

# Wildlife behavior and conservation: ES/Bio 318/518, Fall 2013

## Course description

This course is designed to teach the fundamental theory of behavioral ecology and then apply that theory to wildlife conservation. We will examine how environments shape organisms' lives and what that means for our efforts to manage and conserve species.

## Specific course objectives

1. Gain a rigorous biological foundation in behavioral ecology, evolutionary biology, and related topics in order to understand how environments shape behavior.
2. Provide a forum for discussion of current issues in conservation biology.
3. Develop a framework for applying behavioral ecological theory to wildlife conservation.

For **graduate students** the course will additionally:

4. Provide the opportunity to more completely integrate behavior into conservation and synthesize concepts from the two fields.
5. Develop communication and teaching skills by leading a course by oneself.
6. Further develop the ability to conduct a literature search and write a literature review.
7. Provide the opportunity to complete a behavioral research project, including statistical analysis and write-up.

## Instructor/class information

### *Instructor*

M. Elsbeth (Misty) McPhee

mcpheem@uwosh.edu

424-0644

office hours:

Tues 11:00 – 1:00

Fri: 11:30 – 12:30

If these don't work for you, I'm happy to set up an appointment at a more convenient time. Through Google, all students have access to my calendar and I request that you look at it BEFORE contacting me about an appointment.

office: 3448 Sage

### Meeting times/locations:

Monday, Wednesday, Friday

10:20a – 11:20a

Sage Hall 4212

### *Required Texts & Materials*

Alcock, John. 2009. *Animal Behavior*, Tenth Edition. Sinauer Associates, Inc., Sunderland, MA.

### **Graduate students:**

Martin, Paul and Patrick Bateson. 2007. *Measuring Behaviour: An Introductory Guide*, Third Edition. Cambridge University Press, Cambridge.

[http://www.amazon.com/Measuring-Behaviour-An-Introductory-Guide/dp/0521535638/ref=sr\\_1\\_1?ie=UTF8&qid=1377805080&sr=8-1&keywords=measuring+behavior+an+introductory+guide](http://www.amazon.com/Measuring-Behaviour-An-Introductory-Guide/dp/0521535638/ref=sr_1_1?ie=UTF8&qid=1377805080&sr=8-1&keywords=measuring+behavior+an+introductory+guide)

Other readings will be assigned by your classmates and me; these will be posted on D2L.

## Grading

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

	<u>Undergraduate</u>	<u>Graduate</u>
Participation	100	100
<u>Discussion leadership</u>		
Meeting with me	15	--
Paper choice		
timeliness	10	20
lit search	15	--
lit review	--	30
Discussion		
preparedness	20	25
leadership	20	25
group work	20	
<i>Total</i>	<i>100</i>	<i>100</i>
Discussion questions	50	50
Exams	300 (100 each)	360 (120 each)
Behavioral exercise	15	15
Ethogram	100	120
<u>Final project</u>		
prospectus	10	10
presentation	30	40
group work	10	10
report	50	60
<i>Total</i>	<i>100</i>	<i>120</i>
<b><u>Total</u></b>	<b>765</b>	<b>865</b>

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.

Grade	<i>Undergraduate</i>	<i>Graduate</i>
	<u>% of total points</u>	<u>% of total points</u>
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 based on your overall engagement in the class – 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; finally just general attitude and attendance in the classroom matters.

Participation grades will be given as follows:

- A = participates often and meaningfully in class discussions
- A- = participates a fair amount
- B = participates some
- B- = participates rarely
- C = in class but doesn't participate
- D = in class but not paying attention at all (sleeping, on computer)

Your **active** participation is the key to your learning the material and to the success of the course—both for you as an individual and for the class as a whole.

2. Mondays and Wednesdays will be lectures on behavioral theory. For these, I will assign chapters from the text book.

Fridays will be open discussion of assigned journal articles or book chapters from other books. I will lead the first few discussions, but then each of you will sign up to lead a discussion with one or two of your classmates – discussions will be lead by 2-3 undergraduate or 1 graduate student. You will sign up for a topic that interests you and then work with me to choose the readings for that week.

Your grade for the discussion leadership will be based on two main things. (1) Your meeting with me. Each group/individual **MUST** meet with me **two weeks** prior to your leadership to go over possible journal articles. You must come with a bibliography

with a list of keywords and search engines used. (2) The discussion itself: how you handle it, how prepared you are, and how well you and your partner(s) work together. You should start with short presentation on conservation efforts related to this topic, then have the discussion go from there.

