ANTH 270: INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY
Fall Quarter 2009
4 credit hours (satisfies an SC requirement)

Course Time & Location: MW 4:00-5:20pm in 182 Lillis

Instructor: Dr. Josh Snodgrass
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COURSE DESCRIPTION

Examines the biological aspects of the human species from comparative, ecological, and evolutionary perspectives. Explores theoretical and methodological issues in biological anthropology.

COURSE CONTENT

This course provides a comprehensive introduction to biological (or physical) anthropology, in which we will explore the evolution of the human species and the nature of contemporary human variation. Principles of evolutionary theory and genetics will first be presented to provide a framework for the study of human evolutionary biology. The fossil evidence for human evolution will then be considered using comparative data from non-human primate ecology to help reconstruct prehistoric lifeways. Finally, the influence of environmental stressors (e.g., climate, nutrition, and disease) on modern human biological variation will be discussed. Particular attention will be given to how human populations have utilized biological and behavioral mechanisms to adapt to their environments throughout evolutionary history.

The course is designed to be both an introduction to biological anthropology for anthropology majors and an introduction to the field for non-majors. As one of the four subfields of anthropology (along with archaeology, cultural anthropology, and linguistic anthropology), biological anthropology is a critical component in the education of all students in the discipline. After successfully completing this course, students will be prepared to enter upper-level courses in biological anthropology.

LEARNING OBJECTIVES

After successful completion of this course, students will have an understanding of the following key issues in biological anthropology:

- The basic principles of evolutionary biology and human genetics
- The similarities and differences between humans and mammal and primate species
- The major trends in hominid evolution, including the fossil and molecular evidence for the origin of modern humans
- The influence of genetic, ecological, and sociocultural factors on biological variation in contemporary human populations
- Biocultural perspectives on human reproduction biology, growth and development, and patterns of disease

COURSE FORMAT

The course consists of lectures and required laboratory sections. The required laboratory sections are a critical part of the course and are designed to develop practical skills of observing, measuring, and interpreting bioanthropological data.

BLACKBOARD

A blackboard site will be maintained for this class, which will be your main source for course information, documents, and announcements. Make sure that you regularly check your Blackboard-linked e-mail account.

ACCOMMODATIONS

Appropriate accommodations will be provided for students with documented disabilities. Please make arrangements to meet with me or your GTF to discuss these accommodations.

REQUIRED READINGS

- Jurmain R, Kilgore L, Trevathan W, Ciochon RL. 2009. Introduction to Physical Anthropology (12th edition), Thomson/Wadsworth. (Available at the UO Bookstore)
- Several additional articles and book chapters (available on Blackboard)

EVALUATION METHOD

Requirements include two written midterm exams, one written (non-cumulative) final exam, discussion section attendance and participation, a lab practical, and a write-up of three short laboratory exercises.

2 Midterm Exams @ 20% each	40%
Final Exam	25%
Discussion Section Attendance & Participation	10%
Lab Practical	10%
3 Lab Exercises @ 5% each	15%

All exams must be taken at the scheduled time. Under no circumstances will make-up exams be given without a documented excuse (e.g., signed note from your doctor). If you will not be able to take an exam, you must notify me in advance (preferably by e-mail).

Exams will be based on lectures, labs, videos, and reading assignments. The final exam will not be comprehensive but will be slightly longer than the midterm exams, and will include several additional short essay questions. Material on the exams may be different than that presented in the textbook, and may only be covered during class lecture and discussion sections. Therefore, you are advised to arrange to get course notes if you miss a class.

A NOTE ABOUT GRADE DEFINITIONS

The grading system used in this course is as follows:

A – Outstanding performance relative to that required to meet course requirements; demonstrates a mastery of course content at the highest level.

B – Performance that is significantly above that required to meet course requirements; demonstrates a mastery of course content at a high level.

C – Performance that meets the course requirements in every respect; demonstrates an adequate understanding of course content.

D – Performance that is at the minimal level necessary to pass the course but does not fully meet the course requirements; demonstrates a marginal understanding of course content.

F – Performance in the course, for whatever reason, is unacceptable and does not meet the course requirements; demonstrates an inadequate understanding of the course content.

