Principles of Wildlife Management

ES/Bio 314/514, spring 2014

Course description

This course is designed to help students bridge the gap between academic experience and advances into the wildlife profession. The course will apply population and community ecology to the management and conservation of wild populations.

Specific course objectives

1. To relate biological concepts and ecological principles to the management of natural resources, habitats, and wildlife populations.
2. To encourage students' professional development through problem solving, critical thinking, and application of education.
3. Provide an opportunity for students to discuss current issues and research in wildlife and fisheries management.
4. Provide experience working in teams to solve reality-based problems.

By the end of this course, students should be able to:

1. Demonstrate an ability to assess wildlife population dynamics and the demographic and genetic structure of populations.
2. Apply general ecological principles to management decisions.
3. Describe the process of approaching a management problem including setting objectives, making decisions, and developing monitoring strategies.
4. Demonstrate an awareness of relevant management agencies and legislation that influences wildlife management decisions.

In addition, graduate students will:

1. Develop a deeper understanding of the quantitative tools used in wildlife management.
2. Demonstrate a more sophisticated understanding of underlying ecological concepts.
3. Further their ability to read scientific literature and present the concepts orally to the class.

Instructor/class information

Instructor

M. Elsbeth (Misty) McPhee
mcpheem@uwosh.edu
424-0644
office hours:
Tues 10:00 am – 12:00 pm
Fri 2:00 – 3:00 pm
If these don't work for you, I'm happy to set up an appointment at a more convenient time. My schedule is posted on D2L so you can see when I'm available.
office: 3448 Sage

Meeting times/locations:

Monday, Wednesday
3:00 – 4:30 pm
N. Halsey 266

Required Texts & Materials

Mills, L. Scott. 2013. Conservation of Wild Populations: Demography, Genetics, and Management, Second Edition. Blackwell Publishing, Malden, MA.

Other readings will be assigned as we go through the course — these will be posted on D2L.

Grading

Your grades will be based on (for descriptions, see below):

	Undergraduate	Graduate
Participation	100	100
Discussion leadership	--	50
Exams	300 *(3 @ 100 each)*	300 *(3 @ 100 each)*
Homework assignments	200 *(4 @ 50 each)*	300 *(6 @ 50 each)*
Discussion questions	20 *(10 pts/ discussion)*	20 *(10 pts/ discussion)*
Field trips	60 *(2 @ 30 each)*	60 *(2 @ 30 each)*
Recovery Plan *prospectus* *individual portion* *presentation* *group work* *paper*	100 *10* *30* *50* *10* *--*	150 *10* *30* *50* *10* *50*
Total	780	980

To figure your grade at any point throughout the term, add the total points earned and divide by the total points possible up to that point. Attendance and participation can raise a borderline grade.

	Undergraduate	*Graduate*
Grade	% of total points	% of total points
A	94 – 100	98 – 100
A-	90 – 93	95 – 97
B+	87 – 89	92 – 94
B	83 – 86	89 – 91
B-	80 – 82	86 – 88
C+	77 – 79	83 – 85
C	73 – 76	79 – 82
C-	70 – 72	76 – 78

D+	67 – 69	74 – 75
D	63 – 66	71 – 73
D-	60 – 62	70
F	≤ 59	≤ 69

Grade descriptions

1. **Class participation** will be graded based on attendance and overall participation and engagement in the course. Obvious signs of engagement are questions and participation in discussion; other signs are coming to talk to me in office hours or before/ after class; and finally, just **general attitude** and attendance in the classroom.

   Participation grades will be given as follows:

   A+ = participates very often (4+ times) and meaningfully (comments related to the readings/exercise)
   A = participates often (3 times) and meaningfully
   B = participates some (2 times) and meaningfully; participates often but not meaningfully
   C = in class but doesn't participate; participates some (2 times) but not meaningfully
   D = in class but not paying attention at all (sleeping, on computer) or has a poor attitude toward the material, other students, or the instructor.

   <u>You will lose points for each class missed.</u>

2. **Discussion leadership.** Each graduate student will be required to present one primary journal article of their choosing to the class on either 26 Feb and 2 Apr and lead the discussion on that/those article(s) in addition to the article(s) assigned by me. Half of the graduate students will lead on one day and the other half on the other day. The article you choose must address a topic we have discussed up to this point in the class.

3. There will be three exams, each worth 100 points; graduate exams will be worth the same amount but will have additional questions of greater complexity.

4. There will be two **mandatory weekend field trips**: Saturday, **19 April** and Saturday, **26 April**. Put them on your calendar NOW. After the trips you must write a short (~2 page) analysis of the day's activities and how what you've learned in class applies to the programs visited. These will be due on 30 April.