*Graduate students:* Unless the class is too large, you will be required to lead a discussion on your own. In any case, you are required to write a brief literature review on your chosen topic.

3. For the weeks you don't lead, you are responsible for posting three discussion questions on D2L (in the Discussions section) about the readings assigned for that Friday. Bring your questions to class (either electronically, on paper, or in your head). These questions will NOT be questions about details of the readings but big-picture questions that foster discussion. For example, do not ask, "Did the animals in the treatment group forage more or less than those in the control group?" but, "What implications does the difference in foraging behavior have on reproductive success?"
4. There will be three take-home exams, worth 100 points for undergraduates and 120 points for graduate students. I ask very broad essay questions. The more you've read of the text and the more you've asked questions in class, the better you'll do in your written answers.
5. On the Monday of Thanksgiving week, there will be no class. You are to take this time, however, and go into the field to observe animals and create an ethogram. The exercise itself will take more than the one-hour of class time I'm giving you, so be sure to plan accordingly.

*Graduate students:* You will be required to spend more time observing your animals, conduct more sophisticated data analysis, and provide a more professional write-up of your project than the undergraduates. Thus, I recommend that you begin working on this before Thanksgiving week.

6. For your final group projects, you will get into groups of 2 or 3 students and study the behavior and conservation of a given species. On **25 October**, you will turn in a prospectus of your project, then on either 2, 4, or 6 December, you will give a 15-min

presentation to the class on your species. A full description of the assignment is below.

### 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 I will automatically deduct 50 points from your overall grade.
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. This is a conservation class, therefore, I prefer all documents to be turned in electronically. If you must turn in a hard copy, consider printing on both sides of a sheet of paper, or even printed on scratch paper! Let's try to keep our resource use down.
4. If you are late for an assignment and the dropbox is closed, put your assignment in the "Late assignments" dropbox. **I WILL NOT ACCEPT ANY ASSIGNMENT VIA EMAIL – EVER.** If it goes into the late dropbox, I don't guarantee it will get graded before the end of the term. Do not complain about timing – if you were late, I have no obligation to be timely. All late submissions are subject to a 10 - 20% penalty and will appear as a 0 on D2L until I grade it which, again, might not be until the end of the semester.
5. **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.
6. **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.

7. **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.

8. UW Oshkosh conducts an **Early Alert** program for all 14-week undergraduate courses to provide students with performance feedback early in the term so that appropriate action can be taken if needed. You will receive an e-mail from Academic Advising with the subject Early Grade Report on **4 Oct.** Please read the e-mail carefully and see me if your grade is lower than a C and/or you have not attended class regularly.

## Group Project description

Early in the semester you will identify an endangered or threatened species of interest. You and your partner(s) will study the species' behavior and life history, evaluate the current conservation program for that species, and talk about how behavioral ecology has been incorporated into the conservation program for that species – or how incorporating behavioral ecology could potentially enhance the success of the program. **A large part of your grade will be based on your analysis of the program in relation to behavioral ecology.** You will then put together a 15-min presentation on the species. (One report/group; graduate students must turn in their own.)

On 25 October, a prospectus is due. (Hint: the more you have done here, the less you'll have to do at the end!) This will be a short description of the species and its conservation status - and **a list of references** that will be helpful as you put together your presentation and report.

On either 2, 4, or 6 December, your group will give your presentation and turn in (via D2L) an electronic copy of your presentation along with a bibliography. The report should be fully cited and it must be *your original work* — plagiarism will not be tolerated and will result in 0 points for the paper AND presentation.

Scoring group projects can be difficult and students typically feel that it's unfair. Therefore, after you present your species report, you will turn in a brief description of what you did (as an individual) to research the topic and prepare for and give the presentation, and how your group worked together. One short paragraph is sufficient. You should then:

1. give **yourself** a letter grade
2. give your **partner(s)** a letter grade

These grades will not necessarily be identical, and as I already have some idea of how I will grade you, you should evaluate your efforts honestly.

