



ANTH C1001L - Biological Anthropology Lab

Catalog Description

Transfer Status: CSU/UC

Corequisite: Successful completion of or concurrent enrollment in ANTH C1001

Unit(s): 1.00

Lab: 51.00 Contact hours/0.00 Out of class hours/51.00 Total hours/1.00 Unit(s)

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Course Description: In this laboratory course, students investigate the anatomy, genetics, behavior, variation, and evolution of humans and other primates. Students apply the scientific method and use interactive exercises in this course supplement to the Introduction to Biological Anthropology lecture course. (C-ID ANTH 155L).

Objectives

Upon successful completion of this course, the student should be able to:

1. Identify and compare primate and hominin species in terms of their osteological, morphological, and/or behavioral adaptations.
2. Describe the principles of human inheritance, genetics, and evolutionary processes.
3. Demonstrate an understanding of the scientific method and an ability to interpret data to arrive at reasoned conclusions.
4. Relate classification to morphology and behavior of living primates.
5. Evaluate how the forces of evolution produce genetic and phenotypic change over time.
6. Describe the structure and function of DNA and RNA.
7. Describe the biological and behavioral adaptations of the genus Homo.
8. Identify the biological and cultural factors responsible for human variation.

Course Content

Topic Titles / Suggested Time Topic	
<u>Lecture</u>	
<u>Topics</u>	<u>Lec Hrs</u>
	Total Hours: 0.00
<u>Lab</u>	
<u>Topics</u>	<u>Lab Hrs</u>
1. Application of the scientific method	51.00
2. Investigation of cellular biology and DNA	
3. Examination of the inheritance of human traits	
4. Exploration of evolutionary mechanisms	
5. Investigation of human osteology and forensic anthropological methods	
6. Comparative analysis of anatomical and behavioral traits of non-human primates	
7. Comparative analysis of hominin fossils	
8. Analysis of evidence for hominin evolution	
9. Investigation into human biological variation	
10. Molecular, Mendelian and population genetics	
11. The nature of the fossil record including dating techniques	
12. Examination of human variation around the globe	
	Total Hours: 51.00

Methods of Instruction

- A. Class Activities
- B. Collaborative Group Work
- C. Demonstrations
- D. Field Trips

- E. Laboratory Experiments
- F. Problem-Solving Sessions

Methods of Evaluation

- A. Examples of potential methods of evaluation used to observe or measure students' achievement of course outcomes and objectives could include, but are not limited to: laboratory exercises, practica, quizzes, projects, and research demonstrations. Methods of evaluation are at the discretion of local faculty.

Examples of Assignments

Reading Assignments

1. Read Stephen Jay Gould's *Ever Since Darwin*. Apply Gould's understanding of our current views of evolution to human evolution. Use these works to discuss Darwin's contributions to the theory of evolution. Be prepared to discuss in class.
2. Read Katharine Milton's article: *Diet and Primate Evolution* (In *Nutritional Anthropology: Biocultural Perspectives on Food and Nutrition*; Mayfield). Be prepared to discuss this article in class in terms of implications for human evolution, especially as related to human cognition.

Writing Assignments

1. Make your way around the room starting at one of the six stations. Using Lab 9: Primate Taxonomy as your guide for each specimen available, fill in the morphological traits listed in the chart. Once you have completed a section in a station, write a 250-word paragraph discussing how each trait is diagnostic of the species you are describing.
2. Lab 10: Forensic Detectives require you to interact with the pelvis, cranium, and femurs of different human specimens. Use the lab instructions to determine the possible age, biological sex, presence or absence of degenerative arthritis, and whether the individual has given birth or experienced a pregnancy. Collect your data, fill in the forms and write a 1-2 page report on your findings.

Recommended Materials of Instruction

Soluri, K. E., & Agarwal, S. C. (2019). *Laboratory Manual and Workbook for Biological Anthropology*. Norton, 2nd. 9780393697476.

Hens, S. (2021). *Method and Practice in Biological Anthropology: A Workbook and Lab Manual for Introductory Courses*. Pearson, 2nd. 9780133825862.

Walker-Pacheco, S. (2022). *Exploring Physical Anthropology: A Lab Manual and Workbook*. Morton, 4th. 978-1640432123.

Zero Cost Textbook

Shook, B. et. al. (Eds.). (2023). *Explorations: An Open Invitation to Biological Anthropology*. 2nd ed. (OER).

<https://pressbooks.calstate.edu/explorationsbioanth2/>

Taylor-Hill, L. (2025). *Calculations and Palpations: An Open Invitation to Biological Anthropology Laboratory*. (OER).

<https://www.calculationsandpalpations.org/>

Other Learning Materials

Locally developed lab manual.

Minimum Qualifications

Anthropology (Masters Required)

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