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Fall 2021

### **ANT 130: Introduction to Biological Anthropology syllabus (Fall 2021)**

Britney Kyle

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# ANTHROPOLOGY 130: INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY

## FALL 2021 – 3 CREDITS

**INSTRUCTOR:** Dr. Britney Kyle  
**EMAIL:** [britney.kyle@unco.edu](mailto:britney.kyle@unco.edu)  
**PHONE:** 970-351-1745

**OFFICE:** Candelaria 2032  
**IN-PERSON OFFICE HOURS:** M 12:45-2:45pm, W 2:30-3:30pm, and by appointment  
**ZOOM OFFICE HOURS:** T 12:45-1:45pm, and by appointment (for zoom office hours, email me for a link)

**CLASS TIME AND LOCATION:** MWF 11:15am-12:05pm in Candelaria 1220

**REQUIRED TEXT:** This course will use the open-access textbook *EXPLORATIONS: An Open Invitation to Biological Anthropology*. You can access it **for free** as a PDF or read chapters online here:  
<https://explorations.americananthro.org/>

If you prefer a hard copy, you can purchase one on Amazon here for under \$40:

[https://www.amazon.com/Explorations-Open-Invitation-Biological-Anthropology/dp/1931303630/ref=sr\\_1\\_2?dchild=1&keywords=Explorations&qid=1596818923&s=books&sr=1-2](https://www.amazon.com/Explorations-Open-Invitation-Biological-Anthropology/dp/1931303630/ref=sr_1_2?dchild=1&keywords=Explorations&qid=1596818923&s=books&sr=1-2)

### ADDITIONAL READINGS, POSTED ON CANVAS:

- Throughline podcast “The Invention of Race” November 19, 2020  
<https://www.npr.org/2020/11/18/936346847/the-invention-of-race>
- Evolution and Natural Selection reading. 10 Oct 2010. University of Michigan.
- Pennisi (2016) Humans are still evolving – and we can watch it happen. *Science*.
- Radiolab podcast “G: Unfit” July 17, 2019 <https://www.wnycstudios.org/podcasts/radiolab>
- Radiolab podcast “G: Unnatural Selection” July 25, 2019  
<https://www.wnycstudios.org/podcasts/radiolab>
- Smedley A & Smedley BD (2005) Race as Biology is Fiction, Racism as a Social Problem is Real: Anthropological and Historical Perspectives on the Social Construction of Race. *American Psychologist* 60:16-26.
- Harrell E (2009) CSI Stone Age: Did Humans Kill Neanderthals? *Time Magazine Science*.
- The Smithsonian Institute (2016) What does it mean to be human? Ancient DNA and Neanderthals
- Balter M (2005) Are Humans Still Evolving? *Science* 309:234-237.

### COURSE DESCRIPTION:

This is a science course on human evolution exploring what makes our species unique, strange, and wonderful. We will first learn the biological mechanisms underlying evolution and natural selection. Next, we will look at modern primate variation today (including humans) and learn how to use primates as models to help us learn about the behavior, environments, and lifeways of extinct species. Third, we will interpret data from the human fossil record to understand where, how, when, and in what way modern humans evolved. Finally, we will examine specific modern human traits through this evolutionary lens to build arguments for how we got to where we are today.

### COURSE LEARNING OBJECTIVES:

- Students will understand essential facts, theories, and methods of biological anthropology including the four forces of evolution, the development of evolutionary theory, the biological basis for life, adaptation, primate anatomy and behavior, hominid origins, and the adaptive significance of human variation. Competence will be demonstrated on exams and quizzes.
- Students will be able to describe and evaluate the importance of key events within biological anthropology, especially pertaining to the development of evolutionary theory, the modern synthesis, and the major milestones of human evolution, as assessed in class discussions.
- Students will test anthropological hypotheses by applying the scientific method to critically evaluate material, genetic, and geophysical evidence, in labs and assignments conducted in class.

- Students will calculate genotype and phenotype ratios, expected genotype frequencies in the next generation, and intermembral indices, in labs and assignments. Student will use these quantitative data to determine whether allele frequencies are changing (i.e., evolution is occurring), and to compare and contrast human and non-human primate populations using metric data.
- Students will identify technological trends in biological anthropology and the contributions of new technology to our increasing knowledge of human origins and evolution, in class assignments.
- Students will be able to make connections between class material and other academic disciplines, including chemistry, biology, and geology, and to relate course content to their own lives. This will be demonstrated in class discussions and on course evaluations.

#### **DEPARTMENTAL LEARNING OUTCOMES:**

This course addresses several of our department learning goals, including: knowledge of advancements in biological anthropologists' understanding of human biological evolution, skill at using the scientific method in addressing problems of human evolution, and skill at critical thinking about issues in human evolution.

