Anthropology 207: Hominid Evolution  
Fall 2010

Instructor: Adam Van Arsdale  
Office Hours: PNE 348: Tu 4-5,  
Fr 10-11, and by appointment  
Lecture: PNW 117, Tu/Fr 11:10-12:20  
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Course Description:  
The hominid fossil record provides direct evidence for the evolution of humans and our ancestors through the past 5-7 million years. This will provide an overview of human evolutionary history from the time of our last common ancestor with the living great apes up through the emergence of “modern” humans. Emphasis is placed on evolutionary mechanisms, and context is provided through an understanding of the pre-human primates. The human story begins with origins and the appearance of unique human features such as bipedality, the loss of cutting canines, the appearance of continual sexual receptivity, births requiring midwifery, and the development of complex social interactions. An early adaptive shift sets the stage for the subsequent evolution of intelligence, technology, and the changes in physical form that are the consequence of the unique feedback system involving cultural and biological change.

Texts:
- The Human Evolution Source Book (2nd ed.), 2006  
  Russell Ciochon & John Fleagle, Prentice Hall  
- Primary literature (.PDFs available via Sakai)

Grading:
- 10% Participation (in class and on Sakai)  
- 5% Fossil presentation  
- 30% Quizzes (4) – emphasis on the details of the fossil, archaeological and genetic record. Based on readings, lectures and supplemental information.  
- 30% Essays (4) – 900 words or less, concise argument supported with evidence.  
- 25% Final – Essay based final, due by December 19

Course Goals:
- Develop a familiarity with the basic outline of human evolution over the past 6-8 million years, including major evolutionary developments and important fossils sites and specimens  
- Improved understanding of how the scientific process operates within the context of paleoanthropology and human evolution. How are questions asked and addressed? What constitutes knowledge of the past?  
- Improved skill in writing concise, evidence based arguments  
- Appreciation of human evolution as a means to gain insight into broader evolutionary theory  
- Develop a comfort with constructive debate and respect for the opinions, views, and ways of approaching problems of other class members
Sakai:
The course will utilize the new Sakai platform for facilitating the distribution of class resources and discussion outside of the classroom (https://sakai.wellesley.edu/portal/). The site will provide access to readings, lectures, course assignments and additional class discussion. Questions regarding the site can be directed to Prof. Van Arsdale or IS staff.

Concerns:
If you have any concerns regarding your ability to complete the assignments of the course or trouble understanding specific concepts, I am always available for consultation. In addition to my office hours I can be reached with regularity via e-mail (please only call my cell phone in case of emergency). Assistance is also available for students through the Pforzheimer Learning and Teaching Center. All work in this class is subject to the Wellesley Honor Code. While students are encouraged to discuss the course materials and assignments both in and out of class, all of your work must reflect your own independent efforts. All assignments must be turned in on time. Unless approval is granted from Prof. Van Arsdale, no late assignments will be accepted. No extra credit will be available for this course.

SYLLABUS: (subject to change)

Week 1: (Sept. 6-10) Introduction, Apes and Humans
Tuesday, September 7 – First day of class, Introduction to human evolution
Friday, September 10 – Human and ape skeletal anatomy

Reading:

Week 2: (Sept. 13-17): Apes and the fossil record
Tuesday, September 14 – Human and ape behavior and genes
Friday, September 17 – Asking questions of the fossil record

Reading:
- C & F, Part 1 (3-30)

**First Essay Assignment to be handed out in class (due online by 9/21 at 9:00am)**

Week 3 (Sept. 20-24): Miocene apes and fossil dates
Tuesday, September 21 – Dating the fossil record
Friday, September 24 – The Miocene stew

Reading:
- C & F, Part 2, 9-11 (33-47)
**Week 4 (Sept. 27-Oct. 1): How to not be an ape**
Tuesday, September 28 – Hominid candidates, part 1: *Sahelanthropus* and *Orrorin*
Friday, October 1 – Hominid candidates, part 2: *Ardipithecus*

Reading:
- C & F, Part 2, 12-15 (48-72)

**Basic Osteology Quiz (administered via Sakai – must be completed by Friday 10/1 5:00 pm)**

**Week 5 (Oct. 4-8): Would the real hominid please stand up?**
Tuesday, October 5 – Bipedality
Friday, October 8 – Early Australopith morphology

Reading:
- C & F, Part 3, 16-17, 21 (73-97, 149-156)

**Second Essay Assignment to be handed out in class (due online by 10/12 at 9:00am)**

**Week 6 (Oct. 11-15): Australopithecine Dentition**
Tuesday, October 12 – (NO CLASS, Monday schedule due to Fall Break)
Friday, October 15 – Molars, big and bigger

Reading:
- C & F, Part 3, 18-19 (98-114)

**Week 7 (Oct. 18-22): Australopithecine Ecology**
Tuesday, October 19 – Gracile and Robust: diet, dentition and demography
Friday, October 22 – The end of the Australopiths

Reading:
- C & F, Part 3, 23-25 (176-218)

**Week 8 (Oct. 25-29): The beginnings of Homo**
Tuesday, October 26 – Defining *Homo*
Friday, October 29 – Identifying early *Homo* in the fossil record

Reading:
- C & F, Part 4, 26-27, 29-31 (219-234, 243-270)

**Australopithecine Quiz (administered via Sakai – must be completed by Friday 10/29 5:00 pm)**
**Week 9 (Nov. 1-5): Becoming human in the Pleistocene**
Tuesday, November 2 – Dmanisi and the early dispersal of Homo out of Africa
Friday, November 5 – A model of Pleistocene human evolution

Reading:
- C & F, Part 5, 34-37 (293-326)

**Third Essay Assignment to be handed out in class (due online by 11/9 at 9:00am)**

**Week 10 (Nov. 8-12): Pattern and Process in the Pleistocene**
Tuesday, November 9 – Human ecology in the Pleistocene
Friday, November 12 – Africa, Europe and Asia in the mid-Pleistocene

Reading:
- C & F, Part 5, 45 (376-392)
- C & F, Part 6, 46-47, 51 (393-420, 434-439)

**Week 11 (Nov. 15-19): The late Pleistocene “transition”**
Tuesday, November 16 – Out of Africa?
Friday, November 19 – Transitions in the Late Pleistocene

Reading:
- C & F, Part 8, 61-63. 67 (537-562, 595-600)

**Early Homo Quiz (administered via Sakai – must be completed by Sunday 11/21 5:00 pm)**

**Week 12 (Nov. 22-26): If not the Neandertals…**
Tuesday, November 23 – A model of Pleistocene human evolution, in review
Friday, November 26 – NO CLASS, Thanksgiving holiday

Reading:
- C & F, Part 7, 53-54, 56 (447-469, 482-495)
- C & F, Part 9, 68, 71 (601-608, 617-625)

**Week 13 (Nov. 29-Dec. 3): Post-Pleistocene human evolution**
Tuesday, November 29 – The real demographic/ecological revolution
Friday, December 2 – The rise of the domesticated human

Reading:
- C & F, Part 9, 73-74 (637-672)

**Fourth Essay Assignment to be handed out in class (due online by 12/7 at 9:00am)**
Week 14 (Dec. 6-10): Evolution in a human context
Tuesday, December 7 – Human evolutionary theory
Friday, December 10 – Final thoughts…

Reading:
• STUDY!

Modern Human Origins Quiz (administered via FirstClass – must be completed by Friday 12/10 5:00 pm)

**FINAL EXAM – ESSAY FORMAT, ADMINISTERED ONLINE VIA SAKAI**
**MUST BE COMPLETED BY 12/19 5p.m.**