INTRODUCTION TO HUMAN EVOLUTION

Anthropology Department; SJSU

ANTH 012 Section 1 — Fall 2007
Mondays & Wednesdays 1330 – 1445 — WSQ 207

Dr. Elizabeth Weiss
Office: CL 404R
Office Hours: M, W 1500 - 1700
T 1300-1500
(Or available by appointment via prior arrangement)

If you have any concerns about your class performance or comprehension, please 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.

Phone: 408-924-5546
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COURSE WEB PAGE: http://www.sjsu.edu/faculty_and_staff/course_detail.jsp?id=515

Home Page: http://www.anthrosciences.com
Departmental Web Page: http://www2.sjsu.edu/depts/anthropology/people/weiss.html
Faculty Web Page: http://www.sjsu.edu/faculty_and_staff/faculty_detail.jsp?id=565

COURSE DESCRIPTION

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 biocultural evolution over the last sixty million years.

Detailed Course Description:
Introduction to Human Evolution is a course designed to allow students to appreciate the evolutionary history of our species and the biological bases that are at the foundation of this process. 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
- Life history theory

ANTH 012 GOALS

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: use methods of science and knowledge derived from current scientific inquiry in life or physical science to question existing explanations; demonstrate ways in which science influences and is influenced by complex societies, including political and moral issues; and 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.

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 of 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.

REQUIRED TEXT

Fuentes A. Core Concepts in Biological Anthropology. McGraw-Hill, 2007.

COURSE REQUIREMENTS

Students will take five in-class quizzes, which will be unannounced.

A midterm and a comprehensive final exam will also be required.

Students will be required to turn in three at-home writing assignments. Writing requirements will include a minimum of 500 words per assignment. The essays will be assessed for content, correctness, clarity, conciseness, grammar, and spelling. **Failure to satisfactorily complete the writing requirements will result in a failing grade for the course, regardless of achievement on other portions of the course.**

Summary of Requirements

- Exam requirements include five quizzes, a midterm exam, and a final exam.
- Writing requirements include three essays each of which will consist of 2 pages for a minimum of 500 words per assignment. The topics and format will be discussed in class and posted on the course webpage.
- 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.

GRADING POLICY AND PROCEDURES

The final semester grade will be based on the following (each of which is graded on a scale of 100):

Quizzes	5 X 3% =	15%
Writing Assignment 1	1 X 10%=	10%
Writing Assignment 2	1 X 15%=	15%
Writing Assignment 3	1 X 15%=	15%
Midterm	1 X 20%=	20%
Comprehensive Final	1 X 25%=	25%
Total		100%

Grading is as followed:

A	B	C	D	F
97% - 100% = A+ 91-96% = A 90% = A-	87-89% = B+ 81-86% = B 80% = B-	77-79% = C+ 71-76% = C 70% = C-	67-69% = D+ 61-66% = D 60% = D-	59% and Below = F

Grade Calculation

Students should keep track of their grades, which entails picking up participation assignments, quizzes, writing assignments, and exams in a timely manner. I will bring graded assignments to class and students can pick them up after the class period or they can come to my office to pick them up. By filling out the below table students should be able to determine their progress in the course.

Assignment	Assignment Grade	Weight	Weighted Grade	Grade[1]
Quiz 1		X 0.03 =		
Quiz 2		X 0.03 =		
Quiz 3		X 0.03 =		
Quiz 4		X 0.03 =		
Quiz 5		X 0.03 =		
Writing Assignment 1		X 0.10 =		
Writing Assignment 2		X 0.15 =		
Writing Assignment 3		X 0.15 =		
Midterm		X 0.20 =		
Final		X 0.25 =		
GRADE[1]				
Extra Credit[2]				
CLASS GRADE				

[1] Add all the weighted grade numbers together to get your grade.

[2] Each extra credit assignment is worth ½ of a percentage point added to your grade, which will give you your Class Grade.

Extra Credit

There may be opportunities for extra credit throughout the semester; some will be based on current events and others will be based on participation in class. Each extra credit opportunity is worth half a percentage point on your overall grade. Extra credit opportunities will not be announced and cannot be made up if you miss class.

Attendance and Participation

There will be various in-class participation assignments intended to help students on future quizzes, midterms, writing assignments, and the final.

