

BIOL5760: MAMMALOLOGY, FALL 2019

Lecture: T & R, 12:30-1:45 PM, Funchess 336

Lab: T or R, 2:00-4:50, SCL 231

INSTRUCTIONAL TEAM:

Professor:

Dr. Wendy Hood

My preferred pronouns are she/her and I appreciate being referred to by my students as Dr. Hood (not Mrs., please. Thank you).

Office: Rouse 315; **Phone:** 334-844-7437 **Office Hours:** after class or by appointment

Email: *Please use Canvas for all course-related correspondence*

Other correspondence, wrhood@auburn.edu

Class webpage: Canvas BIOL-5760-00X F 2019

GTA's

Tori Andreasen, vaa0008@tigermail.auburn.edu

Kaylene Yamada, kyy0003@tigermail.auburn.edu

LECTURE & LAB:

Mammalogy is an integrative biology course. The material will bridge evolutionary biology, ecology, anatomy, and physiology. Students will learn to identify local mammals and the material presented in class will highlight examples from research on mammals to give context to the topics covered in lecture and lab. Lecture and lab for this class are concurrent. Students cannot take one or the other, and they will receive a single grade based on their performance in both, as described below.

SUPPLIES NEEDED:

- Feldhamer et al. 2015. Mammalogy, 4th edition. John Hopkins University Press. *Recommended.*
- **Required** and always bring to lab:
 - Ryan, 2018. Mammalogy Techniques Lab Manual. John Hopkins University Press.
 - Hardcover notebook.

COURSE POLICIES, IN BRIEF – A QUICK REFERENCE:

- Students should use **Canvas** for all course-related **emails**.
- Exams are given in class on the day listed in the schedule. **Exams** will be delivered online, and thus, you will need to **bring your laptop to each exam**.
- Students who are ill or have a family emergency and cannot make it to an exam must:
 1. **Email Dr. Hood BEFORE the exam** is scheduled to begin.
 2. Make arrangements to take the exam within five business days of the exam
- Students that require special accommodations for exams or have a university-approved excuse for missing an exam should make arrangements with Dr. Hood 1 week before each exam.

COURSE FORMAT:

This course meets bi-weekly. Course material will be presented in an interactive lecture format. In lecture, concepts will be presented by professor and students will be asked to assist by sharing their knowledge. Labs meet weekly except for the first week of classes. Labs are designed to both familiarize you with the subjects of this class and give you a foundational understanding of many topics studied by mammologists.

COURSE MANAGEMENT TOOLS:

Canvas will be used for:

- presenting the learning objectives for each topic
- administering exams
- posting key figures from lecture (posted after lecture)
- posting lab PowerPoints for review
- posting your grade

Full PowerPoints from lectures will not be available—students must attend class and take notes. Any complex figures that you are expected to be familiar with will be posted. The professor and GTA's review all posted grades carefully, but we occasionally make mistakes. It is the student's job to monitor their performance throughout the semester. If a score appears to be incorrect, please let us know immediately. By monitoring their grade, the student will have the opportunity to make necessary adjustments to their study practices and achieve the grade that they desire. In addition, a list of valuable web pages and books will be posted. These references may help students to make up deficiencies in their preparation, reinforce that material covered in class, and provide a springboard for learning more.

LEARNING OBJECTIVES:

The Department of Biological Sciences has developed a set of Student Learning Outcomes (SLOs) for majors in the department. These describe the knowledge, skills, and abilities that we expect of our students once they graduate with a biology degree From Auburn. This course contributes to the following learning objectives within the Department of Biological Sciences:

- Students will be able to apply the scientific method to formulate testable hypotheses, gather data that address the hypotheses, and analyze the data (statistically, graphically) to assess the degree to which their scientific work tests their hypotheses and draw appropriate conclusions from the data (Department-wide SLO 5).
- Students will be able to use biological evidence in a comparative framework to explain how the theory of evolution offers a comprehensive scientific explanation for the unity and diversity of life on Earth. They will be able to use specific examples to demonstrate how evolution has shaped organismal morphology, physiology, life history, and behavior (Department-wide SLO 7).
- Students will be able to apply broad knowledge of the *structure, function, and diversity of organisms to illustrate how ecological and evolutionary processes have shaped organisms at the individual, population, community, and ecosystem levels*. Students will have skills related to behavior, physiology, biodiversity, systematics, evolution, ecology, and/or conservation research (Organismal Biology SLO 8).

In addition, specific learning objectives for each lecture topic will be provided on Canvas. These are the guidelines that Dr. Hood uses when she selects what material to emphasize in lecture and the guides she uses when she decides what to include on exams. She strongly **recommends that students review the learning objectives for each topic as they study to be a guide**. A way to prepare for the exams is to review the learning objective and try to anticipate the questions she will ask. Then, make sure you can answer those predicted questions.

