

INTRODUCTION TO PHYSICAL ANTHROPOLOGY

Archaeology 203 ~ Fall 2011



Professor: Warren Wilson

Lecture: Tues/Thurs 14:00-15:15, ST 143

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Course Description

Where, when, and how did humans originate? Why are physical anthropologists interested in examining the skeletal remains of prehistoric peoples? 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 will help 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**, beginning with the origin of primates. This discipline, known as **paleoanthropology**, helps us to understand modern human biology, our relationship with the rest of the natural world, and possibly can 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. This course should help you to develop your critical thinking skills and enhance your understanding of how science operates and 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. 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. Please note that *no personal electronic devices, other than a calculator, may be used in this classroom.*

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*. Nelson, Toronto.

Wilson, Covert, and Dufour. 2011. *Lab Manual for Physical Anthropology*. (Available on the blackboard site for the class.)

Zihlman. 2000. *The Human Evolution Coloring Book*. Harper Perennial, Oakville, CA.

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**. Mid-term exam #3 is comprehensive. Prior to each 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.

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 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 Undergraduate Programs Office (UPO) and must be processed by the deadlines that are established in the U. of C. Calendar. You can find the forms you need at: Deferred Term Work Form: <http://www.ucalgary.ca/registrar/files/registrar/defTW.pdf> . You must submit these deferral forms to the Faculty of Arts Associate Dean (Students) through the Undergraduate Programs Office, 4th Floor, MacEwan Student Centre. To make an appointment with the Associate Dean, phone (403) 220-8155. 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:	_____	26%
Mid-Term Exam #2:	_____	29%
Mid-Term Exam #3:	_____	10%
Lab Mark (determined by your lab instructor)	_____	35%

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 scheme:

Percentage range	Letter grade	Percentage range	Letter grade
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. 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 services provided by the Writing Centre in the Effective Writing Office can be utilized by all undergraduate and graduate students who feel they require further assistance.

6. 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>

7. Disability Resource Centre Accommodations: It is the responsibility of the student to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at (403)220-8237.

Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. Students are also required to discuss their needs with the instructor no later than fourteen (14) days after the start of the course.

8. 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.

9. 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.

Please refer to the following web link for detailed information: <http://www.ucalgary.ca/drc/node/71>

10. 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.

11. 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. Note that 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 Blackboard space (your name will not appear).

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

13. 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/secretariat/system/files/foip%20overview.pdf>

14. 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>

15. 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.

16. Faculty of Arts Program Advising and Student Information Resources

- Have a question, but not sure where to start? The new Faculty of Arts Program Information Centre (PIC) is your information resource for everything in Arts! Drop in at SS110, call us at 403-220-3580 or email us at 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 (formerly the Undergraduate programs Office) at (403) 220-5881 or visit them in their new space on the 3rd 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 for Students Union Representatives for the Faculty of Arts:

arts1@su.ucalgary.ca

arts2@su.ucalgary.ca

arts3@su.ucalgary.ca

arts4@su.ucalgary.ca

Archaeology 203- Fall 2011: Schedule¹

Date	Topic	Reading ²	Coloring Book ³
Sept. 13	Introduction: physical anthropology, scientific method	"Scientists' Tools" ⁴	1-1, 1-2
Sept. 15	Evolution: history of evolutionary thought	2-22, "Why we are, as we are" ⁴	1-3, 1-4
Sept. 20	Evolution: history of evolutionary thought	24-48	1-5, 1-6, 1-7
Sept. 22	Evolution: natural selection- Gould video	Darwin-Wallace paper (1858) ⁴ & web video clip ⁵	1-8, 1-9
Sept. 27	Genetics & inheritance: early ideas, peas & people	51-70	1-10, 1-11, 1-12
Sept. 29	Genetics & inheritance: molecular genetics	72-93	2-1 to 2-6, 6-1, 6-7
Sept. 29	Evolution & genetics: modern synthesis & evo devo	evo-devo ⁶	1-16, 1-17
Oct. 4	Evolution & genetics: population genetics	436-446 & web video clip ⁷	
Oct. 6	Human skeletal biology	321-328, 342-349, Take 2 beers & call me in 1,600 yrs ⁴	6-4, 6-5, 6-6
Oct. 11	Mid-Term Exam #1		
Oct. 13	Paleoanthropology: macroevolution & extinction	131-138	2-15
Oct. 18	Paleoanthropology: guiding principles	134-144 & Principles of Paleontology ⁴	2-15
Oct. 20	Paleoanthropology: how do we know what we know?, primate origins (Eocene) Primate Classification	144-156	2-7 to 2-11, 5-2, 5-3
Oct. 25	Paleoanthropology: anthropoids, hominins, and hominin origins (Oligocene through Pliocene)	158-183	1-22, 5-4 to 5-12
Oct. 27	Paleoanthropology: Pliocene hominins and the origin of the genus <i>Homo</i>	184-215	5-14 to 5-20
Nov. 1	Paleoanthropology: Pliocene hominin wrap-up & <i>H. erectus</i>	216-237	5-20 to 5-24
Nov. 3	Paleoanthropology: VIDEO "Alien from Earth"	238-258	5-25 to 5-28
Nov. 8	Paleoanthropology: Archaic <i>Homo sapiens</i>	260-279	5-13
Nov. 10	<i>Reading Day~No Class</i>		
Nov. 15	Paleoanthropology: past & present behavior	A new view of the birth of ⁴	5-29 to 5-30
Nov. 17	Mid-Term Exam #2		
Nov. 22	Primateology: & VIDEO: Prime Time Primates	94-113	3-1 to 3-5
Nov. 24	Primateology: behavior & communication	114-122	3-6, 3-18 to 3-22
Nov. 29	Primateology: field primatology	122-133	3-23 to 3-26
Dec. 1	Primateology: field primatology, VIDEO: New Chimpanzees	A Quest to Save the Orangutan ⁴	3-27 to 3-30
Dec. 6	Primateology: wrap up, 10 enduring questions, demonic males?	Sapolsky: The Uniqueness of Humans ⁸	3-32 to 3-34, 4-35
Dec. 8	Mid-Term Exam #3		

¹ Note, the schedule of topics may change, but the exam dates will not change.

² Page numbers are from the *A Human Voyage* by Keenleyside & Lazenby textbook.

³ 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.

⁴ On the Arky 203 Blackboard site.

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

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

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

⁸ http://www.ted.com/talks/lang/eng/robert_sapolsky_the_uniqueness_of_humans.html

DEPARTMENT OF ARCHAEOLOGY

STATEMENT OF INTELLECTUAL HONESTY

(With thanks to the Department of Anthropology for use of their
Statement of Intellectual Honesty as our guide.)

Intellectual honesty is the cornerstone of the development and acquisition of knowledge. Knowledge is cumulative and further advances are predicated on the contributions of others. In the normal course of scholarship, these contributions are apprehended, critically evaluated and utilized as a foundation for further inquiry. Intellectual honesty demands that the contribution of others be acknowledged.

Essentially, plagiarism is a form of cheating that involves submitting or presenting work in a course as if it were the student's own done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:

- 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 person 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 references to the original author.
- c) the whole work 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 (even though it may be entirely the work of that student) without the express consent of the instructors of the courses concerned.

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 offense.

The elementary rules of quotation and paraphrase are given below. There are further details and conventions of punctuation that you will need to look up in a manual of style, but observance of these rules should assure compliance with contemporary standards of intellectual honesty.

1. If you use more than four words from any source, put them in quotation marks and identify the source with a reference.

EXAMPLE:

It has been observed that "many tribes are, in a sense, ethnographic fictions"
(Leach 1954: 291).

2. If your direct quotation is more than three lines long, put it in block form, that is, left and right indented and single-spaced, without quotation marks and with a reference.

EXAMPLE:

Malinowski thought of tribes as social systems with well defined boundaries. This conception of tribe was later to be challenged by one of his students, who observed that:

The ethnographer has often only managed to discern that existence of 'a tribe' because he took it as axiomatic that this kind of cultural entity must exist (Leach 1954: 291).

3. To paraphrase the work of another means to present the same train of thought and evidence, but rephrased into your own words. Whenever you do this, you must include a note or reference to the source. A common mistake is to break up an author's words, and rearrange them slightly, passing them off as your own. This is wrong, even if you include a note or reference to the source. To do this for more than a few words is to commit plagiarism.

Below are three passages. The first is an excerpt from E.A. Leach, *Political Systems of Highland Burma*. The second is an improper paraphrase of the passage that would be considered plagiarism. The third is a proper paraphrase.

1. It is largely an academic fiction to suppose that in a 'normal' ethnographic situation one ordinarily finds distinct 'tribes' distributed on the map in orderly fashion with clear-cut boundaries between them. I agree of course that ethnographic monographs frequently suggest that this is the case, but are the facts proved? My own view is that the ethnographer has often only managed to discern the existence of 'a tribe' because he took it as axiomatic that this kind of cultural entity must exist. Many such tribes are, in a sense, ethnographic fictions (Leach 1954: 290-1). **(source)**
2. It is an academic misconception to think that in a typical ethnographic situation tribes with clear-cut boundaries can be found distributed in an orderly fashion on the map. Ethnographic monographs often imply that this is so, but what are the facts? The ethnographer is often able to find a 'tribe' only because she takes it for granted that this kind of group must exist. Many tribes are figments of the anthropologist's imagination. **(plagiarism)**
3. Ethnographic monographs often suggest that it is normally the case that there exist in the real world contiguous tribes with clearly discernible boundaries: however, it is Leach's view that such units are found only because the ethnographer has taken their existence for granted (Leach 1954: 290-1). **(proper paraphrase)**

STUDENT 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 the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course."