SYLLABUS

ANT 350C – PRIMATE SENSORY ECOLOGY

Fall Semester 2017

PROFESSOR: Dr. Chris Kirk
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Office hours: Thursday 12:30 - 2:30 PM

LECTURES: Tues. and Thurs. 11:00 AM - 12:30 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 biological 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 and subsequent modifications.

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 Canvas (http://canvas.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 Canvas. 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 each count as 35% of the final grade each; Exam 3 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.

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), you must contact Dr. Kirk at least 7 days in advance of the exam in order to discuss the necessary arrangements. Proof of qualification for accommodations from the UT Services for Students with Disabilities (SSD) office must be provided. Each time a student wishes to use an approved accommodation for an exam, it is the student's responsibility to notify and make advance arrangements with Dr. Kirk.

A student is free *not* to use an approved accommodation. However, if a student opts out of an accommodation for one exam and then decides to use it for another exam, it is the responsibility of the student to make advance arrangements with Dr. Kirk.

COURSE OUTLINE**		**READINGS*****
31 Aug (Th)	Introduction	Purves et al., 2012, Ch. 11
5 Sep (Tu)	Eye	Purves et al., 2012, Ch. 11
7 Sep (Th)	Retina	
12 Sep (Tu)	Activity Pattern 1	Kirk, 2006; Hall et al., 2012
14 Sep (Th)	Activity Pattern 2	
19 Sep (Tu)	Visual Acuity 1	Kirk and Kay, 2004 – pp. 539-556 ONLY
21 Sep (Th)	Visual Acuity 2	Veilleux and Kirk, 2009
26 Sep (Tu)	Visual Fields	
28 Sep (Th)	Color Vision	Dominy, 2001; Caine and Mundy, 2000
3 Oct (Tu)	Balance & Vestibular Apparatus 1	Purves et al., 2012, Vestibular System
5 Oct (Th)	**EXAM 1**	
10 Oct (Tu)	Balance & Vestibular Apparatus 2	Purves et al., 2012, Vestibular System
12 Oct (Th)	Hearing 1	Purves et al., 2012, Auditory System
17 Oct (Tu)	Hearing 2	Purves et al., 2012, Auditory System
19 Oct (Th)	Cochlear Function	Kirk and Gosselin-Ildari, 2009
24 Oct (Tu)	Auditory Efferent System	Kirk and Smith, 2003
26 Oct (Th)	Auditory Ecology 1 – Localizability	Marler, 1955; Slabbekoorn, 2003
31 Oct (Tu)	Auditory Ecology 2 – Transmission	Brown and Waser, 1984
2 Nov (Th)	Auditory Ecology 3 - Noise	
7 Nov (Tu)	**EXAM 2**	
9 Nov (Th)	Introduction to Olfaction	Purves et al., 2008, Olfactory Sense
14 Nov (Tu)	Main Olfactory System	
16 Nov (Th)	Accessory Olfactory System	
21 Nov (Tu)	Primate Variation	Aujard, 1997; Gilad et al., 2004
23 Nov (Th)	**THANKSGIVING**	
28 Nov (Tu)	Pheromones	Fisher et al., 2003
30 Nov (Th)	Scent Marking 1	
5 Dec (Tu)	Scent Marking 2	Lewis, 2005
7 Dec (Th)	**EXAM 3**	

****Note: Subject to Revision****

*****Note: Subject to change - Different / additional readings may be assigned*****