



El Camino College
COURSE OUTLINE OF RECORD – Approved

I. GENERAL COURSE INFORMATION

Subject and Number: Anthropology 1H
Descriptive Title: Honors Introduction to Biological Anthropology
Course Disciplines: Anthropology
Division: Behavioral and Social Sciences

Catalog Description:

This honors course, intended for students in the Honors Transfer Program, explores and emphasizes the evolution and biological diversity of the human species and our closest living relatives, the non-human primates. Topics include genetics, mechanisms of evolutionary change, primate behavior and ecology, human biological variation and human evolutionary history through examination of the fossil record. This course is enriched through extensive, rigorous reading, writing, and research assignments.

Note: Students may take either Anthropology 1H or Anthropology 1. Duplicate credit will not be awarded.

Recommended Preparation: English 1 or eligibility for English 1A or qualification by appropriate assessment

Course Length: Full Term **Other (Specify number of weeks):**
Hours Lecture: 3.00 hours per week TBA
Hours Laboratory: 0 hours per week TBA
Course Units: 3.00

Grading Method: Letter
Credit Status: Associate Degree Credit

Transfer CSU: **Effective Date:** Prior to July 1992
Transfer UC: **Effective Date:** Prior to July 1992

General Education:

El Camino College:

1 – Natural Sciences

Term: Other:

CSU GE:

B2

Term: Other:

IGETC:

5B

Term: Other:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

SLO #1 Natural Selection In a written assignment, students will explain how natural selection is related to environmental factors by using an example that identifies key processes of natural selection and illustrates how selective pressures can change.

SLO #2 Primate Arboreal Adaptation In an in-class assignment or objective exam question, students will demonstrate an understanding of primate adaptation by describing the major anatomical characteristics of primates associated with movement and the senses, and identifying how they evolved as adaptations to arboreal environments.

SLO #3 Human Evolution In a written assignment or objective exam question(s), students will demonstrate an understanding of human evolution by comparing and contrasting the anatomical and behavioral features of modern *Homo sapiens* with various extinct species of the Genus *Homo* (e.g. Neanderthals, *H. erectus*, *H. habilis*). (Active)

B. Course Student Learning Objectives (The major learning objective for students enrolled in this course are listed below, along with a representative assessment method for each)

1. Demonstrate an understanding of the concepts of the scientific method and its significance to science.
Objective Exams
2. Describe and evaluate the major ideas that preceded and led to the development of evolutionary theory and analyze modern theories of Darwinian evolution through natural selection.
Essay Exam
3. Identify and describe the processes by which genetic information is transmitted from one generation to the next.
Objective Exams
4. Identify and discuss the various components of the DNA molecule and the process of protein synthesis.
Objective Exams
5. Explain and assess the mechanisms of evolutionary change and explain how each one contributes to the evolutionary process.
Essay Exam
6. Contrast point and chromosomal mutations and discuss the significance of point mutations to evolution.
Objective Exams
7. List the major anatomical characteristics of primates associated with movement and the senses, and explain how they evolved as adaptations to an arboreal environment.
Objective Exams
8. Contrast the major forms of primate social structure and describe their relationship to the primate species' ecology.
Essay Exam
9. Evaluate the benefits of bipedalism in reference to the particular environment in which most hominin evolution occurred.
Essay Exam

10. Compare and contrast the skull characteristics of *Australopithecus africanus*, *Australopithecus* (or *Paranthropus*) *boisei*, and *Homo habilis* in relation to the particular diet of each.
Essay Exam
11. Contrast the anatomical characteristics of *Homo habilis* and *Homo erectus*, and analyze those contrasts in reference to their respective environment and subsistence strategies.
Objective Exams
12. Analyze the characteristics of *Homo neanderthalensis* in reference to the environment in which this hominin lived.
Objective Exams
13. Evaluate the models that account for the origin of *Homo sapiens*, outlining the major criteria and evidence supporting each.
Objective Exams
14. Outline the cultural stages in the evolution of the genus *Homo*, making reference to the particular *Homo* species, tool industry, and environmental context associated with each stage.
Essay Exam
15. Explain the difference between physiological adjustments and adaptations and explain skin color and body form as adaptations to particular environments.
Essay Exam
16. Conduct scholarly research independently to enrich multiple reading and writing tasks.
Other: Essay Exam, Written Homework, Term or Other Papers

III. OUTLINE OF SUBJECT MATTER (Topics are detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.)

Lecture or lab	Approx Time in Hours	Topic Number	Major Topics
Lecture	3	I.	Introduction to Biological Anthropology A. The Relationship of Biological Anthropology to Other Anthropological Fields 1. Archaeology 2. Cultural Anthropology 3. Linguistic Anthropology B. Biological Anthropology as a Science 1. The Anthropological Perspective 2. The Scientific Method
Lecture	3	II.	History of the Development of Evolutionary Theory A. Pre-Darwinian Contributions to Evolutionary Thought B. The Discovery of Natural Selection C. Natural Selection in Action
Lecture	3	III.	Introduction to Cell Biology A. Structure of the Eukaryotic Cell B. DNA Structure and Function C. Protein Synthesis D. Cell Division: Mitosis and Meiosis E. Chromosomal Mutations as a Result of Nondisjunction

