

## PHYSICAL ANTHROPOLOGY

This course offers a detailed introduction to the discipline of physical/biological anthropology through a presentation of the human evolutionary record and a consideration of the present diversity of Homo sapiens sapiens. It first traces human evolution from its earliest primate beginnings over four million years ago to the appearance of anatomically modern man, at least c. 40-35,000 B.C. After briefly sketching the birth and development of evolutionary thought, the course proceeds with a description of the advanced physical and behavioral characteristics of the primate order. In addition to the consideration of the fossil palaeontological record, archaeological materials and biochemical evidence are presented to document the story of our evolution. The course then discusses theories on the origin of contemporary human diversity and details the present variation of the human species in respect to physical features, such as blood types and body forms, and environmental adaptations.

Five reading assignments will be required during the term with possible supplementary materials added by the teacher during his lectures; the students are expected to read the books and papers as assigned and are responsible for the material that is presented in the lectures. **Three quizzes will be given during the term (Feb. 27<sup>th</sup>, April 6<sup>th</sup>, and May 8<sup>th</sup>; there will be no final exam. Students should consult with Mr. Kohl about final papers (c. 12-16 pages), which are due at the end of Examination Period on May 21<sup>st</sup>. A 2 page outline of the final paper (non-graded) will be due after spring break on March 27<sup>th</sup>, and students will be asked to make short 10-15 minute oral presentations of what they are researching in April after the second quiz on April 6<sup>th</sup>.** There may be a field trip in late April/early May to visit the primate exhibit (primarily gorillas) at Franklin Park zoo.

Students are encouraged to select topics of their choice, but Mr. Kohl must approve these selections. Grades for the course will be calculated roughly as follows: 1/6 per quiz; 2/6 for the final paper; and 1/6 for class participation and the oral presentation. Students are invited to meet with Mr. Kohl at any time in his office, Pendleton East 345, particularly during his office hours that are Tuesdays and Fridays 11:00AM – 12:15 P.M.

### Required Books Available for Purchase at Bookstore

- EPA – *Essentials of Physical Anthropology* by R. Jurmain, et al., 6<sup>th</sup> edition
- LL – *Lucy's Legacy* by A. Jolly
- WB – *The Wisdom of the Bones* by A. Walker and P. Shipman
- MMM – *The Mismeasure of Man*, 2<sup>nd</sup> edition, by S.J. Gould
- WMC - *What It Means to be 98% Chimpanzee* by J. Marks

## **COURSE OUTLINE**

1. Evolution: the history and development of a theory - 19th century evolutionary thought; the synthetic theory of evolution; the source of genetic variation; vertebrate and mammalian evolution; dating techniques; and the complex concept of adaptation; a brief look at the Flores hominids

Required Readings to be completed by Feb. 13<sup>th</sup>:

EPA – chapters 1-4

Article (on e-reserve) by:

S. Gould & R. Lewontin - "The Spandrels of  
San Marco and the Panglossian  
Paradigm..." (to be discussed on Feb. 13<sup>th</sup>)

Video: Darwin's Revolution in Thought by S.J. Gould  
(Feb. 9<sup>th</sup>)

2. The Primate Order and Miocene Hominoids - primate taxonomy and physical characteristics; behavior and social organization; adaptations to a terrestrial way of life - the emergence of human culture; the evolution of human sexuality; the Dryopithecines, Sivapithecus, and other hominoids; sociobiology and sociobiological readings of human/primate homologies and human origins.

Reading to be completed by February 23<sup>rd</sup>:

EPA – chapters 5-7 and chap. 8, pp. 172-189

LL - entire (to be discussed in class on Feb. 23<sup>rd</sup>)

## **FIRST QUIZ: February 27<sup>th</sup>**

3. Plio-Pleistocene Hominids: ancestors and cousins - South African Australopithecines: the history and context of their discoveries; East African Australopithecines: A. afarensis, H. habilis; alternative ways of arranging the human evolutionary tree; interpretations of the archaeological record for Plio-Pleistocene hominids; The Earliest Dispersal of the genus Homo and Homo erectus.

Reading to be completed by March 16<sup>th</sup>:

EPA – chapter 8, pp. 189-215, chap. 9 (entire)  
WB – entire (for discussion on March 16<sup>th</sup>)

4. Middle-Late Pleistocene Hominids -; Homo sapiens neanderthalensis: the features, culture, and regional variation of the humans of the Middle Palaeolithic; multiregional evolution vs. the Out of Africa model of modern human origins; Cro-Magnon and Upper Palaeolithic people - evolution of language and of art; molecular evidence for hominid/pongid relations and modern human origins - the mitochondrial DNA Eve theory

Readings to be completed by April 3<sup>rd</sup>:  
EPA – chapters 10-11  
DHC – entire (for discussion on April 3<sup>rd</sup>)

### **2ND QUIZ: APRIL 6<sup>th</sup>**

5. Human Variation and Diversity - the concept of race and the origin of the races: physical anthropological conceptions of race and the multiregional model of human evolution; a brief presentation of our knowledge of the means of heredity and population genetics; adaptations to particular environmental conditions; racial differences critically examined; race in biological anthropology; eugenics, biological determinism and cultural evolution: from anthropometry to intelligence testing, sociobiology, evolutionary psychology, and the bell curve. **SHORT STUDENT ORAL PRESENTATIONS (c. 2-3 presentations/class, beginning on April 13<sup>th</sup>; c. 10-15 minutes each):**

Required Readings to be completed by May 4<sup>th</sup>:  
EPA – chapters 12 - 14  
MMM– entire (for discussion in class on April 24<sup>th</sup>)  
WMC – entire (for discussion on May 4<sup>th</sup>)

Articles by: H. F. Osborne "The Evolution of Human Races"  
P.T. Baker "Human Adaptations to High Altitudes"  
R. Lewontin "Race and Intelligence"

### **3RD QUIZ: MAY 8<sup>th</sup>**