



## Introduction to Physical Anthropology

ANTH-1-2036 Intro to

**Thurs 6:00 – 9:10**

**Spring 2014**

**Office ARTB 320 5pm-6pm T-TH**

**Rm. ARTB - 334**

*Instructor: John McDermott*

**Phone: (562) 965-0951**

**Email: [jmcdermott@elcamino](mailto:jmcdermott@elcamino)**

MyECC: 🍎 [Class Team Site](#)

**3 units; 3 hours lecture Recommended Preparation: Eligibility for English 1A Credit, degree applicable Transfer CSU, UC;**

**This course explores and emphasizes the evolution and physical diversity of the human species. Topics include genetics, mechanisms of evolutionary change, human variation, and the reconstruction of human evolutionary history through examination of the fossil record and comparative studies of the living non-human primates**

### Course Objectives:

1. **Demonstrate an understanding of the concept of the scientific method and its significance to science.**
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.**
3. **Identify and describe the processes by which genetic information is transmitted from one generation to the next.**
4. **Identify and discuss the various components of the DNA molecule and the process of protein synthesis.**
5. **Explain and assess the mechanisms of evolutionary change and explain how each one contributes to the evolutionary process.**
6. **Contrast point and chromosomal mutations and discuss the significance of point mutations to evolution.**
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.**
8. **Contrast the major forms of primate social structure and describe their relationship to the primate species' ecology.**
9. **Explain the differences between relative and chronometric dating and provide an example of chronometric dating using a radiometric technique.**
10. **Evaluate the benefits of bipedalism in reference to the particular environment in which most hominid evolution occurred.**
11. **Compare and contrast the skull characteristics of *Australopithecus africanus*, *Australopithecus* (or *Paranthropus*) *boisei*, and *Homo habilis* in relation to the particular diet of each.**
12. **Contrast the anatomical characteristics of *Homo habilis* and *Homo erectus*, and analyze those contrasts in reference to their respective environments and subsistence strategies.**
13. **Analyze the characteristics of *Homo neanderthalensis* in reference to the environment in which this hominid lived.**

**14. Evaluate the models that account for the origin of Homo sapiens, outlining the major criteria and evidence supporting each.**

**15. 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.**

**16. Explain the difference between physiological adjustments and adaptations and explain skin color and body build as adaptations to particular environments.**

**Student Learning Outcomes:**

Anthropology 1 Introduction to Physical Anthropology 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.

Anthropology 1 Introduction to Physical Anthropology 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 indentifying how they evolved as adaptations to arboreal environments.

Anthropology 1 Introduction to Physical Anthropology SLO #3 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. Neandertals, H. erectus, H. habilis).

**ADA Statement: El Camino College is committed to providing educational accommodations for students with disabilities upon the timely request by the student to the instructor. A student with a disability, who would like to request an academic accommodation, is responsible for identifying herself/himself to the instructor and to the Special Resource Center. To make arrangements for academic accommodations, contact the Special Resource Center.**

**Student Code of Conduct**

<http://www.elcamino.edu/administration/board/boarddocs/5500%20%20Academic%20Honesty.pdf>

**Student Rights and Grievances Procedure 5530**

<http://www.elcamino.edu/administration/board/policies.asp>

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**Anthropological Perspective:**

- **Holism:** Breaking something into its basic parts, understanding those parts for what they are and what they do and then putting those parts together to see how they create the whole; demonstrates how the whole is integrated and functions on many levels.
- **Relativism:** Understanding one's own preconceived ideas, biases and prejudices to understand how your lens can corrupt seeing something in context of itself. Non- judgment allows a deeper examination with less bias, therefore more meaningful comprehension of what you are examining. Understanding and examining evolution/environment/people/culture in relative context of how they developed: biological development, personal development, cultural development; relativism is not judging by one's own perceived standards, but allowing for other standards of development to be valid, even if they are different.

**Attendance is required, Please don't be late**  
**It is your responsibility to drop the class if you stop attending**

**Text:** Biological Anthropology Concepts and Connections - Agustin Fuentes

**Class description:** Humans as biological organisms from an evolutionary perspective. Concepts, methods, findings and issues in the study of the Order primates, including the relationships among fossil monkeys, apes and humans, and the significance of genetic diversity in modern populations.