PERFORMANCE EVALUATION:

Student's final grade for this course will be based on their performance on 4 lecture exams and a cumulative final. Lecture exams and the final are each worth 100 points. To prepare for lecture exams, students should come to class, read the corresponding sections of the book, and review the lecture outline for each topic. The exams will only cover the material presented in class. At the final exam, everyone will take the cumulative final which will be designed to take ~1 h to complete. In addition, a 4th non-cumulative lecture exam will also be given. This exam will also be designed to take ~1 h to complete. This exam will cover the material from the last lectures of the semester. Each student's lowest score on a lecture exam will be dropped. If a student is happy with his/her previous scores – he/she is welcome to skip the 4th exam but not the final.

In lab, you will be given 5 quizzes with 10 questions (0.5 pts ea). Each quiz will be designed to help keep you on top of the material and to prepare for the practical exam. The practical exam will have 50 questions. For both the quizzes and practical, you should strive to have the correct spelling for each answer. If there are more than three letters that are incorrect or out of order, you will lose 50% of the credit for that question. If your answer is NOT very similar to or recognizable as the appropriate answer, you will not get any points for the question.

There will be one mandatory weekend field trip. On Friday Oct 18 at noon, we will leave for the Wehle Land Conservation Center in Midway, AL. We will return to Auburn by noon on Oct 19. Students should eat lunch before leaving on Friday. Dinner and breakfast will be provided. Students will receive 25 points for attending the field trip and being an active and respectful participant. Use of alcohol or other intoxicating substances are NOT permitted during the trip.

The answers to all other lab assignments must be answered in your notebook. You are required to have your GTA review and initial your responses at the end of class. At the end of the semester, your lab notebook will be collected and graded for completeness.

No other sources of additional credit will be available – don't ask.

Grading Scheme:

A \geq 90.0, B = 80.0-89.9, C = 70.0-79.0, D = 60.0-69.9, F \leq 59.9

All final scores will be rounded up from 0.5.

<u>Assessment</u>	<u>Points</u>	<u>% Final Grade</u>
Lecture exams (4 exams, 1 drop).	100 ea * 3 = 300	each 16.7%, combine 50.0%
Lecture final	100	16.7%
Lab quizzes (5)	5 ea * 5 = 25	each 0.8%, combine 4.2%
Field trip participation	25	4.2%
Lab notebook	50	8.4%
Lab practical	100	16.7%
Total	= 600	100.0%

TIPS FOR DOING WELL

Students should:

- Come to class
- Be an engaged and active learner
- Stay on top of the material - review material every/most days
- Anticipate questions on exams
- Adjust study habits early. Review any exam that you are unhappy with and look for patterns in the errors you make and correct the way you study accordingly.

ePortfolio:

A graduation requirement for all Department of Biological Sciences majors is the completion of an ePortfolio. Mammalogy is an integrative course that will have limited opportunity to develop hard artifacts for an ePortfolio. However, this does not mean that you cannot develop meaningful and thought-provoking artifacts for use in an ePortfolio. Think about what you learn and how you feel this course prepared you for the next step in your career and write a reflection on that.

Answer questions such as: Did you gain the ability to identify local mammals? What was your favorite lecture from this semester? Did the integrative nature of this class change your understanding of the connections between biological topics? Did the content of your favorite lecture or lab change how you feel towards that particular topic? Towards another topic or science in general? Is there an aspect of that topic that you would like to learn more about? Why?

Although not required, Dr. Hood would love for you to share any materials from Mammalogy that you feature on your ePortfolio page. This evidence will help her to highlight the value of this class to the Biology department.

COURSE POLICIES, IN DETAIL:

Missing lecture exams and the lab quizzes and practical exam:

Makeup lecture exams and the lab quizzes and practical exam will not be given unless a physician's note indicates that the student had an incapacitating illness on the day of the quiz/exam. **If a student is ill, he/she must contact Dr. Hood by email BEFORE the exam begins.** A doctor's note confirming the severity of your illness must be brought or emailed to Dr. Hood within 24 hours of the scheduled exam. ***All doctor's notes will be verified.*** All make-up exams must be completed within five days of the scheduled exam. If the student does not contact Dr. Hood before the exam and/or cannot adequately document the reason for the absence, the student will be given a zero on the exam. NO EXCEPTIONS. Students should refer to the student handbook for a description of acceptable reasons for missing an exam and appropriate documentation to provide.

