



## INTRODUCTION TO PHYSICAL ANTHROPOLOGY

### Archaeology 203 ~ Fall 2015



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**Lecture:** Tues/Thurs 12:30-1:45, Science B 144

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**Office hours:** Tues. 11:00-12:00 *and* by appointment

### Course Description

Where, when, and how did humans originate? Why do we fall in love? What can we learn from the skeletal remains of prehistoric peoples? Why do teenagers exhibit risky behaviour? How should we raise our children? Are we unique among animals? Why do we have such big brains? Why do we share so much in common with the great apes and what might this tell us about who we are today? This course is designed to help us to answer these questions by providing a concentrated introduction to human biology, the human place in the animal kingdom, and the fossil evidence for human evolution.

We will begin with a discussion of the development of **evolutionary biology**. A thorough understanding of evolutionary biology is essential as it is the paradigm upon which physical anthropologists base their research. We will then cover **human genetics** at the molecular and population levels. Next we will discuss **human skeletal biology**, which will help us to understand the lives of prehistoric human populations and provide a foundation for subsequent sections on the fossil evidence for human evolution. In order to help us understand our place in the natural world, we will next turn our attention to **biological classification** and **comparative studies**. Subsequently, we will cover **patterns and rates of evolution, the evidence for human evolution, and the major developments in the evolution of our species**. This consideration of the evolution of humans should help us to understand modern human biology, our relationship with the rest of the natural world, and possibly inform our future action as a species. We will finish by studying non-human **primate ecology**. Primate ecology can help us to determine whether aspects of our behaviors and mental capacities reflect ancestral evolutionary heritage or are new features evolved or socially acquired by

our lineage. The topics addressed in this course should enhance your understanding of the nature of humankind.

### Course Conventions

- 1. Lecture:** In order to meet the goals of the course you have to come regularly and ON TIME to class and your lab. Be prepared by reading what is assigned for the day. You are responsible for lecture material and any announcements concerning changes in schedule, etc. In this classroom, you are not allowed to use any personal electronic devices such as computers or cell phones. Please note that lectures are *not* a summary of the material presented in the text and that, on the balance, exam questions will be drawn from material emphasized in lecture.
- 2. Lab:** The lab portion of this class is designed to give you hands-on experience with subjects covered in lecture. Your labs begin in the second week of classes. Participation in the labs is required. While we make every effort to ensure that the lab and lecture material overlap, in some cases the lecture material will precede the lab covering that subject by a week or so and in some cases the lab will cover material not yet covered in the lecture.
- 3. Reading:** You are not required to read a great deal in this class. However, keep in mind that *you are not finished with the reading assignment until you thoroughly understand it.* This will sometimes require you to read an assignment more than once. An effective way of ensuring comprehension is to read the assignment then go back through it and summarize its main points in your notebook. The coloring book exercises provide a complimentary pathway to learn the material.

### Required Texts

Keenleyside and Lazenby. 2011. *A Human Voyage: Exploring Biological Anthropology*. Nelson Education. USA.

Wilson, Covert, and Dufour. 2015. *Lab Manual for Physical Anthropology*. (Available on the Desire to Learn website for the class.)

**4. Evaluation:** You will be evaluated based on your performance on **three mid-term exams** drawn from the lecture (multiple choice and short answer) and your **work in the lab**. As well, I will frequently give brief, 5-minute, quizzes in class. I give these quizzes solely to determine whether or not you understand the readings and subject matter covered on a specific day. These quizzes will not affect your grade.

Prior to each mid-term exam, I will hand out a list of key terms which have been covered in the lectures, reading assignments, and films and will be found on the exam. Do not define these key terms in isolation; rather, define and understand them in relation to the other key terms within the context of the course. Note that Mid-term exam #3 is cumulative.

You must provide advance notice to the instructor if you are unable to take an exam. All requests for deferral of an examination due to/for health reasons must be accompanied by written documentation as outlined in the University Calendar and should be obtained while the student has the physical or emotional problem rather than after recovery. Deferred exams may be allowed in the following circumstances: illness, domestic affliction, or religious conviction. If you have missed an exam for a legitimate reason, you will be able to write a “make up” exam as close to the original exam as possible. The date and location will be at the convenience of the Archaeology Department. Travel arrangements and misreading of the syllabus are not valid reasons for requesting a deferred exam.

Deferred exams will not be granted if it is determined that just cause is not shown by the student. This policy also applies to laboratory assignments.

Please note that requests to defer term work past the end of a term go through the Student Success Centre / Undergraduate Programs Office (<http://www.ucalgary.ca/ssc/>) and must be processed by the deadlines that are established in the University of Calgary Calendar. You can find the deferred term work form at [http://www.ucalgary.ca/registrar/forms\\_students](http://www.ucalgary.ca/registrar/forms_students). You must submit these deferral forms to the Faculty of Arts Associate Dean (Students) through the Student Success Centre / Undergraduate Programs Office (<http://www.ucalgary.ca/ssc/>). To make an appointment with the Associate Dean, phone (403) 220-3580. Only the Associate Dean approves requests for deferrals which extend beyond the end of a term. Instructors are not involved in such decisions.

Your final grade will be calculated as follows:

Mid-Term Exam #1:	_____	25%
Mid-Term Exam #2:	_____	30%
Mid-Term Exam #3:	_____	10%
Lab Mark (determined by your lab instructor)	_____	35%

A passing grade is not required on any particular component for the student to pass the course as a whole; that is, a student may fail, for example, Mid-Term Exam #2 or any other component and, assuming their overall average percentage earned for the course is above 49, they will pass the course.

Letter grade assignment: At the end of the course, the numerical marks will be summed and a final letter grade will be assigned based on the following basis:

<u>Percentage range</u>	<u>Letter grade</u>	<u>Percentage range</u>	<u>Letter grade</u>
95 or higher	A+	68-72	C+
90-94	A	64-67	C
85-89	A-	59-63	C-
81-84	B+	54-58	D+
77-80	B	50-53	D
73-76	B-	49 or lower	F

**5. Academic Accommodation Policy:** The purpose of academic accommodation is to provide students with documented disabilities equal opportunity to master the essentials of a post-secondary education. Students with disabilities at the University of Calgary have met all admission requirements but may have done so with the use of accommodations. Similarly, they are expected to meet all academic and non-academic requirements. Adaptive technology and other academic accommodations do not relieve students of their responsibility to develop the essential skills and abilities expected of all students.

Students with a disability, who require academic accommodation, must register with the Student Accessibility Services (<http://www.ucalgary.ca/access/>, MacEwan Student Centre 452, telephone 220-8237). Academic accommodation letters need to be provided to me *and* your lab TA no later than fourteen (14) days after the first day of class. It is a student's responsibility to register the Student Accessibility Services and to request academic accommodation, if required.

**6. Retrieving Assignments:** The Freedom of Information and Protection of Privacy (FOIP) legislation disallows the practice of having students retrieve assignments from a public place, e.g., outside an instructor's office or the Department main office. Term assignments must be returned to students individually, during class, or during the instructor's office hours; if a student is unable to pick

up her/his assignment s/he may provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment.

**7. Office Hours:** I enjoy having visitors during my office hours and am happy to schedule additional times as necessary. These hours are yours and I encourage you to take advantage of them, whether you are having difficulty with some aspect of the course, or if you would like to discuss in greater detail something that was touched on in class.

**8. E-mail:** Students are encouraged to use the lectures, lab periods, and office hours to ask questions. For after-hours questions, the use of email is acceptable. Please write 'ARKY 203' in the 'Subject' portion of the email. The TAs and I receive numerous e-mails everyday. By clearly identifying the subject of your email, you will help us reply more efficiently to your emails. If the TAs or I think that your question and related answer is of general interest, we may decide to post them on the course Desire to Learn class website (your name will not appear). While I will do my best to reply to your message as soon as possible I will generally not be able to do so on weekends or holidays. Overall, I attempt to reply to all messages within four days.

**9. Writing across the Curriculum:** Writing skills are not exclusive to English courses and, in fact, should cross all disciplines. The University supports the belief that throughout their University careers, students should be taught how to write well so that when they graduate their writing abilities will be far above the minimal standards required at entrance. Consistent with this belief, students are expected to do a substantial amount of writing in their University courses and, where appropriate, instructors can and may use writing and the grading thereof as a factor in the evaluation of student work. The Writing Support services provided by the (<http://www.ucalgary.ca/ssc/writing-support>) in the Student Success Centre can be utilized by all students who feel they require further assistance.

**10. Electronic devices:** Students in this course are not allowed to use any portable electronic devices, other than a calculator, in class.

## Schedule<sup>1</sup>

Class	Date	Topic	Reading <sup>2</sup>
1	Sept. 8	Introduction: physical anthropology, scientific method	"Scientists' Tools" <sup>4</sup>
2	Sept. 10	Evolution: history of evolutionary thought	3-22, "Why we are, as we are" <sup>4</sup>
3	Sept. 15	Evolution: history of evolutionary thought	25-48
4	Sept. 17	Evolution: natural selection- Gould video	Darwin-Wallace paper (1858) <sup>4</sup> & web video clip <sup>5</sup>
5	Sept. 22	Genetics & inheritance: early ideas, peas & people	51-68
6	Sept. 24	Genetics & inheritance: molecular genetics	71-82
7	Sept. 29	Evolution & genetics: modern synthesis & evo devo	evo-devo <sup>6</sup>
8	Oct. 1	Evolution & genetics: population genetics	82-92 & web video clip <sup>7</sup>
9	Oct. 6	Human skeletal biology	337-345, 358-367, & Take 2 beers and call me in 1600 yrs <sup>4</sup>
10	Oct. 8	<b>Mid-Term Exam #1</b>	
11	Oct. 13	Taxonomy & Paleoanthropology	95-102
12	Oct. 15	Paleoanthropology: guiding principles	141-145 & Foote & Millar - Principles of Paleontology <sup>4</sup>
13	Oct. 20	Paleoanthropology: how do we know what we know?, primate origins (Eocene) Primate Classification	145-155
14	Oct. 22	Paleoanthropology: anthropoids, hominoid, and homind origins (Oligocene through Pliocene)	155-192
15	Oct. 27	Paleoanthropology: Pliocene hominins and the origin of the genus Homo	195-222
16	Oct. 29	Paleoanthropology: Pliocene hominin wrap-up & H. erectus	225-247
17	Nov. 3	Paleoanthropology: VIDEO "Alien from Earth"	249-272
18	Nov. 5	Paleoanthropology: Archaic Homo sapiens...early to late	275-294
19	Nov. 10	Paleoanthropology: past & present behavior	If I had a hammer <sup>9</sup> , Stone age sex <sup>10</sup> , Optional: A new view of the birth of <i>Homo sapiens</i> <sup>4</sup>
n/a	Nov. 12	<i>Remembrance Day - No Classes</i>	
20	Nov. 17	<b>Mid-Term Exam #2</b>	
21	Nov. 19	Primatology: video	102-117
22	Nov. 24	Primatology: behavior & communication	119-130
23	Nov. 26	Primatology: field primatology	130-139
24	Dec. 1	Primatology: 10 enduring questions	A Quest to Save the Orangutan <sup>4</sup>
25	Dec. 3	Primatology: demonic males?, Course wrap up	Sapolsky: The Uniqueness of Humans <sup>8</sup>
26	Dec. 8	<b>Mid-Term Exam #3</b>	

<sup>1</sup> The schedule of topics may change, but the exam dates will not change.

<sup>2</sup> Page numbers are from the A Human Voyage (Keenleyside & Lazenby) textbook.

<sup>3</sup> This book will enhance your understanding of the topics addressed both in the lecture and lab sections of this course. You may wish to read/color several sections *in addition to* those listed here.

<sup>4</sup> On the Arky 203 Desire to Learn website .

<sup>5</sup> <http://www.pbs.org/wgbh/evolution/educators/teachstuds/svideos.html> Select Video **1: Isn't Evolution Just a Theory?**

<sup>6</sup> [http://evolution.berkeley.edu/evolibrary/article/evodevo\\_01](http://evolution.berkeley.edu/evolibrary/article/evodevo_01) (read slides 1-5, the 5<sup>th</sup> slide is titled "Understanding Complexity". When you finish you should be able to answer the five questions shown on the first slide.)

<sup>7</sup> <http://www.pbs.org/wgbh/evolution/educators/teachstuds/svideos.html> Select Video **6: Why Does Evolution Matter Now?**

<sup>8</sup> [http://www.ted.com/talks/lang/eng/robert\\_sapolsky\\_the\\_uniqueness\\_of\\_humans.html](http://www.ted.com/talks/lang/eng/robert_sapolsky_the_uniqueness_of_humans.html)

<sup>9</sup> Tattersall, I (2014) If I had a hammer. *Scientific American*. September, 311(3):54-59. This article can be accessed electronically via the University of Calgary's Library Journals link (<http://library.ucalgary.ca/journals>, search for *Scientific American*, select 2014, select September, scroll down to article #24).

<sup>10</sup> McArthur, N (2014) Stone age sex: When it comes to sex will humans ever be liberated from the basic biological needs that drove our evolutionary past? *Aeon* <http://aeon.co/magazine/psychology/is-human-sexuality-determined-by-evolution/>

**Human research:** Students will be not be expected to conduct research on themselves or others in this course.

**Supplemental fees:** There are no mandatory supplemental fees for this course.

### **Freedom of Information and Protection of Privacy Act**

The University of Calgary is committed to protecting the privacy of individuals who work and study at the University or who otherwise interact with the University in accordance with the standards set out in the Freedom of Information and Protection of Privacy Act. Please refer to the following link for detailed information: <http://www.ucalgary.ca/legalservices/foip>

### **Academic Misconduct**

Academic dishonesty is an unacceptable activity at the University of Calgary and students are **strongly advised** to read the Student Misconduct section of the University Calendar. Quite often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are:

- 1) Presenting another student's work as your own
- 2) Presenting an author's work or ideas as you own without proper referencing
- 3) Using work completed for another course

This activity will not be tolerated and students conducting themselves in this manner will be dealt with according to the procedures outlined in the University Calendar.

For detailed information on what constitutes academic misconduct, please refer to the following link: <http://www.ucalgary.ca/pubs/calendar/current/k-2-1.html>

### **Plagiarism**

Plagiarism involves submitting or presenting work as if it were the student's own work when it is not. Any ideas or materials taken from another source written, electronic, or oral must be fully and formally acknowledged. Plagiarism includes but is not limited to:

- (a) The work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test),
- (b) Parts of the work are taken from another source without reference to the original author,
- (c) The whole work (e.g., an essay) is copied from another source, and/or,
- (d) A student submits or presents work in one course which has also been submitted in another course (although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved.

While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence. It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis or dissertation.

### **Emergency Evacuation Assembly Points**

In the event of an emergency that requires evacuation, please refer to the following link to become familiar with the assembly points for the class: <http://www.ucalgary.ca/emergencyplan/assemblypoints>

### **Safewalk Information**

Campus Security, in partnership with the Students' Union, provides the Safewalk service, 24 hours a day to any location on Campus including the LRT, parking lots, bus zones and University residences. Contact Campus Security at (403) 220-5333 or use a help phone, and Safewalkers or a Campus Security Officer will accompany you to your campus destination.

### **Faculty of Arts Program Advising and Student Information Resources**

- Have a question, but not sure where to start? The new Faculty of Arts Student Centre is your information resource for everything in Arts! Drop in at SS102, call us at 403-220-3580 or email us at [artsads@ucalgary.ca](mailto:artsads@ucalgary.ca). You can also visit the Faculty of Arts website at <http://arts.ucalgary.ca/undergraduate> which has detailed information on common academic concerns.
- For program planning and advice, contact the Student Success Centre (403) 220-5881 or visit them in their new space on the 3<sup>rd</sup> Floor of the Taylor Family Digital Library.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at (403) 210-ROCK [7625] or visit them at the MacKimmie Library Block.

### **Contact Information for Student and Faculty Representation**

Student Union Vice President – Academic

Stephan Guscott

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Email: [suypaca@ucalgary.ca](mailto:suypaca@ucalgary.ca)

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