

Introduction to the Natural History of Vertebrates

Biol3420: Spring 2008

www.wtamu.edu/~rmatlack/bio3420.htm

Dr. Ray Matlack

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Class hours: T, TH 1:00-2:15. Location: ANS 320

Office Hours: T, Th 9:00-11:00 and by Appointment. I would be happy to schedule an appointment to meet with you at anytime I am available. You may schedule an appointment to meet with me via email or phone. I check my email and voice mail several times each day and will promptly reply to your messages.

Text Book: *Vertebrate Life*, 7th Ed. Pough, Janis, and Heiser.

Course Content: This course will provide students with a detailed understanding of the biology, ecology, diversity and natural history of vertebrates. Students will become familiar with the characteristics of the different groups of vertebrates. Students will learn to identify species of vertebrates common to the Panhandle of Texas and will examine morphological adaptations of vertebrates in the laboratory portion of the course.

Course Objectives:

1. To gain a sense of the diversity of vertebrates including the characteristics of each major group of vertebrate
2. To understand the environmental adaptations that allow survival and reproduction in vertebrates
3. To learn about the biology, ecology, conservation, and behavior of vertebrates
4. To be able to identify the common vertebrates of Texas

Tentative evaluation:

Lecture exams	4 @ 100 pts	400 pts
Lab practicals (exams)	2 @ 75	150 pts
Photo quizzes	5 to 10 @ 10 pts	50-100 pts
TOTAL.....		600-650 pts

Note: Other assignments (resulting in more points) may be given to facilitate learning of class material. To calculate your grade in the course, divide the number of points you receive on the above by the total number of points possible for the given work and multiply this number by 100.

Tentative Exam Dates:

Lecture Exam 1	Tuesday, 5 February
Lab Exam 1	Tuesday, 26 February
Lecture Exam 2	Tuesday, 4 March
Lecture Exam 3	Thursday, 3 April
Lab Final	Tuesday, 29 April
Lecture Final Exam	1:00 p.m., Thursday 8 May

Grade scale: A= 90-100%
B= 80-89%
C= 70-79%
D= 60-69%
F= 0-59%

Course content:

LECTURE SUBJECT	READING
Diversity, Classification, and Evolution of Vertebrates	Ch1; 2-15
FISHES	
Living in water	
Cartilaginous fishes	Ch 5
Bony fishes	Ch 6
HERPTOFAUNA	
Living on land	
Salamanders, anurans, and caecilians	Ch 10
Turtles	Ch 12
Tuataras, lizards, and snakes	Ch 13
Endothermy	Ch 14
BIRDS	
Characteristics of birds	
Evolution of birds and flight	421-429
Avian specializations	Ch 17
MAMMALS	
Characteristics of mammals	
Mammalian specializations	Ch 21
Endothermy	Ch 22
Body size, ecology, and sociality of mammals	Ch 23

DATE	LABORATORY SUBJECT
1/15	Introduction to Lab
1/22	Fishes
1/29	Fishes
2/05	Amphibians
2/12	Amphibians
2/19	Reptiles
2/26	Exam
3/04	Reptiles
3/11	Birds
3/18	Spring break
3/25	Birds
4/01	Birds/Mammals
4/08	Mammals
4/15	Mammals
4/29	Practical (Lab Final Exam)

Class Policies:

Information – I will maintain a web site for this class to provide you with class and general information. The site will contain general class information (such as the syllabus) and more detailed information to help you complete assignments. Please check this web site regularly: (www.wtamu.edu/~rmatlack/bio3420.htm).

Attendance - Attendance in the lecture and laboratory is expected. Regardless of whether you are in class or not, however, you are responsible for everything which is discussed in lecture, any announcements made in class or lab, everything which is assigned as class reading, and any handouts which are given in class. If you miss class, you must make your own arrangements for access to class notes or handouts from classes that you miss. I will not provide copies of my class notes except under very rare circumstances (serious injury, surgery, etc.) and by PRIOR arrangement only.

Lectures – This class will cover material in one semester that could easily fill 4 semesters. As a result, we will not be able to cover everything I want to cover or that should be covered. Keeping up with the readings will be very important to your understanding of the material and to ensure you get a good breadth of knowledge. The most effective way of incorporating the readings is to read the assigned material before you come to class. I will assign questions on the readings from time to time to encourage you to do the readings.