#### **IMPORTANT CAMPUS DATES:**

*Drop deadline* (course will not show up on transcripts, tuition refunded) – September 3

*Course Withdrawal deadline* (“W” on transcript, will not impact GPA) – December 3

#### **INSTRUCTOR-STUDENT COMMUNICATION:**

Please don't hesitate to contact me with any questions, comments, or concerns. I can be reached at the email address and office above. My office hours are time that I've set aside to meet with you to talk about any questions you might have about the class, study strategies, or Anthropology in general. If my office hours conflict with your schedule, I am happy to meet at another time, either by zoom or in person. Just let me know that you want to meet and we'll find a time that works for both of us!

#### **CLASS NEWS AND CANCELLATION:**

In case of unexpected instructor absences, the information will be posted on the **Canvas website and I will email your bear mail**. Canvas and/or your university email account should be consulted in the event of inclement weather to check for possible class cancellations or delays. Changes or cancellation of office hours will also be emailed to your university account.

#### **DISABILITY RESOURCES:**

It is the policy and practice of the University of Northern Colorado to create inclusive learning environments. If there are aspects of the instruction or design of this course that present barriers to your inclusion or to an accurate assessment of your achievement (e.g. time-limited exams, inaccessible web content, use of videos without captions), please communicate this with your professor and contact Disability Resource Center (DRC) to request accommodations. Office: (970) 351-2289, Michener Library L-80. Students can [learn more about the accommodation process here](#).

#### **TITLE IX:**

The University of Northern Colorado is committed to providing a safe learning environment for all students that is free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. Students who have experienced (or who know someone who has experienced) any of these incidents should know that they are not alone. UNC has staff members trained to support students to navigate campus life, to access health and counseling services, to provide academic and housing accommodations, to help with legal protective orders, and more.

Please be aware all UNC instructors and most staff members are required to report their awareness of sexual violence to the Office of Institutional Equity and Compliance (OIEC). This means that if students tell an instructor about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking, the instructor must share that information with the Title IX Coordinator, Larry Loftin. Larry or a trained staff member in OIEC will contact the reporting students to let them know about accommodations and support services at UNC as well as their options to pursue a process to hold accountable the person who

caused the harm to them. Students who have experienced these situations are not required to speak with OIEC staff regarding the incident. Students' participation in OIEC processes are entirely voluntary.

If students do not want the Title IX Coordinator notified, instead of disclosing this information to the instructor, students can speak confidentially with the following people on campus and in the community. They can connect you with support services and help explore options now, or in the future.

UNC's Assault Survivors Advocacy Program (ASAP): 24 Hr. Hotline 970-351-4040 or

<http://www.unco.edu/asap>

UNC Counseling Center: 970-351-2496 or <http://www.unco.edu/counseling>

UNC Psychological Services: 970-351-1645 or [http://www.unco.edu/cebs/psych\\_clinic](http://www.unco.edu/cebs/psych_clinic)

Students who are survivors, who are concerned about someone who is a survivor, or who would like to learn more about sexual misconduct or report an incident, can visit [www.unco.edu/sexual-misconduct](http://www.unco.edu/sexual-misconduct). Students may also contact OIEC at 970-351-4899 or email [titleix@unco.edu](mailto:titleix@unco.edu).

### **FOOD INSECURITY AND BASIC NEEDS:**

Research shows that college students experience food insecurity at higher rates than the American household rate, and that food insecurity can negatively impact academic performance and persistence. In recognition of this problem, UNC offers assistance to students facing food insecurity through an on-campus food pantry. The Bear Pantry is located in University Center 2166A. Please visit [www.unco.edu/bear-pantry](http://www.unco.edu/bear-pantry) for more information.

Any student who faces challenges securing food or housing and believes this may affect their performance in the course is also urged to contact Student Outreach and Support (SOS) for assistance. SOS can assist students during difficult circumstances, which may include medical, mental health, personal or family crisis, illness or injury. SOS can be reached at [dos@unco.edu](mailto:dos@unco.edu) or via phone at 970-351-2796. UNC Student Legal Services offers free consultations, including for landlord tenant issues: <https://www.unco.edu/student-life/legal-services.aspx>

### **EQUITY AND INCLUSION:**

The University of Northern Colorado embraces the diversity of students, faculty, and staff, honors the inherent dignity of each individual, and welcomes their unique perspectives, behaviors, and worldviews. In this course, people of all races, religions, national origins, sexual orientations, ethnicities, genders and gender identities, cognitive, physical, and behavioral abilities, socioeconomic backgrounds, regions, immigrant statuses, military or veteran statuses, size and/or shapes are welcomed and strongly encouraged to share their rich array of perspectives and experiences. Course content and campus discussions will heighten your awareness to each other's individual and intersecting identities. If you would like to report an incident or learn more about identity-based discrimination/harassment, please visit [www.unco.edu/institutional-equity-compliance](http://www.unco.edu/institutional-equity-compliance). There are increasing reports of racism during the COVID-19 pandemic. During this time, more than ever, please be kind to one another. If you feel that you've been the victim of harassment or discrimination, please don't hesitate to report it under the "Submit Report" tab on this website: <https://www.unco.edu/sexual-misconduct/>

