ANTH 1L: PHYSICAL ANTHROPOLOGY LABORATORY

Foothill College Course Outline of Record

Heading	Value
Units:	1
Hours:	3 laboratory per week (36 total per quarter)
Corequisite:	Completion of or concurrent enrollment in ANTH 1 or 1H.
Advisory:	Not open to students with credit in ANTH 1HL.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Area III: Natural Sciences
Transferable:	CSU/UC
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable

Student Learning Outcomes

- Students will practice and apply understandings of evolution in a laboratory setting.
- Students will critically analyze and interpret physical anthropological data.
- Students will apply anthropological principles for solving human problems on the local, regional and world scales.

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.

Course Objectives

The student will be able to:
A. distinguish scientific methodology from other methods of evaluation or thinking.
B. explain a variety of primate and/or hominin evolutionary patterns over time.
C. assemble or organize specimens and/or models used in physical anthropology (skeletal, dental, genetic, geological).
D. employ basic forensic field methods for analyzing and interpreting human remains.
E. research an anthropological topic and prepare the results for public and/or classroom presentation.
F. evaluate and debate social, cultural, environmental, or other influences on hominin adaptation and survival over time.

Course Content

Laboratory projects based on B-E of expanded description of course content for ANTH 1. Projects cover methods, techniques, and procedures used in biological/physical anthropology research. Emphasis on skill demonstrations and problem solving.
A. Students will demonstrate knowledge in the following areas:
1. Mendelian genetics
2. Population genetics
3. Human variability
4. Forensics
5. Medical anthropology
6. Epidemiology
7. Hominin dietary patterns
8. Non-human primates
9. Primate dental and skeletal anatomy
10. Fossil hominins
11. Chronometric dating
12. Environmental challenges to hominins
13. Environmental impact of hominin behavior
14. General methodologies utilized in physical anthropological research
15. The general study of hominins as bio-culturally adapting animals
B. Students conducting laboratory research will gain proficiency in the following areas:
1. Instrumentation such as microscopes and centrifuges
2. The appropriate handling of human remains
3. Crime scene investigation techniques
4. Data gathering and analysis using current statistical and mapping programs
5. Graphing and interpretation of data using scientific methodology

Lab Content

Lab content may include but is not limited to:
A. Scientific Method exercises
1. Field study using Method
2. Microscope training
B. Darwin's Natural Selection
1. Examples from nature
2. Cellular transformation
C. Genetics
1. Field study of phenotypic traits
D. Biological classifications
1. Taxonomy
E. Primate osteology
1. Lab training with primate skeletons
F. Human osteology
1. Skeletal anatomy
G. Primate behavior
1. Field project on human primates
H. Early primates and hominins
1. Fossil collection study
I. The Genus Homo
1. Anthropometrics
J. Forensics and variation (Metric/Non-Metric)
1. Craniometric and osteometric studies
2. Blood group work
3. Finger prints
K. Forensics and skeletal abnormalities
1. Gun shot wounds
2. Trephination
3. Antemortem, perimortem and postmortem analysis

L. Sociobiology and human bio-cultural adaptations
M. Our past 10,000 years: agriculture, population and biology

Special Facilities and/or Equipment

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

Method(s) of Evaluation

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

Methods of evaluation may include:
A. In-class projects
B. Lab reports submitted the following week
C. Quizzes and exams
D. Skill demonstrations or problem solving
1. Class performances
2. Field work
3. Performance exams
E. Group project scientific research and presentations

Method(s) of Instruction

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

Methods of instruction may include:
A. Lecture
B. Discussion
C. Cooperative learning exercises
D. Field work
E. Oral presentations
F. Laboratory methods and exercises
G. Multimedia presentations
H. Demonstrations

Representative Text(s) and Other Materials

Soluri, E. Elizabeth, and Sabrina Agarwal. Laboratory Manual and Workbook for Biological Anthropology: Engaging with Human Evolution. New York: W.W. Norton and Co., 2016.
France, Diane. Laboratory Manual and Workbook for Physical Anthropology. 6th ed. Belmont, CA: Wadsworth Publishing, 2007.
Walker, Suzanne. Exploring Physical Anthropology: A Lab Manual and Workbook. Englewood, CO: Morton Publishing Company, 2007.
Whitehead, Paul, William Sacco, and Susan Hochgraf. A Photographic Atlas for Physical Anthropology. Englewood, CO: Morton Publishing Company, 2005.

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

Examples of required reading, writing and outside class assignments may include:
A. Required readings from the lab textbook or academic journals.
B. Completion of exercises in the workbook.
C. Lab report write-ups.
D. Collection and analysis of laboratory data.
E. Practical exams with osteological samples.
F. Computational analysis.

Discipline(s)

Anthropology