

Introduction to Human Evolution
Spring 2008
ANTH 12: Section 1, MW 10:30 - 11:45 p.m.

Dr. Tracey L. O'Rourke
Office: Clark 463

Office Hrs: MW 9:45-10:15 and by appointment
Phone: 924-5714 (during office hours)
Main anthropology office 924-5710
E-mail: tracey.orourke@sjsu.edu

Catalogue Description:

The human organism from an evolutionary perspective. The foundations of life and evolutionary theory. Introduction to primate behavior and the fossil record. Human bio-cultural evolution over the last sixty million years.

Course description:

Biological, or physical, anthropology studies biological and physical aspects of humans in order to understand how and why we vary and how we got this way. It covers all biological aspects of what makes us human. This course is an introduction to this field of study. We focus therefore, on basics of biology, in order to understand how we vary; evolutionary theory, to understand how we got to be this way; modern primates and their behavior, because inherent to understanding us in understanding our nearest relatives, the primates; and we examine the fossil evidence for human and primate evolution, in order to see how we got here.

Anth 012 is a Science GE offering (core GE, B2/Life Science).

The course is an introductory one; thus, no specific prior knowledge is assumed. **There are no prerequisites to take this course.**

During the semester, students will acquire basic biological knowledge relating to molecular biology, cell reproduction, fundamental principles of micro- and macro-evolutionary theory (especially the role of natural selection), and the intellectual background leading to the development of evolutionary theory.

This foundation will then be used to explore the specific evolutionary history of major groups of organisms with a specific focus on human evolutionary history. Comparative perspectives will be incorporated so to provide a basis for understanding how humans are related to other primates (and what this implies structurally, physiologically, and behaviorally). Furthermore, data provided directly by the fossil and molecular records will be comprehensively reviewed in tracing the major features of human evolution. In summary, this course attempts to place our species in a clear evolutionary context and to ask basic questions relating to human origins, such as what kind of creature are we, how did we get to be this way, and where did we come from.

Major topics will include:

- The history of evolutionary theory
- Biological basis of life: cells, DNA, and genes
- Evolution and heredity
- Overview of primates
- Hominid/human origins
- Modern human origins
- Human variation and adaptation

ANTH 012 GOALS

ANTH 012 as a General Education Course:

ANTH 012 as a General Education Course: Anth 012 is a Science GE offering (core GE, B2/Life Science). Basic objectives for student learning in all science core GE courses are the abilities to:

- 1) use methods of science and knowledge derived from current scientific inquiry in life or physical science to question existing explanations;
- 2) demonstrate ways in which science influences and is influenced by complex societies, including political and moral issues; and
- 3) recognize methods of science, in which quantitative, analytical reasoning techniques are used.

More specifically, life science courses, such as Anth 012, focus on:

- Structure and functions of living organisms;
- Levels of organization of living systems;
- Strategies of survival and reproduction;
- Patterns of evolution;
- Principles of genetics, including the basis for variation; and
- Interaction of organisms and their natural environment.

Course Goals:

In addition to the above overall objectives of all life science GE courses, Anth 012 also has several more specific learning objectives. By the completion of this course, students should be able to:

- Think critically;
- Recognize a testable hypothesis;
- Differentiate between a hypothesis and a general theory;
- Recognize how evolutionary theory is part of a wider scientific approach;
- Recognize biases;
- Know the historical development of Western scientific tradition;
- Distinguish and understand the primary factors influencing evolutionary change;

- Discern how basic life processes play a part in the variation necessary for evolution;
- Understand the relationships between humans and other organisms; and
- Understand the biology and culture of human diversity.

Course Requirements and Grading:

Textbook: Stanford, C. et al., . **Biological Anthropology**, Pearson Education, 2006.

Students should read the assigned readings before they come to class. Also, students should feel free to ask questions when something in the lecture or book is not clear.

