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Syllabus

BISC 350 MAMMALOGY (Fall 2018)

Tues/Thurs 1:00-2:15 (Shoemaker 408/205) & Thurs 2:30-3:50 (Shoemaker 205)

Course Description: Mammalia, the taxonomic group to which humans belong, is the smallest class of vertebrates. Nevertheless these mammals exhibit great diversity. They live in every available habitat on the planet and range in size from a few grams (the bumblebee bat) to several tons (the blue whale). This course presents a survey of the shared characteristics and phenomenal diversity of the vertebrate class Mammalia, including their anatomy, physiology, behavior and evolutionary history. Learning will occur through regular lectures, student presentations, field and laboratory experiments, and field trips. Student performance will be judged through class participation, exams, weekly discussions, quizzes and data analyses, and other activities.

Learning Outcomes: After completing this course, a student will know the taxonomy of the major groups of mammals, understand their evolutionary history and adaptive characteristics, and be able to identify local mammal species. The practical skills learned may include dichotomous key construction and use for species identification, specimen preparation, live trapping techniques, radio-telemetry triangulation, and mark/recapture analysis.

Required Texts:

1. ***Mammalogy: Adaptation, Diversity, Ecology*** by George A. Feldhamer, Lee C. Drickamer, Stephen H. Vessey, Joseph F. Merritt, Carey Krajewski. (2015) 4th ed. Johns Hopkins Univ Press ISBN-13: 978-0-8018-8695-9 (Hard- or soft-cover)
2. ***Peterson Field Guide to Mammals of North America*** by Fiona Reid (2006) Fourth Edition only! Houghton Mifflin Co, NY. ISBN 13: 978-1-4214-1588-8 (hard- or soft-cover))

Points Available	TOTAL	800
4 exams x 100 pts each =		400
12 chapter quizzes x 10 pts each =		120
“New” mammal presentation =		130
Class/Lab/Field assignments/participation =		150

Your final grades are based on these point percentages with the *exceptions* described below:

A*, 89-100%; B, 80-88%; C, 70-79%; D, 60-69%; F, <60%;

*you must earn B or better on the cumulative final exam to be eligible for an “A” in the course

Exams: a combination of multiple choice, short answer and essay. The final exam is *cumulative*.
Chapter quizzes: These quizzes test you on your knowledge of the textbook readings. **“New” mammal presentation:** A class presentation on a recently discovered “new” species of mammal.
Class/Lab/Field assignments/participation: This includes but is not limited to handing in properly completed assignments that are on time, attendance and punctuality, participating in discussions and asking questions, being an amiable and enthusiastic classmate, proper animal respect, care and handling, and concern with safety. You start with zero participation points and must *earn* these points each week. Attendance is required. Students who do not attend will be dropped after one week. See Dr. B to discuss unavoidable absences. Never engage in any form of academic dishonesty, including plagiarism and receiving or giving assistance on exams and quizzes, and other assignments.

Disability Access and Inclusion: The University of Mississippi is committed to the creation of inclusive learning environments for all students. If there are aspects of the instruction or design of this course that result in barriers to your full inclusion and participation, or to accurate assessment of your achievement, please contact the course instructor as soon as possible. Barriers may include, but are not necessarily limited to, timed exams and in-class assignments, difficulty with the acquisition of lecture content, inaccessible web content, and the use of non-captioned or non-transcribed video and audio files. If you are approved through SDS, you must log in to your Rebel Access portal at <https://sds.olemiss.edu> to request approved accommodations. If you are NOT approved through SDS, you must contact Student Disability Services at [662-915-7128](tel:662-915-7128) so the office can: 1. determine your eligibility for accommodations, 2. disseminate to your instructors a Faculty Notification Letter, 3. facilitate the removal of barriers, and 4. ensure you have equal access to the same opportunities for success that are available to all students.

