

Anth 104: Introduction to Human Evolution  
Professor Kristen D. Barnett

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Office hours:  
Tuesday and Thursday 10:00-11:00am  
Please make appointment on google calendar

Course description

This course will introduce students to the study of human evolution from a biological, anthropological and archaeological perspective. During this course we will explore concepts of evolution and the antiquity of the human experience. We will investigate and develop theoretical perspectives and critical thinking skills with a focus on indigenous-feminist critical theory. Throughout this course we will apply these skills to a wide body of knowledge centered around evolution, including the exploration of concepts including race, gender, sexuality, and normative thinking. During the semester students will engage in select readings, film, video and hands on assignments including creating a phylogeny and cranial reconstruction of our human ancestors.

Learning objectives

As a class student will fully understand Darwinian concepts of evolution and the often misconstrued concepts of natural selection and “survival of the fittest”. As a group we will learn to identify gender and ethnic/racial bias. Students will be able to identify social, political and economic impacts of past and current literature regarding human origins and evolution of our species. At the conclusion of this course we will have developed a holistic understanding of human evolution and consequences of the selective processes and the power embedded in how these ideas are illustrated and conveyed to contemporary populations.

What you can expect from me

I am not a linear thinker...I will do my best to provide students with clear, concise instructions and expectations. I will communicate these in discussion, handouts, and grading rubrics. I will offer fair consideration to each student and allow for a safe environment for learning and sharing ideas. I will not allow harassment, hate, discrimination or oppression in my class. Should you at any time feel unsafe or unwelcome, I encourage you to approach me in confidence. I will conduct myself in a professional and respectful manner and make myself available to students as needed to provide opportunities for success in my course and in the college.

### What you can expect from each other

You are expected to show up prepared to engage in the coursework. Students are expected to behave in a respectful manner, allowing for all participants to share their ideas, thoughts, and feelings about course related material in a safe environment that respects the diversity of all backgrounds, individuals, experiences, and thought to accommodate exploration of ideas and learning.. I expect students to attend class, complete coursework on schedule and communicate with me as to any concerns or issues that arise during the semester.

Most of all, this course is a learning experience. If, for any reason, a student is uncomfortable with discussions or course content please contact me via phone, e-mail or during office hours at any time.

### academic honesty

Our community of learning is built on a shared sense of trust, solidarity, and intellectual risk-taking. It is my hope that we all bring our most thoughtful and ethical selves to the classroom and our assignments.

- You are responsible for understanding and applying the Bates College policy on academic integrity. Please consult with me if any portions of it are unclear. It can be found at this web address <http://www.bates.edu/student-affairs/student-conduct/academic-integrity-policy/>

- You are also responsible for appropriately citing sources. Bates provides guidance at the following URL:

[http://www.bates.edu/writing/files/2011/06/Guide\\_to\\_Working\\_with\\_Sources\\_August\\_2013\\_print.pdf](http://www.bates.edu/writing/files/2011/06/Guide_to_Working_with_Sources_August_2013_print.pdf)

### Resources

In building a strong community of learning Bates provides us all with a number of resources, both academic and personal. We will review our resources in class throughout the semester.

### Texts & required materials

There are no required texts for this course. Research and publications on evolution are constantly changing. Readings will be assigned in class and made available on Lyceum one week before. Please complete readings prior to class.

### Assignments and Grading

- 2 assignments (1-5 points and 2-15 points):20
- 3 exams (50 each): 150
- 4 labs (20 points ea): 80
- Participation and discussion: 50

300 total.

Extra credit opportunities will present themselves throughout the semester. No late assignments or papers will be accepted.

In our course we need a way to measure the comprehension and engagement (overall success), this is typically a quantitative practice. Let's talk about this together. Until then...

How can you succeed in this class?

- **Attend class**
- Talk/participation
- Read
- Study

90-100%=A

80-89%=B

70-79%=C

60-69%=D

59% < =F

### Course Schedule

#### **SECTION I**

##### **Week 1: Introductions and Background**

Jan 9- Introductions, **Assignment 1, NOTECARD**

Jan 11- Principles of Evolution

##### **Week 2: Application to Human Evolution and Theory**

Jan 16-Critical Theories in Archaeology

Jan 18- Film: NOVA : The Great Human Odyssey

Reading:

1997 Wylie, Allison

Good Science, Bad Science or Science as Usual? Feminist Critiques of Science in *Women in Human Evolution*. Ed. Lori Hager. Routledge Press New York, NY

1997 Sperling, Susan and Yewoubdar Beyene

A Pound of Biology and a Pinch of Culture or a Pinch of Biology and a Pound of Culture? The Necessity of Integrating Biology and Culture in Reproductive Studies in *Women in Human Evolution*. Ed. Lori Hager. Routledge Press New York, NY

Optional readings:

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0102172>

<http://www.cnn.com/2016/09/30/us/astronomy-sexual-harassment/>

<http://edition.cnn.com/2015/11/04/living/geoff-marcy-astronomy-harassment-feat/>

