

SYLLABUS

ANT 350C – PRIMATE SENSORY ECOLOGY

Fall Semester 2012

PROFESSOR: Dr. Chris Kirk
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Office hours: Tues. 10:00 - 12:00 AM

LECTURES: Tues. and Thurs. 12:30 - 2:00 PM
SAC 5.172

COURSE DESCRIPTION:

Ecology is the study of how organisms interact with their environment.

Sensory ecology is the study of how organisms acquire and respond to *information* about their environment.

Primate Sensory Ecology is a course designed for advanced undergraduates in physical anthropology and the biological sciences. This course provides an opportunity for detailed study of primate sensory systems from an ecological and comparative perspective.

The core topics covered in this course are the special senses of vision, hearing, and smell, with a particular emphasis on the adaptive and ecological significance of primate sensory adaptations. For each of these senses, lectures and readings will review all or some of the following concepts: 1) general and comparative anatomy and physiology, 2) evolutionary history, 3) development, 4) neural pathways and central processing, 5) psychophysics, and 6) behavioral ecology.

In studying each sensory system, an emphasis will be placed on the relationship between variant morphologies and behavioral capabilities. This dual focus on morphology and behavioral ecology will provide students with an explicit understanding of the effect that the functional anatomy of a sensory system has on an organism's niche. All information will be presented within a comparative phylogenetic framework, so that evolutionary novelties can be understood in terms of the macroevolutionary processes responsible for the novel feature's appearance.

READING ASSIGNMENTS:

There is no textbook or course pack for this course. Readings of review articles and research papers will be made available online through blackboard (<http://courses.utexas.edu/>). In general, reading assignments will cover some (but not all) of the material presented in class.

PDF files of lecture slides will also be posted on blackboard. Be advised that past performance in this course is closely tied to attendance - **YOU ARE STRONGLY ENCOURAGED TO ATTEND CLASS.**

GRADING & EXAMS:

There will be three non-cumulative exams during the course of the semester. Exam questions will be taken from lectures and assigned readings.

DO NOT MISS AN EXAM. Make-up exams will be given ONLY when medical or family emergencies can be documented.

Exam scores will not be curved during the term. If you have any questions about your grade on an exam, I will be happy to recheck your whole exam. Simple errors of grading (e.g., incorrect addition) will be corrected immediately. More complicated issues should be addressed in writing within 3 days after the return of exams. Please include the exam with your request. You have 3 days after the exams have been returned to you to notify me of any errors or disagreements. After that, grades are final.

Exams 1 & 2 (covering 9 lectures each) count as 35% of the final grade each; Exam 3 (covering 6 lectures) counts as 30% of the final grade. All exams are non-cumulative.

THERE IS NO FINAL EXAM FOR THIS COURSE.

Final Grade Ranges:

A = 100-90; **B** = 89-80; **C** = 79-70; **D** = 69-60; **F** = 59 and below

CHEATING POLICY:

During exams, students will not be permitted to use electronic devices of any kind (including, but not limited to, cell phones and iPods).

Without exception, any student found cheating on an exam will receive a grade of zero for the exam and will be referred to the dean's office for further disciplinary action.

SPECIAL ACCOMMODATIONS:

If you require special accommodations for exams (e.g., a reduced-distraction environment or extra time), please schedule a meeting in advance with your instructor in order to discuss the necessary arrangements. At the meeting, proof of qualification for accommodations from the UT Services for Students with Disabilities (SSD) office must be provided.

COURSE OUTLINE

READINGS***

30 Aug (Th)	Eye	(Purves et al., 2008, Vision)
4 Sep (Tu)	Retina	(Purves et al., 2008, Vision)
6 Sep (Th)	Activity Pattern	
11 Sep (Tu)	Evolutionary Disequilibrium	(van Schaik & Kappeler, 1996; Kirk, 2006)
13 Sep (Th)	Visual Acuity 1	(Kirk and Kay, 2004 – pp. 539-556 ONLY)
18 Sep (Tu)	Visual Acuity 2	(Veilleux and Kirk, 2009)
20 Sep (Th)	Visual Fields 1	(Rasmussen, 90; Cartmill 92; Sussman, 95)
25 Sep (Tu)	Visual Fields 2	
27 Sep (Th)	Color Vision	(Dominy, 2001; Caine and Mundy, 2000)
2 Oct (Tu)	EXAM 1	
4 Oct (Th)	Balance & Vestibular Apparatus 1	(Purves et al., 2008, Vestibular System)
9 Oct (Tu)	Balance & Vestibular Apparatus 2	(Purves et al., 2008, Vestibular System)
11 Oct (Th)	Hearing	(Purves et al., 2008, Auditory System)
16 Oct (Tu)	Video: Super Sense	
18 Oct (Th)	No Class	
23 Oct (Tu)	Cochlear Function	(Kirk and Gosselin-Ildari, 2009)
25 Oct (Th)	Auditory Efferent System	(Kirk and Smith, 2003)
30 Oct (Tu)	Auditory Ecology 1 – Localizability	(Marler, 1955; Slabbekoorn, 2003)
1 Nov (Th)	Auditory Ecology 2 – Transmission	(Brown and Waser, 1984)
6 Nov (Tu)	Auditory Ecology 3 - Noise	
8 Nov (Th)	EXAM 2	
13 Nov (Tu)	Introduction to Olfaction	(Purves et al., 2008, Olfactory Sense)
15 Nov (Th)	Main Olfactory System	
20 Nov (Tu)	Accessory Olfactory System	
22 Nov (Th)	THANKSGIVING	
27 Nov (Tu)	Primate Variation	(Aujard, 1997; Gilad et al., 2004)
29 Nov (Th)	Pheromones	(Fisher et al., 2003)
4 Dec (Tu)	Scent Marking	(Lewis, 2005)
6 Dec (Th)	EXAM 3	

***Note: Additional or revised readings may be posted that are not included on this list