Labs – Much of the in-lab experience will be working on your own to learn the biology of the different groups of vertebrates, including species identification and morphological adaptation to particular habitats or ways of life. You will be exposed to a number of preserved specimens to facilitate this learning. There will be 2 lab practicals that cover the material from the labs. Photographs of selected species will be provided on the course web site (www.wtamu.edu/~rmatlack/bio3420.htm) to assist you in learning to identify the vertebrates covered in lab. You will be quizzed on your ability to identify various vertebrates from photographs in the lab.

Makeup exams, practicals and late assignments – All assignments will be due at the times announced in class or in the syllabus. Late assignments will be penalized. Assignments > 1 week late will not be accepted unless you have medical or other documented reasons for the delay and have received prior approval from me. All exams and practicals must be taken at the times announced in class or in the syllabus. Make up exams will be possible only with a doctor's letter or letter of absence for a school-sponsored event. If you have a serious reason for missing an exam, you must contact me BEFORE the scheduled exam period to notify me that you cannot take the exam (again, written documentation is required). You are then responsible for arranging with me to make up the test or quiz within two days of your return to campus. Lab exams require a tremendous amount of preparation and make up lab exams will not be of the same form as that given at the announced lab exam time (i.e., the makeup will have fewer questions, may be an oral exam, etc.). **Note:** Exams are subject to change and I reserve the right to change any and all information contained in the syllabus.

Academic dishonesty - If you are uncertain about what constitutes academic dishonesty, please read the appropriate sections in the Code of Student Life (see link below). I will have zero tolerance for academic dishonesty. Instances of dishonesty will be punished to the fullest extent possible, including the receipt of a failing grade for the course. Take care to avoid the appearance of cheating! During exams keep your eyes on your own paper, keep books and bags closed, and put all paper away.

Students with Disabilities:

WTAMU seeks to provide reasonable accommodations for all qualified persons with disabilities. This University will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to register with Disability Support Services and to contact the faculty member in a timely fashion to arrange for suitable accommodations.

Copyright:

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Safety:

Safety is everyone's responsibility. Material Safety Data Sheets (MSDSs) are provided for all chemicals used in this class. MSDSs provide information about physical properties, health risks, fire and explosion data, and other important information associated with these chemicals. Before handling or using a chemical, you should refer to the MSDS for that chemical. It is your responsibility to inform the instructor in writing of any health conditions that may prevent you from safely using a chemical (pregnancy, auto immune deficiency, etc.). It is also the responsibility of the student to report any spills or problems found while storing or using a chemical. If you are unsure about a chemical, always ask. If you see any unsafe condition, notify your instructor immediately. If you are unsure about the proper and safe operation of any piece of equipment, ask your instructor for proper instruction. All injuries, spills of materials and unsafe conditions must be reported to the instructor immediately.

Evacuation:

When you receive notice to evacuate the building, please evacuate promptly but in an orderly manner. Evacuation routes are posted in various locations indicating all exits, outside assembly area, location of fire extinguishers, fire alarm pull stations, and emergency telephone numbers (651-5000 or 911). In the event an evacuation is necessary, evacuate immediately; do not use elevators; take all personal belongings with you; report to outside assembly area and wait for further information; students needing assistance in the evacuation process should bring this to the attention of the instructor at the beginning of the semester.

Scholastic Dishonesty:

It is the responsibility of students and instructors to help maintain scholastic integrity at the University by refusing to participate in or tolerate scholastic dishonesty. Commission of any of the following acts shall constitute scholastic dishonesty. This listing is not exclusive of any other acts that may reasonably be said to constitute scholastic dishonesty: acquiring or providing information for any assigned work or examination from any unauthorized source; informing any person or persons of the contents of any examination prior to the time the examination is given in subsequent sections of the course or as a makeup; plagiarism, submission of a paper or project that is substantially the same for two courses unless expressly authorized by the instructor to do so. (2007-2008, CODE OF STUDENT LIFE, Rules and Procedures for Students, West Texas A&M University).

A complete statement regarding scholastic dishonesty can be found in the Student Code of Life at <http://www.wtamu.edu/administrative/ss/code/index.html>.