

I. CATALOG DESCRIPTION:

Department Information:

Division: Social Sciences
Department: Anthropology
Course ID: ANTHRO 106
Course Title: Physical Anthropology
Units: 3
Lecture: 3
Prerequisite: None

Catalog Description:

The systematic study of humans as biological organisms including the origin and antiquity of humanity, our place in nature, modern biological diversity including race, and the future prospects for the human species.

Schedule Description:

The systematic study of humans as biological organisms including the origin and antiquity of humanity, our place in nature, modern biological diversity including race, and the future prospects for the human species.

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: One

III. EXPECTED OUTCOMES FOR STUDENTS:

Upon successful completion of this course, students should be able to:

- A. Describe the history of evolutionary theory and analyze the central principles of that theory;
- B. Discuss and demonstrate the processes of meiosis, mitosis, and protein synthesis;
- C. Explain the processes of genetic variation in a population and its importance for evolution;
- D. Explain and analyze the various theories of evolution of humans;
- E. Differentiate between the morphological changes that characterize hominoids and hominids;
- F. Evaluate the strengths and weakness of various theories of evolution and apply the various theories to create scenarios for the long-term future of the human race.

IV. COURSE CONTENT:

- A. Introduction
 1. What is Anthropology
 2. What is Science
 3. What is Evolution
- B. Patterns of Variation in Modern Humans
 1. Basic concepts of human genetics
 2. Protein synthesis
 3. Complex morphological traits
- C. Forces of Evolution
 1. Populational thinking and counting genes
 2. Sources of variation
 3. Natural selection
 4. Adaptation to climatic factors
 5. Genetic variation and disease
- D. Mammals and Primates
 1. Taxonomy
 2. Characteristics of mammals
 3. Primates

- E. Macroevolution v. Microevolution
 - 1. Speciation
- F. Fossil Record
 - 1. Paleontological methods
 - 2. Early Primate evolution
 - 3. Overview of human evolution
 - 4. Evolutionary models of human origins
 - 5. Australopithecines
 - 6. Emergence and evolution of Homo sapiens
 - 7. Neandertals
 - 8. Emergence of modern humans

V. METHODS OF INSTRUCTION:

- A. Lecture
- B. Discussions (class and group)
- C. Audio-Visuals
- D. Reading of texts, both secondary and primary
- E. Writing tasks appropriate for the material
- F. Computer Tutorials (if applicable)
- G. Online or web-based delivery of instruction

VI. TYPICAL ASSIGNMENTS:

- A. Reading and Critical Thinking
Read the section titled "Is Evolution a Fact, a Theory, or Just a Hypothesis?" in Michael Alan Park's *Biological Anthropology*. Summarize the key ideas in that article. Compare and contrast the views that evolution is fact, theory, hypothesis, and a complex nexus of all three. Be prepared to discuss your summary, your comparative analysis, and your own personal ideas on the topic with the class.
- B. Writing and Critical Thinking
Because of anthropology's wide scope of interests and its overlap with other scholarly disciplines, anthropologists have sometimes been described as "jacks of all trades and masters of none." Write an essay in which you respond to that remark, justifying your ideas with references to the nature and methods of biological anthropology.

VII. EVALUATION:

- A. Methods of evaluation will vary from instructor to instructor, but may include true-false tests, multiple choice tests, or sentence completion tests. In addition, written components such as essay tests, writing tasks (i.e. journals, summary reviews, interpretive essays, and/or term projects) will be included. Telecomputing can include downloading and uploading reading and writing tasks, on-line discussion, and computer tutorials. Grading may be comparative within a class or may be based on an absolute standard. **Methods of evaluation will adhere to the parameters set out in the "Expected Outcomes for Students" section above.**
 - 1. Sample objective test question: The total genetic endowment of an organism is called
 - a. genome
 - b. cline
 - c. demes
 - d. endocasts
 - 2. Sample subjective test question: Does the conflict between scientific creationism

and mainstream evolutionary science mean that we must choose between science and religion? Are the two realms of knowledge, with regard to this subject, incompatible.

- B. While the frequency of evaluation will depend on the type of evaluation (i.e. "objective" or written), evaluation will take place periodically throughout the semester with enough frequency to be sufficient to measure student progress and will be sensitive to the various learning styles of students. The minimum evaluation will consist of: at least two evaluative instruments (i.e. papers, projects, portfolios, or tests) chosen by the instructor of record for the class.

VIII. TYPICAL TEXT(S):

- A. Park, Michael Alan. 2002. *Biological Anthropology*. Third Ed. McGraw-Hill.
- B. Jurmain, R., Nelson, H., Kilgore, L., Trevathan, W. 1999. *Introduction to Physical Anthropology*. International Thomson Publishing Co.
- C. Boaz, Noel T. *Biological Anthropology: A Synthetic Approach to Human Evolution*, 2nd ed. Prentice-Hall, 2002.

IX. OTHER SUPPLIES REQUIRED OF STUDENTS:

Supplementary material may include handouts, primary sources, maps, study guides, computer disks, and/or software.