

**ANTHROPOLOGY 309  
HUMAN EVOLUTION  
FALL 2015**



**Tuesdays and Thursdays 12:30 – 1:45pm**

**Lectures: MFH 164  
Labs: ES 614**

**TA: Josie Vayro  
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**Instructor: Dr. Susanne Cote  
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Office Hours: Thursdays 2-4pm, or by  
appointment**

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**TA: Allyson Gibson  
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**COURSE DESCRIPTION:**

How did our species evolve and who are our fossil ancestors? We will work chronologically and thematically through the last six million years surveying the major phases of human evolution, with an emphasis on understanding how specific human adaptations evolved and why. In laboratories, students will learn how to identify fossils and how to reconstruct behavior from anatomical and paleontological evidence by studying fossil casts.

**Prerequisites:** ANTH 201, or permission of instructor

**REQUIRED READINGS:**

- Readings from the scientific literature as indicated in the Schedule – links provided on D2L.
- Several of the readings come from The Nature Education Knowledge Project, Biological Anthropology Section - <http://www.nature.com/scitable/knowledge>

**Recommended Readings:**

- Keep your textbook from ANTH 201. It will be a helpful reference!

**COURSE OBJECTIVES:**

Upon completion of this course, students will know:

- The basic outline of human evolution over the past 6 million years, including major evolutionary developments and important fossil sites and specimens
- How questions are asked and addressed in the fossil record and how we 'know' what happened in the past
- How paleoanthropologists identify and study new fossil finds.
- How fossil morphology can be used to reconstruct function and behaviour

## COURSE REQUIREMENTS AND GRADING:

Lab Assignments – 25%  
Midterm Exam – 30%

Final Exam – 35%  
Lab Exam – 10%

### ***Lab Assignments – 25%***

**Please note that laboratory assignments are mandatory.** Each of the nine assignments is equally weighted and will be worth ~3% of your final grade (25%/8 labs). The purpose of the labs is to give students the opportunity to examine fossils and fossil casts first hand and learn how paleontologists study fossil remains. All work needed to successfully complete the lab assignment will be done in class. **YOU MUST PRINT THE WEEKLY LAB ASSIGNMENT FROM D2L AND BRING IT WITH YOU TO YOUR ASSIGNED LAB SECTION!**

### ***Mid-term Examination – 30% - October 22<sup>nd</sup> in class***

This exam will cover lectures, laboratories, and readings assigned since the beginning of term through Week 6 of class (inclusive). The format will include a mixture of different types of short answer questions and medium answer questions.

### ***Laboratory Examination – 10% - First week of December in your lab section***

The lab exam will take place during your last scheduled lab section (the last week of classes – week of December 1<sup>st</sup>). The lab exam will consist of a set of 'stations', each with a short question to be answered. Students will work individually for the lab exam, rotating around to all of the stations on the exam. Each station will be timed. Students who have attended all labs and made sure that they understand what they are seeing in lab should do well.

### ***Final Examination – 35% - Registrar scheduled (December 11 – 22<sup>nd</sup> 2015)***

The final examination will cover ALL lectures, laboratories, and assigned readings for the term. The format will be the same as the midterm examination and will include a mixture of different types of short answer questions and medium answer questions.

**\*\*Please note that no extra credit or 'make up' work is available in this class\*\***

### **Department of Anthropology and Archaeology Grade Scheme:**

A+	100-94.9%	B	79.8-74.9%	C-	62.8-58.9%
A	94.8-89.9%	B-	74.8-70.9%	D+	58.8-54.9%
A-	89.8-84.9%	C+	70.8-66.9%	D	54.8-49.9%
B+	84.8-79.9%	C	66.8-62.9%	F	49.8% and less

## **COURSE POLICIES**

### ***Classroom behavior and attendance:***

- The most important thing is to be respectful and supportive of other students. Please turn off your cell phone and any other electronic devices. You may use a laptop to take notes, but please sit in the back or along the sides so as to not disturb other students. Please only use your laptops to take notes, and remember that instructors can often tell when you are watching videos, looking at Facebook etc.
- It is in your own best interest to attend all classes. You are responsible for taking your own notes, or for obtaining notes from a classmate if you have to miss a class for unavoidable reasons.
- Lecture slides will be posted AFTER class, not before. You should come to class prepared to take notes. Please note that reading the lectures slides alone will NOT be sufficient to get a good grade in this class. All material from lectures is testable, and lecture slides will not have everything you need to know.

### ***Labs:***

- Most importantly, you must **DOWNLOAD AND PRINT THE WEEK'S LAB ASSIGNMENT FROM D2L** and bring it with you to class. Otherwise you won't be able to complete the assignment!
- Students are encouraged to work in groups for the lab exercises and to seek help and advice from the TA as often as possible.
- All work necessary to complete the lab exercises will be done **IN CLASS**. There will be no 'homework' from labs and you will submit your lab exercises at the end of class on the day of that lab.
- Labs are **MANDATORY** and may only be missed in the case of serious illness or personal emergency. You must contact your TA as soon as possible (preferably before class) if you need to miss lab.
- The **only** opportunity to make-up missed laboratory exercises will be at the end of term during Lab 9.

### ***Exam and Grading Policies:***

- Missed exams automatically receive a score of zero. In the event of an emergency or illness, the Anthropology main office (403-220-6516) or the instructor **MUST** be notified **BEFORE** the exam, and documentation (e.g. signed Physician's Statement) must be provided. Make up exams may be in any format (including oral examination); performance on make-up exams is often poorer.
- Exams grades will be posted on D2L as quickly as possible. Midterms will be returned to students, but final exams will not. If you wish to see your final exam, please make an appointment.
- If you have questions about the grading of your exam or assignment, please see Dr. Cote (exams) or the TA (labs) as soon as possible. After consultation with the teaching staff, you may dispute a grade that you have received by submitting a written statement within two weeks of receiving the grade.

