

Fall 2020 Syllabus (Updated 8/24 13:25)

ANIMAL BEHAVIOR

BISC 512 (Hybrid)

M, W, lectures online; F 11-11:50; 205 Shoemaker

Lab: Wed 1-4:50pm; 205 Shoemaker

Remote Office Hour: Monday 11-12, or by appt.

Richard Buchholz, Ph.D.

104 Shoemaker Hall; 915-5012

byrb@olemiss.edu

Call or email during office hour so that we can Zoom

Goals of the Course: There remain many mysteries to be solved in the study of animal behavior. The objective of this course is to survey some of the most puzzling questions of animal behavior and to introduce you to the methods and approaches used by animal behaviorists to solve these puzzles. The lecture is loosely organized around the "four questions" of behavior. These are: How are behavior patterns inherited, elicited, stimulated and produced? How do behavior patterns change over the lifetime of an animal? Why do individual animals choose to perform one particular behavior rather than alternative ones? Why do some species, even if they are unrelated, share similar behavioral adaptations?

Outcomes: This course will teach you about the breadth and interdisciplinary nature of behavioral biology. You will learn to describe, collect and analyze variation in behavior, and become proficient in experimental design to test hypotheses about the mechanisms, development, adaptive function and evolutionary history of animal behavior. Helping students develop effective verbal and written communication skills is a goal of this course as well. Throughout the course you will be asked to think critically about the scientific method and the use of data to advance scientific theory and solve practical problems.

The lecture and laboratory portions of the course are inseparable. Lecture exams will cover lab material. Lab exercises integrate lecture material. Point contributions to your final course grade are as follows.

<u>Lecture</u>		<u>Laboratory</u>	
3 EXAMS	300 points	Analyses & Assignments	220 points
Homework	100 points	Participation	80 points
Discussion	100 points		
<i>Subtotal</i>	<i>500</i>	<i>Subtotal</i>	<i>300</i>
Total 800 points available*			

*Note: For graduate students the total is 900 points because they have an additional assignment. The graduate assignment topic must be approved by the instructor, and is planned and completed in close consultation with him, as explained on the separate grad handout.

DO NOT underestimate the amount of work. There is a lot of reading and contemplation necessary to truly comprehend this subject. You are expected to be an active participant in the discussion and lab portions of the course. Please make sure that you have the necessary background understanding of basic genetics, ecology and physiology. Do additional reading if you need to. Please ask questions *before* you fall behind in your studies!

Your final grade will be determined as follows: A, 90-100%; A-, 87-89%; B+, 83-86%; B, 80-82%; B-, 77-79%, C+, 73-76%; C, 70-72%; (no C- grade); D, 60-69%; F, <60%, with the exception that the instructor may adjust final grades away from this scale to reflect issues such as, but not limited to, poor conduct, dishonesty, plagiarism, misuse of animals and class resources, and problems with attendance. Attendance is required. To comply with attendance verification requirements, a report of your attendance will be made by the end of the first week of classes. Speak with Dr. B about pre-arranged excused absences and make up assignments for emergency absences with proper documentation. See Covid-19 addendum below to understand your obligations if you suspect you might have covid-19 or have been exposed to it.

Hybrid class design: Because of the physical spacing restrictions placed on us by the covid-19 pandemic, we need to figure out how to stay safe but still create an opportunity for you to get excited about behavioral biology while also getting practical experience in working with animals. Dr. B's current plan is for lectures to be delivered asynchronously as pre-recorded videos; labs to be 'in person' either outdoors as a group or indoors with staggered attendance (or students work independently outside of the official lab time); and class discussions will be 'in person' outdoors. Discussion will be by Zoom (synchronous) when necessary (for example, during inclement weather). You must maintain your schedule so that you are available to meet in person or by zoom Wednesdays 1-4:50 and Fridays 11-11:50. If the University closes due to the spread of covid-19, only the design of the class' labs must change drastically and suddenly, and I will figure out how at that time.

Graded Items:

Exams- a mixture of multiple choice, short answer and essay questions (exam dates shown on schedule)

Homework- reading tutorials, quizzes and other assignments associated with lecture topics (see BB for dates)

Discussion- written discussion topics (DT) weekly (due Thurs) & performance in discussion and as leader

Lab Analyses & Assignments- write-ups and statistical analyses of lab data due in one week

Participation- attendance is required and contributes to the participation portion of your grade. In this hybrid course, attendance is counted by your presence and active participation in lab activities and class discussions. When discussions occur remotely (e.g. via Zoom), students are required to be visible to the class via an active video feed (not a static image).

