ANTH A185: INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY

Item	Value
Curriculum Committee Approval Date	10/04/2023
Top Code	220200 - Anthropology
Units	3 Total Units
Hours	54 Total Hours (Lecture 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)
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 5B Biological Sciences (5B)
Intersegmental General Education Transfer Curriculum (IGETC)	• IGETC 5B Biological Sciences (5B)
California State University General Education Breadth (CSU GE-Breadth)	• CSU B2 Life Science (B2)

Course Description

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. Enrollment Limitation: ANTH A185H; students who complete ANTH A185 may not enroll in or receive credit for ANTH A185H. Transfer Credit: CSU; UC. C-ID: ANTH 110.**C-ID:** ANTH 110.

Course Level Student Learning Outcome(s)

1. Utilize evolutionary theory and scientific evidence to explain human biological variation and adaptations.
2. Demonstrate an understanding of the morphological and behavioral trends that occurred during human evolution.
3. Explain the role of Biological Anthropology within the discipline of Anthropology, and how the knowledge gained from research in Biological Anthropology contributes to a better understanding of the human species.

Course Objectives

- 1. Explain the discipline of Anthropology and introduce the subdiscipline of Biological Anthropology.
- 2. Explain the nature of scientific inquiry and the process used to explore natural phenomenon, specifically as it applies to anthropological research.
- 3. Identify the major contributors to the development of evolutionary theory and explain their contributions.
- 4. Understand basic molecular and population genetics as well as principles of Mendelian inheritance.
- 5. Explain the forces of evolution and their effects on gene frequencies and phenotypic variations.
- 6. Demonstrate an understanding of classifications and morphology for living primates.
- 7. Examine social behaviors observed in living primates.
- 8. Explain techniques and challenges associated with dating, interpreting, and analyzing fossils.
- 9. Identify key traits associated with the various hominin species and the possible relationship between each species.
- 10. Explain how modern human variation evolved due to biological and cultural interactions.

Lecture Content

An overview of Anthropology Subdisciplines of Anthropology Subfields of Biological Anthropology Scientific method and a scientific approach to Anthropological research Development of Evolutionary Theory Pre-Darwinian contributors (Linnaeus, Lamarck, Cuvier, etc) Charles Darwin and the process of Natural Selection Genetics and Heredity DNA Structure, Replication, and Protein Synthesis Cell Division Principles of Mendelian inheritance Mechanisms of Evolution Mutations Gene flow Genetic Drift Natural selection Population Genetics Primate taxonomy General primate traits Key traits for major primate groups Dentition Limb proportions Primate Behavior Locomotion Social groups Reproductive Strategies Diet and Foraging Behavior Communication Study of Fossils Dating methods Types of fossils Taphonomy Fossilization Environmental reconstruction Early Primate Evolution Key discoveries from the Paleocene to the Miocene Hominin Fossils Key morphological traits for various hominin species from the following: pre-australopithecines, australopithecines, paranthropines, and the genus Homo. Evidence of behaviors (e.g., tool technology) associated with hominins Genetic evidence of human evolution Human variation and biocultural adaptations Topics include but are not limited to body shape and size variation, skin pigmentation, lactase persistence, and adaptations to infectious disease

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

Instructional Techniques

Audio and/or Visual Presentations (Power points, videos, animations, 3D images, etc...) used during lecture and/or uploaded to the course management system Collaborative Group Work Skill-building Exercises Small group or directed class discussions. Student-instructor conferences (face-to-face, online via chat, video conferencing, and/or email) so that the instructor may aid or feedback on assignments

and exams. Feedback may be provided on assignments as appropriate (e.g., instructor-led discussions, written on printed copy of assignment, narratives in the course management system for electronic submissions)

Reading Assignments

Students may spend 2 hours per week reading assigned chapters from the textbook, additional course handouts, and/or websites which emphasize key concepts (e.g., protein synthesis, hominin diets, foraging by nonhuman primates, etc...) to facilitate participation in class discussions and comprehension of the material.

Writing Assignments

Students may spend two hours per week writing a comparison and contrast response on behavioral or morphological traits of early hominins, humans, or nonhuman primates.

Out-of-class Assignments

Students may spend two hours conducting literature searches of the library database and writing article summaries on topics covered in the course.

Demonstration of Critical Thinking

Students may communicate in writing their own perspective or positions and support their positions with relevant scientific evidence. During small group activities, students may discuss various topics (i.e., evolution of bipedalism) and analyze the scientific evidence.

Required Writing, Problem Solving, Skills Demonstration

Students may work in small groups to discuss competing hypotheses. Students may compare and contrast skeletons to determine nonhuman primate or hominin classifications.

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 Larsen, C. S. Essentials of Biological Anthropology, 5th ed. Norton, 2021 2. Required Stein, P., Rowe, B., Pierson, B.. Physical Anthropology, 12th ed. McGraw Hill, 2020 3. Required Fuentes, A.. Biological Anthropology: Concepts and Connections, 3rd ed. McGraw Hill, 2019 4. Required Shook, B., Nelson, K., Aguilera, K., Braff, L., eds. . Explorations: An Open Invitation to Biological Anthropology, 2 ed. American Anthropological Association, 2023

Other Resources

1. Selected handout materials to be prepared and distributed by the instructor.