ANTH G185L: PHYSICAL ANTHROPOLOGY LAB

Item	Value
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
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
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

This course examines concepts presented in Physical Anthropology, ANTH G185, through supplemental and practical laboratory exercises. Topics include the scientific method, applied evolutionary theory, cellular structure and function, DNA, protein synthesis, cellular division, inheritance processes, evolutionary forces, skeletal analysis, bioarcheology, forensic anthropology, comparative osteology, primatology, fossil primates, hominin ancestors, anatomically modern humans, and biocultural variations of modern humans. PREREQUISITE: ANTH G185 or concurrent enrollment. Transfer Credit: CSU; UC. C-ID: ANTH 115L. **C-ID:** ANTH 115L.

Course Level Student Learning Outcome(s)

1. Course Outcomes
2. Assess the value of the scientific method for morphological analyses of primate remains.
3. Diagram the form and function of organelles in eukaryotic animal cell.
4. Examine the steps of protein synthesis.
5. Differentiate the outcomes of mitosis and meiosis cellular division.

Course Objectives

- 1. Explain the genetic principles involved in heredity and human evolution.
- 2. Explain basic cellular structure, functions, and reproduction.
- 3. Compare and contrast the morphological features of modern humans, ancestral hominins, and non-human primates.
- 4. Relate the behaviors and physical characteristics of living non-human primates to modern humans.
- 5. Explain how biocultural interactions between the environment and human behavior affected human evolution as well as modern biological variations.

Lecture Content

See Lab content

Lab Content

Physical Anthropology as a Science Scientific Method Process of Evolution Evolutionary Theory as a Science Measuring Evolutionary Success Evolution and Human Ancestry The Organism and the Cell Basic Body Plan Cells Chromosomes Organism, Cells, and Chromosomes The Double Helix Genetic Material Protein Synthesis Mutations How Cells are Made Cell Division Chromosomal Aberrations Inheritance Gregor Mendel Autosomal Traits Blood Typing Sex-Linked Traits Pedigrees Genetics Recap Major Forces of Evolution Natural Selection Mutation Migration (Gene Flow) Random Genetic Drift The Bones Within Us Functions of the Skeleton What Can We Tell from Bone. Classification, Development, and Anatomy of Bone Anatomical Terminology Features of Bone Axial Skeleton The Skull Vertebral Column Thorax Appendicular Skeleton Forensic Anthropology Measuring Human Biological Variation Anthropometric Techniques Male or Female. How Old Were They. Determining Ancestry How Tall Were They. Comparative Osteology Evidence from the Teeth and Skull Evidence from the Postcranial Skeleton Biological Classification and the living Primates Establishing Evolutionary Relationships Biological Classification Alternative Classification Schemes The Order Primates Observing the Behavior of Living Primates Captive Primates Preparation Primate Behavioral Observations Focal Animal Instantaneous Sampling Scan Sampling Early Primates from the Paleocene through the Miocene Geological Time Scale Plate Techtonics Primate Beginnings (66 to 56 mya) "True" Primates of the Eocene (56 to 34 mya) Other Eocene Primates from Africa, Asia, and Europe Oligocene Primates (34 to 24 mya) Miocene Honidoids (53 to 23 mya) Whos in Our Family. The Comparative Basis Bipedalism Ape-Human Anotomical Comparisons Cranial and Dental Differences between Humans and Apes Early Members of the Human Line The Genus Homo Early Homo Later ("Archaic") Homo Neanderthals Anotomically Modern Humans Modern Human Biological Variation Intergroup Variation: Race and Ancestry Intragroup Variation: Differences among Individuals

Method(s) of Instruction

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

Instructional Techniques

Laboratory activities with supportive brief lectures or explanatory media.

Reading Assignments

Textbook, Websites, Handouts

Writing Assignments

Students participate in group discussions while working on lab exercises. Laboratory assignments will be turned in at the end of each lab session. Students will maintain a journal and/or take midterm and final exams that include responses to objective questions, essay questions, and critical thinking problems.

Out-of-class Assignments

Assigned reading, "One Step Further" excercises from the textbook

Demonstration of Critical Thinking

Explanation and application of anthropological concepts in essay form or classroom activities. Maintenence of a weekly critical thinking reflection log.

Required Writing, Problem Solving, Skills Demonstration

Students participate in group discussions while working on lab exercises. Laboratory assignments will be turned in at the end of each lab session. Students will maintian a weekly critical thinking journal that allows them to reflect upon the topics covered in the lab. Students will also take a midterm and final that will include responses to objective questions, essay questions, and/or critical thinking problems.

Eligible Disciplines

Anthropology: Masters degree in anthropology or archaeology OR bachelors degree in either of the above AND masters degree in sociology, biological sciences, forensic sciences, genetics or paleontology OR the equivalent. Masters degree required.

Manuals Resources

1. Susanne E. Walker-Pacheco. Exploring Physical Anthropology, Morton Publishing Company , 01-01-2010