

Ant 274: Bones, Stones & Genomes

Winter 2014

Syllabus*

*subject to change at instructor's discretion

Professor: Zachary Cofran

Lecture: 8.305, T-Th 3-4:15 pm

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Office: 8.131

Office hours: T-Th 2-3, W 11-12 and 1-3, and by appointment

Here we will examine the evidence of human evolution, beginning millions of years ago and up to the present day. You will learn about the development and anatomy of what makes humans unique, as well as the comparative anatomy of other primates. We will focus on *why* humans evolved to be the way we are today, as well how and why we are still evolving as a species.

Course objectives

By the end of the semester, *hard-working* students will:

- understand what evolution is (and isn't) and how it works (and how it doesn't)
- learn how to identify and comprehend quality scientific articles
- learn to distinguish good science from 'pseudo' science (a.k.a. bullshit)
- learn how to set up and test a hypothesis
- appreciate the place of humans as another animal in nature

Textbooks & Readings

Conroy, GC and Pontzer H. 2012. *Reconstructing Human Origins*, 3rd edition. WW Norton: New York. ("CP" in schedule below)

Additional readings will be posted to Moodle to supplement the textbook. These will be more focused on a given topic and will provide the subjects of in-class discussions.

Grading

Participation = 20%

You will get the most out of class if you actively learn and participate. To reward readers & contributors, there will be a short quiz every week over the previous week's reading/lecture. These must be taken in class and cannot be made up. Your lowest score will be dropped from the overall grade. Sleeping in class and not participating in discussions will harm your participation grade.

Blog post writing assignments = 30%

You will contribute 5 short blog posts (each worth 6% of your total grade) to the class blog, nazarbioanthro.blogspot.com, over the course of the semester. Each post will be due by Friday at midnight of the given week, except for the first one.

Student-led discussion = 5%

In small groups, students will lead a class discussion of a peer-reviewed (i.e., professional, scientific) article. *Date and topic sign-up will be 27 January*

Final project about a primate fossil taxon (due in parts) = 30%Project taxon proposal (**14 February**) = 5%Project outline (**21 March**) = 5%Final draft (**05 May**) = 20%**Final Exam = 15%****In class Tuesday 29 April**

Except for a few points on the midterm, there will be no opportunities for extra credit.

Grading scale:

≥93% = A

90-92% = A-

87-89% = B+

83-86% = B

80-82% = B-

77-79% = C+

73-76% = C

70-72% = C-

67-69% = D+

60-66% = D

<60% = F

Late policy

Work turned in late will not be accepted. I do not grant extensions. You must be in attendance for quizzes and the midterm exam.

Academic Integrity

All work you submit must be your own. You may discuss assignments with colleagues, but you may not turn in the same work. When you use references, other people's ideas, and especially other people's direct words, you absolutely must cite them. Failure to cite is plagiarism, which will result in your failure of the assignment. Plagiarism and other academic misconduct will be reported to the SHSS for possibly further disciplinary action.

Attendance

Whether you attend each class is ultimately up to you, but you will do better if you come to class. Note that there will be quizzes every week and cannot be made up if missed. Keeping up with course material and due dates is ultimately your responsibility. Please do not waste either your or my time by sleeping in class (you will be asked to leave).

Schedule of topics* & assignments

*subject to change

Due dates in red**Textbook readings in bold**

Week 1: Paleoanthropology; course expectations

Week 2: The human animal

CP chapter 1

Blog 1: What do already know about human evolution? (due Monday 13 January at midnight)

Week 3: What evolution is and how it works (and what it isn't and how it doesn't work)
Species & speciation

Week 4: Paleontology
Fossilization, dating, taxonomy
CP chapters 3-4
Discussion group/topic sign begins Monday 27 January

Week 5: Human bones and genes
Databases & resources, osteology

Week 6: Planet of the apes (& other primates)
Environment and climate
CP chapter 5
Blog 2 due: Primate osteology (KUPRI database)

Week 7: The first hominins?
CP chapters 2 & 8
Project taxon proposals due on Moodle midnight Friday 14 February

Week 8: Pliocene East Africa
CP chapter 7

Week 9: Pliocene South Africa
CP chapter 6
Blog 3: An australopithecine fossil

Week 10: The genus *Homo*
CP chapter 9

Week 11: *Homo erectus*
CP chapter 10
Project outline and bibliography due Friday 21 March

SPRING BREAK (no class 25-27 March)

Week 12: Between *erectus* and *sapiens*
CP chapter 11
Blog 4: A *Homo* fossil

Week 13: AAPA meeting (Zach is gone)

Week 14: Paleogenetics
Neandertals and "Denisovans"

Week 15: Modern humans

CP chapters 12-13

Blog 5: Your project hypothesis

Final exam in class Tuesday 29 April

Final project due Monday 05 May