Lecture	3	IV.	<p>Mendelian Genetics</p> <ul style="list-style-type: none"> A. Mendel's Principles <ul style="list-style-type: none"> 1. Segregation 2. Independent Assortment B. Autosomal and Sex-Linked Inheritance C. Non-Mendelian Inheritance D. Population Genetics
Lecture	6	V.	<p>Modern Evolutionary Theory</p> <ul style="list-style-type: none"> A. Forces of Evolution <ul style="list-style-type: none"> 1. Mutation 2. Natural Selection 3. Gene Flow 4. Genetic Drift B. Macroevolution <ul style="list-style-type: none"> 1. The Species Concept 2. Speciation 3. Adaptive Radiation 4. Gradualism Versus Punctuated Equilibrium Models
Lecture	3	VI.	<p>Biological Classification and Vertebrate Evolutionary History</p> <ul style="list-style-type: none"> A. Classification Approaches <ul style="list-style-type: none"> 1. Evolutionary Systematics 2. Cladistic Analysis B. Introduction to the Vertebrates C. The Class Mammalia
Lecture	3	VII.	<p>The Living Primates</p> <ul style="list-style-type: none"> A. Distinguishing Characteristics of the Primate Order B. Arboreal Adaptations and Other Traits Unique to the Non-Human Primates <ul style="list-style-type: none"> 1. Prosimians 2. New World Monkeys 3. Old World Monkeys 4. Apes C. Primate Classification D. Endangered Primates
Lecture	3	VIII.	<p>Introduction to Primatology</p> <ul style="list-style-type: none"> A. Behavioral Ecology B. Non-Human Primate Social Behavior <ul style="list-style-type: none"> 1. Dominance 2. Affiliative Behaviors 3. Mating Systems 4. Parenting C. Social Structure D. Reproduction <ul style="list-style-type: none"> 1. Male and Female Reproductive Strategies 2. Sexual Selection E. Cooperation, Altruism, Kin Selection and Group Selection
Lecture	3	IX.	<p>Non-Human Primate Models for Human Behavioral Evolution</p> <ul style="list-style-type: none"> A. The Evolution of Human Language B. Language Capabilities in Non-Human Primates C. Cultural Behavior D. Violence and Aggression

			E. Capacity for Empathy, Deception, and Displacement
Lecture	3	X.	<p>Introduction to Paleoanthropology</p> <ul style="list-style-type: none"> A. Fossils and Fossilization <ul style="list-style-type: none"> 1. Factors that Contribute to Fossilization 2. Problems with Interpreting Data from Fossils B. Dating Methods C. Definition of a Hominin D. Reconstruction of Early Hominin Environments and Behavior
Lecture	3	XI.	<p>The Fossil Primates</p> <ul style="list-style-type: none"> A. Paleocene Primate-Like Mammals B. The <i>True</i> Primates of the Eocene C. Oligocene Primates D. Miocene Hominoids E. Evolution of the Extant Hominoids
Lecture	3	XII.	<p>Hominin Origins</p> <ul style="list-style-type: none"> A. The Bipedal Adaptation B. Early Hominins in Africa – Pre-Australopithecus C. Australopithecus/Paranthropus D. Evidence for Behavior
Lecture	3	XIII.	<p>The Genus Homo</p> <ul style="list-style-type: none"> A. Homo Habilis <ul style="list-style-type: none"> 1. South African Specimens 2. East African Specimens B. Homo Rudolfensis from East Africa – Olduvai and East Turkana <ul style="list-style-type: none"> 1. Evidence for Behavior 2. Oldowan Tool Culture C. Homo Ergaster from East Africa <ul style="list-style-type: none"> 1. Evidence for Behavior 2. Acheulian Tool Culture 3. Skeletal Morphology D. Homo Erectus <ul style="list-style-type: none"> 1. Culture 2. Tool Technology 3. Javan Specimens 4. Chinese Specimens 5. European Specimens 6. Skeletal Morphology E. The Dmanisi Hominins
Lecture	3	XIV.	<p>Archaic Homo Sapiens</p> <ul style="list-style-type: none"> A. The Pleistocene Environment B. Homo Heidelbergensis <ul style="list-style-type: none"> 1. African Specimens 2. European Specimens 3. Chinese Specimens C. Homo Antecessor from Spain D. Middle Pleistocene Technology E. Neanderthal Specimens <ul style="list-style-type: none"> 1. Western Europe 2. Central Europe 3. Western Asia

