

**ANTHROPOLOGY 392J [31905]**  
**Introduction to Graduate Physical Anthropology Part 2:**  
**Behavioral Ecology, Genetics, and Biological Variation**

SPRING 2014

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**COURSE DESCRIPTION:**

This course is Part 2 of a two semester core curriculum in physical anthropology. All physical anthropology graduate students are required to take parts 1 and 2. Part 2 was offered in Fall 2013. Topics covered will include grouping patterns, reproductive strategies and mating systems, socioecology, cooperation, sex differences in behavior, genomics, population genetics, and evolutionary genetic theory in relation to human and nonhuman primates. The course also explores biological variation in genetic, physical, and behavioral traits within and between populations of humans and nonhuman primates, exploring both microevolutionary and cultural processes that have shaped these traits. (Part 1 emphasizes the history of the field of physical anthropology, evolutionary theory, primate systematics, methods of phylogenetic reconstruction, primate diversity and anatomical adaptations, and the human and nonhuman primate fossil record). The course provides an overview of behavioral ecology, molecular anthropology, and biological variation in human and nonhuman primates. The goal of the course is to give you an overview of the field, while allowing you to identify areas of research you might want to pursue at the master's and doctoral levels.

**COURSE FORMAT:**

Part 2 will consist of a combination of lectures, discussions and student presentations, and will cover major topics in physical anthropology. This class will primarily follow a seminar format. The instructor will give an introductory lecture on a new topic to be followed by discussion of the assigned papers. Each discussion will have a designated discussion leader (to be chosen by a semi-random process on the day of the discussion). Thus, students are expected to be prepared to lead discussion every class period. Students are expected to be able to provide a summary of the readings AND a critical evaluation of the readings each class. Additionally, each student will be responsible for the lecture, readings, and leading discussion for one topic during the semester.

**COURSE READINGS:**

**Textbook:** *Evolution Of Primate Societies* edited by Mitani et al. ISBN: 9780226531724

This course assumes that you already have the basic textbook knowledge of primates and evolutionary theory. Students who believe that they need to refresh their memories are encouraged to examine one of the following books:

*Primates in Perspectives* Campbell et al. (2011)  
*How Humans Evolved* (6<sup>th</sup> Edition) Boyd & Silk (2011)

Readings will be available on Blackboard or online journals and are to be read BEFORE class. A stimulating class discussion depends on students having thoroughly and critically read the assigned papers.

Be sure to regularly check Blackboard for class materials and information. Class handouts will be available on Blackboard.

**COURSE EVALUATION:**

Grades will also be based upon class participation, presentation of a topic via lecture and readings, a paper, and an oral presentation on that paper. The paper/presentation will be a critical review of a problem in human or nonhuman primate behavioral ecology, molecular anthropology, or biological variation.

	<b>%Grade</b>	<b>Date</b>
Participation	30%	
Weekly synthesis of readings	5%	
Lecture	20%	
Presentation	15%	Apr 21
Paper	30%	Apr 30 (by 5pm)
(Draft of paper)		Mar 17

**Participation:** Each student is expected (1) to ask meaningful questions during any lectures, (2) to be able to summarize any or all of the readings each class period, and (3) to thoroughly, thoughtfully, and critically discuss the readings each class period.

**Weekly Synthesis:** Students are expected to write a double spaced 1-page paper each week that (1) synthesizes the main ideas of the readings and (2) questions/critiques the ideas and/or methods of the readings.

**Lecture:** Each student will be required to give the lecture, assign the readings, and prepare leading questions to ask the class that will generate discussion for one class. This will require researching the topic, developing the lecture, and guiding the discussion. The students are responsible for this class period but are expected to develop the material for the topic under my general guidance. Lectures are expected to focus on the general theory regarding their topic.

