

Syllabus

Course Description: This introductory course focuses on human evolution as it has occurred in the last 4 to 5 million years. The first half concentrates on evolutionary theory, the principles of genetics, living and fossil primates with a special focus on those most like ourselves – monkeys and apes. We read about our close primate relative, the bonobo. The second part of the course details the hominid fossil record and concerns the fascinating story of how we came to be human, that is, upright, brainy, bipedal creatures capable of making tools, hunting, sharing, altruism, and language use.

Books: B. Campbell & J. Loy Humankind Emerging. The Concise Edition
Franz De Waal & F. Lanting Bonobo: The Forgotten Ape
Selected photocopies

Requirements and Grading:

First hourly quiz	15%
Second hourly quiz	20%
Final exam	25%
Research report (see below)	25%
Participation*	<u>15%</u>
	100%

* **Participation:** Based on attendance, class contributions, and one short report based on reading assigned from the bonobo book or highlights from research paper in class.

Student Code of Behavior: You are bound by *Community Standards for Academic Conduct* in the Student Handbook. The specific rules are below. I thank you in advance.

1. **Exam Policy:** Exams are governed by the Honor Code. If you observe an infraction, please report it to me. Do not miss an exam; there are *no make-ups unless there are truly exceptional circumstances, as determined by me*. Cell phones etc must stored away during the exam.
2. **Papers:** Evidence of plagiarism will net an “F” in the course. Plagiarism includes borrowing, in whole or part, from any source without proper citation. Late penalties apply – usually 10 points per day.
3. **Attendance:** You are expected to attend all classes, and arriving late (unless excused) amounts to an absence. An email or one from the Student Affairs about an absence is a welcome courtesy, but it *does not automatically lead* to an excused absence. Unexcused absences can lower your grade.
4. **Classroom Protocol:** I can see clearly what is going on, so please observe basic rules of civility: arrive on time, turn off phone, do not talk or eat in class. Kindly do not get up and leave while the class is in session.
5. **Email:** Please use email as a formal mode of communication (i.e. like a business letter) with the appropriate parts, correct spelling, and polite language.

Outcomes and Assessment:

1. Understanding of key concepts and theories in evolutionary theory, genetics, derived traits of hominids, race and human variability. Assessed by exams and class discussion.
2. Ability to weigh and assess competing theories about evolved traits such as bipedalism, intelligence, language, tool use, religious consciousness, etc. Assessed by exams.
3. Awareness of cognitive and behavioral similarities (and differences) between human and closest non-human primates. In depth understanding of at least one species of non-human primate. Assessed by primate report, exam, and class discussion.
4. Understanding of humans as bio-social animals. Assessed by exams.
5. Critical awareness of scientific method as it applies in paleo-anthropology. Assessed by exams.
6. Ability to research and write up results of ethological investigation. Assessed by report.

Research Paper

Due Dates

- Topic- Jan 21
- List of Resources- Feb 2
- Outline- Feb 11
- Outline of Notes- Feb 25
- First Draft- March 23
- Second Draft- April 6
- Final Draft- April 22

Style and format instructions for Paper:

- You must make your paper original.
- Do not cut and paste from your sources (that's called plagiarism and earn you a zero on the paper).
- The paper should be typed and double-spaced, in *12-point* font, with one-inch margins.
- Length should be 8-9 pages, excluding the references and title page.
- Include a title page with title, course name, your name, and date.
- The *References* section should follow the standard formats as APA or MLA.
- Points deducted for poor style and organization, grammar, and typos.
- Internet resources should be avoided. Only use these in extreme cases, for example The Discovery Institute is one of the 'official' websites on ID. You may use this, but only with the recognition that it is only one perspective.

Paper Options: Choose one of the following

Report Option #1 – Darwin's Voyages and Theory of Natural Selection.

You are to read about Darwin's voyages on the Beagle and his stops, especially at the Galapagos Islands. Write a description of the five-year voyage around the world, his time on the ship, what he collected, and what he began to think about with respect to natural selection. In some detail, explain his thinking about natural selection that culminated in a joint article with Alfred Russell Wallace (1858) and the book, *On the Origin of Species* (1859).