I highly recommend students attend class as often as possible. Some quizzes will be given at the beginning of class and others at the end of the class; thus, it is important to arrive on time and attend the entire class period.

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.

IMPORTANT

CLASS BEHAVIOR

- **Newspaper reading is not allowed in class. If you read a newspaper in class, I will ask you to leave class for the rest of the semester.**
- **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.**

LATE PAPERS

- **Papers are due at the beginning of class.**
- **No late papers without a documented valid excuse will be accepted.**
    - **Documents need to be official and verifiable, such as hospital receipts, police records, etc. and each case will be evaluated on a case-by-case basis.**
    - **Some valid excuses may include illnesses that include hospital stays, car accidents, and a parental death.**
    - **Some non-valid excuses may include weddings, computer problems, financial difficulties, and funerals of unrelated individuals.**
    - **These are examples; each case will be evaluated on a case-by-case basis.**
    - **Events that occur the night before the paper is due will not be accepted as an excuse since your paper should be done or nearly done by that time.**
- **No emailed papers, papers slid under my office door, or put in my office box will be accepted without prior permission.**
- **Occurrences that involve family members or friends will be considered only with documentation and collaborative evidence of relationships and the necessity of your attendance.**
- **AGAIN EACH EXCUSE WILL BE EVALUATED ON A CASE-BY-CASE BASIS AND ALL DECISCIONS ARE FINAL.**

CHEATING and PLAGIARISM

- **Incidences of cheating and plagiarism will be turned into the academic integrity office; you have two (2) office hour periods to discuss the issue with me prior to my turning in the report.**
- **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

- **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.**
- **Failure to turn in any of the three writing requirements will result in an F in the class, regardless of achievement on other portions of the course.**
- **It is not possible to make-up quizzes or extra credit assignments.**

- **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.**

- **Library Liaison For Anthropology:** Bernice Redfern; **Librarian; (408) 808-2038;** Bernice.Redfern@sjsu.edu

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."

COURSE OUTLINE

Date		Topic	Assigned Readings
Aug.	27	Introduction and Anthropology as a Science	Chapter 1: 10-23
	29	History of Evolutionary Theory	Chapter 1: 23-30
Sept.	03	Labor Day – No Class	
	05	Natural Selection (Last Day to Drop)	Chapter 1: 30-42
Sept.	10	DNA	Chapter 2: 44-58
	12	Mendelian Genetics (Last Day to Add)	Chapter 2: 58-71
	17	Human Biology: Where we fit in	Chapter 3: 72-84
	19	Human Biology: the body (1st Writing Assignment Due)	Chapter 3: 84-97
	24	Modern Evolutionary Theory	Chapter 4: 98-121
	26	Primates	Chapter 5: 122-136
Oct.	01	Primate Ecology	Chapter 5: 136-141
	03	Primate Behavior	Chapter 5: 141-151
	08	Primate Models	Chapter 5: 151-167
	10	Primate Evolution (2nd Writing Assignment Due)	Chapter 6: 168-193
	15	Midterm Review	
	17	MIDTERM	
	22	Early Hominid Evolution: Possible Hominins	Chapter 7: 194-207
	24	Early Hominid Evolution: Bipedality origins	
	29	Early Hominid Evolution: Australopithecines	Chapter 7: 207-223
	31	Early Hominid Evolution: Australopithecines	
Nov.	05	Plio-pleistocene Hominids: Early *Homo sp.* & contemporaries	Chapter 8: 224-246
	07	Plio-pleistocene Hominids: Early *Homo sp.* & contemporaries	
	12	Veterans Day - Campus Closed	
	14	Plio-pleistoence Hominids: *H. erectus* & contemporaries	Chapter 8: 246-265
	19	Plio-pleistoence Hominids: *H. erectus* & contemporaries	
	21	Rise of Modern Human: Archaics	Chapter 9: 266-281
	26	Neanderthals	
	28	Anatomically Modern Humans (3rd Written Assignment Due)	Chapter 9: 282-305
Dec.	03	Human Diversity	Chapter 10: 306-343
	05	Modernity & Human Biology	Chapter 11: 344-365
	10	Final Review	

FINAL EXAM: Monday, December 17th at 1215-1430