ANT 348: Human Origins and Evolution
(31726, 31727, 31728)

Syllabus

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TEACHING ASSISTANT: Benjamin W. Rodwell (ben.rodwell@utexas.edu)
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LECTURE MEETINGS: M and W: 9-10 am in SAC 5.172

LABORATORY MEETINGS: M 1-3 pm (31728); W 1-3 pm (31727); F 1-3 pm (31726).

COURSE WEB SITE: http://www.canvas.utexas.edu
We use Canvas for lecture and lab announcements, reading materials, and assignments. You need to have an UTEID to access the Canvas site.

INTRODUCTION: This course examines the evidence for the origin and evolution of humans with particular emphasis placed on reconstructing the paleobiology and behavior of extinct hominins. Lectures will draw upon a diverse range of disciplines (anatomy, archaeology, ecology, ethology, genetics, geology, paleontology) and integrate these into a framework for understanding the history of this unusual group of primates. The laboratories provide the student with an opportunity to examine firsthand the fossil evidence for human evolution.

REQUIRED READINGS: The following textbooks are required for the course:

- Klein, R.G. 2009. ***The Human Career*.** The University of Chicago Press. 3rd edition.
- Kappelman, J. 2007. ***Virtual Laboratories for Physical Anthropology.*** 4th edition. Labs are available online from UT's TXShop website, and the instructions are available on the **Canvas** course website. ***VLabs*** can be used with these browsers: Firefox, Safari, or Internet Explorer (but not Google Chrome). If you already have a copy from a previous course, that will work. For purchase, go to the TXShop website: Virtual Laboratories for Physical Anthropology
- **Sourcebook and laboratory materials.** These materials include articles from the primary literature along with the laboratory readings and assignments and are available on the **Canvas** course website.

REQUIREMENTS AND GRADING: The course material will be introduced during lecture. Weekly laboratory problem sets will serve to highlight specific topics. The final grade for the course (no + or -) will be calculated as follows:

1.	Laboratory Assignments	30%
2.	Examination #1	20%
3.	Examination #2	20%
4.	***eFossils*** Team Term Project	25%
5.	Class and Lab Attendance and Participation	5%
	TOTAL	**100%**

COURSE POLICY ON ACADEMIC HONESTY

Students who cheat not only cheat themselves but also cheat other students in the course and harm the reputation of the University. **Any student found cheating will receive an F in the course** and will be directed to the appropriate University authorities for additional sanctions that may include dismissal from the University. Please see the **Honor Code** to review the UT policy.

Students *ARE NOT* permitted to copy by any means down exam questions, *ARE NOT* permitted to copy by any means down the answers to the exam questions, and *ARE NOT* permitted share this information with another student(s). Students *ARE NOT* permitted to discuss the content of the exams with each other, and this includes all possible venues (informal hallway chat, websites, forums, Facebook, etc.).

Students *ARE NOT* permitted to discuss or share laboratory assignments and answers with another student(s), *ARE NOT* permitted to collaborate on the completion of these assignments unless specifically directed to do so, and *ARE NOT* permitted to submit assignments for one another.

A student(s) who requests any exam or lab information puts the other students in the course at risk and will receive an F in the course even if no information is supplied by other students.

This course has a zero tolerance policy for cheating. Any questions about the lab assignments and exams should be directed to the professor and teaching assistant, NOT to your fellow students.

I have read and understand the above rules and agree to follow these course and University policies.

_____ _____ _____

Name (printed) Date Signature

Print your name and date, sign this page, and submit it to the TA at the first lab meeting.

DESCRIPTION OF REQUIREMENTS

Laboratory Assignments

Weekly laboratories provide the student with a hands-on examination and evaluation of the fossil record for human origins and evolution. The labs provide an in-depth study of a particular topic presented in that week's lecture. Each of 11 labs consists of a 30-45 minute lecture that introduces the problem that in turn is followed by about 30-45 minutes of data collection. In order to use lab time efficiently, students must come to lab having already read the lab materials and familiarized themselves with the assignment.

