ANTH G185: PHYSICAL ANTHROPOLOGY

Item	Value
Curriculum Committee Approval Date	11/19/2024
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), • Pass/No Pass (B)
Local General Education (GE)	• Area 5 Natural Sciences (GB1)
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 examines primate biology, human evolution, and biocultural variation through the theories, methods, and applications of physical anthropological inquiry. Foundational topics include molecular biology, genetics, living non-human primates, primate behavior, the fossil record, early primates, bipedal ancestors of humans (i.e., hominins), Neanderthals, archaic humans, and forensic anthropology. Cumulative topics include microevolutionary variations of modern humans (e.g., race), impacts of modern lifeways on human health, and the intersections between human biology, culture, and the environment. ADVISORY: ANTH G185L. Transfer Credit: CSU; UC. C-ID: ANTH 110. **C-ID:** ANTH 110.

Course Level Student Learning Outcome(s)

1. Course Outcomes
2. Assess the importance of the multidisciplinary approach to physical anthropological inquiry.
3. Estimate the influence of historical context on foundational concepts of evolution.
4. Compare the processes of mitosis and meiosis.
5. Differentiate between Mendelian and polygenic genes.

Course Objectives

- 1. Distinguish physical anthropological inquiry from other paradigms.
- 2. Identify the key discoveries which contributed to the development of Darwin's concept of natural selection.
- 3. Distinguish the various forms and functions of cellular organelles.
- 4. Differentiate between mendelian, polygenic, and epigenetic inheritance factors.
- 5. Evaluate the concept of evolution within the context of contemporary biological sciences.
- 6. Describe the various categories of living non-human primates.
- 7. Evaluate the behavioral ecology of living non-human primates.
- 8. Distinguish key methods of analyzing fossilized remains.
- 9. Debate the evolutionary origins of the primate order.
- 10. Explain the emergence of bipedalism in hominins.
- 11. Examine the regional variants of Homo erectus.
- 12. Assess the taxonomic classification of Neanderthals.
- 13. Inspect the migration patterns of early modern humans.
- 14. Explain why race is not biologically detectable and therefore exists only as a cultural construct.
- 15. Identify the key methods of forensic skeletal analysis.
- 16. Examine the intersections of culture, biology, and the environment.

Lecture Content

Introduction to biological anthropology Four fields of anthropology Foundational paradigms of anthropology Subfields of physical anthropology History of evolutionary thought Foundational contributions to scientific inquiry Darwin's discovery of natural selection Common misconceptions of natural selection Molecular biology Eukaryotic animal cells and tissue types DNA, RNA, and protein synthesis Mitosis and meiosis Genetics Mendelian genetics Polygenic genetics Epigenetics Contemporary evolutionary thought Forces of evolution Population genetics Macro- vs. microevolution Living non-human primates Tarsiers, lemurs, and lorises Monkeys Apes Primatology Habit, diet, and locomotion Social structures Reproductive strategies Communication Primate culture Interpreting the fossil record Taphonomy Dating methods Context Evolutionary origins of primates Leading hypotheses Key New World specimens Key Old World specimens Early hominins Emergence of bipedalism Pre-australopiths Australopiths Early members of the genus Homo Climate change and the evolution of the human brain Homo habilis Homo erectus Archaic Homo The Ice Age Neanderthals Denisovans, H. naledi, and H. floresiensis Modern Homo sapiens Migrations Material cultures Origins of agriculture Race and human variation History of race and "scientific" racism Race as a cultural construct Biocultural legacy of racism Microevolutionary adaptations of modern humans Temperature Altitude Disease Forensic anthropology Skeletal analysis Identifying markers Ethical considerations Contemporary topics Impacts of modern lifeways on human health Intersections of human biology, culture, and the environment Social and biopolitical dimensions of evolutionary thinking

Method(s) of Instruction

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

Reading Assignments

Textbook.

Writing Assignments

Discussion, essays, and/or reserach papers.

Out-of-class Assignments

Assigned readings, essays, reserach papers, and/or projects.

Demonstration of Critical Thinking

Distinguish the evolutionary effects of the various forces of evolution. Construct the most likely evolutionary pathway of Homo sapiens sapiens. Assess the importance of cultural patterns on human health.

Required Writing, Problem Solving, Skills Demonstration

Synthesize terminology, key concepts, and methods of inquiry for application to broader topics.

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 Shook, B., Braff, L., Nelson, K., Aguilera, K.. Explorations: An Open Invitation to Biological Anthropology, 2nd ed. Creative Commons Attribution Noncommercial, 2023