Mammalogy (NR 712/812)
Syllabus - Spring 2014

Instructor:
Dr. Rebecca J. Rowe
Assistant Professor, NREN
Office: James Hall 136
Ph: 862-2810
Email: rebecca.rowe@unh.edu
Office hours: T: 11-1, and by appointment

Teaching Assistant:
Rory Carroll
Graduate Student, NREN
Office: James Hall G40b
Email: rpc1@wildcats.unh.edu
Office hours by appointment

Time and Place:
Lecture Tuesday/Thursday 9:40-11:00 James Hall 144
Lab (01) Th: 1:10-3:00 James Hall 144/ Lab (02) Th: 3:10-5:00 James Hall 144

Required Text: (available at UNH bookstore; also try Amazon.com)
- Feldhammer, G.A., L.C. Drickamer, S.H. Vessey, J.F. Merritt and C. Krajewski. 2007. *Mammalogy: adaptation, diversity, and ecology*. 3rd ed. John Hopkins Press, Baltimore.
  * *A copy is available on reserve at the library*
- Martin, R.E., R.H. Pine and A.F. DeBlase. 2001. *A Manual of Mammalogy*. 3rd ed. McGraw-Hill, Boston
  * *You may share a copy with a classmate, but you may need to xerox sections prior to lab.*
- Francq, E.N. 1974. Key to the land mammals of New Hampshire (provided in lab)
- Additional materials and readings will be posted on the course blackboard site.

Some Web Resources:
- Animal Diversity Web (http://animaldiversity.ummz.umich.edu/site/accounts/information/Mammalia.html)
- UCMP Berkeley (http://www.ucmp.berkeley.edu/mammal/mammal.html)
- Tree of Life (http://tolweb.org/tree?group=Mammalia&contgroup=Therapsida)
- Mammal Species of the World (http://www.vertebrates.si.edu/msw/mswcfapp/msw/index.cfm)

Course Description
This lecture and lab course provides an overview of the evolutionary history, adaptations, diversity, and ecology of mammals. You will be introduced to the groups of mammals through the interplay of structure and function over evolutionary time, and an emphasis on natural history, physiology, behavioral ecology, community ecology, and conservation. Familiarity of mammalian groups to the family level and identification of local fauna to species will be expected. 4 course credits; Prerequisite BIOL 411-412/equivalent, or permission of instructor.

Course Objectives - *By the end of the course students should be able to:*
- Describe the ecological and evolutionary processes which led to the diversification and diversity of mammals
- Discuss how key adaptations allow for survival in a variety of conditions
- Infer life history from skeletal material
- Identify specimens to Order and Family (and to Species for local fauna).
- Understand the factors (past and present) which determine the distribution and abundance of species (including those that place them risk of extinction), and structure communities

Expectations
My goal is to facilitate your learning. Learning is not a passive process. You are expected to (1) attend all class and lab sessions, (2) actively participate by asking questions (3) come prepared - read assignments prior to class to facilitate a productive session, and (4) communicate and work cooperatively and respectfully with your peers. Attendance, participation, and professionalism will be factored into your final course grade.

Exams & Quizzes
For the lecture portion of the course there will be two exams and 4 quizzes. The final exam will be comprehensive regarding the concepts covered in the course. Exam questions will be based on lectures and readings. The best study guide for the exams will be your class notes. If you miss an exam or quiz, it is your responsibility to contact me regarding the possibility and policy of a make-up; these will be addressed on a case-by-case basis. No quizzes will be dropped.

Lab
The laboratory potion of the course will include a series of exercises to reinforce key concepts from class, learn skeletal anatomy, learn how to distinguish/recognize different orders, families, and species, and learn how to prepare a museum specimen. You will also attend one required field trip. work in pairs develop a presentation (see separate guidelines). Attendance is required. If you miss a lab period, it is your responsibility to contact the TA regarding the possibility and policy of making-up the exercise. Because many labs involve the use of specimens which will have been put back in storage, it is unlikely a make-up lab will be an option. There will two lab practicals.

