COURSE OUTLINE : ANTHR 101
D Credit – Degree Applicable
COURSE ID 004046
Cyclical Review: February 2020
Revision: October 2021

COURSE DISCIPLINE : ANTHR

COURSE NUMBER : 101

COURSE TITLE (FULL) : Physical Anthropology with Lab

COURSE TITLE (SHORT) : Physical Anthropology with Lab

CALIFORNIA STATE UNIVERSITY SYSTEM C-ID : ANTH 110 – Introduction to Biological Anthropology

ACADEMIC SENATE DISCIPLINE: Anthropology

CATALOG DESCRIPTION

ANTHR 101 introduces the concepts, methods of inquiry, and scientific explanations for biological evolution and its application to the human species while exploring them in a laboratory setting. Issues and topics will include genetics, evolutionary theory, human variation and biocultural adaptations, comparative primate anatomy and behavior, forensic anthropology, human osteology, and the fossil evidence for human evolution. The scientific method serves as foundation of the course.

Total Lecture Units:3.00

Total Laboratory Units: 1.00

Total Course Units: 4.00

Total Lecture Hours:54.00

Total Laboratory Hours: 54.00

Total Laboratory Hours To Be Arranged: 0.00

Total Contact Hours: 108.00

Total Out-of-Class Hours: 108.00

Recommended Preparation: ENGL 100 or ESL 151.

ENTRY STANDARDS

	Subject	Number	Title	Description	Include
1	ENGL	100	Writing Workshop	read, analyze, and evaluate contemporary articles and stories to identify topic, thesis, support, transitions, conclusion, audience, and tone;	Yes
2	ENGL	100	Writing Workshop	read, analyze, and evaluate contemporary articles and stories for the comprehension of difficult content and the identification of main ideas and (topic-based) evidence;	Yes
3	ENGL	100	Writing Workshop	read, analyze, and evaluate student compositions for unity, development, use of evidence, interpretation, coherence, and variety of sentence form;	Yes
4	ENGL	100	Writing Workshop	write a summary of a contemporary article or story with correct citation techniques;	Yes
5	ENGL	100	Writing Workshop	write an argumentative essay that has an introduction, body paragraphs, and a conclusion, demonstrating a basic understanding of essay organization;	Yes
6	ENGL	100	Writing Workshop	write an argumentative essay that addresses the topic, is directed by a thesis statement, uses appropriate textual evidence, develops logical interpretations, and concludes with some compelling observations;	Yes
7	ENGL	100	Writing Workshop	write an argumentative essay that integrates the ideas of others (i.e., authors) through paraphrasing, summarizing, and quoting with correct citation techniques;	Yes
8	ENGL	100	Writing Workshop	write an argumentative essay that generates novel ideas (those that add to the conversation rather than repeating the author's ideas) related to the topic and the readings;	Yes
9	ENGL	100	Writing Workshop	write compositions (e.g., summaries and argumentative essays) that are easy to read and follow, though some errors in grammar, mechanics, spelling, or diction may exist;	Yes
10	ENGL	100	Writing Workshop	proofread and edit essays for content, language, citation, and formatting problems.	Yes
11	ESL	151	Reading and Composition V	Read and critically analyze various academic readings;	Yes
12	ESL	151	Reading and Composition V	summarize readings;	Yes
13	ESL	151	Reading and Composition V	organize fully-developed essays in both expository and argumentative modes;	Yes

14	ESL	151	Reading and Composition V	compose a 500 to 550-word essay which: summarizes and cites appropriately a reading passage; includes a clear thesis statement; uses evidence to support the thesis; shows clear organization into an introduction, body, and conclusion;	Yes
15	ESL	151	Reading and Composition V	revise writing to eliminate errors in syntax, and grammatical constructions;	Yes
16	ESL	151	Reading and Composition V	employ basic library research techniques;	Yes
17	ESL	151	Reading and Composition V	compose one research paper (1,000 words) or two short research papers (500-700 words each) with citations.	Yes

EXIT STANDARDS

1 Describe the scientific process as a methodology for understanding the natural world;
2 define the scope of anthropology and discuss the role of biological anthropology within the discipline;
3 identify the main contributors to the development of evolutionary theory;
4 explain the basic principles of Mendelian, molecular and population genetics;
5 evaluate how the forces of evolution produce genetic and phenotypic change over time, includingmutational errors and natural selection;
6 demonstrate an understanding of classification, morphology and behavior of living primates, and primateidentification;
7 summarize methods used in interpreting the fossil record, including dating techniques and biasing agents;
8 recognize the major groups of hominin fossils and describe alternate phylogenies for human evolution;
9 identify the biological and cultural factors responsible for human variation;
10 describe the ways human variation has been examined and critique both how the scientific and social communities have used data.