<http://anthropology.hawaii.edu/people/faculty/stark/pdfs/Stark%20and%20Kramer%201994.pdf>

<http://www.acenet.edu/news-room/Pages/New-Report-Looks-at-the-Status-of-Women-in-Higher-Education.aspx>

<http://www.pia-journal.co.uk/articles/10.5334/pia.469/>

### **Week 3: Fossil Dating and Phylogenies**

Jan 23: Dating and Phylogenies,

Jan 25: **LAB 1**

Reading:

2014 Jennings, Thomas and Michael Waters

Pre-clovis lithic technology at the Debra L. Friedkin Site, Texas: Comparisons to Clovis Through Site-Level Behavior, Technological Trait-List and Caldicic Analysis. *American Antiquity*, Vol. 79, No. 1

## **SECTION II**

### **Week 4: Earliest Hominins and Bipedalism**

Jan 30: Theories for bipedalism

Feb 1: Bipedal Apes

Reading:

2012 Gundling, Tom

Stand and be Counted: The Neo-Darwinian Synthesis and the Ascension of Bipedalism as an Essential Hominid Synamorph. *History and Philosophy of the Life Sciences*, Vol. 34, No. ½ Through the Looking Glass of History and Epistemology.

2010 Brunet, Michel

Two new Mio-Pliocene Chadian hominids enlighten Charles Darwin's 1871 prediction. *Philosophical Transactions: Biological Sciences*, Vol. 365, No. 1556, the first four million years of human evolution.

### **Week 5: Australopithecines**

Feb 6: The Missing Link

Feb 8: Lucy, **LAB 3 and Assignment 2 Reading Response (due Feb 14th at the beginning of class)**

Reading:

1997 Hager, Lori

Sex and Gender in Paleanthropology in *Women in Human Evolution*. Ed. Lori Hager.  
Routledge Press New York, NY

2013 Solometo, Julie and Joshua Moss

Picturing the Past: Gender in National Geographic Reconstructions of Prehistoric Life.  
*American Antiquity*, Vol. 78, No. 1

### **Week 6: Hominin Diversification**

Feb 13: Piltdown Man and Homo habilis

Feb 15: **Exam 1**

### **Week 7: Winter Recess**

### **Week 8: Homo origins**

Feb 27: Early Pleistocene

March 1: Middle and Late Pleistocene: Developing Social Structures

Reading:

2013 Brower, Bruce

Fossil Could Prune Family Tree. *Science News*, Vol. 784, No. 10

2013 Margvelashvili, Ann, Christopher P. E Zollikofer, David Lordkipanidze, Timo Peltomaki, and Marcia S. Ponce de Leon

Tooth wear and Dentoalveolar Remodeling are Key Factors of Morphological Variation in the Dmanisi Mandibles. *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 110, No. 43.

### **Week 9: Out of Africa**

March 6: Homo floresiensis

March 8: Neanderthals, **LAB 3**

Reading:

2017 Chatterjee, Rhitu

Some Neanderthals were Vegetarian and they likely Kissed our Human Ancestors. *All things Considered*, NPR

### **Week 10: Modern Humans**

March 13: Homo Sapiens

March 15: **Exam 2**

Reading:

2010 Geneste, Jean-Michel, Bruno David, Hugues Plisson, Chris Clarkson, Jean-Jaques Delannoy, Fiona Petchey, and Ray Whear  
Earliest Evidence for Ground-Edge Axes: 35,400 +/- 410 cal BP from Jawoyn Country, Arnhem Land. *Australian Archaeology*, Vol. 71.

2012 Wurst, Sarah and Philip Van Peer  
Out of Africa, the Nile Valley and the Northern Route. *The South African Archaeological Bulletin*, Vol. 67, No. 196

### **Week 11: Tool use**

March 20: Materiality

March 23: Biological adaptation of the female orgasm

Readings:

2016 Pavlicer, Michael and Gunter Wagner  
The Evolutionary Origins of the Female Orgasm. *Journal of Experimental Zoology*, Vol. 326B

Optional:

<http://www.smithsonianmag.com/science-nature/jacques-cinq-mars-bluefish-caves-scientific-progress-180962410/>

## **SECTION III**

### **Week 12: Race, culture and ethnicity**

March 27: Cave of Forgotten Dreams (Film)

March 29: film cont...

Readings:

2006 Ballard, Chris  
Strange Alliances: Pygmies in the Colonial Imaginary. *World Archaeology*, Vol. 38, No. 1, Racism and Archaeology.

### **Week 13: Gender and heteronormativity**

April 3: race, culture, ethnicity: the Americas (Pygmy paper)  
sexual dimorphism and representation The 'natural' **LAB 4**

April 5: **No Class**

**Week 14: Finals Week, Essay Exam.**

Tuesday April 10 @ 3:45 **ATTENDANCE REQUIRED**