### **LAND ACKNOWLEDGEMENT:**

The University occupies the lands in the territories of the Ute, Cheyenne, and Arapaho peoples. The University of Northern Colorado acknowledges the forty-eight tribes that are historically tied to the state of Colorado. Thus, the land on which UNC is situated is tied to the history and culture of native and indigenous peoples. UNC appreciates this connection and respects the land. Additionally, the University community pays its respect to Elders past, present, and future, and to those who have stewarded this land throughout the generations. As part of the learning and reflection process please visit <https://native-land.ca/>, call the Office of Equity & Inclusion at 970-351-1944, or consider taking the following courses: ANT 212 North American Indians (LAC Area 8).

ANT 317 Contemporary Native American Issues.  
HIST 329 Indigenous N. America (sophomores & above).

### **COVID-19:**

The COVID-19 pandemic is a complex, challenging, and fluid situation, which continues to evolve. UNC will follow applicable legal requirements and federal, state, and county public health recommendations and mandates in all decisions related to university operations. Students should review the [Coronavirus website](#) for the current academic term for the most up to date guidance. Students who fail to comply with UNC's public health requirements, such as the use of masks and social distancing, will be reminded of current policy; students who fail to correct their behavior will be asked to leave the classroom and may be referred to the Dean of Students office.

The safety and well-being of our Community of Bears requires each of us to be prepared to do our part to protect the health of our entire campus community, as well as our friends, families, and neighbors. It is important that all members of the university community work together to do all we can to keep our community safe.

### **ACADEMIC MISCONDUCT:**

All members of the University of Northern Colorado community are entrusted with the responsibility to uphold and promote five fundamental values: Honesty, Trust, Respect, Fairness, and Responsibility. These core elements foster an atmosphere, inside and outside of the classroom, which serves as a foundation and guides the UNC community's academic, professional, and personal growth. Endorsement of these core elements by students, faculty, administration, and trustees strengthens the integrity and value of our academic climate.

Cheating, plagiarism, forgery, and all other forms of academic misconduct are unacceptable in this course, and at UNC. UNC's policies and recommendations for academic misconduct will be followed. For additional information, please see the Dean of Student's website, Student Handbook link <http://www.unco.edu/dos/handbook/index.html>. Lack of knowledge of these requirements will not be viewed as an excuse for noncompliance. Cheating, plagiarism, and forgery will result in a zero for that assignment and may result in a failing grade for the course.

### **COURSE REQUIREMENTS:**

**Exams:** There are three exams in this class. The first two will be given in class. The third of these is the final, and will be **Thursday, December 9th at 8am in our regular classroom**. Exams are **not** cumulative. The exams cover material from the lectures, videos, readings and discussions. Make-up exams will be given at the instructor's discretion. Exam format includes a combination of multiple-choice, fill-in-the-blank, short answer, and essay questions. If a test is missed due to unforeseen circumstances such as illness or family emergency, please contact **the instructor within 24 hours of the examination date**. Make-up exams should be taken within one week after the exam. Refer to the course outline for the dates of the exams. **If you have any conflicts with the exam dates, see the instructor immediately.**

**In-Class Quizzes:** There will be three in-class quizzes/practice exams throughout the semester. These quizzes will follow the same format as exams and will give students a chance to gauge their progress and the success of their study strategies prior to exams. **Make-up quizzes will be given at instructors discretion (see above). Those arriving late to class will not be allotted extra time to complete the quiz** (i.e. don't be late to class).

**Labs and Assignments:** Several assignments and labs will be given throughout the course. Much of the work for these assignments will be done during class. However, written analyses of the results will be completed on your own time. Tentative due dates for all assignments are given on the schedule below.

**Attendance and Participation:** Although you will not be graded on attendance and participation, attending class regularly and participating fully will help you do well in this class. If you have to miss class for an extended period of time, please let me know so that we can work to catch you up before it impacts your

grade. One of the best ways to retain information is by articulating your thoughts on new or complex material. Please remain on topic and remain respectful when asking/answering questions.

**GRADING PROCEDURES:**

Late assignments will be **docked by 10% for every calendar day** that they are late, ie. one day, 10%, two days 20% until you get to 50%. You can turn in assignments for up to 50% credit anytime until the day of the final exam. No extra credit will be offered.

