

# SYLLABUS

## BEHAVIORAL ECOLOGY

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**OFFICE HOURS:** M, W: 10-11 & 2-4, or by appointment

**My commitment to diversity and inclusion:** I want to acknowledge that we are on the ancestral homelands of the Anishinaabe Nation and that the Anishinaabe people are among the First Peoples of the Great Lakes. In addition, I believe the diversity all students bring to my classroom is a resource, strength, and benefit to our shared pursuit of scientific knowledge. My goal is that the learning needs of students from all backgrounds and perspectives will be well served in my classroom and that all students in my class are supportive and respectful of the diversity represented here: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, culture, immigration status and religion. Further, I believe that all people have the right to be addressed and referred to in accordance with their personal identity. As such, please let me know the name you prefer to be called as well as your preferred pronouns and I will do my best to refer to all students accordingly and support your fellow classmates in doing so as well. If my academic schedule conflicts with any of your religious events, let me know so that I can make arrangements for you to not miss out important activities and assignments. Please let me know if/how I can make you feel more welcome, valued and supported in our shared pursuit of conservation knowledge.

Sincerely, Dr. Lafferty

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**COURSE DESCRIPTION:** Behavioral ecologists look at the responses of animals to their environment from an evolutionary perspective. They ask the questions “how did this behavior evolve?” and “how does this behavior contribute to survival and reproduction?”. In this course we will consider a wide variety of behaviors including group formation, social behavior, predator-prey interactions, foraging decisions, mate choice, parental care, life history strategies, territoriality, and altruism as the product of evolution.

**CLASS MEETING TIME & Location:** M, W 12:00-1:40, Jamrich Hall 2315

### **COURSE GOALS:**

- To appreciate the interplay of genes, the developmental process, the endocrine system, the nervous system, and the environment that produces behaviors.
- To understand animal behaviors as adaptations that maximize the probability that an individual will survive and reproduce.
- To apply Tinbergen’s “four questions” to a variety of different behaviors.
- To discover the role that behavioral plasticity plays in maximizing individual fitness.
- To appreciate the role of hypothesis testing and experimental design in behavioral ecology.
- To use our understanding of behavioral ecology to pose and answer novel questions.

### **LEARNING OBJECTIVES:**

Successful completion of Behavioral Ecology will allow you to...

- Form hypotheses about how and why organisms display particular behaviors.
- Assess the influence of genetics and environment in the development and expression of behavior.
- Make predictions about behavior based on information about an individual’s environment.
- Depict the sensory world of a particular animal and explain how that sensory world shapes its behavior.
- Connect the outcomes of particular behaviors with survival and reproduction (i.e., fitness).
- Use the findings of behavioral ecology to better understand patterns of human behavior.
- Describe the experimental approaches and techniques used to study behavior.
- Ask a behavioral ecology question and design an experiment, field-based, laboratory-based, or a combination thereof, to answer that question.

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### CLASS EXPECTATIONS

Please arrive on time, bring your book, and be prepared to engage in conceptually rich class discussions, debates, and activities. Attendance is critical because this is an engaged learning class and there will be activities and discussion during every session.

Lateness and absences will adversely affect your grade. You will be considered late to class if you arrive later than 12:01 pm. You are permitted to be late once without penalty; however, for each additional time you are late to class you will lose 0.5 points from your classroom participation grade. In addition, you will be considered absent from class if you arrive later than 12:30 pm or do not attend class. You are permitted to miss one class period during the semester without penalty; however, for each additional absence you will lose 2 point from your classroom participation grade. Late assignments will not be accepted except due to exceptional circumstances (e.g., medical/family emergency). The following reasons do not excuse lateness in turning in assignments or tardiness/absence from class: routine (i.e. non-chronic) illness, oversleeping, excessive work load in other classes, inability to use EduCat, you forgot to save your assignment and your computer dies, you forgot your i>Clicker, opening day of deer season, or "forgetting". This list of unacceptable excuses in not exhaustive. Further, in order for an absence or lateness to be excused, you must provide formal documentation stating, which classes/deadlines were affected and explaining the reason behind the absence; all documentation will be subject to strict verification.

### Food & drinks

You can bring food and drinks to class, so long as it is quiet and does not give off a strong odor that will make everyone hungry (unless you bring enough to share with everyone) or nauseated. I recommend drinks with lids to minimize the risk of spilling on people, computers, and desks (yes, it has happened).

### Course EduCat page

If you're reading this online you've already found the official EduCat page for this course. The EduCat page will provide a week-by-week listing of peer-reviewed paper to compliment the chapters we'll be reading/discussing each week. You are responsible for reading the assigned chapters/papers before class and being prepared to discuss challenging theoretical and practical questions on the topics covered in the chapters and papers.

### Assignment Submission

Although there are few assignments for this course, all assignments that must be turned will be handled through EduCat. This will be a paperless course. For each assignment, I will create a folder with the assignment title and due date. The location of the folder in EduCat will correspond with the due date of the assignment.