SCHEDULE

Week	Dates	Topics	Reading Assignment
1	9/28	**No Class—Yom Kippur**	
	9/30	Course Overview & Introduction to Anthropology; The Scientific Method; The Big Questions ***Lab: Introduction to the Class; Introduction to Evolutionary Biology***	Chapter 1 & Ward 2009
2	10/5	Evolution—History of an Idea; Darwin & Natural Selection; Biological Basis of Life	Chapters 2 & 3
	10/7	Inheritance of Traits; Basic Genetics; The Modern Evolutionary Synthesis ***Lab: Genetics & the Modern Synthesis*** ***(Write-up of this lab is due by the end of your lab the following week)***	Chapter 4
3	10/12	Macroevolution; Systems of Classification; What It Means to be Mammal ***(Guest Lecture by Dr. Stephen Frost, UO Anthropology)***	Chapter 5
	10/14	Our Heritage as Primates ***(Guest Lecture by Dr. Frances White, UO Anthropology)***; *Video: Life in the Trees* ***Lab: Primate Adaptation & Classification***	Chapter 6
4	10/19	Primate Adaptation and Classification	Chapters 7 & 8
	10/21	Primate Behavior & Ecology; Primate Reproductive Strategy; What We've Learned about Human Evolution from Living Primates ***Lab: Primate Behavior & Ecology***	
5	10/26	**Midterm Exam #1**	
	10/28	Introduction to Paleoanthropology; The Fossil Record; Dating Methods; Evolution of Bipedalism; Anatomical Changes with Bipedalism ***Lab: Introduction to the Skeleton & Ape/Human Differences***	Chapter 10 (<u>not</u> covered on Midterm Exam #1)
6	11/2	The Earliest Hominids; *Australopithecus* & *Paranthropus*; Origin & Evolution of the Genus *Homo*	Chapter 11
	11/4	*Homo erectus;* Dispersal; Brain Evolution; The Evolution of Hominid Diets; Later *Homo*; Europe; The Neandertals ***Lab:* Australopithecus & Homo** ***(Write-up of this lab is due by the end of your lab the following week)***	Chapters 12 & 13
7	11/9	Origin & Dispersal of Modern Humans; The Human Revolution; Upper Paleolithic Culture; Defining What It Means to Be Human	Chapter 14
	11/11	Contemporary Human Biological Variation; The Concept of Race ***Lab: Lab Practical*** ***(Lab quiz on primates, human skeleton & early hominid fossils)***	Chapter 15

Week	Dates	Topics	Reading Assignment
8	11/16	**Midterm Exam #2**	
	11/18	Human Nutritional Evolution; Plant & Animal Domestication; Food Production: A Great Leap Forward? ***Lab: Food & Health (Write-up of this lab is due to your GTF by Wednesday, 11/25 @ 5:00 pm)***	Larsen Ch. 12 (not covered on Midterm Exam #2)
9	11/23	Applied Biological Anthropology: Bioarchaeology & Forensic Anthropology	Stanford et al. Ch. 18
	11/25	Are Humans Still Evolving? Human Adaptation & Adaptability; Heat & Cold Adaptation ***No Lab—Thanksgiving Holiday***	Chapter 16
10	11/30	Human Adaptation (cont'd): High Altitude Adaptation; Skin Color & Solar Radiation	
	12/2	Evolutionary Medicine & Human Biocultural Evolution ***Lab: Anthropometry and Health (Body Size, Proportions, & Health)***	Chapter 17 & Nesse & Williams 1998
11	**12/9**	**Final Exam (Wednesday, 3:15 – 5:15 pm)**	

ADDITIONAL REQUIRED READINGS

In addition to the Jurmain textbook, there are four additional readings that are required for this course. All these readings are available on Blackboard.

- Ward P. 2009. What will become of *Homo sapiens*? *Scientific American* (January): 68-73. (*Week 1*)

- Larsen CS. 2008. The root of the matter: Farming and its consequences (Ch. 12). In: Our Origins: Discovering Physical Anthropology. Norton, New York, pp. 381-415. (*Week 8*)

- Stanford C, Allen JS, Antón SC. 2009. Bioarchaeology and forensic anthropology (Ch. 18). In: Biological Anthropology (2nd edition). Prentice Hall, Upper Saddle River, pp. 520-546. (*Week 9*)

- Nesse RM, Williams, GC. 1998. Evolution and the origins of disease. *Scientific American* (November): 86-93. (*Week 10*)