Discussions
During lecture we will occasionally discuss peer-reviewed literature chosen to reinforce and expand upon key concepts. These discussions are intended to provide you with the opportunity to think critically about a topic or study, to formulate questions and explanations, and to communicate these effectively to their peers. ***A short writing assignment will be associated with each article.***

Academic Honesty
The University of New Hampshire operates on the assumption that all academic work is the honest product of each student's own endeavors. The faculty and staff expect such integrity from all students, and violations are cause for disciplinary action. Violations of academic honesty in this course may result in a grade of zero on an assignment, quiz, or exam, or failure (F) for the course as a whole; at the discretion of the instructor. Further ramifications at the University level (e.g., suspension, probation, or expulsion) also may occur. Academic dishonesty includes, but is not limited to, cheating and plagiarism. For a full definition refer to your Student Rights, Rules, and Responsibilities Handbook (http://www.unh.edu/student/rights/srrr0708.pdf), or ask if you have questions or concerns.

Grading
Course assignments and exams are designed to measure your understanding of the material and your ability to effectively communicate that information.

Grading Scale

A	95-100	B+	87-89	C+	77-79	D+	67-69
A-	90-94	B	83-86	C	73-76	D	63-66
		B-	80-82	C-	70-72		

Weight of Assignments

Lab	40%
• Practicals	30%
• Presentation	10%
Lecture	55%
• Exams	30%
• Quizzes	15%
• Discussions & writing assignments	10%
Class/Lab attendance, participation, professionalism	5%

Graduate students are required to complete an additional assignment. This will be determined on a case-by-case basis by the instructors in consultation with the graduate student.

University or Major Requirements

This course will NOT satisfy any DISCOVERY requirement, including INQUIRY, and will NOT fulfill any Writing Intensive requirement. The course will fulfill (one of) requirements #21/22/24 in the B.S. degree in Wildlife and Conservation Biology and fulfills the elective Animal Survey Course for the B.S. degree in Zoology. This course may also serve as an approved elective for other majors in the Department of Natural Resources & the Environment, the Department of Biological Sciences, and the Department of Molecular, Cellular & Biomedical Sciences (see your course checklist or confirm with your advisor).

UNH Policy on Use of Electronic Devices in the Classroom

"Students may not use cell phones, PDAs, pager, digital music players, laptops and other electronic devices during class unless designated by the course instructor. If use of any of these items is permitted by the course instructor, these items are not allowed to be used for non-class activities. If you have a learning disability that requires the use of one of these items, you must provide evidence from the Disability Services for Student office (DSS), to inform the course instructor of this situation so that he or she can accommodate your use. Also, if you need to leave a cell phone on for an emergency situation, you should inform the course instructor at the beginning of the class session as well as keep the phone on in a silent mode, so as not to disrupt the course."

Persons with Disabilities

The University is committed to providing students with documented disabilities equal access to all university programs and facilities. If you think you have a disability requiring accommodations, you must register with Disability Services for Students (DSS). Contact DSS at (603) 862-2607 or disability.office@unh.edu. If you have received Accommodation Letters for this course from DSS, please provide me with that information privately in my office early in the term (***within the first two weeks***) so that we can review those accommodations.

