occurs, not when you submit the assignment late. I will work with you if you have a legitimate excuse, but will apply the late assignment policy if you do not offer a legitimate excuse. Legitimate excuses include: (1) participation in University activities and programs; (2) personal illness; or (3) family and/or other compelling circumstances. Further, 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 must submit a formal written request to the instructor. You need to provide me with evidence of these matters. I hope you can appreciate how an e-mail the morning of class indicating "I don't feel good" is not legitimate without corroboration such as a note from your physician or the university infirmary. Without evidence or some reasonable corroboration, you will lose points as described in this section.

## **Academic Dishonesty**

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](#).

Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration, consult with me. 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](#). Plagiarism will result in failing the course and being reported to the University for disciplinary action.

## **American Disabilities Act**

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

If you have already registered with Disability Services, please notify me as soon as possible, but no later than the end of the second week of classes so that we can discuss appropriate accommodations. Please do not wait until we are weeks into the semester to notify me of you being registered with Disability Services. The sooner I am made aware of any accommodations the sooner I can make the necessary arrangements. If you have questions about anything in this syllabus, please contact me and let me know.

## Drop Dates

Important Dates Restricting Opportunities to Drop a Course Spring 2020:

Deadline	Description	Date
To 15 <sup>th</sup> instructional day	Students can drop classes on CyberBear with refund & no "W" on Transcript, last day to change to Audit	February 3, @5 PM
16 <sup>th</sup> to 45 <sup>th</sup> instructional day	A class drop requires a form with instructor and advisor signature, a \$10 fee from registrar's office, student will receive a 'W' on transcript, no refund.	February 4 – March 24 @5 PM
Beginning 46 <sup>th</sup> instructional day	<u><a href="#">Students are only allowed to drop a class under very limited and unusual circumstances.</a></u> Not doing well in the class, deciding you are concerned about how the class grade might affect your GPA, deciding you did not want to take the class after all, switching majors, and similar reasons are not among those limited and unusual circumstances. If you want to drop the class for these sorts of reasons, make sure you do so by the end of the 45 <sup>th</sup> instructional day of the semester. Requests to drop must be signed by the instructor, advisor, and Associate Dean (in that order) so if you pursue this request, <b>leave sufficient time to schedule meetings with each of these individuals</b> (generally this will take at least 3-5 working days). A \$10 fee applies if approved. Instructors must indicate whether the individual is Passing or Failing the class at the time of request.	March 25 – May 1 @5 PM

## Student Wellness and Basic Needs Security Statement

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, or has mental health concerns, and believes this may affect their performance in the course, is urged to contact the Office of Student Success for support. Furthermore, please notify me if you are comfortable in doing so. This will enable me to help provide any resources and contact information in a confidential and discreet manner.