IMPORTANT SAFETY INFORMATION for BISC 350

1. This class necessarily involves the handling of both living mammals and mammal corpses/parts/feces.
2. Also there is some group and independent (unsupervised) fieldwork requiring you to capture and handle small mammals.
3. It is possible to contract diseases from and/or be injured by the activities required of this class. You will be asked to sign a waiver in which you acknowledge that you accept these risks.
4. *Basic* biosafety instructions and equipment will be provided to you. The likelihood of infection or serious injury is probably slight. However it could happen. Injury may occur in places without cell phone reception. You assume this personal risk by taking this class. You may decide to obtain additional safety equipment (snake proof leggings, HEPA respirator, etc) to protect yourself more. When traveling on field trips, you should wear your seat belt.
5. Please read the basic safety instructions provided to you during these exercises. If you have a medical condition that predisposes you to infection, you probably should consult your physician about whether to take this class. The CDC provides helpful information on zoonoses (diseases contracted from other animals) at its website: <http://www.cdc.gov/healthypets/diseases/index.html>
6. Common sense, preparedness, being careful and avoiding distractions are essential to your safety. Ask your instructor if you're not sure. If injured or ill, seek medical attention. Report any injuries or illnesses to your instructor, or the biology office as soon as possible. You are financially responsible for your own medical care.

After you have reviewed the zoonotic risk (**see attached assignment**), you will be asked to sign a statement confirming that you understand the risks of taking a course in Mammalogy, and accept these risks and all associated liabilities.

BISC 350 Tentative Schedule of Reading Assignments, Lab Topics & Exams

Week	Date	Topic	Lab/Field	Textbook Reading*
1	8/21 8/23	-What is a mammal? -Mammal orders and families	-Zoonoses -Dichotomous keys	Chapters 1 & 2 Pages 237-241
2	8/28 8/30	-Monotremes and marsupials	-Skulls, Teeth, Foods, Feeding	p.75-81 Chapter 8 Chapter 12 Field Guide
3	9/4 9/6	-Insectivores and others	--Integument (hair, etc) - Identification	Chapter 7 (Q1) Chapter 13 Field Guide
4	9/11 9/13	EXAM ONE -Chiroptera (Bats!)	- Identifying bats	Chapter 14 (Q2) Field Guide
5	9/18 9/20	-Primates -Life Histories	-we will schedule a Memphis Zoo** trip sometime tba	Chapter 15 (Q3) Chapter 26
6	9/25 9/27	-Xenarthrans and other weirdos	- Environmental adaptations, Thermoregulation	Chapter 16 Chapter 10 (Q4)
7	10/2 10/4	-Carnivores	-Skulls and tracks	Chapter 17 (Q5) Field Guide
8	10/9 10/11	EXAM TWO -Reproduction	Reproductive tracts	Chapter 11 (Q6)
9	10/16 10/18	-Rodents and rabbits	- Designing and setting up a population study	Chapter 18 Chapter 3 (Q7) Field Guide
10	10/23 10/25	-Proboscidea (elephants +) -Communication	-Trapping and marking **	Chapter 19 Chapter 22 (Q8)
11	10/30 11/1	-Perissodactyla and Artiodactyla -Domestics EXAM THREE	Trapping and marking **	Chapter 20 Chapter 29 (Q9) Field Guide
12	11/6 11/8	-Cetacea Sexual behavior	Scent marking	Chapter 21 Chapter 23 (Q10)
13	11/13 11/15	-Dispersal -Parasites	Parasitology	Chapter 25 (Q11) Chapter 28
14	11/27 12/29	--Social behavior -Conservation	Saving the world	Chap. 24 (Q12) Chapter 30
15	12/6	FINAL EXAM 12pm (Th)	<i>Cumulative</i>	

*There will be some additional readings posted via Blackboard

**This class has fieldwork/trips outside of regular class hours.

ZOONOSES ASSIGNMENT

1. Go to the CDC website on zoonoses:

<http://www.cdc.gov/healthypets/diseases/index.html>

2. Peruse the list of diseases that can be transmitted from non-humans to humans.

3. Find the **mammal-transmitted zoonotic disease** assigned to you, and prepare brief written answers to each of these questions (be prepared to present it to the class and hand this assignment in to Dr. Buchholz during your next class meeting).

- a. what is the name of the disease?
- b. what is the name of the organism that causes the disease to occur?
- c. what types of mammals carry this disease organism?
- d. specifically, how is the disease transmitted from wild mammals to humans?
- e. what are the symptoms in humans infected with this disease? Is it deadly?
- f. how can you protect yourself from catching this zoonotic disease?

4. Note that if you click to expand the Pets link on the left, you can see the zoonotic risks of handling non- wild animals that you may be exposed to everyday, such as pet dogs and cats. Also the CDC has a link on the Health Benefits of Pets.