Special Projects- see separate description for details of additional ways you may be graded that *might* apply to you.

About the lab: Please dress appropriately... animals can be messy, and there may be inclement weather. All animals must be handled humanely. Some labs will require you to feed/water/clean our animals. Because handling animals and conducting field and lab work has inherent risks, you will be required to review information about zoonotic disease, inform the instructor of any special needs or issues that you may have, follow verbal safety instructions during class activities, and sign a waiver accepting these risks.

COVID-19 Important Information Addendum

Students are encouraged to visit the **University's Keep Learning** site (<https://olemiss.edu/keeplearning/>) to access information and resources related to COVID-19 support. The site provides links to University student services to facilitate and support learning.

Students with diagnosed health concerns that may affect their compliance with COVID-19 health requirements should contact UM's Student Disability Services (SDS) Office (<https://sds.olemiss.edu>) to see if they are eligible for an SDS accommodation as soon as possible.

The University must have accurate contact information, including cell phone numbers, to facilitate student communications and contact tracing. **Students should check and update their University contact information** (<https://olemiss.edu/mystudentprofile>).

The University of Mississippi has adopted a tiered **disciplinary protocol for nonadherence** to COVID-19 health requirements. This disciplinary protocol is maintained by the Office of Conflict Resolution and Student Conduct (<https://conflictresolution.olemiss.edu/>).

Preliminary (Updated 8/24 13:25)
Topic and Textbook Readings Schedule
(Animal Behavior BISC 512 Fall 2020)

Week	Lecture Topic* (multiple video lectures)	Reading* posted on BB	Lab Topic** (Wednesdays)	Discussion Topic*** (Fridays)
Aug 24	What is behavioral biology?	Chapter 1 (N & V)	Describing behavior (squirrels) Zoonotic diseases	1. Anthropomorphism (DL: Dr. Buchholz)
Aug 31	Approaches & Methods	Chapter 3 (N & V)	Quantifying behavior (squirrels)	2. Pit Bull "Bans" (DL: Peyton)
Sep 07	Behavioral genetics	TBA	Designing a heritability study (crickets)	3. Can animals evolve fast enough for climate change? (DL: Cooper)
Sep 14	Learning & Cognition	TBA	Innate behavior (chicks)	4. Animal teaching (DL: Sarah)
Sep 21	Finding Food Anti-Predator Behavior	TBA	Learning to forage (chicks)	5. Animal intelligence (DL: Belinda)
Sep 28	Optimal Foraging	TBA	G.U.T or G.U.D? (squirrels)	EXAM ONE (covers <i>previous</i> five weeks)
Oct 05	Communication	TBA	Olfactory signals (dogs)	6. Rhythm & dance (DL: Jessi)
Oct 12	Navigation & Migration	TBA	Navigation (honeybees)	7. Obstacles to migration (DL: Madelyn)
Oct 19	Habitat Selection, Territoriality & Aggression	TBA	Animal tracking (various)	8. "Problem" bears (DL: Tate)
Oct 26	Sexual Selection	TBA	Female choice (guppies)	EXAM TWO (covers <i>previous</i> four weeks)
Nov 02	Parental Care & Mating Systems	TBA	Male competition (guppies)	9. Are there gay animals? (DL: Laura)
Nov 09	Social Behavior	TBA	Special projects deadline (various, <i>see explanation</i>)	10. Evolutionary psychol. & human society (DL: Josh)
Nov 16	Social Behavior	TBA	----	----
Nov 18	FINAL EXAM Wednesday at noon	(covers <i>previous</i> three weeks)	----	----

NOTES: *There may be homework assignments associated with these lectures/readings. Monitor the BB announcements for due dates and check the Lecture Assignments folder inside the Content folder on BB. **Lab write-ups are typically due by email before the next lab (i.e., noon on Wed.) ***Students must submit a DT to the DL and Dr. B by 5pm Thurs. the day before the Discussion. See the Announcement on BB each week to obtain the DL's email address. This is a preliminary topic and reading schedule that will be updated showing an update date at the top of the first syllabus page, and may be changed if further pandemic restrictions occur. Readings will be posted to Blackboard (BB). TBA = to be announced.

Other handouts associated with this syllabus:

- Zoonotic disease assignment
- Special projects opportunities