If a student has questions about how their exam was graded, he/she should talk to Dr. Hood after class or email her within five days of receiving his/her graded exam. If a student has questions about how their final was graded, he/she should talk to Dr. Hood within 24 hours of receiving their score on the final. Dr. Hood will not consider changing anyone's score after these time limits.

Academic dishonesty:

Auburn University and this class, Mammalogy, has NO TOLERANCE for academic dishonesty. Measures will be taken to prevent cheating. Following Auburn University policy, ***all violations of the academic honesty code will be reported to the University Academic Honesty Committee***. Students should refer to Tiger Cub, Academic Affairs I, 1. – SGA code of laws, title XII. Academic dishonesty can result in a failing grade, suspension, and/or expulsion from the University. Students should be aware that turning in a falsified document for missing an exam is considered a violation of this code.

Students with Disabilities:

Students who need special accommodations should make an appointment to discuss their situation confidentially with Dr. Hood. Exam accommodations should be arranged one week in advance.

GRADUATE STUDENTS:

<u>Assessment</u>	<u>Points</u>	<u>% Final Grade</u>
Lecture exams (4 exams, 1 drop).	100 ea * 3 = 300	each 12.5%, combine 37.5%
Lecture final	100	12.5%
Lab quizzes (5)	5 ea * 5 = 25	each 0.6%, combine 3.1%
Field trip participation	25	3.1%
Lab notebook	50	6.3%
Lab practical	100	12.5%
Grad project	200	25.0%
Total	= 800	100.0%

Grad project:

Graduate students in this class will be asked to complete a project that will help them build the skills needed for graduate school and beyond. The recommended assignment for grad students is to complete a publication-quality review paper. However, all grad students will have the opportunity to propose an alternative project of equal effort that will be a greater benefit to their development. For example, College of Education students may wish to develop and test a lesson plan that they will be able to use in the classroom. Wildlife students may wish to complete a short research project that will give them valuable mammalogy experience that can be added to their job applications. Biology students may wish to write a research proposal that complements their research project. Grad students will work with Dr. Hood to define the expectations for their project and meets with her periodically to discuss their progression. They will be expected to meet with her 1-2 times during the semester to discuss their progress.

TENTATIVE SCHEDULE

Date	Lecture	Reading: chapters	Lab
20-Aug-19 22-Aug-19	Syllabus & 01-Introduction 02-Taxonomy		No labs
27-Aug-19 29-Aug-19	02-Taxonomy 03-Evolution & systematics		Museum tour Lab / Field notebooks
3-Sep-19 5-Sep-19	04-Origin & evolution of mammals Exam 1 – topic 02 only!		Skeleton lab; prep for census
10-Sep-19 12-Sep-19	05-Biogeography 07-Skull, teeth, feeding, and digestion		Discussion censusing large groups Skull lab
17-Sep-19 19-Sep-19	08-Integument and its derivatives 09-Skeletal adaptations & locomotion		Morphology lab
24-Sep-19 26-Sep-19	10-Physiological adaptations & locomotion 11-Adaption to the environment		<i>Quiz skeletons</i> Mammal ID: Rodents
1-Oct-19 3-Oct-19	<i>Finish any remaining material</i> Exam 2 – topic 01,03-05,07-11		<i>Quiz skulls</i> Mammal ID: Bats
8-Oct-19 10-Oct-19	06-Speciation (guest lecture – Dr Hill) Fall Break		<i>No labs</i>
15-Oct-19 17-Oct-19	12-Reproductive anatomy & physiology 12-Reproductive anatomy & physiology		Trapping and tracking
18-19 Oct 19	Overnight field trip – Wehle Tract		
22-Oct-19 24-Oct-19	13-Mating systems, sexual selection, & parental care 13-Mating systems, sexual selection, & parental care		<i>Quiz rodents</i> Mammal ID: Remaining taxa
29-Oct-19 31-Oct-19	14-Communication, aggression, and spatial relations 15-Social behavior		<i>Quiz bats</i> Quantifying behavior
5-Nov-19 7-Nov-19	16-Dispersal, habitat selection, and migration Exam 3 – topics 06,12-15		<i>Quiz remaining taxa</i> Phylogenetic methods
12-Nov-19 14-Nov-19	17-Populations and life history 18-Community ecology		Practical – skeleton, skulls, all mammal IDs
19-Nov-19 21-Nov-19	19-Parasites and diseases 20-Domestication and domesticated mammals		Sound ID
26-Nov-19 28-Nov-19	Thanksgiving week		<i>No class or labs</i>
3-Dec-19 5-Dec-19	21-Conservation & climate change <i>Finish any remaining material</i>		Study skins <i>Lab notebook due</i>
10-Dec-19	Tues. Noon. Exam 4 (topics 17-21) & Final (cumulative)		