			<ul style="list-style-type: none"> 4. Central Asia F. Skeletal Morphology of the Neanderthals G. Culture of Neanderthals <ul style="list-style-type: none"> 1. Mousterian Stone Tool Technology 2. Subsistence Strategies 3. Archaeological Evidence for Symbolic Behavior 4. Skeletal and Genetic Evidence for Language Abilities
Lecture	3	XV.	The Origin and Dispersal of Homo Sapiens <ul style="list-style-type: none"> A. Models for Understanding Modern Human Origins <ul style="list-style-type: none"> 1. Complete Replacement Model 2. Regional Continuity Model B. Morphological Features of Homo Sapiens C. Key Discoveries from Old World Sites D. Upper Paleolithic Culture E. Migration to the New World F. Homo Floresiensis Discovery
Lecture	6	XVI.	Human Biological Variation and Adaptation <ul style="list-style-type: none"> A. Historical Views of Human Variation B. The Anthropological Concept of Race C. The Adaptive Significance of Human Variation <ul style="list-style-type: none"> 1. Skin Color 2. Body Form 3. Infectious Disease D. Human Biocultural Evolution E. Human Skeletal Variation <ul style="list-style-type: none"> 1. Techniques Used by Forensic Anthropologists 2. Data Used by Archaeologists
Total Lecture Hours		54	
Total Laboratory Hours		0	
Total Hours		54	

IV. PRIMARY METHODS OF EVALUATION AND SAMPLE ASSIGNMENTS

A. PRIMARY METHOD OF EVALUATION

Substantial writing assignments

B. TYPICAL ASSIGNMENT USING PRIMARY METHOD OF EVALUATION

In a written four- to five-page essay, assess and evaluate the argument made by Dr. Robert Kunzig in his article entitled *Learning to Love Neanderthals* which states that modern Homo sapiens and Neanderthals interbred.

C. COLLEGE LEVEL CRITICAL THINKING ASSIGNMENTS

1. Examine the sociopolitical events of 19th Century England to place Darwin's research within its historical context. In a four- to six-page essay, outline these events and assess their impact on Darwin, his research, and his publications.
2. Examine non-verbal communication in humans with an emphasis on those gestures and behaviors we share with non-human primates. In a five- to seven-page essay, assess the evolutionary importance of these behaviors and address the role of culture in the evolution of human language and communication.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS

- Objective Exam
- Clinical Evaluation
- Completion
- Essay Exams
- Reading Reports
- Term or Other Papers
- True/False
- Matching Items
- Written Homework
- Multiple Choice

V. INSTRUCTIONAL METHODS: Select from this list.

- Lecture
- Multimedia presentations

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instructional delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS: Select from this list. Use all that apply.

- Study
- Answer questions
- Required reading
- Written work (such as essay/composition/report/analysis/research)

Estimated Study Hours Per Week: 6

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS

Clark Spencer Larsen. Essentials of Biological Anthropology. W. W. Norton and Company, 2019.

B. REQUIRED TEXTS (title, author, publisher, year)

C. REQUIRED SUPPLEMENTARY READINGS

Required supplementary reading of articles and/or electronic resources as assigned.

D. OTHER REQUIRED MATERIALS

VIII. CONDITIONS OF ENROLLMENT

A. Requisite/s (Course and Non-Course Prerequisite/s and Corequisite/s). Add rows as needed.

Requisites	Category and Justification
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B. Requisite Skills - Match skills from prerequisite course/s or non-course prerequisites without which a student would be “highly unlikely to succeed.”

Requisite Skills – Matching
Requisite Skill Needed: Course title and number and objective related to that skill:

C. Recommended Preparations (Course and Non-Course) Add rows as needed.

Recommended Preparation	Category and Justification
English 1	Category: Course Justification: This course involves reading college level textbooks, developing written projects, and answering essay questions. A student’s success in this class will be enhanced if they have these skills.
Eligibility for English 1A or qualification by appropriate assessment	Category: Non-Course Justification: This course involves reading college level textbooks, developing written projects, and answering essay questions. A student’s success in this class will be enhanced if they have these skills.

D. Recommended Skills. Match skills from recommended courses or non-course prerequisite that would “enhance a students’ ability to succeed in the courses”.

Recommended Skills – Matching
Students need well-developed reading skills in order to understand and interpret information in their textbooks and writing skills to develop essays and projects. ENGL 1 – Summarize, analyze, evaluate, and synthesize college-level texts. ENGL 1 – Write a well-reasoned, well-supported expository essay that demonstrates application of the academic writing process.

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact

Course created by: Marianne Waters

BOARD APPROVAL DATE: 11/18/2019

LAST BOARD APPROVAL DATE:

Last Reviewed and/or Revised by