

FUNDAMENTALS OF BIOLOGICAL ANTHROPOLOGY

Anthropology 20201

Fall 2023

Tuesday & Thursday – 9:30am-10:45pm

Corbett Family Hall E108

Dr. Cara Ocobock

Dr. Ocobock's Contact Info

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Office Hours: Tuesday & Thursday 1:30-2:30 or by appointment

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Important Things to Know



This is a grade-less, test-less class, see details further in this syllabus

I am **NOT** Mrs. Ocobock. I am Dr. Ocobock or Professor Ocobock






I will not typically respond to email between the hours of 6pm-6am.

BEFORE emailing me, please first check the syllabus for answers.

Course Description

This course will provide you with broad background in the field of biological anthropology with a focus on human evolution. The course is divided into 4 primary sections. 1) we will discuss the history and development of evolutionary theory and cover basic genetics. 2) we will focus on living non-human primates, their morphology, behavior and ecology. 3) we will focus on the fossil record to understand human evolution. 4) we will examine modern human dispersal, variation, and current topics in biological anthropology.

Course Objectives

-  Be able to explain what biological anthropology is (and was), and why it is a relevant field of study
-  Be able to explain evolutionary theory, with specific examples from humans and non-human primates
-  Understand and appreciate the breadth and depth of human variation
-  Engage with the material in both traditional and non-traditional ways in order to broaden your skillset and hone both your speaking and writing skills
-  Develop honest self-assessment skills

THIS CLASS HAS NO GRADES OR TESTS, BUT THERE WILL BE A FINAL GRADE

Why Grades Don't Work

- [Listen to an interview here](#)
- Grades make you think less
- Grades make you avoid taking risks
- Grades make you lose interest in learning
- Grades rarely reflect actual learning
- Grades do not reflect life

Why Tests Don't Work

- Tests really only test your cramming/short term memory
- Tests cannot take into account different learning styles
- Tests produce unnecessary anxiety that prohibit learning engagement

How This Will Work

- You will develop a goal and plan of action for this semester
 - You will state the grade you would like to receive and how you plan to achieve this grade throughout the semester
 - You will also describe any hurdles you expect to encounter and how you might overcome them
 - You will meet with me during the first two weeks of class to discuss this plan
- You will turn in regular writing assignments as well as 4 larger assignments throughout the semester
 - I will provide feedback on each of these assignments
 - But so will you, for each larger assignment, you will write a short assessment that includes the following:
 - what you learned
 - the challenges you faced completing this assignment
 - how you overcame those challenges (if you did)
 - how well you think you did the assignment
 - what you think you could have done better
- Mid-Semester Check-In – meet with me to discuss what you have done so far, what you are proud of, and what you could be doing better
- End of Semester Meeting – meet with me to assess the body of work you completed throughout the semester and together decide a final grade to be submitted to Notre Dame.

Academic Integrity

As a student of the University of Notre Dame, you are expected to abide by its honor code (<https://honorcode.nd.edu/>):

“As a member of the Notre Dame community, I acknowledge that it is my responsibility to learn and abide by principles of intellectual honesty and academic integrity, and therefore I will not participate in or tolerate academic dishonesty.”

When you are expected to work alone on an assignment, it will be clearly stated in the assignment guidelines.

Course Materials

- Most resources are links to articles on the web.
- Articles provided through Canvas
- A notebook
- Handful of colored pens or pencils (I like to write and draw on the board)

Class Behavior






- This class does cover some controversial topics. I expect each of you to respect your classmates' opinions. If you disagree, do so respectfully so that we can have a discussion about it. I want to promote diversity and inclusion in this classroom (<https://diversity.nd.edu/>)
- We will, therefore, take color conscious (rather than colorblind) approach. As Michelle Alexander states, color consciousness “places faith in our capacity as humans to show care and concern for others, even as we are full cognizant of race and possible racial differences.” pg. 243 from *The New Jim Crow*

IN ORDER TO SUCCEED

You Need To:

1. Attend class regularly
2. Take notes in class – handwritten is better!
3. Actively participate
4. Maintain an open mind to my methods – this is the first time I have run a course like this (no grades or exams). There are likely to be bumps along the way, I would greatly appreciate your patience
5. Maintain an open mind to the topics covered
6. Be engaged and inquisitive
7. Give me feedback! If something works well, tell me. If something fails miserably, TELL ME!
8. DO NOT PLAGIARIZE! Cite everything you use to complete your work – here is a helpful resource on citations:
<http://library.williams.edu/citing/styles/chicago2.php>