NR 712: Mammalogy
Spring 2014
Lecture Schedule

Week	Date	Topic	Readings	Assign.
1	Jan 20 Jan 23	Course Overview; Why Mammals? Mammalian Characteristics	Ch 1-2 Ch 4	
2	Jan 28 Jan 30	Legacy of Linneaus & Modern Systematics Phylogenetics cont.,	Ch 3 pp 38-45	
3	Feb 4 Feb 6	Origin of Mammals I: Pelycosaurs & Therapsids Origin of Mammals II: Early Mammals	Ch 4 Ch 4	 Quiz 1
4	Feb 11 Feb 13	Monotremes & Marsupials Marsupials cont., Meta/eutherian contrasts	Ch 11 Ch 5(75-81), Eaton 1993	 QQTP 1
5	Feb 18 Feb 20	Reproduction: three ways to be a mother Afrotheria	Ch 10 Ch 12 & 19	 Quiz 2
6	Feb 25 Feb 27	Xenartha, Scandentia, Dermoptera Chiroptera, Flight and Echolocation	Ch 15 & 12	 Lab Exam I
7	Mar 4 Mar 6	Chiroptera cont. **MIDTERM EXAM**		
		Spring recess		
8	Mar 18 Mar 20	Primates Lagomorphs & Rodents	Ch 14 Ch 18	
9	Mar 25 Mar 27	Modes of Feeding Carnivores & Ungulates	Ch 7, Esselstyn et al 2012 Ch 16 & 20	QQTP2
10	Apr 1 Apr 3	Locomotion Thermoregulation	Ch 6 Ch 9	Quiz 3
11	Apr 8 Apr 10	Adaptations to extreme environments Cetaceans (and their adaptations)	Ch 9 Ch 17	
12	Apr 15 Apr 17	Life History & Community Ecology Community Ecology cont., & Biogeography	Ch 25 & 26 Ch 5 (pp84-90)	Quiz 4
13	Apr 22 Apr 24	Mating systems & Sociality Conservation and Rewilding	Ch 22 & 23 Donlan 2005, Lyons et al 2004 (intro & p.354)	 QQTP3
14	Apr 29 May 1	Domestication Advances in Mammalogy & Synthesis	Ch 28	 Lab Exam II
	May 8	**FINAL EXAM 1:00 – 3:00**		

This syllabus is subject to change.

Chapters refer to Feldhammer, G.A., L.C. Drickamer, S.H. Vessey, J.F. Merritt and C. Krajewski. 2007. *Mammalogy: adaptation, diversity, and ecology*. 3rd ed. John Hopkins Press, Baltimore.

The additional readings will be posted on the course blackboard site.

Registration reminders
February 7: Last day to add courses or Honors designation; last day to drop course without a fee
February 21: Last day to drop a course (with fee); last day to drop Honors designation.

NR 712/812: Mammalogy
Spring 2014 - Lab Schedule

Week	Date (Th)	Topic	Chapters
1	Jan 23	Overview, specimen care, keys & keying out	Ch 8
2	Jan 30	Skulls & Teeth	Ch 2 & 3
3	Feb 6	Anatomy of mammal skeleton	Ch 6
4	Feb 13	Marsupials & "Insectivores"	Ch 11 & 12
5	Feb 20	Chiroptera & Primates	Ch 14 & 16
6	Feb 27	**Lab Practical I**	
7	Mar 6	Value of natural history collections & Specimen preparation	Ch 31
8	Mar 20	Rodents & Lagomorphs	Ch 22 & 23
9	Mar 27	Owl Pellet Exercise	
10	Apr 3	Carnivores, Ungulates, & Hair, horns, and antlers	Ch 19, 26, 27, 5
11	Apr 10	Cetaceans & Dive Response exercise	Ch 20
12	Apr 17	Trip to Harvard Museum of Natural History	
13	Apr 24	Presentations	
14	May 1	**Lab Practical II**	

This syllabus is subject to change.

Chapters refer to Martin, R.E., R.H. Pine and A.F. DeBlase. 2001. *A Manual of Mammalogy*. 3rd ed. McGraw-Hill, Boston. Many labs will also use Francq, E.N. 1974. Key to the land mammals of New Hampshire, and you should bring this to lab regularly.

You are expected to attend and complete the activities for each lab session (including the preparation of a museum specimen outside of class time, if necessary). As outlined in the main course syllabus, lab constitutes 40% of your course grade. You will be assessed through two lab practicals and your paired-partner presentation.