**Objectives:** To understand the process of evolution and the role DNA plays, to understand the relatedness between humans, nonhuman primates and the rest of the life on the planet and to understand the reason for variation between humans and what that means (3 Units)

**Class is composed of:** Lecture, PowerPoint, Films, Discussion, Assignments; Chapter papers, article papers, Exams (scantron 882) and a Term paper

**Exams:** Scantron 882E will be needed the exams are true false and multiple choice.

**Final:** Multiple Choice and true false you will need a Scantron 882E

**Article papers: There are three articles online (25 points each) Minimum of 3 pages.** Read each one (SEE SYLLABUS SCHEDULE FOR DUE DATE) I want you to demonstrate you understand the author's perspective, main topics and the point of the article. Using a holistic perspective and relativism describe how the articles are relevant in our world today. There is no minimum pages, you are being graded on content. These are academic articles, plan to read them more than once.

**Introduction:** Introduce me to what I am about to read, what is the author's topics and how does the author approach these topics. (Keep in mind I assigned these articles and the subject matter we are covering in the class and find them to be helpful in understanding physical anthropology)

**The Body:** Will be an analysis demonstrating to me how you understand the ideas the author is presenting; main points, perspective, use examples from the article to explain that are examples of what the author is writing about. I do not want to read your ideas, in this section; I want you to show me how you understand the author's ideas from a holistic perspective and how it is relevant today.

**Conclusion:** Here is where I would like your opinion; if you, agree/disagree; why? I would like to read the thought processes that the article provoked within you and how is the information relevant within our culture today.

Remember this class and the assignments are a part of a holistic and relativistic discipline that studies, what it mean to be human, biologically, socially and psychologically, through time.

*These articles are about getting you to think about the information in this class as relevant in our culture and applicable to the world around you*

**Article 1- Is Poverty In Our Genes:** In this article the authors critic an article that attempts to explain the idea that those that live in poverty are genetically programed to live in poverty. This perspective is thrown around in our culture to explain the unequally within our society. This is biological determinism and has no scientific basis, when linked to social status... So, I am especially looking for the information that debunks the Ashraf and Galor, 'Our of Africa' paper. Write about this using the guidelines above

**Article 2 – Intelligence, Coalition Killing and the Antecedence of War:** In this article I am looking specifically for discussion on primate development of conspecific (one's own species) killing. Paul Roscoe presents 2 hypotheses; please explain both hypotheses and the information in the article used to back both

Write about this using the guidelines above

**Article 3 – Culture, Not Race, Explains Human Diversity:** This article explains how race is a scientific fallacy, a cultural construction, based on false ideas of biological determinism. The author explains why culture explains our differences and he promotes an idea for academia. Write about this using the guidelines above

**Research Paper: (100 points):** (minimum: 5 pages and 5 references)

**Research paper grading policy:**

**Methodology.....20 points**

**Research and citations.....10 points**

**Following Directions .....10 points**

**Clarity and Content.....60 points**

The paper will be at least 5 pages and 5 references (wikipedia cannot be used as one of the 5 references, but can be used for a jumping point and to obtain information and if so must be cited). **Citations need an author and a year of publication.** The library on campus has a database of journals. Your textbook can be used for one reference. Again, at least 5 of the references need and author and a year of publication. See the library for our online Journal Database **Please do not use dictionaries or encyclopedias for references or sources**

**Research and write about all of the following areas of Physical Anthropology:**

- What is Physical (Biological) Anthropology
- What areas of the human species does physical anthropology study
- Write about 2 pre-Homo hominins and 2 Homo hominins (before 200,000 years ago; Not Modern Humans); the area the fossils were found, physical description, diet
- 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
- How do you think the knowledge gained from Biological/Physical Anthropology will affect global worldview as this information is applied in the world around us.

**The paper: 12 font, double spaced, page numbers, name, class, date and title of paper**

**Follow the guidelines listed below :**

**Introduction/methodology:** Start the paper with a discussion of your each of your five references; where you found them, why you chose them and how you will use them in your paper (*this is your methodology*). While discussing your references or immediately after briefly explain what your paper will contain; the parameters.

