

Ant 179: Introduction to Biological Anthropology

Fall 2015

Syllabus

*subject to change at instructor's discretion

Professor: Zachary Cofran

Lecture: 8154, T-Th 15:00-16:15

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Office: 8219

Office hours: Tues & Thurs 1-3 pm, and by appointment

This class surveys the wide world of biological (a.k.a. "physical") anthropology. We will examine the biology and behavior of humans and our closest living (and extinct) relatives, in the context of evolutionary theory.

Course objectives

By the end of the semester, *hard-working* students will:

- Develop an understanding of the place of biological anthropology within anthropology, and how it relates to other fields and disciplines
- Develop an understanding of the place of humans among the diversity of life on earth, both past and present
- Appreciate and understand the complementary influences of nature and nurture (biology and environment) on human variation and evolution
- Learn how to form research questions, to propose and to test hypotheses

Readings

Weekly readings will be posted to Moodle. Readings should be done before coming to class each week.

Grading

Participation = 25%

Pop quizzes over the current week's readings can happen at any time. Quizzes must be taken in class and cannot be made up. Your lowest score will be dropped from the final grade. Participation in laboratory assignments will also count toward your participation grade.

Lab assignments (5 x 5%) = 25%

Midterm Exam = 25%

Final Exam = 25%

Except for a few points on the exams, there will be no opportunities for extra credit

Grading scale

A	95%-100%	Excellent, exceeds the highest standards in the assignment or course
A-	90%-94.9%	Excellent; meets the highest standards for the assignment or course
B+	85%-89.9%	Very good; meets high standards for the assignment or course
B	80%-84.9%	Good; meets most of the standards for the assignment or course
B-	75%-79.9%	More than adequate; shows some reasonable command of the material
C+	70%-74.9%	Acceptable; meets basic standards for the assignment or course
C	65%-69.9%	Acceptable; meets some of the basic standards for the assignment or course
C-	60%-64.9%	Acceptable, while falling short of meeting basic standards in several ways
D+	55%-59.9%	Minimally acceptable
D	50%-54.9%	Minimally acceptable; lowest passing
F	0%-49.9%	Did not satisfy the basic requirements of the course

Late policy

Work turned in late will not be accepted. I do not grant extensions. You must be in attendance for quizzes and exams.

Academic Integrity

All work you submit must be your own. You may discuss assignments with your peers, but you may not turn in the same work. When you use references, other people's ideas, and especially other people's direct words, you absolutely must cite them. Failure to cite is plagiarism, which will result in your failure of the assignment. Plagiarism and other academic misconduct will be reported to the SHSS Disciplinary Committee for possibly further disciplinary action.

Attendance

Whether you attend each class is ultimately up to you, but you will do better if you come to class. Note that there will be quizzes every week and cannot be made up if missed. Keeping up with course material and due dates is ultimately your responsibility. Please do not waste either your or my time by sleeping in class (you will be asked to leave).

Technology

You will do better in the class if you pay attention during lecture; cell phones and other devices will distract you (and me) more than they will help you. Use of cell phones is prohibited: if you are found to be on your phone in class you will have to leave the classroom and you will receive negative participation points (points previously earned will be lost). I may apply this policy to other devices if I see fit.

Schedule of topics & assignments*

*subject to change

Due dates in red

18-20 August: Introduction to Introduction to Biological Anthropology

Readings: Su, 2012. What is it Like to be a Biological Anthropologist? A Field Paleontologist's Point of View. *Nature Education Knowledge* 3: 22 (<http://bit.ly/13RSXzc>)
 Morgan, 2012. Notes from the Field: A Primatologist's Point of View. *Nature Education Knowledge* 3: 8 (<http://bit.ly/primatenotes>)
 Zimmer, 2014. Why we can't rule out Bigfoot. *Nautilus* (<http://bit.ly/czbigfoot>)

25-27 August: What is a human?

Readings: Calcagno and Fuentes, 2012. What makes us human? Answers from evolutionary anthropology. *Evolutionary Anthropology* 21: 182
 Hogenboom, 2015. Humans are nowhere near as special as we like to think. *BBC*. (<http://bbc.in/1Jb2heW>)
 Hogenboom, 2015. The traits that make humans unique. *BBC*. (<http://bbc.in/1Jb2cYG>)

01-03 September: What is evolution?