STUDENT LEARNING OUTCOMES

1 summarize the scope of physical anthropology, including evolution, genetics, and the principles of cell biology;
2 discuss hominid and non-human primate anatomy and behavior and make inferences about behavior from morphological characteristics of skeletons;
3 analyze the record of fossil forms leading to the characteristic structure of modern Homo sapiens, identifying human variation at the individual and group levels;
4 critique the evolutionary aspects of human health and disease and interpret the implications of current and future forces of change.

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COURSE CONTENT WITH INSTRUCTIONAL HOURS

	Description	Lecture	Lab	Total Hours
1	Physical Anthropology • Definition of anthropology • Sub-disciplines of anthropology, with an emphasis on physical anthropology • Scientific method, natural selection, and basic evolution ◦ What the scientific method is and how it works ◦ The nature and function of natural selection ◦ Evolution, evolutionary theory, forerunners to evolutionary thought	4	3	7
2	Genetics and Genetic Mechanisms of Evolution • Cell biology/eukaryotic cell and organelles • DNA molecule/DNA synthesis/protein synthesis • Cell division: mitosis and meiosis • Chromosomal types • Structural and regulatory genes • Genotypes and phenotypes • Mechanisms of mendelian genetics • Genetic stability and variability	6	12	18
3	Genetics of Populations • Population genetics/concepts of gene frequency and gene pool • The hardy-weinberg theorem • Microevolutionary forces • Mutation and genetic recombination, natural selection, gene flow, random genetic drift • Balanced polymorphism • Macroevolution: modes and tempos of speciation	6	4	10

4	Order Primates • Taxonomy and classification of humans and non-human primates • Five categories of primates • Non-human primate distribution/habitats/locomotion/dental formulas, different teeth and functions • Ancestral and derived traits • Prosimians, old world monkeys and new world monkeys • Basic skeletal anatomy and taxonomy • Sexual dimorphism	7	8	15
5	Our Closest Living Relatives: The Apes • The lesser apes: gibbons and siamangs • The great apes: orangutans, gorillas, chimpanzees and bonobos • Conservation status, methods and concerns • Significance of primate behavior studies and early hominid evolution • Primate behavior and adaptations: mating, reproductive, communication strategies • Conduct and biases of behavior studies • Observations of living primates (fieldwork) • Interpretations of living primate data	9	3	12
6	Early Hominid Evolution • Cenozoic era and adaptive radiation of non-human primates and hominids • Bipedalism and changes to the skeleton • Fossilization and dating techniques • Early hominids and australopithecines • The origin of the genus Homo • Archaeological methods and dating techniques	6	6	12
7	Adaptive Radiation of the Genus Homo • Genus Homo and species • Significance archaeological sites, skeletal remains and cultural artifacts • Behavioral firsts and paleolithic, mesolithic and neolithic tool industries • Migrations of the genus homo • The neanderthals • The origin of Homo sapiens • Dental morphology and diet	7	8	15

8	Human Variation and Biological Adaptations • The concept of race: past and present perspectives • Analyzing human variation • Adaptive significance of human phenotypes • Body size, pigmentation, resistance to disease, and other adaptive mechanisms • Biological and cultural strategies to heat, cold and altitude stress • Bone anthropometry and dermatoglyphics	6	4	10
9	Forensic Anthropology/Osteology • Bone trauma • Bone pathology • Determination of age, sex, and cause of death	0	6	6
10	Evolution: Today and Tomorrow • The forces of change	3	0	3
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OUT OF CLASS ASSIGNMENTS

1 written assignments (e.g., short paper about cell biology);
2 out of class visits and field trips (e.g., attending primate lectures at the SCPRF);
3 group projects (e.g., primate research project based on empirical observations of primates at the zoo).

METHODS OF EVALUATION

1 lab exercises;
2 quizzes;
3 essays and other written in-class assignments;
4 midterm examinations;
5 cumulative final examination (e.g., multiple choices, true/false, and matching format).

METHODS OF INSTRUCTION

- [x] Lecture
- [x] Laboratory
- [ ] Studio
- [x] Discussion
- [x] Multimedia
- [ ] Tutorial

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- [x] Independent Study
- [x] Collaboratory Learning
- [x] Demonstration
- [x] Field Activities (Trips)
- [x] Guest Speakers
- [x] Presentations

TEXTBOOKS

Title	Type	Publisher	Edition	Medium	Author	IBSN	Date
Annual Editions: Physical Anthropology	Required	McGraw Hill	28	Print	Angeloni, Elvio	9781260579987	2019
Exploring Physical Anthropology: A Lab Manual and Workbook	Required	Morton Publishing Company	3	Print	Walker-Pacheco, Suzanne E.	978-1617314032	2017