Selected Books: *On the Origin of Species* (Darwin);
Wonderful Life (SJ Gould)
Darwin. Discovering the Tree of Life (Niles Eldredge)

Report Option #2: Intelligent Design

Write a paper on the emergence of Intelligent Design (or ID) out of the older ideology of Creationism. What are the key tenets or ideas of ID? What are the differences and similarities between creationism and ID? What new strategies does ID employ? Explain why evolutionary scientists say that ID does not qualify as science. What are the failings of ID, according to scientists? What is the idea of "teach the debate" on the ID side and why does it have appeal?

Describe some of the leading figures in ID, such as Michael Behe, Philip Johnson and Wm. Demski, and some of the leading critics from biology and anthropology, such as Ken Miller and Eugenie Scott. Refer to some key publications, such as *The Panda's Thumb* or *Darwin's Black Box*. How do you explain the popularity of this movement among conservatives in the US? Note: it has no support in Europe or Canada.

Schedule (Please read before each class)

Week 1

Jan 19 Four fields of anthropology.

Jan 21 Review of scientific method. Enterprise of paleo-anthropology. Fossil dating techniques.
Read: Campbell & Loy chapter 1
Paper- Topic Due

Week 2

Jan 26 Early theories of geology – catastrophism and uniformitarianism. "Fixity of Species."

Jan 28 Evolution: Darwin, Wallace, and Malthus. **Read:** Campbell & Loy - chapter 1.

Week 3

Feb 2 Herbert Spencer & macro-level evolution. Implications of the Burgess Shale.
Read: Handout on the Burgess Shale and ID. Campbell & Loy chapter 2
Video: *Understanding Evolution*
Paper- List of Resources Due

Feb 4 Contemporary challenges: Creationism and Intelligent Design

Week 4

Feb 9 Mendel's experiments and development of genetics.

Feb 11 Population genetics: speciation, extinction, fitness, sexual selection. Race and phenotypic racial features as an adaptation.
Read: Campbell & Loy chapter 3.
Paper- Outline DUE

Week 5

Feb 16 **First Hourly Quiz (15%)** (Do not miss quiz. There are no make-ups)

Feb 18 **PPT** of animals. **Video:** *Survey of the Primates*

Week 6

Feb 23 Living primates: appearance, and behaviors. Derived human characteristics. How hominids are different from apes.
Read: Campbell & Loy chapter 4: pp 75-99, chapter 5 .

Feb 25 **Video:** *Ape Genius*
Paper- Outline of Notes DUE

Week 7

March 2 & 4 **Bonobos:** de Waal & Lantings' findings on bonobos. Student presentations on selected chapters from *Bonobos: The Forgotten Ape*
Read: *Bonobos: The Forgotten Ape*

Spring Break March 6-13

<u>Week 8</u>	
March 16	Primate evolution in the Paleocene. Read: Campbell & Loy chapter 6
March 18	Second Hourly Quiz (20%) (Do not miss quiz. There are no make-ups)
<u>Week 9</u>	
March 23	Australopithecus and Paranthropus. Campbell & Loy chap 7. Paper- First Draft Due
March 25	Video: <i>Ape Man: Human Puzzle.</i>
<u>Week 10</u>	
March 30	Homo habilis and rudolfensis. Read: Campbell & Loy chap 8
April 1	Evolution of hominid traits: bipedalism, increased brain size, tool use. Oldowan chopper tools. Read: Campbell & Loy chapter 8
<u>Week 11</u>	
April 6	Homo erectus: sites of discovery and behaviors. Latest news from Dmanisi site. The “hobbits” of Indonesia. Read: Campbell chap 9 and Handout Paper- Second Draft Due
April 8	Video: <i>Ape Man: Giant Strides</i>
<u>Week 12</u>	
April 13	Evolution of language. Read Campbell & Loy chapter 4, pp. 101-106.
April 15	Video: <i>Neanderthal</i>
<u>Week 13</u>	
April 20	H. heidelbergensis and H. neandertalensis. Read: Campbell & Loy chapter 10.
April 22	Student presentations. Paper- Final Draft Due Today!!!!
<u>Week 14</u>	
April 27	Emergence of modern Homo sapiens. Cro-Magnon anatomy, migrations, art and magic Read: Campbell & Loy chapter 11, 12.
April 29	Modern humans Video: <i>The Human Journey Pt 3: Creative Explosion</i>
May 4	Review and catch up.
TBA	Don't forget the Final Exam!!!