

ANIMAL BEHAVIOR LABORATORY (BIO 406)
Spring 2021
M, 12:30-4:20 PM, 160 Science

INSTRUCTOR: Dr. Chris Maher
OFFICE: 201 Science (A Wing) or 178 Science (CSTH Dean's office, C Wing)
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DROP-IN HOURS: T 12:30-1:30 PM, W 1:00-2:00 PM, or by appointment

COURSE DESCRIPTION: In this course, you learn how to study animal behavior, i.e., you design experiments, analyze data, and report results. You observe animals and try to understand their activities, using rigorous scientific procedures. Be prepared, however. Animals do not necessarily do what we want, when we want. Therefore, you must exercise patience and keep an open mind. The amount that you learn depends greatly on the amount of time, effort, and creativity that you commit to tasks.

This syllabus is intended as a guide for the semester; however, I reserve the right to make changes in topics or schedules as necessary.

COURSE PREREQUISITES: You must have completed successfully (i.e., grade of C- or higher) BIO 107 or BIO 113. If you have not met these prerequisites, please speak with me. A course in statistics (MAT 220) is highly recommended but not required.

COURSE MATERIALS:

Martin, P. and Bateson, P. 2007. *Measuring behaviour: an introductory guide*. 3rd ed. Cambridge University Press, Cambridge. [Required]
Pechenik, J. A. 2015. *A short guide to writing about biology*. 9th ed. Pearson, Boston. [Required; older editions are acceptable]

LEARNING OUTCOMES: Upon successfully completing this course, you should be able to:

- 1) design and conduct behavioral studies;
- 2) demonstrate methodologies that researchers use in animal behavior;
- 3) observe animals carefully and understand principles underlying their behavior; and
- 4) communicate ideas more effectively to others in written and spoken form.

ASSESSMENT:

1) *Lab assignments and report:* You will submit several written assignments, which address all four learning outcomes: designing and conducting studies, using appropriate methods, making careful observations, and communicating results. Most assignments involve specific sections of a scientific paper, i.e., Introduction, Methods, Results, Discussion, and References, and they build on each other as we proceed through the term. At the end of the semester, you also turn in one complete lab report on the exercise of your choice. Review chapters 4, 5 and 9 in Pechenik for useful suggestions. **Lab assignments will be due at the beginning of the following lab. The final lab report is due Monday, 3 May, by 12:30 PM.** No late assignments will be accepted.

2) *Proposal presentation:* To develop and hone communication skills, you will deliver an oral presentation, with slides, of your proposed research project to your peers. You have 15 min to present the project, followed by 5 min for questions and discussion. Students also provide written comments on each person's presentation and research proposal, which I distribute to

each presenter electronically and anonymously. **Presentations must be submitted by 11:59 PM on Sunday, 21 Feb.** Late assignments will not be accepted.

3) *Participation*: The more you participate, the more you learn. Thus, participation is an important part of your grade. You do not receive points just for showing up to class. I will observe the level of participation throughout the semester and assign points accordingly.

GRADE DETERMINATION:

Lab assignments	60%
Proposal presentation	10%
Final lab report	20%
Participation	<u>10%</u>
TOTAL	100%

Grades are curved as follows: I use the highest score earned on an assignment as an indication of the best that students could do, and I curve from there, using the scale shown below. Final grades are determined in the same manner: I curve down from the highest number of points earned in the course. If you have questions about your grade at any point during the semester, please ask me.

93-100%	A	87-89.9	B+	77-79.9	C+	67-69.9	D+
90-92.9	A-	83-86.9	B	73-76.9	C	63-66.9	D
		80-82.9	B-	70-72.9	C-	60-62.9	D-
						<60	F

COURSE EVALUATIONS: At the end of each semester every student has the opportunity to provide constructive feedback on the course. It is important to me that you take the time to let me know your thoughts about the course. I use your feedback to make improvements in course materials, assignments, and outcomes.

COURSE POLICIES

ANIMAL WELFARE

Animal behaviorists are concerned with the ethical treatment of the animals they study. Doing research in behavior requires taking responsibility for those animals. Whenever we interact with living organisms, we risk affecting them in negative ways. Therefore, we treat all animals humanely, without inflicting any undue harm or injury. We abide by all laws describing the treatment of animals in scientific research, and we try to minimize our impact (positive and negative) on the animals with which we work. USM's Institutional Animal Care and Use Committee approves research that involves direct interactions with vertebrates.