Grades will be based weekly assignments, a single midterm and the final exam:

Weekly assignments	: 10 x 10 pts	100	36.5%
Midterm Exam	75 pts	75	27%
Final EXAM	125 pts	100	36.5%
		275	100%

Assignments: The weekly assignments will be given on Monday and are due the following Monday. They will have various formats, from problem solving to essay. **There are 12 weekly assignments. You are required to complete 10 of these.** You may complete all and then the lowest scores will be dropped. About half the assignments will be essay. All the assignments are designed to address the GE learning objectives (with each writing assignment covering one of the learning objectives and incorporating the content objectives in these assignments as well). For the essay assignments, writing requirements will include a minimum of 500 words (about 2 pages) per assignment. The essays will be assessed for content, correctness, clarity, conciseness, grammar, and spelling. Failure to satisfactorily complete the writing requirements (3 essays) will result in a course grade of “WU” (i.e., an administrative “F”), regardless of achievement on other portions of the course.

Exams: There are two exams, a midterm and final. These will address content and GE learning objectives. The final exam will be cumulative.

Late assignments will not be accepted and make-up exams will not be offered without a VALID, DOCUMENTED excuse.

Final grades will be calculated based on the highest score in the class. That will set the high score by which all students will be evaluated. For example, if there is a perfect score, the highest score in the class will be 275. If you were to receive a 250, your score would be 250/275 or 91%. On, the other hand, if the high score in the class were 260, your final score would be 250/260 or 96%.

Course Schedule:

The course schedule details the dates, topics, readings, and assignments, as well as the GE goals these assignments address.

Week	Date	Topic	Reading	Assignment/ GE objective
1	Jan 23	Introduction: What is biological anthropology, how do we study it?	Chapter 1	
2	Jan 28-30	Evolutionary theory and history	Chapter 2	Assignment 1 GE B2-1
3	Feb 4-6	Inheritance and Genetics	Chapter 3-4	Assignment 2
4	Feb 11-13	Modern evolutionary theory	Chapter 5	Assignment 3 GE B2-3
5	Feb 18-20	Human Biology Evolution and human variation	Chapter 6	Assignment 4 GE B2-2
6	Feb 25-27	Primates Primate Ecology	Chapter 7	Assignment 5 GE B2-3
7	Mar 3-5	Primate Behavior Primate Models	Chapter 8	Assignment 6 GE B2-3
8	Mar 10-13	Primate Evolution	Chapter 9-10	
9	Mar 17-19	MIDTERM REVIEW MIDTERM		
	Mar 24-26	Spring Break		
10	Mar 31- Apr 2	Early Human Evolution Earliest hominids Bipedality origins	Chapter 11-12	Assignment 7
11	Apr 7-9	Australopithecines Earliest Homo Hominid taxonomy	Chapter 12-13	Assignment 8 GE B2-3
12	Apr 14-16	<i>Homo erectus</i> history, fossils <i>Homo erectus</i> morphology, emergence <i>Homo</i> transitions	Chapter 13	Assignment 9
13	Apr 21-23	Archaic homs Neandertals	Chapter 14	Assignment 10 GE B2-1
14	Apr 28-31	Modern human origins What it means to be modern	Chapter 15	Assignment 11 GE B2-2
15	May 5-7	Evolution of Brain and Language Evolution of Human Behavior	Chapter 16-17	Assignment 12 GE B2-2
16	May 12	Summary/Review		

FINAL EXAM: Tuesday May 20, 9:45 a.m. – 12:00 p.m.

Reiteration of GE objectives

B2-1 use methods of science and knowledge derived from current scientific inquiry in life or physical science to question existing explanations;

B2-2 demonstrate ways in which science influences and is influenced by complex societies, including political and moral issues; and

B2-3 recognize methods of science, in which quantitative, analytical reasoning techniques are used.

Departmental Learning Objectives and Skills:

The department of anthropology also has key learning objectives and skills that we wish students to obtain. By the completion of this course, students should have an increased:

- 1) Understanding culture as the distinguishing phenomenon of human life, and the relationships of human biology and cultural processes in human behavior and evolution.
- 2) Awareness of human diversity and the ways in which humans categorize diversity.
- 3) Knowledge of the significant findings of archaeology, cultural anthropology, and physical anthropology, and familiarity of the important issues in each sub-discipline.
- 4) Knowledge of the history of anthropological thought and its place in modern intellectual history.
- 5) Comprehension of migration, colonialism, and economic integration as significant phenomena shaping global society.
- 6) Ability to access various forms of anthropological data and literature.
- 7) Awareness of the importance and value of anthropological knowledge in contemporary society, and the ability to apply it to social issues.
- 8) Knowledge of the research methods of the sub-disciplines of anthropology, and ability to apply appropriate research methods in at least one sub-discipline.
- 9) Ability to present and communicate anthropological knowledge and the results of anthropological research to different audiences.
- 10) Knowledge of political and ethical implications of social research.