**Term project presentation:** Each student will be required to conduct a small *research project* during the course of the semester and then present the results the last day of class in a 10-15 minute professional-style presentation. The goal of this assignment is to get your “feet wet” by doing *original research* and learning how to present your data as you would at a national conference (e.g. American Association of Physical Anthropologists). I will meet with each student individually to help you figure out your research topic, and to help you identify the resources you need to carry out your project. If you are unable to collect original data, as an alternative you may compile data from the literature to analyze in a new way. **ALL STUDENTS MUST MEET WITH ME TO DISCUSS THEIR RESEARCH PROJECTS NO LATER THAN**

*THE 5<sup>TH</sup> WEEK OF CLASS, AND FOR A SECOND TIME THE 10<sup>TH</sup> WEEK OF CLASS.*

**Term project paper:** You are also required to write a paper on your research project in journal article style. This paper should be approximately 20 pages long, but no more than 25 in 12pt font and with 1” margins. You should write a paper that is publishable in a journal that makes sense for your career, such as American Journal of Physical Anthropology. If you choose to write the paper for a non-physical anthropology journal, you still need to make sure that the paper is written in such a way as conform to the norms of the field of physical anthropology. In other words, if your research project crosses the boundaries with physical anthropology and archeology, the paper must be written in a broadly comparative physical anthropology format. Similarly, if your project examines data on a primate(s), it is not necessarily a physical anthropology project – your paper must be written as a physical anthropology paper, even if it is to be submitted to a general animal behavior journal. All papers should explore a set of hypotheses and predictions and test these predictions using either empirical data collected by the student or empirical data collected from the literature. *ALL STUDENTS MUST TURN IN A PAPER COPY OF AN EARLY DRAFT OF THEIR PAPER NO LATER THAN THE 9<sup>TH</sup> CLASS PERIOD TO GET FEEDBACK ABOUT THE DIRECTION OF THE PAPER/PROJECT DURING THE MEETING THE FOLLOWING WEEK (see above).*

#### **TENTATIVE COURSE SCHEDULE:**

Jan 13	Introduction, Overview of Evolutionary Theory & Primate Social Evolution
Jan 20	No class
Jan 27	Ecology Primate Ecology: Habitats, Diet, Range Use, etc.
Feb 3	Behavior Primate Groupings, Kinship, & Socioecology
Feb 10	Behavior Sexual Selection
Feb 17	Behavior Intelligence & Power
Feb 24	Behavior Communication & Culture
Mar 3	Genetics Molecular markers, Genome studies, Genome structure, Comparative primate genomics
Mar 10	No class
Mar 17	Genetics Population genetics, Hardy-Weinburg equilibrium, Microevolution
Mar 24	Variation Race/skin color variation, Global genetic diversity patterns <b>(Guest Lecture: Deborah Bolnick)</b>
Apr 9	Variation Adaptation, Acclimatization, Plasticity (temperature, altitude, lifestyle, malaria, lactose tolerance)
Apr 14	Variation Human behavioral variation, Case studies
Apr 21	Presentations
Apr 28	Anne Pusey will join class and we will read and discuss her work with her

#### **ACADEMIC INTEGRITY**

If you are caught plagiarizing, I will be following the university guidelines for disciplinary actions: ([deanofstudents.utexas.edu/sjs/academicintegrity.html](http://deanofstudents.utexas.edu/sjs/academicintegrity.html)), see also ([www.academicintegrity.org/](http://www.academicintegrity.org/)).

Each student in this course is expected to abide by the University Code of Academic Integrity (see attached). Any work submitted by a student in this course for academic credit will be the student's own work. You are encouraged to study together and discuss information and concepts covered in lecture. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of email, email attachment file, disk, or hard copy. Should copying occur, both the student who copied from another student and the student who gave material to be copied will both be automatically receive a zero for the assignment. Penalty for violation of this Code can also be extended to include failure of the course and University disciplinary action.

During examinations, you must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the exams will result in failure of the exam, and may result in failure of the course and University disciplinary action.

#### **THE UNIVERSITY OF TEXAS HONOR CODE**

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

#### **ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES**

In compliance with the UT Austin policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for students with disabilities. Requests for academic accommodations are to be made during the 1<sup>st</sup> 3 weeks of the semester, except for unusual circumstances, so arrangements can be made. Students are encouraged to register with Student Disability Services to verify their eligibility for appropriate accommodations.