In many cases students will be able to complete much of the laboratory assignment write-up during the lab time. The TA will instruct the class as to whether or not it is permissible for students to work together on data collection and write up; if the TA does not explicitly state that cooperation is permitted, students should assume that all work must be their own. Assignments are due at the beginning of the following lab. Extension requests are subject to the rules as presented below.

Examinations

There are two hourly exams in the course. The first part of each exam is a computer-based multimedia test that is administered during regular lab times. This test includes materials from the textbook, labs, and lectures within 1) a multiple-choice, matching, and plotting format, and 2) an interactive exercise. The first part of the test can be attempted twice, with the highest of the two grades counting toward the final grade. The second part of the test can be completed one time only.

A take-home open book essay question is assigned with each exam and is submitted via email. It has a length limit of five pages and must include appropriate citations. Students have at least one week to complete the essay and submit it via email.

eFossils Team Term Project

The fossil record for human evolution has expanded dramatically over the past quarter century and it is now difficult to easily present these numerous findings. Prof. Kappelman and his team of developers have built a website, ***eFossils,*** that offers a useful means for aggregating these findings within a "map-app."

Students will be assigned to teams of five members, given a fossil site, and then work together to investigate the subtopics (hominins, archaeology, fauna, geology, paleoecology). The results will be posed to ***eFossils***. Student team members will earn publication authorship for the assignment. Each team will briefly present its findings in class during the last week of the semester.

There is almost no work in any of the sciences that today represents the work of a single person, and paleoanthropology with its large teams is an excellent case in point of how scientists do their work. This term-length assignment offers a realistic experience about how team-based science is conducted.

Class and Lab Attendance and Participation

Attendance in class and lab is recorded. Everyone has something to contribute, and participation counts!

Extra Credit

Explore UT. It is critical that scientists engage with the public, and students have the opportunity to volunteer at ***Explore UT*** as part of Prof. Kappelman's lab group. In addition, students are always welcome to volunteer in the lab and participate in the various ongoing digital imaging projects, many of which are designed for the public (*e.g.*, ***eSkeletons***, ***eFossils***, ***eLucy***).

In the news. You probably know that paleoanthropology is an active field. You can earn extra credit by submitting a brief paragraph that links to and describes a new discovery in human evolution:

- Subject line: "In the news by [your name]"
- Body: brief paragraph describing the finding and its significance/relationship to human evolution

A 348 LECTURE AND READINGS SCHEDULE

Below are listed the reading assignments from the two required texts used in this course (Klein's *The Human Career* and Kappelman's *Virtual Laboratories*). In addition, there are weekly laboratory readings that must be completed before you attend you assigned lab.

In addition to weekly readings from the textbook and *Virtual Labs*, we assign weekly readings from primary science journals that provide more detailed information about discoveries or ideas in the field. These articles will be posted each week on Canvas. A few questions that will aid your understanding of these articles will be included with each week's readings. **These readings are an important addition to studying for the two hourly exams and essays and can also assist you with the weekly lab assignment writeups.**

The "**Klein"** textbook is given by chapter number and **"VL"** refers to lab number from the **Virtual Laboratories**. Items in *italics* are University deadlines.