**Body:** Discuss the subject matter outlined above using your references to cite the information you present to answer the five questions

**Conclusion:** Tell what you discovered doing your research and go into some detail about your feelings on the subject ie...its implications, its applications, value and validity. This demonstrates your personal understanding of the material.

**References** need and author and a year of publication. For the in text citations, use the authors last name and year of publication = **(Smith, 2007)**.

**Bibliography cite as follows:**

Books: Author, Title, Publisher and Address, Date

Internet (must have author and date): Author Title, URL, Date

Magazines and Journals: Author, Title, Magazine or Journal title, vol., page, Date

Films: Director, Title, production Company, year of release

**Example:** Smith, John, Why is There Air?, Thomson Wadsworth, 2007

For web pages replace the publisher with the URL, and you will still need the year the URL was published and an author.

**No Wikipedia, Dictionary or Encyclopedia sources... all sources need an Author and year of publication**

**Academic Honesty:** Academic honesty is expected. Academic dishonesty will be dealt with harshly and may result in a failing grade for the course at the discretion of the instructor. Academic dishonesty not only includes plagiarism and cheating on exams and/or assignments, but also includes turning in work that is not your own (make sure to clearly cite ALL sources). See term paper prompt...

### **IT IS YOUR RESPONSIBILITY TO DROP THE CLASS**

#### **Grading policy**

#### **Point Break down**

**You can hand in a total of 25 points extra credit (See me if you have questions)**

<b>4 – Midterm</b>	<b>100</b>
<b>1 - Final</b>	<b>25</b>
<b>3 - Articles</b>	<b>75</b>
<b>1 – SLOA</b>	<b>00</b>
<b>1 - Research paper</b>	<b>100</b>
<b>Total</b>	<b>300</b>

<b>A</b>	<b>300 - 270</b>
<b>B</b>	<b>269 - 240</b>
<b>C</b>	<b>239 - 210</b>
<b>D</b>	<b>209 - 180</b>
<b>F</b>	<b>179 and lower</b>

<a href="#">Counseling Services</a> SSVC 1st Floor x3442	<a href="#">Project Success</a> SSVC 104G x6037
<a href="#">EOP&amp;S/CARE</a> SSVC 205A (x6195) & 205B (x3395)	<a href="#">Puente Project</a> SSVC 104E x3638
<a href="#">Financial Aid &amp; Scholarships</a> SSVC 215 (x6038)	<a href="#">Seeds Head Start Partnership</a> ARTB 340 x3755
<a href="#">First Year Experience/Learning Communities</a> SSVC 204 x6936	<a href="#">Special Resource Center</a> SRC (outside SSV) x3295 or x6047
<a href="#">Foster &amp; Kinship Education Program</a> SSVC 216 x3585	<a href="#">Student Athlete Independent Learning</a> SSVC 104C x3531
<a href="#">Graduation Initiative Project</a> ADMIN 137 x3243	<a href="#">Student Development Office</a> Activities Center 160 x3504
<a href="#">Honors Transfer Program</a> SSVC 1st Floor (in Counseling) x3815	<a href="#">Student Health Center</a> P.E. Building (near Pools) x3643
<a href="#">HBCU Transfer Initiative</a> SSVC 104 H x3632	<a href="#">Supplemental Instruction</a> SSVC 206 x3612
<a href="#">International Student Program</a> SSVC 104D x3431	<a href="#">Transfer Center</a> SSVC 102G x3408
<a href="#">Women In Industry and Technology (WIT)</a> TECH 104 B x6780	<a href="#">Writing Center &amp; Computer Lab</a> HUM 122 x6136

Last day to add (full semester classes)	Friday January 31
Last day to change residency status for current semester	Friday January 31
Last day to drop with enrollment fee refund (full semester classes)	Friday January 31
Last Day to drop without notation in your permanent record	Friday January 31
Last Day to apply for Spring Degrees and Certificates	Thursday February 13
Last Day to Drop with a 'W'	Saturday March 22

**“The diversity of our student population provides us with a unique opportunity to experience the differences among us. At times we may disagree on a particular point; however, our discussions will always remain respectful of these differences. We will treat others with dignity and respect in the classroom”**

**These precepts apply outside the classroom as well, as we meet the needs of our diverse global community, which will become more prominent in your lives than ever before in the history of life on this planet.**

**My Personal Statement:** I would like to demonstrate the continuum of life on our planet, the connectedness, both physiologically and psychologically of life on earth. Present the effects of Homo sapiens developing symbolic perception of existence itself, as well as, our developing understanding of the elements and processes operating around us and within us.