FIELD WORK: This semester, labs are conducted outdoors, and you must dress accordingly. Experience says that the weather is always colder and windier than you think it will be. Because you cannot collect reliable data if you are cold, wet, or otherwise uncomfortable, be sure to wear appropriate clothing (layers are best).

ATTENDANCE POLICY

I consider college students to be adults and thus responsible for making their own decisions about whether or not to attend class. However, if you miss a lab, you cannot make it up, in part because data collection is a group activity. Furthermore, because part of your grade is based on participation, if you are absent from class, you lose points in that area.

CLASS CANCELLATION

In the event that I must cancel class suddenly for some reason, I will post an announcement and notification on Brightspace and contact you via email.

CLASS CANCELLATION/ATTENDANCE DUE TO INCLEMENT WEATHER

Occasionally, USM will close the University due to inclement weather. If the cancellation or closure affects our class, the class content will be made up at another time or through additional, outside of class, assignments.

When USM opens late or closes early, and the time selected is during the middle of class, we may or may not hold class, and I will notify you. Two examples:

- If class starts at 12:30 PM, and the University is closing at 1:00 PM, we will not have class unless you hear from me.
- If class starts at 12:30 PM, and the University is opening at 1:00 PM, we will still have class.

TECHNOLOGY IN THE CLASSROOM

With increased use of technology in classrooms, we also see an increase in the inappropriate use of devices during class. I do not wish to punish students who want to use computers legitimately, i.e., to take notes during class. However, to avoid distractions and to keep students focused on the class, students may use computers to take notes and collect data and not for any other purpose. Furthermore, to avoid distractions, students must mute their computers. Failure to comply with these rules may result in a ban on computer use for the remainder of the semester.

In addition, students may not use electronic devices (e.g., cell phone, smart phone, tablet, iPod, PDA, MP3 player, pager) during class to access email, instant messages, the Internet, or to send or receive text messages. Please turn off all cell phones and other similar devices prior to the start of class unless I have granted permission in advance to leave them on.

ACADEMIC INTEGRITY

Everyone associated with the University of Southern Maine is expected to adhere to the principles of academic integrity central to the academic function of the University. Any breach of academic integrity represents a serious offense. Each student has a responsibility to know the standards of conduct and expectations of academic integrity that apply to academic tasks. Violations of academic integrity include any actions that attempt to promote or enhance the academic standing of any student by dishonest means. Cheating on an examination, stealing the words or ideas of another (i.e., plagiarism), making statements known to be false or misleading, falsifying the results of one's research, improperly using library materials or computer files, or altering or forging academic records are examples of violations of this policy which are contrary to the academic purposes for which the University exists. Acts that violate academic integrity disrupt the educational process and are not acceptable.

Evidence of a violation of the academic integrity policy will normally result in disciplinary action. A copy of the complete policy may be obtained from the office of Community Standards and Mediation, online at usm.maine.edu/community-standards-mediation/academic-integrity or by calling and requesting a copy at (207) 780-5242.

UNIVERSITY POLICIES AND RESOURCES

DISABILITY ACCOMMODATIONS

The university is committed to providing students with disabilities equal access to all university programs and services. If you think you have a disability and would like to request accommodations, please contact the Disability Services Center. Timely notification is essential. The Disability Services Center can be reached by calling 207-780-4706 or by email dsc-usm@maine.edu. If you have already received a faculty accommodation letter from the Disability Services Center and would like to request accommodations for this course, please provide me with that information as soon as possible. Please make a private appointment so that we can review your accommodations together.

HEALTH AND COUNSELING

Counseling is available at USM. The best way to schedule an appointment is by phone at 780-5411. More information is available at <https://usm.maine.edu/uhrs>.

RECOVERY ORIENTED CAMPUS CENTER (ROCC)

A peer support community for students in recovery from substance abuse and other mental health conditions is available at USM. More information may be found online at <https://usm.maine.edu/recovery> or by calling ROCC at 207-228-8141.

NONDISCRIMINATION POLICY AND BIAS REPORTING

The University of Southern Maine is an EEO/AA employer and does not discriminate on the grounds of race, color, religion, sex, sexual orientation, transgender status, gender expression, national origin, citizenship status, age, disability, genetic information or veteran's status in employment, education, and all other programs and activities. The following person has been designated to handle inquiries regarding non-discrimination policies: Amie Parker, Interim Director of Equal Opportunity, The Farmhouse, University of Maine Augusta, Augusta, ME 04333, 207.581.1226, TTY 711 (Maine Relay System). Incidents of discrimination or bias at USM should be reported to Associate Vice President for Student Affairs David Roussel at 207-780-5242.

