CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

Anthropology C1001 – Introduction to Biological Anthropology

3 hours lecture, 3 units

Catalog Description
In this course, students examine human origins, evolution, and variation with a focus on the adaptations of humans and other primates. Biological evolution and scientific methods are foundations for the course.

Topics covered include evolutionary theory, principles of genetics, biology and behavior of nonhuman primates, the fossil evidence for human and primate evolution, and modern human biological and cultural diversity. Formerly ANTH 130. Not open to students with credit in ANTH 130.

Prerequisite
None

Course Content
Part 1:
1) The nature of scientific inquiry and the scientific method
2) The anthropological perspective
3) Development of biological evolutionary thought
4) Molecular, Mendelian, and population genetics
5) Mechanisms/forces of evolution
6) Comparative primate taxonomy, anatomy, and behavioral ecology
7) The fossil record, geologic time, and dating methods
8) The fossil, archaeological, and genetic evidence of human evolution
9) Biocultural adaptations and modern human variation
10) Understanding ancestry, racism, and the invalidity of biological race in humans

Part 2:
1) Anthropology, biological anthropology, and the scientific method.
2) Evolutionary theory.
    a. Historical context of evolutionary theory.
    b. Darwinian natural selection.
    c. Evidence for evolution.
    d. Applications of evolutionary theory.
3) Principles of genetics.
    a. Cellular structures.
    b. DNA structure and protein synthesis.
    c. Mendelian genetic inheritance.
    d. Human genetic conditions.
4) Origin and evolution of species.
5) Human and nonhuman primate evolution.
    a. Primate evolution.
    b. Early hominin evolution.
    c. The genus Homo.
    d. Origin of modern humans.

e. Changing patterns of health and disease.

Course Objectives

Part 1:

At the conclusion of this course, the student should be able to:

1) Demonstrate an understanding of the scientific method and an ability to interpret data to arrive at reasoned conclusions.
2) Identify the principles of human inheritance, molecular biology, genetics, and evolutionary processes from the perspective of biological anthropology.
3) Identify the biological and cultural factors responsible for human variation.
4) Identify and compare primate and hominin species in terms of their osteological, morphological, and/or behavioral adaptations

Part 2:

At the conclusion of this course, the student should be able to:

1) Define the scope of anthropology and discuss the role of biological anthropology within the discipline.
2) Examine the key contributors to the development of evolutionary theory.
3) Summarize the basic principles of molecular, Mendelian and population genetics.
4) Evaluate how the forces of evolution produce genetic and phenotypic changes over time

Method of Evaluation

Part 1:

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: assignments, quizzes, exams, projects, and academic writing. Methods of evaluation are at the discretion of local faculty

Part 2:

1) One or more written exams (objective and essay questions).
2) Comprehensive written final exam (objective and essay questions).
3) Small-group or individual oral presentations**.** Example: Research a fossil hominin species including its skeletal anatomy, diet, and material culture, and how the species fits into the larger picture of human evolution.
4) Written assignments. Example: Describe the relationship between skin color and solar radiation from an evolutionary perspective, explaining how human variation in skin pigmentation is influenced by the environment.

Special Materials Required of Student

None

Minimum Instructional Facilities

1) Smart classroom
2) Learning Resource Center
3) Casts of fossils and model of human skeleton

Method of Instruction

1) Lecture and discussion
2) Small and large group discussion
3) Guest speakers
4) Individual and group projects, structured in-class exercises
5) Library materials and Internet exploration; other computerized instruction
6) Auxiliary use of study groups, peer tutoring and/or instructor office hours

Out-of-Class Assignments

1) **Reading:** Reading assignments from the text and a selection of short articles.
2) **Writing:** Term paper/project involving in-depth library research on a topic discussed in class. Example: Evaluate competing theories on the origins of human bipedalism.
3) **Other:** Research projects. Example: Observing and documenting patterns of behavior among captive primates either from online footage, or from live observation at the San Diego Zoo, using standardized data collection methods.

Texts and References

Part 1:

Textbook choice is the discretion of faculty.
Texts can include, but are not limited to, the following

- Shook, B., Braff, L., Nelson, K., & Aguilera, K. (Eds.). (2023). Explorations: An Open Invitation to Biological Anthropology. 2nd ed.: LibreTexts / American Anthropological Association. CC BY NC (OER).
- Boyd, R., & Silk, J. (2023). How Humans Evolved. 10th ed.: Norton.
- Fuentes, A. (2019). Biological Anthropology: Concepts and Connections. 3rd ed.: McGrawHill.
- Clark, L. (2025). Essentials of Biological Anthropology. 6th ed.: Norton

Part 2:

1) Stanford, C., Allen, J.S., & Anton, S.C. (2025). Biological Anthropology: The Natural History of Humankind. 5th ed.: Pearson.
2) Supplemental: None

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

1) Identify the various scientific methods used to the study of physical anthropological analysis of the human species.
2) Evaluate hypotheses pertaining to the exploration of extinct human populations and their evolution to modern humans.
3) Compare and contrast various scientific breakthroughs and how they have changed the understanding of adaptive strategies of early humans and primates leading to the development of modern human culture.