ANTH A185L: BIOLOGICAL ANTHROPOLOGY LABORATORY

Item	Value
Curriculum Committee Approval Date	11/01/2023
Top Code	220200 - Anthropology
Units	1 Total Units
Hours	54 Total Hours (Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
Associate Arts Local General Education (GE)	• Area 5 Physical and Biological Sciences, Scientific Inquiry, Life Science (OB)
Associate Science Local General Education (GE)	• Area 5 Physical and Biological Sciences, Scientific Inquiry, Life (OSB)
California General Education Transfer Curriculum (Cal-GETC)	• Cal-GETC 5C Laboratory Activity (5C)
Intersegmental General Education Transfer Curriculum (IGETC)	• IGETC 5C Laboratory Activity (5C)
California State University General Education Breadth (CSU GE-Breadth)	• CSU B3 Laboratory Activity (B3)

Course Description

Laboratory exercises are designed to introduce students to the scientific method and explore genetics, human variation, human and non-human primate anatomy and behavior, the primate/hominin fossil record and other resources to investigate processes that affect human evolution. PREREQUISITE: ANTH A185 or concurrent enrollment or ANTH A185H or concurrent enrollment. Transfer Credit: CSU; UC. C-ID: ANTH 115L.**C-ID:** ANTH 115L.

Course Level Student Learning Outcome(s)

1. Apply key concepts (e.g., genetic, evolutionary theory, etc..) to explain human biological variation and adaptations.
2. Utilize evolutionary theory and fossil evidence to explain human evolution.
3. Demonstrate methods and techniques used when analyzing fossil and skeletal remains.

Course Objectives

- 1. Apply the scientific method.
- 2. Identify the mechanisms of evolution and the outcomes of these processes.
- 3. Describe basic concepts of genetics (structure and function of DNA and RNA).
- 4. Demonstrate inheritance of traits using human examples.
- 5. Identify anatomical features of various nonhuman primate groups.
- 6. Describe behavioral patterns observed in nonhuman primates groups.
- 7. Compare the morphology of primates and early hominins from the genus Australopithecus and Homo.
- 8. Compare the morphology of hominin fossils in the genus Homo.
- 9. Identify defining features of anatomically modern humans.
- 10. Describe the behavioral adaptations of the genus Homo.
- 11. Identify basic techniques used in Forensic Anthropology.

Lecture Content

Nature of scientific inquiry and the scientific method Molecular, Mendelian and population genetics Mechanisms of evolution Comparative primate taxonomy, anatomy and behavior The nature of the fossil record including dating techniques Fossil and genetic evidence of human evolution Biocultural adaptations and modern human variation

Lab Content

Application of scientific methods Investigation of cell biology Solve genetics problems using principles of inheritance Exploration of evolutionary mechanisms Identify the major bones of the human skeleton Use forensic and anthropometric basic methods and rechiques to analyze skeletal remains Observe nonhuman primates to compare behavioral patterns. Compare anatomical traits of non-human primates groups Identify and compare key features of fossil hominins. Explore morphological trends in human evolution Explore evidence of behavior traits that emerge in human evolution Investigation into modern human variation and bio-cultural adaptations

Method(s) of Instruction

- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

Audio and/or Visual Presentations (Power points, videos, animations, 3D images, etc...) used to help deliver content, techniques, and methodology Demonstrate measuring techniques Collaborative Group Work Skill-building Exercises Small group or directed class activities and discussions. Feedback provided verbally or in writing for lab activities.

Reading Assignments

Students may spend 1 hour per week reading the assigned text to prepare for the week s lab activity.

Writing Assignments

Students may spend 1 hour per week writing responses for the lab activities.

Out-of-class Assignments

Students may spend 1 hour per week reviewing lab notes and activities and practicing measuring techniques in preparation for lab examinations.

Demonstration of Critical Thinking

Students may use evolutionary theory to explain human variation. Students may compare hominin fossils to investigate trends that occurred in human evolution.

Required Writing, Problem Solving, Skills Demonstration

Students may participate in small group discussions and complete lab activities to solve genetics problems. Students may demonstrate basic techniques used to analyze skeletal remains and complete a written report outlining their findings.

Eligible Disciplines

Anthropology: Master's degree in anthropology or archaeology OR bachelor's degree in either of the above AND master's degree in sociology, biological sciences, forensic sciences, genetics or paleontology OR the equivalent. Master's degree required.

Textbooks Resources

1. Required France, D. L. Lab Manual and Workbook for Physical Anthropology, 8th ed. Cengage, 2018 2. Required Walker-Pacheco, S. E. Exploring Physical Anthropology: A Lab Manual Workbook, Fourth ed. Morton, 2022 3. Required Soluri, K.E. Agarwal, S.C. . Laboratory Manual and Workbook for Biological Anthropology, 2nd ed. Norton, 2019

Other Resources

1. Laboratory equipment, fossil materials. 2. Selected handout materials to be provided and distributed by the instructor.