Attaining the Course Objectives/Goals

At a general level, this course is primarily about the nature of the evolutionary process, how it works, and how scientists have come to understand the process (specifically to understand ourselves). The evidence relating to human evolution is used to illustrate evolutionary and biological processes (such as natural selection, reproduction, heredity, etc). In addressing the fundamental questions relating to human origins, you will be challenged to think critically, apply sound scientific methodologies, understand and assess quantitative data, and communicate your knowledge.

At SJSU, students are encouraged to recognize that education is participatory experience. Thus, each student is expected to contribute to further refining the course objectives (so better to articulate your individual expectations and needs), to give feedback to the instructor regarding the adequacy of your learning and how well the course assessment measures that learning (and how these assessment tools can be improved). Finally, each student is challenged to be engaged in the exploration of the fascinating material covered this semester, to participate in class discussions, and to relate in assignments and exercises how you can apply these concepts to your everyday life.

The most important contribution this course can make to your education is to provide you with greater ability to think critically. As a result, this skill will contribute permanently to your further education, that it, for the remainder of your lifetime.

Course Rules:**Attendance and Participation**

I highly recommend students attend class as often as possible. The material in this course can be difficult to understand with just the textbook, and class attendance will be critical in doing the weekly assignments.

Make-up Work

If you know in advance that you should be unable to attend an exam, it is your responsibility to contact me immediately by either e-mailing or telephoning me, leaving a message for me at the main department office, or coming by during my office hours.

Only students with a valid documented excuse will be able to take a make-up exam or hand in a late assignment. Late assignments will not be accepted otherwise. All assignments need to be turned in **IN CLASS**. **No emailed papers, papers slid under my office door, or put in my office box will be accepted without prior permission.**

IMPORTANT**CLASS BEHAVIOR**

- **Class attendance and participation is key to success. Anything that detracts from this can be detrimental to you as well as those around you. Therefore, some basic rules of behavior and respect:**
 - **No Electronics (which include Ipods, Mp3 Players, Sidekicks, Cell phones, Laptops, etc.) will be allowed out in class. Before class begins, you should turn off all electronics and put them out of sight.**
 - **No newspapers, crossword puzzles, surfing the web, IM, reading of other materials, etc. in class.**

CHEATING and PLAGIARISM

- **Incidences of cheating and plagiarism will be turned into the academic integrity office.**
- **I will only discuss individual cases concerning academic integrity in my office.**
- **Students are responsible for understanding and adhering to the academic integrity policy.**

MISCELLANEOUS

- **I am best contacted by email since I am not on campus often. This does NOT give you free rein to send me emails about anything or everything. I only have SO much time!**
 - **I will not answer questions about what occurred in class due to an absence, paper topics, research, or missing assignments.**
- **You must sign up with the Disability Resource Center to get any special consideration regarding any disability. Just telling me that you have a disability will not be enough.**
- **Once I have graded an assignment, it will be in class to pick up. Students are required to pick up their assignments within two class periods and keep their assignments until the end of the semester, which is intended to prevent problems of lost grades and other similar issues.**
- **Students are responsible for understanding policies about adding, dropping, academic renewal, and incompletes.**
- **Students are responsible for being aware of assignment due dates, midterm date, and the final exam schedule.**
- **Students who miss classes should keep up with course readings and obtain notes from a classmate.**
- **If you have any concerns about your class performance or comprehension, come by my office during office hours or schedule an appointment. I am always willing to help students and I care about whether students are grasping the material and enjoying the class.**

UNIVERSITY, COLLEGE, OR DEPARTMENTAL POLICY INFORMATION**Academic integrity statement (from Office of Judicial Affairs):**

“Your own commitment to learning, as evidenced by your enrollment at San José State University and the University’s Academic Integrity Policy requires you to be honest in all your academic course work. Faculty are required to report all infractions to the Office of Judicial Affairs. The policy on academic integrity can be found at <http://www2.sjsu.edu/senate/S04-12.pdf>”

Campus policy in compliance with the Americans with Disabilities Act:

“If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities register with DRC to establish a record of their disability.”