Reading: Forbes, 2010. Evolution is change in the inherited traits of a population through successive generations. *Nature Education Knowledge* 3:6 (<http://bit.ly/1IYS8Sn>)
 Newitz, 2014. 10 scientific ideas that scientists wish you would stop misusing. *IO9* (<http://bit.ly/XVBMtW>)
 Buller, 2012. Four fallacies of pop evolutionary psychology. *Scientific American*.
 Pontzer, 2012. Overview of hominin evolution. *Nature Education Knowledge* 3:8 (<http://bit.ly/homevol>)

08 September: Brain

Thursday: Library resources

Lab 1: Classroom brain size

Reading: Bartholomeusz et al., 2002. Relationship between head circumference and brain volume in healthy normal toddlers, children, and adults. *Neuropediatrics* 33:239-241.

15-17 September: Brain, language and culture

Lab 1 short report due 17 September at midnight

Reading: Schoenemann, 2006. Evolution of the size and functional areas of the human brain. *Annual Review of Anthropology* 35: 379.

22-24 September: Bipedalism (locomotion)

Lab 2: Primate limb proportions

Readings: Gebo, 2013. Primate locomotion. *Nature Education Knowledge* 4:1 (<http://bit.ly/1DM7oX0>).

Bramble and Lieberman, 2004. Endurance running and the evolution of *Homo*. *Nature* 432:345-342.

29 September-01 October: Males and Females

Reading: Held, 2009. *Quirks of Human Anatomy*: Chapter 5, p. 75-103.

06-08 October: Exam week

Lab 2 short report due 06 October at midnight
MIDTERM EXAM in class Thursday 08 October

*** Fall Break 12-16 October ***

20-22 October: Growing up

Lab 3: Classroom height and mass

Reading: Bogin, 2012. The evolution of human growth. In *Human Growth and Development*, 2nd edition, eds. Cameron and Bogin.

27-29 October: Diet

Lab 3 short report due 29 October at midnight

Reading: Gibbons, 2014. The evolution of diet. *National Geographic*.

<http://www.nationalgeographic.com/foodfeatures/evolution-of-diet/>

Jabr, 2013. How to really eat like a hunter-gatherer. *Scientific American* (<http://bit.ly/1N6TP7p>)

03-05 November: Adaptation

Lab 4: Classroom limb proportions

Readings: Leonard and Katzmarzyk, 2010. Body size and Shape. In *Human Evolutionary Biology*, Muehlenbein, ed.

Jablonski and Chaplin, 2013. Epidermal pigmentation in the human lineage is an adaptation to ultraviolet radiation. *Journal of Human Evolution* 65: 671

10-12 November: Population variation

Readings: Barbujani et al., 2013. Nine things to remember about human genome diversity. *Tissue Antigens* 82: 155.

Supplementary: Coop et al., 2009. The role of geography in human adaptation. *PLoS Genetics* 5:e1000500.

17-19 November: Race

Lab 4 short report due 19 November at midnight

Lab 5: Skin color

Readings: Mielke et al., 2006. *Human Biological Variation*: Chapter 1 (p. 3-21)

Hirschfeld, 1998. Natural assumptions: Race, essence, and taxonomies of human kinds. *Social Research* 65: 331.

24-26 November: Health and society

Lab 5 short report due 26 November at midnight

Readings: Kuzawa and Sweet, 2009. Epigenetics and the embodiment of race:

Developmental origins of US racial disparities in cardiovascular health. *American Journal of Human Biology* 21: 2

Ferdman, 2014. The stark difference between what poor babies and rich babies eat. *The Washington Post* (<http://wapo.st/1A8omMq>).

01-03 December: Biological Anthropology in Kazakhstan

No class Tuesday 01 December – 1st President's Day

Readings: Facchini et al., 2007. Prevalence of overweight and cardiovascular risk factors in rural and urban children from Central Asia: The Kazakhstan health and nutrition examination survey. *American Journal of Human Biology* 19:809.
Lalueza-Fox et al., 2004. Unravelling migrations in the steppe: mitochondrial DNA sequences from ancient Central Asians. *Proceedings of the Royal Society B* 271:941.

FINAL EXAM (FINALS WEEK)