5. For your final group projects, you will divide into six groups and evaluate a recovery plan for a species of your choice. The full assignment will be posted on D2L.

    - On **19 March**, you will turn in a document that 1) lists your species of choice, 2) includes a copy of or link to the species' recovery plan, and 3) lists your group members.
    - On **23 April**, you will turn in part III of the assignment, *Conceptual Construction of a Conservation Plan*. This is to be done on your own.
    - On either **12 or 14 May**, you will give a 20-min presentation to the class on your species based on part IV, *Questions and Assessment: Evaluation an Actual Recovery Plan*.
    - Graduate students will be required to write a paper evaluating the recovery plan. This will be due on Friday **16 May.**

Miscellaneous – but important – comments

1. Cell phone use will NOT be permitted in my classroom. If your cell phone goes off or you text during class, you will be asked to leave and you will receive an F for that day's participation - and any other activities we've done that day.

2. Laptops: you are more than welcome to use laptops in class to take notes, but you are **NOT** to use them for any other purpose. If I see you using your laptop for anything other than note-taking, I will ask you to close your computer and automatically deduct 50 points from your overall grade.

3. Any documents that you submit through D2L must be saved as a pdf and double spaced. Any other document will be disregarded.

If you turn in a hard copy, consider use both sides of a sheet of paper, or even use scratch paper! Let's try to keep our resource use down.

No assignments will be accepted after the graded assignment has been returned to the class. If you are late but are still before the cut off, you will be penalized 10% per day.

4. The University uses the Google mail system which includes Google Calendar. This is what I use to manage my schedule. All students have access to my calendar and I request that you look at it BEFORE contacting me about an appointment. I love it when students come see me, but organizing meetings is much easier if you look at my calendar first.

5. The syllabus is a general guideline – we might go slower or faster depending on interest and engagement on various topics. Feel free to give feedback on the speed of the class.

6. **STUDENTS WITH DISABILITIES ARE WELCOME IN THIS COURSE**. Please contact me in the first week of class so that we may arrange all possible accommodation ahead of time.

7. **EMAIL COMMUNICATION and D2L** will be used frequently throughout the semester to communicate between Instructors and Students. Emails constitute legal, official University communication. Not checking your email is not an excuse for performance problems in the class. Contact Academic Computing or any Campus Computer Lab supervisor for assistance with email and D2L.

8. **ACADEMIC HONESTY** policies are clearly defined at this University and all students are expected to abide by them. Penalties for violations are severe in this course. Cheating on an exam (including looking at someone else's paper) at a MINIMUM leads to zero on that exam, with no opportunity for a make-up or extra credit. A second offense is an F in the course and a report to Dean of Students.

Proposed lecture and assignment schedule

Week	Date	Topic(s)	Reading	Items due
1	3 February	• Introduction to wildlife management • Course structure	Chpt 1	
	5 February	• Wildlife laws • Guest speaker: Dr. James Krueger, Bison and Brucellosis		
2	10 February	• Probability and statistics	Chpt 2	
	12 February	• Probability and statistics, cont. *meet in the Radford computer lab*		
3	17 February	• Population vital rates	Chpt 4	• stats homework
	19 February			
4	24 February			
	26 February	• Group discussion; graduate student presentation(s)	Article(s) TBA	• N&S homework • discussion questions
5	3 March	• **EXAM 1**		
	5 March	• Geometric population growth	Chpt 5	
6	10 March	• Geometric population growth, cont. • Density dependent population growth	Chpt 7	• homework (grad only)
	12 March	• Density dependent population growth, cont.		
7	17 March	• Population projection models	Chpt 6	• pop growth homework
	19 March			• Recovery Plan outline
24, 26 March *No class – spring break*				

8	31 March	• Predation	Chpt 8	
	2 April	• Group discussion; graduate student presentation(s)	Article(s) TBA	• discussion questions
9	7 April	• **EXAM 2**		
	9 April	• Genetic concepts • Genetic variation and fitness	Chpt 3, 9	
10	14 April			
	16 April			
Saturday, 19 April: Field trip to Wild Rose Fish Hatchery				
11	21 April	• Dynamics of multiple and small populations	Chpt 10, 12	• genetics homework
	23 April			• Recovery Plan, part III
Saturday, 26 April: Field trip to Horicon Marsh (10-12 tour, 12-1 lunch, 1-3 canoe)				
12	28 April	• Harvested populations		• homework (grad only)
	30 April	• Caribou exercise		• field trip write-ups
13	5 May	• Sampling		
	7 May	• **EXAM 3**		
14	12 May	• **group presentations**		• slides
	14 May			
	16 May			• graduate recovery plans