

Anthropology 1: Human Evolutionary Biology (Fall 2009)

TH 9:00am–10:20am, Chemistry 194

Instructor: Richard McElreath (mcelreath@ucdavis.edu)

Office: 222 Young Hall

Office Hours: To be announced in lecture and by appointment

Goals of the Course

Humans are the product of the same evolutionary processes that create all other forms of life on the planet. Nevertheless, we are a very unusual species. The goal of this class is to explain how we came to be the way we are. 65 million years ago, the ancestors of modern humans were tiny insect-eating animals, scurrying about under the feet of dinosaurs. Between these rodent-like ancestors and ourselves lies a continuous chain of different animals, all of which are important to the story of human evolution. The key to understanding each of these forms, and therefore how and why humans evolved as they did, lies in understanding how evolution by natural selection produces adaptation.

Your Responsibilities

1. You are expected to attend the lectures. A few rare students are able to skip lectures and still get a lot out of the class. But we don't recommend that you do this for three reasons. First, the lectures will help you to understand the material in the text better. Second, material might be presented in class that is not included in the text. For example, if there are important new discoveries of hominid fossils, we might present these in class, but they won't be in the textbook. Third, there might be appearances by guest lecturers who won't stick to the textbook. You will be responsible for the material in these lectures, and they may be included on the exams.

2. You are expected to do the assigned reading. There will be considerable overlap between the lectures and the reading, so you might be tempted to skip the reading. We think this would be a mistake, because (1) there is far more material in the book than we will be able to cover in lecture, and (2) some chapters will be assigned, but not discussed in lecture. You are expected to complete the assigned reading before class. The reason that we want you to do the reading ahead is that you will get more out of the lecture if you already have some familiarity with the material.

Required text: *How Humans Evolved*, Robert Boyd & Joan Silk, Fifth Edition.

3. You are expected to check the class web site regularly. Announcements will be posted on the class web site. These will include assignments for section, changes in reading assignments, and information about exams. The web site will also contain information that might be useful to you, like copies of old exams, answers to study questions, and links to related sites. You can access the website directly by logging in to smartsite.ucdavis.edu with your UCD username and password. If you are enrolled in the course, it will appear on your smartsite.ucdavis.edu pages.

4. You are expected to attend section. The discussion sections are required. 10% of your grade in the course will be based on your participation in discussion sections. The discussion sections are meant to provide you with an opportunity to review the material, to ask questions about things that you do not understand, and give you an opportunity to see and handle facsimiles of hominid fossils. Finally, students who attend section almost always do better than their classmates who do not. It's just one hour out of your week. It's worth the time. **SECTIONS BEGIN MEETING THE WEEK OF SEPTEMBER 28.**

Instructor's Responsibilities

The instructor will provide enough information about exams and other assignments to prevent any surprises. We genuinely want every student to learn this material, because we think no one can be a educated citizen without knowing something about the biological origins of their own species. The lectures will highlight the most important and difficult ideas in the textbook. The instructor will be available both by email and appointment and office hours to answer questions about the course or the material. Your section teaching assistant will also make him or herself available in a similar way. Please don't be shy about approaching us.

Exams

There will be one midterm and a **cumulative** final exam. The midterm will cover the lectures and readings in the first half of the course (Chapters 1–8). The **cumulative** final will cover the whole course, which includes all of the lectures and all of the readings (Chapters 1–16). Students tend to ask several times during the term whether the final exam is **cumulative**, so we will say it again: The final exam is **cumulative**, covering all of the lectures and all of the readings (Chapters 1–16).

The exams will consist of short answer questions. Short answer questions are designed to be answered in a few sentences or a short paragraph. You will see some examples of possible questions and sample answers on the class web page before you are asked to take the midterm.

Papers

There will be a short paper assigned during the term. These paper will be based on readings distributed in class and test your ability to use the course material to compose a clear and effective argument. More details on the paper will come out in section two weeks or more before it is due.

Grading

Your grade will be constructed as follows: Midterm 30%, Final 40%, Section 10%, Paper 20%.

Schedule of Lectures

Week	Date	Topic	Reading
1	24-Sep	Introduction	Preface, Ch 1
		PART I: How Evolution Works	
2	29-Sep	Darwin's theory of evolution by natural selection	Ch 1
	1-Oct	The mechanics of inheritance	Ch 2
3	6-Oct	Population genetics and adaptation	Ch 3
	8-Oct	The origin of species	Ch 4
		PART II: Primate Diversity & Behavior	
4	13-Oct	Meet the primates	Ch 5
	15-Oct	Primate socioecology	Ch 5
5	20-Oct	Reproductive strategies	Ch 6
	22-Oct	Social behavior in primates/Primate cognition	Ch 7
6	27-Oct	The evolution of intelligence	Ch 8
	29-Oct	MIDTERM EXAM	(Ch 1-8)
		PART III: History of the Human Lineage	
7	3-Nov	The first hominins	Ch 10, 11
	5-Nov	Tools and the genus Homo	Ch 11
8	10-Nov	Out of Africa	Ch 12
	12-Nov	The origins of modern human behavior	Ch 13
		PART IV: Evolution and humans today	
9	17-Nov	Ongoing evolution of human nature	Ch 14
	19-Nov	Ongoing evolution of human nature	Ch 14
10	24-Nov	Evolution and human behavior	Ch 15
	26-Nov	<i>Thanksgiving Holiday</i>	
11	1-Dec	Evolution and human behavior	Ch 15
	3-Dec	Mating and parenting in contemporary societies	Ch 16
	9-Dec	1pm, FINAL EXAM	(Ch 1-16)