### Feedback & Grading

To the extent possible, focus on learning in this course rather than grades. Behavioral Ecology is a subject that requires substantial reading and reflection, constructive and often times critical evaluation of the literature, topics/ideas covered, as well as creativity and enthusiasm. This class should be a place where eco-evolutionary theories get you excited and motivate you to think deeply about how to test fundamental and contemporary hypotheses to move the field of Behavioral Ecology forward. I will do my best to facilitate respectful discussions and I will provide guidance and feedback on your oral and written contributions. I expect you to make appropriate changes to your study habits, verbal and written contributions, and to improve your work products throughout the semester.

### Grading scale:

A	> 94	B+	87-89	C+	77-79	F	< 70
A-	90-93	B	84-86	C	74-76		
		B-	80-83	C-	70-73		

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Here's where you can earn points.

Activity	Possible points to be earned
Lead chapter lecture & discussion (2-student, team-effort)	12
Lead peer-reviewed paper discussion (2-student, team-effort)	8
Contribute conceptually to class discussions (1 pt./discussion M/W)	20
Submit 2 discussion questions/comments for each paper discussion (1 pt./submission)	10
Research proposal (NSF-GRF)	20
Research proposal peer-reviews (2 reviews, 5 pts. each)	10
Revised research proposal (NSF-GRF) and response to reviewers	20
<b>Total possible points</b>	<b>100</b>

**Please do not ask for extra credit and do not ask for a grade bump.  
In this class, you get exactly what you earn.  
No exceptions!**

**ACADEMIC INTEGRITY:** Do not cheat! Although you may be encouraged to work together in-class or out-of-class occasionally, and you may give or receive consulting help to/from each other at specified times designated by myself, you must complete your own work independently. All the work you submit must be your own. The minimum penalty for cheating or plagiarizing on any assignment or exam will be a zero grade for that assignment (no exceptions) and you will be reported to the Dean of Student (no exceptions). If you are caught cheating on a second assignment you will be given a grade of "F" for this course. Do not cheat!

**INDIVIDUAL CONSULTATION:** Please come see me if you have difficulty understanding the material or have questions or concerns about any portion of this course. If my office hours do not work for your schedule, we can arrangements to meet at another time.

**NMU'S NON-DISCRIMINATION STATEMENT:** Northern Michigan University does not unlawfully discriminate on the basis of race, color, religion, sex, national origin, age, height, weight, marital status, familial status, handicap/disability, sexual orientation, or veteran status in employment or the provision of services, and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities an equal opportunity to participate in all programs and activities. Anyone having civil rights inquiries may contact the Equal Opportunity Office, 158 Services Building 502, telephone number 906-227-2420.

**DISABILITY SERVICES:** If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (227-1700). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.

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	Lecture/Discussion Schedule	Presenter	Major assignment due
Week 1 8/27-8/31	Welcome to Behavioral Ecology	Dr. Lafferty	
	Chapter 1	Dr. Lafferty	
Week 2 9/3-9/7	Labor Day – No Class	Labor Day – No Class	
	Peer-reviewed paper discussion	Dr. Lafferty	
Week 3 9/10-9/14	Chapter 2	Dr. Lafferty	
	Peer-reviewed paper discussion	Dr. Lafferty	
Week 4 9/17-9/21	Chapter 3	Dr. Lafferty	
	Peer-reviewed paper discussion	Dr. Lafferty	
Week 5 9/24-9/28	Chapter 4	Dr. Lafferty	
	Peer-reviewed paper discussion	Dr. Lafferty	
Week 6 10/1-10/3	Chapter 5	Dr. Lafferty	NSF-GRF Proposal 1 <sup>st</sup> Draft Due
	Peer-reviewed paper discussion	Dr. Lafferty	
Week 7 10/8-10/12	Chapter 6	Students – TBD	
	Peer-reviewed paper discussion	Students – TBD	
Week 8 10/15-10/19	Chapter 7	Students – TBD	NSF-GRF Peer-Reviews Due
	Peer-reviewed paper discussion	Students – TBD	
Week 9 10/22-10/26	Chapter 8	Students – TBD	
	Peer-reviewed paper discussion	Students – TBD	
Week 10 10/29-11/2	Chapter 9	Students – TBD	
	Peer-reviewed paper discussion	Students – TBD	
Week 11 11/5-11/9	Chapter 10	Students – TBD	
	Peer-reviewed paper discussion	Students – TBD	
Week 12 11/12-11/16	Chapter 11	Students – TBD	Revised NSF-GRF Proposal Due
	Peer-reviewed paper discussion	Students – TBD	
Week 13 11/19-11/23	 <i>Thanksgiving Break</i> 		
Week 14 11/26-11/30	Chapter 12	Students – TBD	
	Peer-reviewed paper discussion	Students – TBD	
Week 15 12/3-12/7	Chapter 13	Students – TBD	
	Peer-reviewed paper discussion	Students – TBD	
Week 16 Thursday, Dec. 13 <sup>th</sup> 12:00 – 1:50	Chapter 14 Peer-reviewed paper discussion End of semester activity	Students – TBD Students – TBD	