Animal Biodiversity and Conservation
BIOL 2980
Fall 2010

Instructor: Dr. James H. Kennedy
EESAT 310D
Phone: 940-565-2981
E-mail: kennedy@unt.edu

Office Hours: M. & W. 2:00 – 3:00 or by appointment

Time and Room
Lecture: MW 11:00 – 12:20 Whooten Hall 321.

Required Text: *Animal Diversity* C.P. Hickman, L.S. Roberts, S. L. Keen, A. L. Larson , D. J. Eisenhour, McGraw Hill Higher Education; 5th edition.

ANIMAL BIODIVERSITY and Conservation is a foundation course in the biodiversity of animals and conservation of animals. There is much more to biodiversity than the numbers of species. Biodiversity can best be described by its three major attributes; composition, structure, and function. Composition the first and most familiar component of biodiversity includes species lists and other measures of species diversity such as genetic diversity. Structure refers to the physical organization, from habitats measured within communities to the mosaic pattern of patches and other elements at a landscape scale. Function involves ecological and evolutionary processes, including gene flow, disturbances, and nutrient cycling. Conservation discussed in this course will focus on human impacts to biodiversity and integrative approaches for the protection and management of biodiversity.

Noss, R. 1990. Indicators for monitoring Biodiversity: A hierarchical approach. Conservation Biology 4(4): 355- 364.

OBJECTIVES:
The course aims to provide students with a range of fundamental concepts, designed to provide: a) basic knowledge about the diversity and distribution of organisms; b) an understanding of the links between biodiversity and ecosystem processes and services; c) information needed to evaluate the cultural and economic value of biodiversity and to use this to develop conservation plans and policy decisions.

Course Outline and Tentative Schedule

TENTATIVE SCHEDULE

Date	Topic	Reference
	Structure and Function	
30 Aug 2010	**Introduction: Class policies,** The Science of Zoology and Evolution	Chapter 1
01 Sep. 2010	Hierarchical Characterization of Biodiversity	Chapter 1 + readings
02 Sep. 2010	Evolution history and Darwin's Theory	Chapter 1
06 Sep. 2010	Evidence for Evolution, Natural Selection	Chapter 1
08 Sep. 2010	Macroevolution	Chap 1
13 Sep. 2010	Animal Architecture	Chap 3
15 Sep. 2010	Classification and Phylogeny of Animals	Chap. 4
20 Sep. 2010	Classification and Phylogeny of Animals Cont'd	Chap. 4
22 Sep. 2010	**Examination #1**	
27 Sep. 2010	**Lower invertebrates (Protozoa – Acolelomate Bilateral Animals)**	Chap. 5 - 8
29 Sep. 2010	Lower Invertebrates Cont'd	Chap. 5 - 8
04 Oct. 2010	Higher invertebrates (Mollusca – Hemichordates)	Chap. 10 - 14
06 Oct. 2010	Higher invertebrates continued	Chap. 10 - 14
11 Oct. 2010	Higher invertebrates continued	Chap. 10 - 14
13 Oct. 2010	**Examination #2**	
18 Oct 2010	Vertebrates	Chap. 15 - 20
20 Oct. 2010	Vertebrates continued	Chap. 15 - 20
25 Oct. 2010	Animal Ecology – Introduction Environment - niche	Chap. 2
27 Oct. 2010	Populations	Chap. 2
01 Nov. 2010	Communities and Ecosystems	Chap. 2
03 Nov. 2010	Competition and Character displacement	Chap. 2
08 Nov. 2010	Ecosystem Structure and Dynamics	Chap. 2
10 Nov. 2010	Ecosystem Structure and Dynamics , Cont'd	Chap. 2
15 Nov. 2010	Biogeography, Biosphere and Biomes	Supplemental Readings

17 Nov. 2010	Biogeography, Biosphere and Biomes	Supplemental Readings
22 Nov. 2010	Biodiversity and Extinction	Supplemental Readings
24 Nov. 2010	**Examination #3**	Supplemental Readings
29 Nov 2010	Conservation Biology	Supplemental Readings
01 Dec 2010	Social and political aspects of conservation and management	Supplemental Readings
06 Dec. 2010	Managing and Restoring Ecosystems	Supplemental Readings
08 Dec 2010	Course Summary	
15 Dec. 2010	**FINAL EXAMINATION ... 10:30 - 12:30**	

Please note that this schedule of topics is approximate and subject to some revision. I will make every attempt to cover the materials in the syllabus as outlined but reserve the right to make changes in content and order. Any changes I deem necessary will not be done precipitously. In all cases students will be given reasonable notification concerning changes. Changes, for example, might occur because of important new information that is published during the course or based on discussions and feedback with students enrolled in the course.

Readings: The course outline includes references. These are chapters in the course textbook provide background to the topics that I will discuss in class. Normally additional material beyond that discussed in the book will be presented in class. I will post additional readings throughout the semester on Blackboard.

Final Examination: The final includes information from all areas that was covered during the semester.

Grading: The grade you earn in Animal Biodiversity is based on lecture examinations (90%) and participation (10%). There are three lecture examinations and a final examination. All examinations (lecture and final) are equally weighted and will be averaged to determine the lecture examination portion of your grade. Participation points are based on class attendance, and participation in class activities. Grades will assigned as follows:

A 90 -- 100
B 80 -- 89
C 70 -- 79
D 60 -- 69
F < 59

Although I do not anticipate any reason to modify this grading plan, I reserve the right to do so if circumstances warrant. I will inform the class if modifications to the grading scale are necessary.

Attendance: Attendance is expected. If you miss lecture more than 4 times (two weeks of class) you will receive a 0 for participation for the course. If you miss lecture 6 times (3 weeks of class), you will receive, at the discretion of the instructor, an incomplete or an "F" for the course.

Office Hours: If you are having problems, you are encouraged to talk with me as soon as possible. Please feel free to drop by during posted office hours (M. & W. 2:00 – 3:00 or by appointment). My office is in EESAT 310F or you may e-mail me for an appointment at *kennedy@unt.edu.* It is always a good idea to contact me (even for visits during posted office hours) before you visit

Dishonesty: Academic dishonesty in this class is unacceptable and will not be tolerated in any form. Cheating can impact the entire class. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures.

Classroom Behavior: It is expected that student behavior will be courteous of the professor and other students. Students should arrive for class early and leave only at the end of class. If you arrive late please or must leave early please do not disrupt the class during your entrance or exit. **If you missed the handouts for the class you will need to wait until the end of the class to receive them.** During lectures there should be no distracting behavior including the use of headphones or other unauthorized electronic devices. **Cell phones must be turned off during class.** Lap top computer may only be used for note taking and you must sit in the first row of the lecture room. Students violating these norms will be asked and expected to leave the classroom.

Disability Accommodation:

The Department of Biological Sciences, in cooperation with the Office of Disability Accommodation, complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request before the 12th class day.