

Las Positas College
3000 Campus Hill Drive
Livermore, CA 94551-7650
(925) 424-1000
(925) 443-0742 (Fax)

Course Outline for ANTR 1
BIOLOGICAL/PHYSICAL ANTHROPOLOGY
Effective: Fall 2013

I. CATALOG DESCRIPTION:

ANTR 1 — BIOLOGICAL/PHYSICAL ANTHROPOLOGY — 3.00 units

This course introduces the concepts, methods of inquiry, and scientific explanations for biological evolution and their application to the human species. Issues and topics will include, but are not limited to, genetics, evolutionary theory, human variation and biocultural adaptations, comparative primate anatomy and behavior, and the fossil evidence for human evolution. The scientific method serves as foundation of the course. The course may include a lab component.

3.00 Units Lecture

Strongly Recommended

- Eligibility for ENG 1A -

Grading Methods:

Letter or P/NP

Discipline:

	MIN
Lecture Hours:	54.00
Total Hours:	54.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering this course, it is strongly recommended that the student should be able to:

A. -Eligibility for ENG 1A

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

- A. Describe the scientific process as a methodology for understanding the natural world.
- B. Define the scope of anthropology and discuss the role of biological anthropology within the discipline.
- C. Identify the main contributors to the development of evolutionary theory.
- D. Explain the basic principles of Mendelian, molecular and population genetics.
- E. Evaluate how the forces of evolution produce genetic and phenotypic change over time.
- F. Demonstrate an understanding of classification, morphology and behavior of living primates.
- G. Summarize methods used in interpreting the fossil record, including dating techniques.
- H. Recognize the major groups of hominin fossils and describe alternate phylogenies for human evolution.
- I. Identify the biological and cultural factors responsible for human variation.

V. CONTENT:

- A. Nature of scientific inquiry and the scientific method
- B. Anthropological perspective
- C. History and development of biological evolutionary thought
- D. Molecular, Mendelian and population genetics
- E. Mechanisms of evolution
- F. Comparative primate taxonomy, anatomy and behavior
- G. The nature of the fossil record including dating techniques
- H. Fossil and genetic evidence of human evolution
- I. Biocultural adaptations and modern human variation

VI. METHODS OF INSTRUCTION:

- A. **Lecture** -
- B. Textbook reading assignments; additional Internet and/or print assignments
- C. **Research** - Research project
- D. **Audio-visual Activity** - Presentation of audio-visual materials
- E. **Discussion** -

VII. TYPICAL ASSIGNMENTS:

A. Lectures

1. Mendelian genetics
2. Primate social behavior
3. Anatomical adaptations for bipedalism

B. Reading assignments

1. Read the textbook chapter on *Homo erectus*
2. Read an excerpt from Herbert Spencer's *Progress: Its Law and its Cause*

C. Homework

1. Read the textbook chapter on Mendelian genetics; using a Punnett Square diagram, map out the results of a union between two carriers for a recessive trait. What percentage of offspring would we expect not to show the recessive trait?

D. Class and group discussions.

1. Class discussion topic: Are human beings still evolving?
2. Group discussion topic: What is "fixity of species?" How did the concept stand in the way of the development of evolutionary theory?

E. Audio-visual materials.

1. National Geographic's "Journey of Man," for example, to demonstrate the relevance of physical anthropology to real world science.

F. Group research project.

1. Choose any topic in physical anthropology and produce both a poster and class presentation to explain it in detail. Examples include the Human Genome Project, lithic technology, and cloning.

VIII. EVALUATION:

A. **Methods**

1. Exams/Tests
2. Quizzes
3. Research Projects
4. Papers
5. Projects
6. Field Trips
7. Group Projects
8. Class Participation
9. Home Work

B. **Frequency**

1. Midterm and Final Exams
2. Periodic quizzes
3. Weekly homework evaluation
4. End-of-term evaluation of research project

IX. TYPICAL TEXTS:

1. Jurmain, Robert, Lynn Kilgore and Wenda Trevathan *Essentials of Physical Anthropology*. 9 ed., Cengage, 2012.
2. Larsen, Clark Spencer *Our Origins: Discovering Physical Anthropology*. 2 ed., Norton, 2010.
3. Park, Michael Allen *Biological Anthropology*. 7 ed., McGraw-Hill, 2012.
4. Relethford, John *The Human Species: An Introduction to Biological Anthropology*. 9 ed., McGraw-Hill, 2012.
5. Stein, Philip L. and Bruce M. Rowe *Physical Anthropology*. 10 ed., McGraw-Hill, 2010.

X. OTHER MATERIALS REQUIRED OF STUDENTS: