ANTH 1HL: HONORS BIOLOGICAL ANTHROPOLOGY LABORATORY

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2025
Units:	1
Hours:	3 laboratory per week (36 total per quarter)
Corequisite:	Completion of or concurrent enrollment in ANTH 1H.
Advisory:	Not open to students with credit in ANTH 1L.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Area 5: Natural Sciences w/ Lab
Transferable:	CSU/UC
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes Description

Introductory laboratory course focusing on scientific methodology to explore/experiment with topics from anthropology lecture sections. Topics include Mendelian genetics, population genetics, human variability, forensics, medical anthropology, epidemiology, hominin dietary patterns, non-human primates, primate dental and skeletal anatomy, fossil hominins, chronometric dating, environmental challenges to hominins, environmental impact of hominin behavior, general methodologies utilized in physical anthropological research, and the general study of hominins as bio-culturally adapting animals. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions. Material covered will be enhanced and research techniques and methodologies explored in greater depth than in the non-honors version of this course.

Course Objectives

The student will be able to:

1. Distinguish scientific methodology from other methods of evaluation or thinking.
2. Explain a variety of primate and/or hominin evolutionary patterns over time.
3. Assemble or organize specimens and/or models used in physical anthropology (skeletal, dental, genetic, geological).
4. Employ basic forensic field methods for analyzing and interpreting human remains.
5. Research an anthropological topic and prepare the results for public and/or classroom presentation.
6. Evaluate and debate social, cultural, environmental, or other influences on hominin adaptation and survival over time.

Course Content

Laboratory projects based on 2-5 of expanded description of course content for ANTH 1H. Projects cover methods, techniques, and procedures used in biological/physical anthropology research. Emphasis on skill demonstrations and problem solving.

1. Students will demonstrate knowledge in the following areas:
   a. Mendelian genetics
   b. Population genetics
   c. Human variability
   d. Forensics
   e. Medical anthropology
   f. Epidemiology
   g. Hominin dietary patterns
   h. Non-human primates
   i. Primate dental and skeletal anatomy
   j. Fossil hominins
   k. Chronometric dating
   l. Environmental challenges to hominins
   m. Environmental impact of hominin behavior
   n. General methodologies utilized in physical anthropological research
   o. The general study of hominins as bio-culturally adapting animals
2. Students conducting laboratory research will gain proficiency in the following areas:
   a. Instrumentation, such as microscopes and centrifuges
   b. The appropriate handling of human remains
   c. Crime scene investigation techniques
   d. Data gathering and analysis using current statistical and mapping programs
   e. Graphing and interpretation of data using scientific methodology

Lab Content

1. Scientific Method exercises
   a. Field study using Method
   b. Microscope training
2. Darwin's Natural Selection
   a. Examples from nature
   b. Cellular transformation
3. Genetics
   a. Field study of phenotypic traits
4. Biological classifications
   a. Taxonomy
5. Primate osteology
   a. Lab training with primate skeletons
6. Human osteology
   a. Skeletal anatomy
7. Primate behavior
   a. Field project on human primates
8. Early primates and hominins
   a. Fossil collection study
9. The Genus Homo
   a. Anthropometrics
10. Forensics and variation (Metric/Non-Metric)

   a. Craniometric and osteometric studies
   b. Blood group work
   c. Finger prints
11. Forensics and skeletal abnormalities
   a. Gun shot wounds
   b. Trephination
   c. Antemortem, perimortem, and postmortem analysis
12. Sociobiology and human bio-cultural adaptations
13. Our past 10,000 years: agriculture, population and biology
14. Race as a cultural construct, usage institutionally, to include law enforcement, forensic studies, and educational frameworks

Special Facilities and/or Equipment

1. Anthropology laboratory equipped with appropriate materials to instruct the lab sections.
2. Internet connection required to conduct enhanced learning assignments.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

In-class projects
In-class lab reports
Quizzes
Skill demonstrations or problem solving
1. Class performances
2. Field work
3. Performance exams
Group project scientific research and presentations
Preparedness and participation in seminar style discussions on topics relevant to the lectures and primary source readings such as journal articles

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture
Seminar-style discussions
Cooperative learning exercises
Field work
Oral presentations
Independent study
Laboratory
Demonstration
Professors meet with all students in a series of individual and small group learning communities, out-of-class, to work together on students' research and presentation preparation

Representative Text(s) and Other Materials

Soluri, E. Elizabeth, and Sabrina Agarwal. Laboratory Manual and Workbook for Biological Anthropology: Engaging with Human Evolution, 2nd ed.. 2019.

France, Diane. Laboratory Manual and Workbook for Physical Anthropology, 6th ed.. 2007.

Walker, Suzanne. Exploring Physical Anthropology: A Lab Manual and Workbook. 2007.

Whitehead, Paul, William Sacco, and Susan Hochgraf. A Photographic Atlas for Physical Anthropology. 2005.

Although these texts are older than the suggested "5 years or newer" standard, they are still appropriate for undergraduate coursework in this area of study.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

1. Completion of exercises in the workbook
2. Collection and analysis of laboratory data
3. Practical exams
4. Computational analysis
5. Primary source materials form academic journals

Discipline(s)

Anthropology