COVID-19 & Honestly Any Illness Statement

-  For no, masks are not required in class. However, I reserve the right to require them at anytime!
-  These are unprecedented times. I will do my best to to approach this situation with flexibility, patience, and compassion. I ask you to do the same
-  **IF YOU ARE FEELING ILL, DO NOT COME TO CLASS! EMAIL ME AND LET ME KNOW!!!**
-  If more than 5 students test positive for COVID-19 at the same time, I will move the class online for a two week period.
-  If your professor contracts COVID-19, I will move the class online for a two week period

ASSIGNMENT CHECK LIST

Regular Reading Responses

- Regular reading responses to turn in each **Monday** via **Google Doc**
- These will consist of **Pre-Reading Questions** & **Post-Reading Questions**
- For **Pre-Reading** – I am trying to get you thinking about what you may or may not know about this material before reading about it.
- There is no right or wrong answer to all of this, it is just to get you thinking
- The **Post-Reading Questions** are to make sure you did the readings, and can meaningfully contribute during class.

Large Assignment	Date	Done
Evolution Infographic	9/14	
Primate Podcast/YouTube	10/12	
Hominin Dating Profile	11/14	
Un-Essay	12/7	

Assignment Guidelines

- Guidelines will be provided to you for each assignment. If you do not understand the assignment guidelines, it is up to you to reach out to me for clarification!

Reading Response	Date	Done
1	8/28	
2	9/4	
3	9/11	
4	9/18	
5	9/25	
6	10/2	
7	10/9	
8	10/23	
9	10/30	
10	11/13	
11	11/20	
12	11/27	
13	12/4	
14	12/11	

Attendance and Participation

I like to run an interactive class which means there is give and take from me AND you. You cannot participate in class unless you are physically there. I am fully aware of and sensitive to University sanctioned events as well as life events that may conflict with class. It is your responsibility to discuss potential absences with me ahead of time if possible. If you cannot discuss it with me ahead of time, please make every effort to talk to me as soon as you can.

SCHEDULE (1 OF 6)

Week 1: August 22 & 24 What is Anthropology & Basic Biology

Reading 8/22:

- 1) [What is Biological Anthropology?](#)
- 2) [Scientific Underpinnings of Biological Anthropology](#)
- 3) The Importance of Stupidity (pdf on Canvas)

No Assignments due

Reading 8/24: This looks like a lot, but should be review from high school biology

- 1) [Chromosome Theory](#)
- 2) [Principles of Inheritance](#)
- 3) [RNA](#)
- 4) [What is a Gene?](#)
- 5) [Genotype & Phenotype](#)
- 6) [Pleiotropy](#)
- 7) [Polygenic Traits](#)
- 8) [Genetic Recombination](#)
- 9) [Hox Genes](#)
- 10) [Gene Disorders](#)

Assignment:

- 1) Reading Response #1 on 8/28

Week 2: August 29 & 31 Evolutionary Forces Part 1 & 2

Reading 8/29:

- 1) [Evolution](#) and [Misconceptions that need to die](#)
- 2) [Change over time](#)
- 3) [Myth of Evolutionary Advancement](#)
- 4) [Selection, Genetic Drift, and Gene Flow](#)
- 5) [Natural Selection Part 1](#) & [Natural Selection Part 2](#)
- 6) [Some Darwinian Problems...](#)
- 7) [Before there was Darwin there were Islamic scholars](#)

No Assignments Due

Reading 8/31:

- 1) [Mutations](#)
- 2) [Sexual Selection](#)
- 3) [Hardy Weinberg](#)
- 4) [Speciation](#)

Assignment:

- 1) Reading Response #2 on 9/4

Week 3: September 5 & 7 Evolutionary Forces Part 3 & Living Primates

Reading 9/5:

- 1) [Gene-Environment Interactions](#)
- 2) Mulligan article on Canvas
- 3) Tishkoff article on Canvas

No Assignments Due

Reading 9/7:

- 1) [The Living Primates](#)
- 2) [Crown Primate Characteristics](#)
- 3) [Phylogenetic Trees](#)
- 4) [Catarrhines](#)
- 5) [Platyrrhines](#)

Assignment:

- 1) Reading Response #3 on 9/11

SCHEDULE (2 OF 6)

Week 4: September 12 & 14 Primate Locomotion and Diet & Primate Social Structure

Reading 9/12:

- 1) [Primate Locomotion](#)
- 2) [Primate Diets](#)

No Assignment Due

9/14:

- 1) [Primates in Communities](#)
- 2) [Primate Sociality & Social Systems](#)
- 3) [Primate Group Size](#)
- 4) [Primate Cognition](#)
- 5) [Primate Communication](#)
- 6) [Chimp Wars](#)
- 7) [Tools!](#)

Assignment:

- 1) Writing Response #4 on 9/18
- 2) **EVOLUTIONARY FORCES INFOGRAPHIC DUE**

Week 5: September 19 & 21 Paleontology

Reading 9/19:

- 1) [Paleontology](#)
- 2) [How to become a fossil](#)
- 3) [Dating Techniques](#)
- 4) [Molecular Clocks](#)

No Assignment Due

Readings 9/21: None

Assignment:

- 1) Writing Response #5 on 9/25

Week 6: September 26 & 28 Primate Evolution 1 & 2

Readings 9/26:

- 1) [Primate Origins](#)
- 2) [Climate Change & Primate Evolution](#)
- 3) [Macroevolution](#)
- 4) [Arctic Primate](#)

No Assignment Due

Reading 9/28:

- 1) [Planet of the Apes](#) & an [Update](#)
- 2) [Extinct Apes](#)
- 3) [Early Apes Lived in Savannahs](#)
- 4) [Hominoids](#)

Assignment:

- 1) Writing Response #6 on 10/2

SCHEDULE (3 OF 6)

Week 7: October 3 & 5 Bipedalism and Early Hominins & Australopithecines

Reading 10/3:

- 1) [Overview of Hominin Evolution](#)
- 2) [The human fossil record & Evolution Data](#)
- 3) [The Earliest Hominins](#)
- 4) [Climate and Hominin Evolution](#)
- 5) [Bipedality](#)
- 6) [7mya walking](#)

No Assignment Due

Reading 10/5:

- 1) [Hominin Taxonomy](#)
- 2) [Lucy](#)
- 3) [Australopithecus et al.](#)
- 4) [Robust Australopithecines & No more nuts?](#)
- 5) [Upending our ideas about human evolution](#)
- 6) [More Australopiths & Mrs. Ples](#)

Assignments:

- 1) Writing Response #7 on 10/9

Week 8: October 10 & 12 Early *Homo* and Archaic *H. sapiens*

Reading 10/10:

- 1) Athreya & Ackerman on Canvas
- 2) [Paleolithic Tech](#) & [H. habilis](#)
- 3) [Homo erectus](#)
- 4) [Meat Eating](#)
- 5) [Naledi](#) – explore this, click on links! [And More!](#)
- 6) [Human Evolution Complexity](#) but [Genetics Help](#)

No assignment due today

Reading 10/12:

- 1) [Archaic *H. sapiens*](#)
- 2) [Neanderthal Behavior and an Update](#)
- 3) [Neanderthal Body of Evidence](#)
- 4) [Did Neanderthals Speak?](#)
- 5) [High Neanderthal Fertility?](#)

Assignment:

- 1) Writing Response #8 on 10/23
- 2) **PRIMATE PODCAST/YOUTUBE DUE**

Week 9: October 17 & 19
NO CLASS
FALL BREAK

SCHEDULE (4 OF 6)

Week 10: October 24 & 26 Neanderthals & HUNTING!

Readings 10/24:

- 1) [What happened to Neanderthals?](#)
- 2) [Transition to Modern Behavior](#)
- 3) [Flores](#)
- 4) [Who were the Denosivans?](#)

ADDITIONAL READINGS TO PERUSE!

1. [Neanderthal Cave Art](#)
2. [Dragon Man](#)
3. [New Neanderthal found in Israel](#)
4. [Neanderthals & Denosivans & Cave Sharing](#)
5. [Neanderthal cuisine! Eating elephants](#)

Readings 10/26:

- 1) [Which animals did early humans hunt?](#)
- 2) [How hunting made us human](#) – Dr. Ocobock doesn't like this title or conclusion but the info is good
- 3) [Bow and Arrow Tech](#)

Assignment:

- 1) Writing Response #9 on 10/30

Week 11: October 31 & November 2 Modern Human Emergence & Racism in Science

Reading 10/31 🍊👻🦋👁️:

- 1) Chan et al. on Canvas
- 2) [Wired Article](#)
- 3) Ackermann et al. on Canvas & [Decolonize Human Evolution](#)
- 4) [Gizmodo Article](#)

Other Readings to Peruse

- 1) [Models of Human Origins](#)
- 2) [What happened to other hominins?](#)
- 3) [Biggest Discoveries of this Decade](#)
- 4) [5 Skulls that Shook Up Story of Human Ev](#)
- 5) [We are not unique!](#)
- 6) [Best Discoveries of 2022](#)

Readings 11/2:

- 1) Frederick Douglas on Canvas
- 2) Blakey 1999 on Canvas
- 3) Marks 2017 on Canvas
- 4) [Race & Pseudo Science](#)
- 5) [It matters who does science](#)
- 6) [Podcasts if you are interested](#), you should be

Assignment:

- 1) Writing Response #10 on 11/6

Week 12: November 7 & 9 NO CLASS

🇲🇽 *Ocobock in Mexico! BE JEALOUS!* 🇲🇽

SCHEDULE (5 OF 6)

Week 13: November 14 & 16 Racism in Health & Skin Color

Reading 11/14:

- 1) Gravlee 2009 on Canvas
- 2) [Podcast with Gravlee & Mulligan](#)
- 3) Torres & Kittler 2007 on Canvas
- 4) [Racism and Health Podcasts if interested](#)
- 5) [The Myth of Race](#)

HOMININ DATING PROFILE DUE

Reading 11/16:

- 1) Jablonski & Chaplin 2017 on Canvas
- 2) Lasisi & Shriver 2017 on Canvas
- 3) [Podcast with Lasisi](#)
- 4) [Skin Color is an Illusion](#)
- 5) [Surprise! Africans are not all the Same](#)
- 6) [Podcast with Jablonski if interested](#)

Assignment:

- 1) Writing Response #11 on 11/20

Week 14: November 21 & 23 Evolutionary Medicine

Reading 11/22:

- 1) Nesse & Williams on Canvas
- 2) Alcock & Shwartz on Canvas
- 3) Cancer & Elephants on Canvas
- 4) Cancer across lifeforms on Canvas – this is long, just peruse – it is a beautiful article

Assignment:

- 1) Writing Response #12 on 11/27

NO CLASS 11/23

 HAPPY THANKSGIVING 

Week 15: November 28 & 30 Obesity

Reading 11/28: No readings

No assignment due today

Reading 11/30:

- 1) Casazza et al. 2013 on Sakai
- 2) Fothergill et al 2016 on Sakai
- 3) Brewis 2014 on Sakai
- 4) [Racism and Obesity](#)

Assignment:

- 1) Writing Response #14 on 12/4

SCHEDULE (6 OF 6)

Week 16: December 5 & 7
EGG vs. OD & Evolution of the Human Diet

Reading 12/5:

- 1) Rosenberg et al. on Canvas
- 2) Dunsworth et al. 2012 on Canvas
- 3) Dunsworth et al. 2018 on Canvas
- 4) Ocobock 2020 on Canvas **only need to read pgs 8-9 but feel free to read more!**

No assignment due today

Reading 12/7:

- 1) [What did our Ancestors eat?](#)
- 2) [The “True” Human Diet](#)
- 3) [The Real Paleo Diet](#)
- 4) [Human Diet Evolution](#) – this was written for kids, but it is great!
- 5) [The Switch to Soft Diets](#)
- 6) [Did meat make us human?](#)

Assignment:

- 1) Writing Response #13 on 12/11
- 2) **UNESSAY DUE**

OCOBOCK DISCLAIMERS

1. You should take some time and make friends in this class. I DO NOT give out my notes if you miss class. It is your responsibility to get notes from a friend.
2. As this class is not being run in a traditional way, **I reserve the right to change this syllabus at any time.** I will actively seek your feedback and include it as we move through the semester. As such, it would behoove you to give me that feedback so that I can improve this class and your learning experience along the way.

DISABILITY SERVICES

Any student who has a documented disability and is registered with Disability Services should speak with the professor as soon as possible regarding accommodations. Students who are not registered should contact the Office of Disability Services - <https://sarabeadisabilityservices.nd.edu/>

PERSONAL NOTE

Any student who faces challenges securing their food or housing or faces a catastrophic event (death or illness in the family for example) and believes this may affect their performance in the course is urged to contact the Office of Undergraduate Studies (574-631-7098) of University Health Services (574-631-7497) for support. Furthermore, please notify me if you are comfortable doing so. This will enable me to provide any resources that I may possess.

PRIVACY STATEMENT

Course materials (videos, assignments, problem sets, etc.) are for use in this course only. You may not upload them to external sites, share with any person outside of this course, or post them for public commentary without my written permission. We are recording class meetings to support remote students and to provide everyone in the class with useful study aids. These recordings will be available for review through Sakai. The University strictly prohibits anyone from duplicating, downloading, or sharing live class recordings with anyone outside of this course, for any reason.

CHATGPT STATEMENT

The use of AI technologies (like ChatGPT) is generally acceptable in this course, but, like any other source, must always be attributed in a manner that can be reproduced by the reader. An example of “reproducible” attribution includes the date accessed, the web address or URL accessed, and a description of the prompt. When using generative AI technologies as a source of information, you are responsible for assessing the quality, completeness, and accuracy of the cited information.



Poppadom (black), Hecate (tortoise shell), and Fidgeward (orange) hope you have a purrfect semester!

This is an excellent example of the solid gold comedy you can expect from me...