*Proposed* lecture and assignment schedule

<u>Date</u>	<u>Topic</u>	<u>Assignment</u>
<u>1. Introduction</u>		
Wed, 4 Sept	Why study behavior and conservation? <i>Discussion</i>	
Fri, 6 Sept	Course goals and structure	
Mon, 9 Sept	Examples: reintroductions, evolutionary traps	<u>Read:</u> McPhee & Carlstead 2010
Wed, 11 Sept	<i>Movie:</i> Continuing the Line	
Fri, 13 Sept	<i>Discussion</i>	<u>Read:</u> Aaltonen et al. 2009 <u>Read:</u> Bremner-Harrison et al. 2004 <u>Read:</u> Caro 2007 <u>Read:</u> Buchholz 2007 <b><u>Due:</u> Discussion questions</b>
<u>2. Fundamentals: Hypotheses, evolution, and natural selection</u>		
Mon, 16 Sept	Evolutionary approach to behavior	<u>Read:</u> Alcock, Chaps 1, 10
Wed, 18 Sept	Hypothesis testing/making predictions with ecological theory in conservation	<u>Read:</u> Heinrich, <i>Ravens in Winter</i> , pp. 33-47, 58-94
Fri, 20 Sept	<i>Behavioral analysis exercise</i>	<u>Read:</u> Stockwell et al. 2003 <u>Read:</u> Swarts et al. 2009 <b><u>Due:</u> Discussion questions</b>
<u>3. Behavioral concepts</u>		
23, 25 Sept	Social behavior	<u>Read:</u> Alcock, Chaps 2, 3 <b><u>Due 23 Sept:</u> Behav'l exercise</b>
Fri, 27 Sept	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b><u>Due:</u> Discussion questions</b>
30 Sept, 2 Oct	Communication	<u>Read:</u> Alcock, Chapt 4 <b>Take-home exam 1 posted 30 Sept</b>
Fri, 4 Oct	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b><u>Due:</u> Discussion questions</b>
7, 9 Oct	Feeding and avoiding predators	<u>Read:</u> Alcock, Chapt 5 <b><u>Due 7 Oct:</u> Take-home exam #1</b>

Fri, 11 Oct	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b>Due:</b> <b>Discussion questions</b>
14, 16 Oct	Habitat selection	<u>Read:</u> Alcock, Chapt 6
Fri, 18 Oct	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b>Due:</b> <b>Discussion questions</b>
Mon, 21, 23 Oct	Reproductive behavior	<u>Read:</u> Alcock, Chapt 10
Fri, 25 Oct	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b>Due:</b> <b>Discussion questions</b> <b>Due:</b> <b>Prospectus</b>
Mon, 28 Oct	Mating systems	<u>Read:</u> Alcock, Chapt 8 <b>Take-home exam 2 posted</b>
Wed, 30 Oct	Parental care	<u>Read:</u> Alcock, Chapt 9
Fri, 1 Nov	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b>Due:</b> <b>Discussion questions</b>
4, 6 Nov	Development of behavior	<u>Read:</u> Alcock, Chapt 11 <b>Due 4 Nov: Take-home exam #2</b>
Fri, 8 Nov	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b>Due:</b> <b>Discussion questions</b>
Mon, 11 Nov	Neurons	Read: Alcock, Chapt 12
Wed, 13 Nov	Hormones	Read: Alcock Chapt 13
Fri, 15 Nov	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b>Due:</b> <b>Discussion questions</b>
<u>4. Applying behavioral concepts to us: Human behavioral ecology</u>		
18, 20 Nov	Human behavior	<u>Read:</u> Alcock, Chapt 14
Fri, 22 Nov	<i>Discussion</i>	<u>Read:</u> <i>Assigned papers</i> <b>Due:</b> <b>Discussion questions</b>
<u>5. Ethograms</u>		
Mon, 25 Nov	<i>No class – Ethogram exercise</i>	
27, 29 Nov	<i>No class - thanksgiving</i>	

<u>6. Species Reports</u>		
2, 4, 6 Dec	<i>Group presentations</i>	<b>Due 2 Dec:</b> Presentations and bibliographies <b>Due 4 Dec:</b> Ethogram exercise <b>6 Dec: Take-home exam #3 posted</b>
<u>7. Conclusions</u>		
Mon, 9 Dec	Case studies	
Wed, 11 Dec	<i>Discussion: Ethics</i>	
Fri, 13 Dec	<i>Final exercise</i>	<b>Due: Take-home exam #3</b>

misc resources, ideas:

[santacruz pumas.org](http://santacruz.pumas.org) – footage of puma behavior

when talking to students about how to lead a discussion:

- what was take home message?
  - give students time to think
  - if question is confusing, write on board
- ==== all students should start with "what is the take home message?"