Jan. 23	Introduction to the course
Jan. 25	*Last day of official add/drop period*
Jan. 28	Natural Selection and Adaptation I (Klein, Chap. 1; VL 1)
Jan. 30	Natural Selection and Adaptation II (Klein, Chap. 1; VL 1)
Feb. 4	Natural Selection and Adaptation III (Klein, Chap. 1; VL 1)
Feb. 6	Earth History and Geology (Klein, Chap. 2; VL 7) *Twelfth class day*
Feb. 11	Miocene Hominoids (Klein, Chap. 3; VL 7)
Feb. 13	Hominoid Phylogeny (Klein, Chap. 3; VL 7
Feb. 18	Climates and Environments of the Late Miocene
Feb. 20	Early Hominins of Africa I (Klein, Chap. 4; VL 8)
Feb. 25	Early Hominins of Africa II (Klein, Chap. 4; VL 8)
Feb. 27	Evolution of Hominin Locomotor Adaptations (bipedalism and climbing) (VL 9)
Mar. 2 (Saturday)	***Explore UT (volunteer opportunity for extra credit on campus 10 am - 3 pm)***
Mar. 4	Early Hominin Paleobiology (Klein, Chap. 4)
Mar. 6	Early Hominin Phylogeny (VL 8)
Mar. 11	**EXAM #1: includes all material through 6 March and Labs 1-5.** • Computer-based test given during lab times week of 11-15 March • Take home essay available on 11 March and due on 27 March
Mar. 11	The World of Taung

Mar. 13	Earliest *Homo* (Klein, Chap. 4; VL 10)
Mar. 18-23	**Spring Break (no lecture or lab)**
Mar. 25	*Homo erectus* I (Klein, Chap. 5; VL 10)
Mar. 27	*Homo erectus* II (Klein, Chap. 5; VL 10)
Apr. 1	Early Stone Age Archaeology (Klein, Chap. 4-6; VL 11)
Apr. 3	Archaic *Homo sapiens* I (Klein, Chaps. 5 & 6; VL 10)
Apr. 8	Archaic *Homo sapiens* II (Klein, Chaps. 5 & 6; VL 10) *Last day a student may, with dean's approval, withdraw or change P/F* status
Apr. 10	Middle Stone Age Archaeology (Klein, Chap. 4-6; VL 11)
Apr. 15	Modern *Homo sapiens* (Klein, Chap. 7; VL 12)
Apr. 17	Late Stone Age Archaeology (Klein, Chap. 7; VL 11)
Apr. 22	Paleolithic Art (Klein, Chap. 7)
Apr. 24	Humans enter New Worlds (Klein, Chap. 7; VL 12)
Apr. 29	Sedentism and the Rise of Agriculture
May 1	Modern Human Adaptations (Klein, Chap. 8; VL 2)
May 6	Concluding remarks ***eFossils*** Term Project Presentations
May 8	***eFossils*** Term Project Presentations
May 6-10	**EXAM #2: includes all material from 11 March – 1 May and Labs 6-11.** • Computer-based test given during lab times week of 6-10 May • Take home essay available **6 May and due on 10 May**

WEBSITES

There are many websites that you will find useful include in the study of the course materials. Some of the sites developed here at UT Austin – with the assistance of undergraduates just like you! – include:

The primate and human skeleton	***eSkeletons***
The famous fossil Lucy:	***eLucy***
The human fossil record:	***eFossils***

ADDITIONAL POPULAR BOOKS

The following popular books are optional for the course and can be found in the UT library or online.

Aiello. L., and Dean, C. 1990. *Human Evolutionary Anatomy*.

Arsuaga, J. 2002. *Neanderthal Necklace: In Search of the First Thinkers.*

Kalb, J. 2001. *Adventures in the Bone Trade.*

Lewin, R. 1993. *Human Evolution: An Illustrated Introduction, Third edition*.

Reader, J. 1981. *Missing Links: The Hunt for Earliest Man*.

INTRODUCTION TO THE LABORATORIES

The laboratory sections of this course are designed to provide you with the opportunity to gain hands-on experience with the materials and methods of paleoanthropology. Because such experience is vital to a better understanding of the course of human evolution, the grade you receive in lab will account for 30% of your total grade in the class. It is essential that you attend lab. The following guidelines will be followed for lab sections:

1) All lab assignments are due at the **beginning** of the following week's lab.
2) **NO** late lab homework will be accepted unless a documented and verifiable excuse (*e.g.,* doctor's note, obituary, *etc.*) is provided by the student. If you anticipate a difficulty ahead of time, or have a documented conflict as a consequence of a university activity, you should contact the TA or professor ***ASAP.***
3) You must attend the lab section for which you are registered. If an unforeseen problem arises and you cannot attend your lab, talk to the TA in order to see if you can attend a different session. Your lab assignment will still be due at the beginning of your registered lab section.
4) While we encourage you to interact and exchange ideas with other students, the lab assignments that you submit **must be your own work**.