STATEMENT ON RELIGIOUS OBSERVANCE FOR USM STUDENTS

Absence for Religious Holy Days: The University of Southern Maine respects the religious beliefs of all members of the community, affirms their rights to observe significant religious holy days, and will make reasonable accommodations, upon request, for such observances. If a student's religious observance is in conflict with the academic experience, they should inform their instructor(s) of the class or other school functions that will be affected. It is the student's responsibility to make the necessary arrangements mutually agreed upon with the instructor(s).

TITLE IX STATEMENT

The University of Southern Maine is committed to making our campuses safer places for students. Because of this commitment, and our federal obligations, faculty and other employees are considered mandated reporters when it comes to experiences of interpersonal violence (sexual assault, sexual harassment, dating or domestic violence, and stalking). Disclosures of interpersonal violence must be passed along to the University's Deputy Title IX Coordinator who can help provide support and academic remedies for students who have been impacted. More information can be found online at <http://usm.maine.edu/campus-safety-project> or by contacting Sarah E. Holmes at usm.TitleIX@maine.edu or 207-780-5767.

If students want to speak with someone confidentially, the following resources are available on and off campus: University Counseling Services (207-780-4050); 24 Hour Sexual Assault Hotline (1-800-871-7741); 24 Hour Domestic Violence Hotline (1-866-834-4357).

POLICY ON ACCEPTABLE CONDUCT IN CLASS SETTINGS

If a student substantially disrupts a class, the professor may ask the student to align with this policy on conduct in a class setting. If the student refuses, the professor may, at their discretion, ask the student to leave. If the professor takes this step, they must attempt to communicate with the student and provide informal counsel and advice. The professor may elect to notify their dean of the situation as well. If the student disrupts the class again, the professor may, at their discretion, provide a written notification to the student, describe the offending behavior, and refer the student's case to the appropriate academic dean and notify the dean of students that an official student conduct code violation has occurred [<https://usm.maine.edu/community-standards-mediation/conduct-process>].

COVID FACE COVERING REQUIREMENT

Per USM and the University of Maine System, all students, faculty, and staff members are required to wear a face covering, including during all face-to-face classes. Resident students are exempted from this requirement when in their own room in the residence hall.

Students seeking additional exceptions from this requirement should refer to the DISABILITY ACCOMMODATIONS section of this syllabus. <https://www.maine.edu/together/community-guidance/everyone/>

LAB SCHEDULE

DATE	LAB	TOPIC (subject to change)	READING ASSIGNMENT*	ASSIGNMENT DUE (based on previous week's lab)
25 Jan	1	Introduction to lab; Using the library; Generating ideas from observations	M&B: Chapters 1-2 P: Chapters 1-3, 5 Handouts	
1 Feb	2	Describing and quantifying behavior; Sampling methods; Collecting and analyzing data	M&B: Chapters 3-6, 8-9 P: Chapters 4, 9 (pp. 144-151, 158-188) Handouts	References from 25 Jan due M, 1 Feb by 12:30 PM
8 Feb	3	Foraging in diving birds	Handout	Results from 1 Feb due M, 8 Feb by 12:30 PM
15 Feb		HOLIDAY		Abstract due Sunday, 14 Feb by 11:59 PM
22 Feb	4	Proposal presentations	P: Chapters 10-11	Presentation due Sunday, 21 Feb by 11:59 PM
1 Mar	5	Giving Up Densities	Handouts P: Chapter 9, pp. 152-158, 195-202)	Methods, Results from 8 Feb due M, 1 Mar by 12:30 PM
8 Mar	6	Independent research and individual meetings		
15 Mar	7	Independent research and individual meetings		Methods, Results, Discussion, from 1 Mar due M, 15 Mar by 12:30 PM
22 Mar	8	Independent research and individual meetings		
29 Mar	9	Independent research and individual meetings		
5 Apr	10	Critique posters		Poster draft due Sunday, 4 Apr by 11:59 PM
12 Apr	11	Independent research and individual meetings		
19 Apr	12	Behavioral observations of squirrels	Handouts	Final poster due Sunday, 18 Apr by 11:59 PM
26 Apr	13	NO LAB (Thinking Matters on 30 Apr)		Introduction, Results, Discussion from 19 Apr due M, 26 Apr by 12:30 PM
3 May				Lab report due M, 3 May by 12:30 PM

*M&B = Martin and Bateson; P = Pechenik