BIOL 5580 Mammalogy Fall 2017

TTh 17:45-19:45

Instructor: Dr. Becky Williams Office: BEERC 221B
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Office Hours: 17:00-18:00 Wed, walk in anytime, **or by appointment**

There is no required textbook for this course.

Optional Texts: Feldhamer, G.A., Drickamer, L.C., Vessey, S.H., Merritt, J.F., and C. Krajewski. 2014. Mammalogy: Adaptation, Diversity, Ecology, 4th edition. The Johns Hopkins University Press, Baltimore, MD. 978-1421415888

Vaughan, T.A., Ryan, J.M., and N.J. Czaplewski. 2013. Mammalogy, 6th edition. Jones & Bartlett. 978-1284032093

Any field guide, such as: Peterson Field Guide to North American Mammals

Course Fee: $50

Website: Some course materials and activities will be available on Canvas. You may login with your A number and password. https://canvas.usu.edu/

Catalog Description: Evolution, adaptations, distribution, natural history, behavior, and identification of mammals of the world, with special emphasis on North American species. We will also cover conservation biology and management strategies, including sampling methods, and the roles of mammals in North American ecosystems.

Prerequisites: BIOL 1620 (Biology II). You are expected to read at a college level and write with proper English grammar, sentence structure, and spelling. You will also use basic calculating skills that include fractions, decimals, exponents, simple algebraic expressions, and graphing.

Objectives:

1. **You will develop critical thinking skills in order to make informed decisions within the realm of mammalogy and beyond.**
   Specific strategies: Review and interpret primary literature in the field, engage in discussion about current hot topics in the field, be able to predict or recommend actions to solve previously unfamiliar problems (exams, labs, discussion/activities)

2. **You will acquire an understanding of the basic mechanisms (facts and concepts) of mammalogy.**
   Specific strategies: Learn the terminology and facts/knowledge of the field as well as integrate physiology, evolution, development, and ecology to gain an understanding of mammals as a group. You should be able to apply these facts and concepts to new problems (labs, exams)

Study Tips: Acquiring the knowledge, skills, and abilities taught in this course requires an effective study strategy. USU's Academic Success Center has materials and tips to help you learn how to learn (http://www.usu.edu/asc/).

1. Access the powerpoints before class and bring them with you to facilitate note-taking.
2. Review the material at least once a week; do not wait until the night before the exam.
3. Try to draw diagrams and phylogenies from course material from memory.
4. Make concept maps rather than flashcards of important terms.
5. Have a friend quiz you on the material and form a study group.
6. **Ask questions** of the instructor and your classmates whenever something is unclear. Don't worry about interrupting!
7. Question the information you obtain in class or during your readings: *is it logical? What are the implications? What other questions arise after considering the topic?*

This is a 3-credit course; expect ~2 hours of lecture time, ~2 hours in lab, and 5 additional hours of study time per week **on average** to learn the material and complete assignments. You may require additional time. Please plan for this in your schedule.

Americans with Disabilities Act: I am happy to accommodate all persons with disabilities according to the recommendations of the Disability Resource Center (DRC) to facilitate maximum participation in the course. If you need accommodation, you must contact me ***at least one week prior*** to the requested accommodation and you must document the disability through the DRC (797-2444) as per university policy, preferably during the first week of class.

Academic Integrity and Misconduct: The purpose of this course is to learn the material and acquire skills such as critical thinking, not to "get a good grade." Your degree program is designed to help you acquire the applicable knowledge, skills, and abilities to help you succeed in your chosen career. If you work towards these goals, a good grade will follow. Accordingly, cheating of any sort will not be tolerated. Plagiarism is a form of cheating. All assignments must be in your own words: do not quote or copy any passages from fellow students, written sources (including the text or articles), or any other source (such as online). "Minor" offenses, such as copying a partial sentence from the text, will follow a three strikes plan: strike one = you lose 50% of the grade for that assignment, strike 2 = you lose all points for that assignment, strike three = **you fail the course**. "Major" offenses, such as copying multiple sentences, copying any length of material from a fellow student, or cheating in any form on an exam will not be tolerated even once and such infractions will result in you **failing the course** and possibly being expelled from the university. The instructor reserves the sole right to determine whether offenses are "minor" or "major." Full university policies regarding student conduct may be found in the student code: http://www.usu.edu/studentservices/studentcode/

Exam format: **All exams will be comprehensive**. Questions may be multiple choice, fill-in-the blank, short answer, or short essay. No outside aids are permitted including paper or electronic resources, i.e., no notes, texts, programmable calculators, cell phones, etc. Exams will occur in the regular classroom. **There will be no make up exams.** Your lowest midterm exam score will be dropped. If you miss an exam for any reason, that exam score will be dropped.