LABORATORY SCHEDULE

Week of:	**Lab topic**
Jan. 22-25	**No lab meetings**
Jan. 28-Feb. 1	Lab 1: Methods in Digital Imaging and Functional Morphology
Feb. 4-Feb. 8	Lab 2: An Introduction to Modern Primates. (review VL 1-5)
Feb. 11-15	Lab 3: The Miocene Hominoids. (VL 7)
Feb. 25-Mar. 1	Lab 4: The Molecular Clock. (VL 2)
Mar. 4-8	Lab 5: Early Hominin Evolution. (VL 8 & 9)
Mar. 11-15	**No lab. Exam #1 given during regular lab hours**
Mar. 18-23	**Spring Break**
Mar. 25-29	Lab 6: Early *Homo*. (VL 10)
Apr. 1-5	Lab 7: Early and Middle Pleistocene *Homo*. (VL 10)
Apr. 8-12	Lab 8: Hominin systematics. (VL 7)
Apr. 15-19	Lab 9: Modern Human Origins. (VL 12)
Apr. 22-26	Lab 10: Paleolithic archaeology. (VL 11)
Apr. 29-May 3	Lab 11: The Transition to Sedentism. (VL 12)
May 6-10	**No lab. Exam #2 given during regular lab hours**

DISABILITIES, EXTENSIONS, and DROPS and INCOMPLETES

Disabilities

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259.

Extension requests

Requests for an extension for missed work because of a sanctioned University activity, documented illness, family-related emergency, or death in the family will be dealt with on a case-by-case basis, but whatever the circumstance, documentation is required. If you are unable to document your excuse, you will not be permitted to make up the missed work. Whatever the case – sanctioned University activity, documented illness, family-related emergency, or death in the family – full documentation is required. If you find yourself so sick that you must miss an exam or lab submission, you should see a doctor, and if you do, the doctor will give you a written excuse.

Permission to make up missed exams or labs requires a completed Extension Permission Request Form (available on the Canvas class website) and supporting documentation (see below). The extension request, consisting of a completed Extension Permission Request form along with supporting documentation, must be submitted no later than one week following the missed exam or lab deadline date (*e.g.,* if you miss a Friday deadline date, the extension request form and documentation must be received no later than the following Thursday).

Supporting documentation:

- If an illness, a medical excuse documented by a letter from your doctor;
- If a family emergency, written documentation;
- If a family death, an obituary or death certificate;
- If a University-sanctioned activity, a letter from the director of the organization delivered to us BEFORE the event since these events are scheduled months in advance; and
- If a work-related conflict, a note from your supervisor.

If a scheduling conflict arises from work or some other issues that will cause you to miss a deadline, please inform us as early as possible so we can assess the validity of the conflict and make any necessary arrangements. If you do not tell us ahead of time about a scheduled event, you will not receive permission to make up the missed work.

The extension request must receive approval before any missed work can be made up. If you cannot provide independent documentation that we can verify, the extension request will not be approved. We check on all excuses by calling the doctor, supervisor, family member, and faculty supervisor or coach.

During the days when a completed extension request is under evaluation, you should continue to meet the exam and lab schedule.

Drops and Incompletes

If you find that you are unable to complete the course, you may obtain a **drop** with a "Q" if you file the appropriate paperwork (available from your dean's office) by the required University deadline date.

An incomplete after the deadline date can generally only be granted for a serious medical condition as documented by a letter from your doctor. In only exceptional cases are other excuses considered legitimate grounds for an incomplete, and these excuses require approval from your dean's office.