My goal is to examine the bio-cultural interaction within human evolution. Understanding humanities basic evolution and biological criteria is necessary for passing this class and having the discussions I hope we have.

I would like us to discuss and begin to consider our human ability to understand, project and effect the evolutionary processes, not just for ourselves, but for all life on the planet. I would like us to discuss and consider how applying this understanding would manifest in our reality; physically, emotionally, psychologically and spiritually through bio-cultural development in our future.

Do we have responsibilities that come with our abilities? The very ideas of benevolent and malevolent are products of human perception. How can we learn from our past to structure our goals for what we will create in our future? Because you are the future and as humans we create the world we live in both physically and psychologically.

Because of evolution we have developed a brain that is symbolic, we use language, writing and symbolic metaphor in understanding of the world around us from the microscopic level to the grand macro-level of the universe around us. We create a world within the natural world which is culture, culture is a thought process loaded with symbolic references of how to survive in that particular society; language, economy, social stratification, gender relations, family, art and religion all particular human adaptations, but manifested in thousands of ways in human cultures around the planet and through time.

The more you come to understand these things the more you understand your world, your society and yourself



**Spring 2014 Class schedule for Physical Anthropology subject to change**

Films are **NOT** optional missing may result in a 5 point deduction from your total points

\*Schedule subject to change\*

<b>Week</b>	<b><u>WHAT WE WILL COVER IN CLASS</u></b> Refer to this calendar each week to be prepared; review the chapters before class, so you can provoke/participate in discussions and ask questions	<b><u>ASSIGNMENTS DUE:</u></b> Plan your days and weeks so that you get an early start in your assignments; to finish with your total effort and hand in assignments on time.
01/23	Syllabus- Introduction: Scientific Method Film: Guns Germs and Steel - context	<b>Have a syllabus available, have questions ready</b>
01/30	1 - Introduction to Evolutionary Fact and Theory – Film: Great Transformations	
02/06	2 - Introduction to Genetics and Genomics – Film: Why Sex	<b>Article One: Is Poverty In Our Genes</b>
02/13` <b>Exam 1</b>	3 - Basics in Human Biology	Exam 1: Scantron 882E Chapters: 1, 2-
02/20	4 - Modern Evolutionary Theory Film: The Evolutionary Arms race	
02/27 <b>Exam 2</b>	Cracking the Genetic Code	Exam 2: Scantron 882E Chapters: 3, 4-
03/06	5 - Primate behavioral Ecology Chapter Film: The New Chimpanzee	
03/13	6 - Early primate Evolution Film: Project Nim/Ape Genius	<b>Article Two is Due: Intelligence, Coalition Killing and the Antecedence of War</b>
03/20	<b>Spring Break</b>	<b>Have a terrific break</b>
03/27 <b>Exam 3</b>	Film: Becoming Human: Part 1	Exam 3: Scantron 882E Chapters: 5, 6-
04/03	Chapter 7 Early Hominin Evolution Film: Becoming human: Part 2	
04/10	8 Plio-Pleistocene Hominins and the Genus Homo Film: Becoming Human part 3	
04/17 <b>Exam 4</b>	Film: Ghost In Our Genes	Exam 4: Scantron 882E Chapters: 7, 8
04/24	Chapter 9 The Rise of Modern Humans Film: Race the power of an Illusion 1	<b>Article Three is Due: Culture Not Race Explains Human Diversity</b>
05/01	Chapter 10 Human Biology Diversity in Context Film: The End of Poverty	Last day to hand in extra credit <b>Research Paper due</b>
05/08	Chapter 11 Modernity and Human Biology Film: Race the Power of an Illusion 3	
05/15 Final Exam	<b>SLOA quiz - Final EXAM Chapter 9, 10, 11</b> Scantron 882E After the Exam; Class is dismissed... I wish you the best; grades should be available within one week	