Important Information:

Emergencies and important life events sometimes happen at inconvenient times. In order to accommodate these events, you are allowed to drop one test score and I will provide one extra discussion and a makeup lab time. Thus, accommodations for emergencies and family obligations, etc., are already built into the class and no further accommodations will be made. This policy allows all of us to schedule our time and meet deadlines within and outside of this course. Participation is part of your grade because group discussion is a valuable learning experience. Discussions and activities are designed to help you practice "thinking on your feet" and require feedback from your peers in a collaborative real-time activity and thus cannot be replicated by attempting to answer discussion question on your own. Discussions and activities may be unannounced; please attend every class. Additionally, it may be impossible to replicate the lab experience if you miss it. If you *must* miss something, please make sure you do all the readings, study the powerpoints, go through any available lab materials on your own, and ask your fellow classmates for notes as well as instructions that might have been relayed during classtime. Please note that if you still do not understand something, I am in my office during office hours during which you may call or stop by. If you cannot make that time, ask me for an appointment, email me, or stop by my office at any time. I cannot guarantee I won't be in lab or teaching another class, but I can usually fit you in.

The **no late work** policy as well as the number and type of assignments or activities and their due dates are arranged for your maximum learning benefit based on published research about how students learn. I will give you the "tools" and "map" to attain the skills you need to be successful in your career. Your job is to use these resources to become a self-directed learner in order to maximize your learning in this class and therefore, your future career success.

Note: You and your fellow classmates paid for the privilege of attending this course. You all have a right to a productive learning environment. Turn off cell phones before class and plan to engage yourself in the course as a productive team-member with a positive attitude. Thanks!

Grading:

3 Exams	100* pts total (50 pts each)
2 Lab Practicals	50 pts total (25 pts each)
Final Exam & Practical	100 pts (75 pts exam + 25 pts practical)
Discussions/Activities (12)	60 pts (5 pts each)
Labs (14)	140 pts (10 pts each)
Total	450

* Your lowest midterm exam score will be dropped.

The following is a breakdown of grade assignments.

Grade	% of Total Pts	Grade	% of Total Pts
A	93% and above	C	73–75%
A-	90–92%	C-	70–72%
B+	86–89%	D+	66–69%
B	83–85%	D	63–65%
B-	80–82%	D-	60–62%
C+	76–79%	F	59% and below

Please confirm that your scores are added correctly. Any disputes must be brought to my attention within one week of the assignment being returned in class or via Canvas (even if you fail to retrieve your assignment).

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Tentative Schedule of Topics BIOL 5580 Mammalogy Fall 2017

Date	Topic	Labs
Aug 29	What is a Mammal?	*What is a Mammal?*
Aug 31	Evolution of Mammals	*Teeth*
Sept 5	Evolution of Mammals	*Phylogenetics*
Sept 7	Monotremata	*Phylogenetics*
Sept 12	Metatheria	*Cranial anatomy and keys*
Sept 14	Eutheria I & II	*Post-cranial anatomy*
Sept 19	**Exam # 1** (50 points)	
Sept 21	**Review**	**Lab Practical #1** (25 pts)
Sept 26	No Class – Documentary Activity	
Sept 28	Eutheria III	*Utah Mammals*
Oct 3	Eutheria IV	*Mark-Recapture*
Oct 5	Biogeography	*Sampling*
Oct 10	Biogeography	*Mammal Diversity*
Oct 12	**Exam # 2** (50 points)	
Oct 17	No Class - On Your Own Field Lab	*Ethograms*
Oct 19	No Class - Friday Class Schedule	
Oct 24	Behavioral Ecology	*Ethogram prep*
Oct 26	Behavioral Ecology	*Ethogram presentation*
Oct 31	Reproductive Ecology	*Life History Strategies*
Nov 2	Reproductive Ecology	*Life History Strategies*
Nov 7	Homeostasis	*Tracking*
Nov 9	**Exam # 3** (50 points)	
Nov 14	Foraging Ecology	*Movie Night*
Nov 16	**Review**	**Lab Practical #2** (25 pts)
Nov 21	No Class – Research Article Activity	
Nov 23	Thanksgiving Break	
Nov 28	Dispersal, Habitat Assoc., & Migration	*Spatial Analysis*
Nov 30	Dispersal, Habitat Assoc., & Migration	*Spatial Analysis*
Dec 5	Conservation and Management	*Review Specimens*
Dec 7	Conservation and Management	*Review Specimens*

Dec 12 **FINAL Exam and Practical 5:45–7:45 pm** (100 points, ~1/3 new material)