Title of Course and Course Number:


Course Description:

An introduction to the biological perspective in anthropology, including primate evolution, the living, non-human primates and their behavior, the human fossil record, modern variation and ancient through modern biobehavioral adaptations.

Course Prerequisites:

ANTH 130

Course Objectives:

This course examines the origins, distribution and biological meaning of the physical and behavioral variations and similarities in the modern and fossil populations of the Hominidae. Its specific objectives are to provide students with:

- An explication of evolutionary biology and behavior of our family, the Hominidae.
- A detailed consideration of the fossil record that allows us to place anatomically modern humans in an evolutionary perspective.
- An examination of the growth of biological thought about human diversity.
- An understanding of how natural selection, evolutionary paradigms and modern synthetic theory have been applied to understanding the variation of modern humans.

Student Learning Outcomes:

By the end of this course, the student should be able to:

- Recognize, think critically about, discuss and illustrate the fundamental mechanisms of evolution at the biomolecular, anatomical and behavioral levels.
  - Meets NJ Core Curriculum Standards 5.1-5.2, 5.4-5.6, 5.8-5.10, 6.1
- Think critically about, discuss and illustrate the genetic, morphological and fossil evidence for the emergence of anatomically modern humans.
  - Meets NJ Core Curriculum Standards 5.1-5.5, 5.8-5.10, 6.1, 6.6
- Debate the "Eve" theory that contends that we all descend from a single African female and the question of Regional Continuity vs. Replacement.
  - Meets NJ Core Curriculum Standards 5.2, 5.5, 5.10, 6.1, 6.6
- Think critically about, discuss and illustrate the adaptive nature and meaning of geographic and racial variation in the form of biological and behavioral differences and similarities.
✓ Meets NJ Core Curriculum Standards 5.2, 5.5, 5.10, 6.1, 6.3, 6.6

- Think critically about, discuss and illustrate past and present adaptational variations that arose of the course of the last five million years.
  ✓ Meets NJ Core Curriculum Standards 5.1-5.2, 6.1, 6.3, 6.6
- Think critically about, discuss and illustrate the meaning and definition of such topics as 'race', species and variation.
  ✓ Meets NJ Core Curriculum Standards 5.2, 5.5, 6.1-6.4, 6.6
- Appreciate what it means to be human and how we got that way.
  ✓ Meets NJ Core Curriculum Standards 5.1-5.2, 6.1, 6.6
- Demonstrate ability to locate and use information from a variety of traditional and electronic sources.
  ✓ Meets the NJ Core Curriculum Standards 5.1, 6.1, 8.1, 9.1-9.2
- Demonstrate ability to effectively express themselves in written and oral form and to present information to varied audiences in an organized and effective manner.
  ✓ Meets the NJ Core Curriculum Standards 3.1-3.5, 9.1
- Demonstrate ability to think critically; integrate knowledge in a coherent and meaningful manner; apply knowledge to new problems or situations; make judgement about the value of information, arguments, or methods.
  ✓ Meets the NJ Core Curriculum Standards 5.1, 6.1, 9.1-9.2
- Demonstrate ability to listen to the views of others; acknowledge and respect differences in opinion; work effectively as a member of a group
  ✓ Meets the NJ Core Curriculum Standards 6.2, 9.1-9.2
- Demonstrate an awareness of various cultural traditions and recognize the value of diversity and equity in society.
  ✓ Meets the NJ Core Curriculum Standards 6.2, 9.2

Topical Outline of the Course Content:

1. The Growth of Biological Thought about "Man's Place in Nature."
   - The Classical World - Plato's Cave and The Great Chain of Being.
   - Christians with Clocks - The World in a Grain of Sand.
   - The Impact of Mechanics and the New World - Microscopes and Indians.
   - Natural Theology and the Rise of Geology.
   - The Enlightenment and the Romantics.
   - Race, Anthropology and Colonialism
   - Linnaeus, Lamarck, Malthus, Lyell and Others
   - How the giraffe did not get its neck.
   - Biology and Earth Sciences in Darwin's Century
   - The Impact of Industry on Biology.
   - The Observations of Darwin and Wallace - Finches, Fossils, Islands and People.
   - Phenotype and Genotype - What You See and What You Get.
   - Adaptive Radiations, Anagenesis and Cladogenesis - Sex and Geography.
   - Cladistics - Clades and Grades
4. The Principles of Genetics and Evolution
- Segregation and Independent assortment - Peas and Snapdragons
- The Modern Synthetic Theory - Bones, Stones and Codes.

5. The Fossil Record
   - Geologic time - The Old and the Infinite.
   - Humans as Primates - Missing the Link.
   - Our Nearest Relatives, the African Apes - Going the 'Whole Orang'.
   - Reproduction and Social Structure - The Biology of Parents.

   - The Origin of Primates - 'Glorified Rats', Plants, and Dinosaurs.
   - Ramamorphs - 'I don't Care What it Looks like...'

7. Hominid Evolution
   - The Meaning of the Hominids - Up and About.
   - The Australopithecines - Ape Men and Women.
   - Early Homo, Tool Use and Culture

   - The Behavioral Revolution and the Brain
   - The migration to New Climates
   - The 'New Dates'.

9. Archaics, Neanderthals and Origin of Modern Humans - From 'Eden' to 'Eve.'
   - The 'Muddle in the Middle'
   - The Origin, Meaning and Fate of Neanderthals
   - Eden, Eve and DNA

10. Modern Populations - the Meaning of 'Race'.
    - Microevolutionary Change and Population History - Mountains, Swamps and Deserts.
    - Skin Color, Climatic Adaptation - Skin Deep.
    - Disease - Fatal Flaws.
    - Dietary adaption - Milk Not For Everybody?

11. Summing Up
    - Cross-cultural Commonalities - Humans All.
    - Present and Future Shock

Guidelines/Suggestions for Teaching Methods and Student Learning Activities:

These consist primarily of lectures (predominately with slides), examination of fossil and modern cranial material, archeological materials, videos of selected historical and prehistoric localities and class discussions. The formation of Study and Review Groups is strongly suggested.

Guidelines/Suggestions for Methods of Student Assessment:

Assessment should be based on:

- Three equally weighed examinations.
- In class participation including a willingness to bring in unassigned, related materials.
- A basic research assignment including development of a coherent thesis/hypothesis, library instruction culminating in submission of an annotated bibliography and final presentation in written, and ideally oral, form.
Suggested Readings, Texts, Objects of Study:

See attached. Articles on newly published material will be suggested as they appear.

Bibliography of Supportive Texts and Other Materials:

Preparer’s Name/Date: Dr. G. Pope

Original Departmental Approval Date: Spring 1994

Reviser’s Name/Date: Dr. T. Gundling, Spring 2009

Departmental Revision Approval Date: September 2009