I. Catalog Information

ANTH 1  Physical Anthropology  4 Unit(s)

(See general education pages for the requirement this course meets.)

Advisory: English Writing 1A or English as a Second Language 5.

Four hours lecture

Biological structure and evolution of primates with particular emphasis on Homo sapiens as a culture-bearing animal. Relationships between human and non-human primates; genetic, physical, and cultural variations in living human groups; social organization and gender roles in primate and human societies; and considerations of future human evolution.

II. Course Objectives

A. Recognize the immense scope of the multi-faceted discipline of anthropology and explain the relationships between its basic areas of inquiry: physical anthropology, cultural anthropology, archaeology/prehistory, and linguistic anthropology.

B. Examine the basic conceptual ideas in physical anthropology concerning the scientific method, the determinants of primate behavior, the role of culture, and the theory of evolution.

C. Understand the biological background for physical anthropology in terms of biochemistry, genetics, adaptation, and molecular biology.

D. Assess the primatological information about the living primates by comparing primate anatomy, behavior, gender roles, social organization, reproduction and ecology and by noting their diversity, classification and geographic distribution.

E. Analyze the fossil record of humanity by examining the evidence, questions, hypotheses, and controversies concerning human evolution in light of current information on genetics, evolutionary processes, molecular evidence of evolution, and anatomy and behavior of living primates.

F. Examine the emergence and transformations of human culture over time, recognizing the various and ancient cultural sources for modern human society.

G. Evaluate the importance of the environment in human success and evolution; critically analyze the past and present impact of human populations on the environment and predict possible future outcomes for our species based on present trends in environmental change.

III. Essential Student Materials

None

IV. Essential College Facilities

None

V. Expanded Description: Content and Form

A. Anthropology as a multi-faceted discipline
   1. Anthropology defined as science and as art
   2. The major fields within anthropology
   3. Becoming a physical anthropologist

B. Basic conceptual ideas in physical anthropology
   1. The challenge of applying the scientific method to the study of humans
   2. Human characteristics and behavior, the differentiation of culturally and biologically determined behaviors
   3. The role and importance of culture in the success of human societies functioning in diverse environmental situations.
   4. Organic evolution: historical background and foundations of the theory, how the process works
   5. Comparison of evolutionary theory with traditional views of diverse societies on the origin of the natural world

C. Biological background for physical anthropology
1. DNA structure and functions, significance of mutations in evolution
2. Biochemical evidence for evolution: differences in DNA and proteins of different species, the "molecular clock"
3. Cell structure, chromosome structure, cell division, and sexual reproduction, importance of genetic variation in evolution
4. Genetics and population genetics
   a. genetic crosses
   b. examples of genetically-determined human traits that are found in different frequencies in peoples living in diverse parts of the world, including sickle-cell anemia, Tay-Sachs disease, and lactose intolerance
5. Animal adaptations and diversity in geological time, features of humans that are shared with other primates, other mammals, and other vertebrate animals

D. Primatological information about living primates
1. Primate diversity: prosimians, monkeys, apes, and humans
2. Geographic distribution and ecology of primates
3. Variations in behavior, locomotion, reproductive strategies, social organization, and gender roles in primates
4. Anatomy and locomotor adaptations of primates including special characteristics of human anatomy

E. The fossil record of humankind: analysis of the evidence, questions, hypotheses, and controversies about human evolution
1. Important stages in the development of Homo sapiens
   a. The earliest hominids
   b. Homo habilis and erectus
   c. The Neanderthals and other archaic Homo sapiens
2. Questions and controversies involving the interpretation of fossil hominids and associated artifacts, and the determination of their interrelationships
3. Hypotheses on assessing and interpreting the evidence about hominid culture
   a. Importance of behavior and subsistence patterns
   b. Social organization, rearing of young, and gender roles
   c. Development of technology

F. The emergence and transformations of human culture over time
1. Earliest cultural behavior: living spaces and tool technologies
2. Homo habilis and Homo erectus: developing culture-based lifeways
3. Cultural behaviors of the Paleolithic peoples: evidence and interpretations
4. Ancient cultural sources for modern human society: cognition and language

G. Importance of the environment in human success and evolution and effects of humans on the environment now and in the future
1. Environmental factors in human evolution
2. Past environmental effects of humans
3. Present environmental effects resulting from modern technology
4. Future possibilities depending on directions chosen now

VI. Assignments
A. Readings from the texts
B. Writing assignments involving critical analysis of current literature or video documentaries within the realm of physical anthropology. Students will conduct independent research, evaluate and select sources, critically analyze data, synthesize information, and formulate conclusions.

VII. Methods of Instruction
None

VIII. Methods of Evaluating Objectives
A. Midterm examinations composed of objective and/or essay questions

B. Writing assignments involving summary, synthesis and critical analysis of data.

C. Final examination composed of objective and/or essay questions that will require students to demonstrate the ability to summarize, integrate, and critically analyze information and to apply important concepts examined throughout the course.

IX. Texts and Supporting References

A. Examples of Primary Texts and References


B. Examples of Supporting Texts and References


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