**Communication Guidelines:**

- The best place to ask questions is IN CLASS or during office hours. Please take the opportunity to talk with the instructor and your TA whenever possible.
- Questions during lectures are welcome, so please just raise your hand. If something doesn't make sense to you, it probably didn't make sense to other students either!
- I always prefer to talk IN PERSON with students whenever possible. I will answer questions over email, however due to the volume of emails I receive I cannot commit to answering email questions immediately. It may take up to 2 business days (48 hours), so do not send questions last minute.
- I reserve the right to share questions and answers transmitted over email on D2L or in class if the answers are pertinent to everyone in the class. This saves time, and ensures that all students have access to the same information as they prepare for assignments and exams.
- Before emailing a question, please make sure that it hasn't already been addressed in the course outline, assignment handouts, or on D2L!

**ACADEMIC ACCOMMODATIONS:**

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with Student Accessibility Services, please contact their office at 220-8237. You are required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation.

**PLAGIARISM AND CHEATING:**

Plagiarism: "to steal and pass off the ideas or words of another as one's own" (Webster's). Plagiarism will not be tolerated and will automatically result in a failing grade for the submission. Any student caught plagiarizing will also be subject to additional University sanctions. Students are expected to be familiar with university policies on intellectual honesty available at: <https://arts.ucalgary.ca/plagiarismcheating>

**EMERGENCY EVACUATION:**

In the event that the classroom should need to be evacuated due to an emergency situation please note that the primary assembly point shall be at the Education Block Food Court.

**SAFEWALK:**

Campus security will escort individuals day or night ([www.ucalgary.ca/security/safewalk](http://www.ucalgary.ca/security/safewalk)). Call 220-5333 for assistance. Use any campus phone, emergency phone, or the yellow phones located at most parking lot pay booths.

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**<https://www.anth.ucalgary.ca/home/links/intellectual-honesty-guidelines>**

**The Department of Anthropology’s FOIP (Freedom of Information and Privacy) policy requires all reports/examinations to be returned to students during class time or the instructor’s office hours. Any term work not picked up will be placed in the Anthropology Office (SS 854) for distribution. Any student not wishing to have their work placed in the office must make alternate arrangements with the course instructor early in the term.**

### CLASS SCHEDULE:

Lecture topics and readings are subject to change

Date	Topic	Readings
<b>Week 1</b>		
September 8	Course Introduction; Human Origins	
September 10	History of Discovery	
No Lab	No Labs in Week One	
<b>Week 2</b>		
September 15	How do we know what we know about human evolution?	Peppe and Deino, 2013 (N.Ed)
September 17	Last Common Ancestor – History and Expectations	Kivell and Schmidt 2009**
Lab 1	Basic Human Anatomy	
<b>Week 3</b>		
September 22	Bipedalism	
September 24	Early hominins – <i>Sahelanthropus, Orrorin, Ardipithecus</i>	Gibbons 2009**
Lab 2	Earliest Hominins	
<b>Week 4</b>		
September 29	Early hominins – Interpretations	White et al., 2015**
October 1	Australopithecines – East Africa	Spoor 2015**
Lab 3	Lucy	
<b>Week 5</b>		
October 6	Australopithecines – South Africa	Berger et al 2010**
October 8	Australopithecines – Adaptations	
Lab 4	Gracile Australopithecines	
<b>Week 6</b>		
October 13	<i>Paranthropus</i> I – Species and sites	Constantino 2013 (N.Ed)
October 15	Tools and Experimental Archaeology; Guest Lecture – Bob Patalano	Harmand et al 2015**
Lab 5	<b>Robust Australopithecines (<i>Paranthropus</i>)</b>	
<b>Week 7</b>		
October 20	<i>Paranthropus</i> - adaptations and MIDTERM REVIEW	

October 22	Midterm Examination	
No Labs	NO LABS THIS WEEK	
		Week 8
October 27	Earliest <i>Homo</i>	Villmoare et al 2015**
October 29	Running and energetics in <i>Homo</i> ; Guest Lecture – Dr. Campbell Rolian	Bramble and Lieberman 2004**
Lab 6	<i>Homo</i> - <i>Habilines</i> and <i>Erectines</i>	
		Week 9
November 3	Early <i>Homo</i> – Variation in <i>Erectines</i>	Gibbons 2013**
November 5	Muddle in the Middle: Middle Pleistocene hominins	Bae 2013 (N.Ed)
Lab 7	<i>Homo</i> – <i>Erectines</i> and <i>Heidelbergers</i>	
		Week 10
November 10	Early <i>Homo</i> Behaviour – Migration and Diet	Pobiner 2013 (N.Ed)
November 12	NO CLASS – READING BREAK	
No Labs	NO LABS THIS WEEK	
		Week 11
November 17	Neandertals – Anatomy	Monnier 2012 (N.Ed)
November 19	Modern Humans – Anatomy	
Lab 8	Neandertals and modern humans	
		Week 12
November 24	Neandertal extinction	Havarti 2013 (N.Ed)
November 26	Origins of Modern Humans	Tryon and Bailey 2013 (N.Ed)
Lab 9	Make up labs and self-directed review of lab materials	
		Week 13
December 1	Fossil DNA and human evolution	
December 3	The Hobbit: <i>Homo floresiensis</i>	Aiello 2010**; Baab 2012
Lab 10	Lab Exam	
December 8	Course Synthesis and FINAL EXAM REVIEW	
December 11-22	Final Exam (to be scheduled by the Registrar)	