

January 29, 2014

## HOMINID PALEOBIOLOGY

**HOMP 6201: SPRING 2014**

Course Directors: Brian Richmond & Bernard Wood  
Course Participants: Kay Behrensmeyer, René Bobe  
Office Hours: BR, T 3-5, and by appt; BW, by appt

Class Time: T 11:10-2:00  
Location: Lisner 130

Course Description: The course focuses on the fossil record for human evolution and current research in paleobiology. In addition to the taxonomy, site context, anatomy, and behavior of each hominin taxon we also explore more general topics such as macroevolutionary theory, site formation, phylogeny and the reconstruction of behavior and life history.

### Learning Outcomes:

As a result of completing this course, students will :

- understand the patterns and processes involved in human evolution
- understand the major issues and debates involved in reconstructing hominid paleobiology
- be able to critically evaluate hypotheses based on evidence from the fossil record
- become familiar with important fossil sites and the fossil record.
- learn to analyze and evaluate data design, and
- conduct an original scientific research project

Evaluation: Graduate grades are based on exams and a research project. The first exam is worth 25%, the final exam accounts for 25%, and an oral exam on the cast collection accounts for 10% of the final grade. The remainder of the grade will be based on a research project proposal (5%), and a final presentation and research paper or grant proposal (30%). A research paper must include the collection and/or analysis of data, and a grant proposal would be strengthened with the incorporation of pilot data. Results of your research will be formally presented during the last class sessions.

The components of the Class grade are summarized below:

Exam 1	25%
Exam 2	25%
Cast Exam (oral)	10%
Research paper	20%
Research presentation	10%
Class discussion & participation	10%

Course Materials: Required readings include Klein (2009), a review article on the fossil record (Wood & Richmond, 2000), and articles.

Texts: (1) Conroy G.C., & H. Pontzer (2012). *Reconstructing Human Origins: A Modern Synthesis*, 3<sup>rd</sup> Edition. New York: W.W. Norton.

(2) Wood, B. and Richmond, B.G. (2000). Human Evolution: Taxonomy and Paleobiology. *J. Anat.* 196: 19-60. (pdf available on Blackboard)

- The *Wiley-Blackwell Encyclopedia of Human Evolution* is available on-line through Gelman. If you have any suggestions for entries, or feel moved to offer to write one, please contact BW.
- BW will also update the notes he prepares for his undergraduate *Hominin Evolution* Course, and post these on Blackboard.

Academic Integrity: We expect students to follow the GW Code of Academic Integrity. It states: "Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information." For the remainder of the code, see: <http://www.gwu.edu/~ntegrity/code.html>

Support For Students Outside The Classroom:

*DISABILITY SUPPORT SERVICES (DSS)*: Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: <http://gwired.gwu.edu/dss/>

*UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300*: The University Counseling Center (UCC) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include:

- crisis and emergency mental health consultations
  - confidential assessment, counseling services (individual and small group), and referrals
- <http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices>

Security: In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.

COURSE SCHEDULE

Date	Topic	Reading*
1/14	Principles of evolution; reconstructing phylogeny & behavior; Taxonomy & interpreting evidence	C 2-4; W 19-21
1/21	SNOW DAY	
1/28	Before bipedalism: Miocene hominoid evolution <i>Debate: What drove the origin of hominin bipedalism?</i>	C 5,7
2/4	Hominin origins: <i>Orrorin</i> , <i>Sahelanthropus</i> , & <i>Ardipithecus</i> <i>Debate: What is the earliest known hominin taxon?</i>	C 7
2/11	Guest Lecture: Site formation & taphonomy	C 3
2/18	<i>Australopithecus</i> (and casts) <b>** Project Proposal Abstract Due **</b>	C 6-8; W 21-26
2/25	<i>Paranthropus</i> Casts; <i>Debate: What is the diet of Paranthropus?</i>	C 6-8; W 34-38
3/4	EXAM 1	
3/11	SPRING BREAK	
3/18	Transitional hominins and the origin of the genus <i>Homo</i> Casts	C 9; W 38-44
3/25	<i>Homo ergaster</i> and <i>Homo erectus</i> Paleoenvironments & behavioral evolution in early <i>Homo</i> <i>Debate: What drove the origin of the adaptive 'grade' known as Homo?</i>	C 10; W 42-44
4/1	Pre-modern <i>Homo</i> : <i>H. heidelbergensis</i> , <i>H. antecessor</i> , and <i>H. floresiensis</i> Casts	C 10-11; W 44-46
4/8	<b>NO CLASS: Paleoanthropology Society &amp; AAPA Meetings</b>	
4/15	Neanderthals and Modern Human Origins Casts; & <i>Debate: Why did the Neanderthals go extinct?</i>	C 12-13; W 46-49
4/22	EXAM 2	
4/29	CLASS PRESENTATIONS, 11:00	
5/2	PAPER DUE (midnight)	
5/6	ORAL EXAM (i.e., 'interrogation by casts'), 11-2:00	

\* C refers to chapters in Conroy & Pontzer (2012); W refers to pages in Wood & Richmond (2000).