

ANTHROPOLOGY 1/ EL CAMINO COLLEGE
Section# 2018/ TTH 9:30-10:55; ARTB 338
Office Hours: MW 12:00-2:00
F 11:30-12:30

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COURSE SYLLABUS/ FALL 2010
INTRODUCTION TO PHYSICAL ANTHROPOLOGY

WELCOME TO ANTHROPOLOGY 1! This is an introductory course to Physical Anthropology, one of the main branches of general anthropology. This course will introduce the students to the theory of evolution through natural selection; to the mechanisms of heredity at the cellular and molecular levels; to the processes of micro and macroevolution; and, most importantly, to the evolutionary history of humans.

The following is an outline of the course objectives. It constitutes a list of the major concepts you should thoroughly understand by the completion of the semester. We will refer to each of them as we address relevant topics.

1. Demonstrate an understanding of the concept of the scientific method and its significance to science.
2. Describe and evaluate the major ideas that preceded and led to the development of evolutionary theory and analyze modern theories of Darwinian evolution through natural selection.
3. Identify and describe the processes by which genetic information is transmitted from one generation to the next.
4. Identify and discuss the various components of the DNA molecule and the process of protein synthesis.
5. Explain and assess the mechanisms of evolutionary change and explain how each one contributes to the evolutionary process.
6. Contrast point and chromosomal mutations and discuss the significance of point mutations to evolution.
7. List the major anatomical characteristics of primates associated with movement and the senses, and explain how they evolved as adaptations to an arboreal environment.
8. Contrast the major forms of primate social structure and describe their relationship to the primate species' ecology.
9. Explain the differences between relative and chronometric dating and provide an example of chronometric dating using a radiometric technique.
10. Evaluate the benefits of bipedalism in reference to the particular environment in which most hominid evolution occurred.
11. Compare and contrast the skull characteristics of *Australopithecus africanus*, *Australopithecus* (or *Paranthropus*) *boisei*, and *Homo habilis* in relation to the particular diet of each.
12. Contrast the anatomical characteristics of *Homo habilis* and *Homo erectus*, and analyze those contrasts in reference to their respective environments and subsistence strategies.

13. Analyze the characteristics of *Homo neanderthalensis* in reference to the environment in which this hominid lived.
14. Evaluate the models that account for the origin of *Homo sapiens*, outlining the major criteria and evidence supporting each.
15. Outline the cultural stages in the evolution of the genus *Homo*, making reference to the particular *Homo* species, tool industry, and environmental context associated with each stage.
16. Explain the difference between physiological adjustments and adaptations and explain skin color and body build as adaptations to particular environments.

The following Student Learning Outcome has been developed for the course. By the tenth week of class, the students should be able to understand the requirements outlined below.

In a written assignment, students will explain how natural selection is related to environmental factors by using an example that identifies key processes of natural selection and illustrates how selective pressures can change.

The following Student learning Outcome has been developed for the program. By the sixth week of class, the students should be able to understand the requirements outlined below.

Students will demonstrate an understanding of the four-field approach in anthropology by outlining each field, identifying which aspects of the study of human beings each field addresses and providing two examples of specializations within each field.

REQUIRED TEXT:

Larsen, Clark Spencer. 2010. Essentials of Physical Anthropology. New York: W. W. Norton & Company.

COURSE REQUIREMENTS:

- (1) There will be three exams, each one worth 75 points. The exam with the lowest score will be dropped at the end of the semester. THERE WILL BE NO MAKE-UP EXAMS. If you are unable to attend class during one of the exams, the missed exam will be the one dropped.
- (2) There will be an in-class Final Exam, worth 100 points. This exam will contain material discussed since the beginning of the semester. You need to take this exam in order to achieve a passing grade in the course. THERE IS NO MAKE UP FOR THE FINAL EXAM, EITHER.

- (3) I expect you to attend classes and to arrive on time. It will be extremely beneficial for you to attend every meeting for many reasons, among which I could mention:
- (a) I will assign short quizzes (10) at the beginning of some of the meetings. Those who arrive late will not be allowed to take these quizzes. Each quiz will be worth 5 points, for a total of 50 points.
 - (b) Students who have missed more than five meetings will not be eligible for possible extra credit assignments (no exceptions).
 - (c) A tardy is equivalent to ½ absence.
 - (d) In most cases, my lectures follow material which is presented in the book; however, occasionally, the content of a lecture is drawn from materials not contained in the book. If you miss one of these particular meetings, you will need to visit me during office hours to obtain this material.

Notes:

- (1) Scantrons (Form 882-E) and #2 pencils will be needed for all exams. Exams schedules will not be extended beyond the allotted time for completion (about an hour), so you should arrive on time.
- (2) Any changes to this syllabus will be announced in class. It is your responsibility to know of those changes.
- (3) Cheating is absolutely prohibited. If a student is caught cheating during an exam, an “F” will be assigned to the exam.
- (4) Please turn all cell phones off before entering the classroom.
- (5) Students are expected to remain in class for the whole length of the meeting. Those who leave early without previous consultation with the instructor will be marked absent. (Please, do not leave the classroom in order to answer a phone call. If you do so, you will not be allowed in for the remaining of the lecture)

GRADING:

2 exams @75 points each-----150

Final Exam -----100

10 quizzes @5 points each----- 50

Total Possible points-----300

Grades:

A---100-90% of total points

B--- 89-80% of total points

C--- 79-70% of total points

D--- 69-60% of total points

F--- 59% and below

LECTURES, ASSIGNMENTS, AND EXAM SCHEDULE

(Additional videos may be shown according to availability and scheduling)

WEEK	TOPIC
Feb. 15	Introduction to the Course Chapter 1 Introduction to Physical Anthropology Chapter 2 The Development of Evolutionary Theory (pp. 21-32)
Feb. 22	Chapter 2 The Development of Evolutionary Theory (pp. 21-32)
March 1	Chapter 2 The Development of Evolutionary Theory (pp. 21-32) EXAM #1 to take place on Thursday, 3/4 Chapter 2 Mechanisms of Inheritance (pp. 32-38)
March 8	Chapter 3 Genetics
March 15	Chapter 3 Genetics Chapter 4 Population Genetics (pp. 68-70; 73-91) Review
March 22	Chapter 4 Population Genetics (pp. 68-70; 73-91)
March 29	EXAM #2 to take place on Tuesday, 3/30 Chapter 6 The Living Primates
April 5	Chapter 6 The Living Primates
<u>SPRING BREAK: 4/10-4/16!!!</u>	
April 19	Chapter 6 The Living Primates
April 26	EXAM #3 to take place on Monday, 4/26 Chapter 7 Fossils and Their Place in Time and Nature (pp. 165-187)
May 3	Chapter 9 Hominid Origins
May 10	Chapter 9 Hominid Origins Chapter 10 The Origins and Evolution of Early <i>Homo</i>
May 17	Chapter 10 The Origins and Evolution of Early <i>Homo</i> Chapter 11 The Origins, Evolution, and Dispersal of Modern People

May 24 Chapter 11 The Origins, Evolution, and Dispersal of Modern People
Film: "Walking with Cavemen," which traces hominid
evolution from *A. afarensis* to *H. sapiens*

(Note: Memorial Day on 5/31; campus closed)

May 31 Chapter 5 Human Variation and Adaptation (pp. 95-112)

June 7 Review
FINAL EXAM to take place on Thursday, 6/10

HAVE A GREAT SUMMER!!!