**Grade Breakdown for Course Requirements**

Assessment	% Final grade
Exams (20% each)	60
In-Class Quizzes/Practice Exams (5% each)	15
Labs and Assignments	20
Attendance and Participation	5

**GRADING SCALE**

Percentage	Letter Grade	Quality Points
93-100	A	4.000
90-92	A-	3.667
88-89	B+	3.334
83-87	B	3.000
80-82	B-	2.667
78-79	C+	2.334
73-77	C	2.000
70-72	C-	1.667
68-69	D+	1.334
63-67	D	1.000
60-62	D-	0.667
0-59	F	0.000

**PHILOSOPHY OF GRADING:**

**I do not give grades; students earn their grades.** Your final grade is your responsibility. The only legitimate reason to change a grade is if there was a mistake in grading. Any questions about grading must be discussed with the instructor within the first week following the exam/assignment.

The following is a schedule of the major topics that will be covered in this class. It should be considered tentative and may be modified during the course of the semester as determined by factors such as student progress and amount of class discussion.

Week		Topics Covered	Readings, podcasts, etc.
1	<b>M 8/23</b>	<i>1: Intro to Anthropology / Course Mechanics</i>	Ch. 1
	<b>W 8/25</b>	<i>2: The Four Fields of Anthropology/The Scientific Method</i> · Creating a Falsifiable Hypothesis Group Activity	The Invention of Race podcast
	<b>F 8/27</b>	<i>3: The Development of Evolutionary Thought</i> · Pre-assessment quiz due	Evolution and Natural Selection reading (on Canvas)
2	<b>M 8/30</b>	<i>4: Darwin and Natural Selection</i>	Pennisi, 2016 (on Canvas)
	<b>W 9/1</b>	<i>5: Darwin and Natural Selection continued</i> · Evolutionary Thought Worksheet	
	<b>F 9/3</b>	<i>6: Cells and DNA replication</i> · DNA Assignment	Ch. 3
3	<b>M 9/6</b>	No class – Happy Labor Day!	
	<b>W 9/8</b>	No class – Happy extended Labor Day weekend!	

Week		Topics Covered	Readings, podcasts, etc.
	F 9/10	Cracking your genetic code video · Video Worksheet	
4	M 9/13	7: <i>Mitosis and Meiosis continued</i> · Mitosis and Meiosis Exercise	
	W 9/15	8: <i>Mendelian Inheritance</i> · Mendelian Trait Activity <b>In-class Quiz/Practice Exam 1 - Covers material through 9/13</b>	
	F 9/17	9: <i>Punnett Squares</i>	
5	M 9/20	10: <i>Patterns of Mendelian Inheritance</i>	
	W 9/22	11: <i>The Four Forces of Evolution</i> · Genetic Drift Demo	Ch. 4
	F 9/24	12: <i>The Four Forces of Evolution continued / Hardy-Weinberg Equilibrium</i> · Hardy-Weinberg Assignment	
6	M 9/27	13: <i>Reexamining Hardy-Weinberg</i>	
	W 9/29	<i>Catch-up and Review</i>	
	F 10/1	<b>Exam 1 - During Regular Class Time</b> Covers the book Introduction, Chapters 1, 3, & 4, readings on Canvas, and all lecture material covered to this point	
7	M 10/4	14: <i>Speciation</i>	
	W 10/6	15: <i>Taxonomy</i> · In-Class Classification Activity	
	F 10/8	16: <i>Intro to Non-Human Primates</i>	Ch. 5
8	M 10/11	17: <i>Intro to Non-Human Primates continued</i>	
	W 10/13	18: <i>Primate Behavior</i> <b>In-class Quiz/ Practice Exam 2 – Covers readings and material since the last exam</b>	Ch. 6
	F 10/15	19: <i>Primate Behavior continued</i> · Primate Observation	
9	M 10/18	Primate Lab · Lost Primate Flyer Due	
	W 10/20	20: <i>Fossilization and Dating Methods / Primate Origins and Evolution</i> · Dating Methods Exercise	Chs. 7&8
	F 10/22	<i>Catch-up and Review</i>	
10	M 10/25	<b>Exam 2 - During Regular Class Time</b> Covers Chapters 5-8 in the book, readings on Canvas, and all lecture material covered since the last exam	
	W 10/27	21: <i>The First Hominins / Bipedalism</i>	Ch. 9
	F 10/29	Bipedalism Lab	
11	M 11/1	22: <i>The Australopithecines</i>	
	W 11/3	23: <i>The Evolution of the Genus Homo / The Evolution of the Human Brain</i>	Ch. 10
	F 11/5	24: <i>Homo erectus and the Neandertals</i>	Ch. 11
12	M 11/8	25: <i>Where did the Neandertals go?</i>	Harrell, 2009; Smithsonian article (on Canvas)

Week		Topics Covered	Readings, podcasts, etc.
	<b>W 11/10</b>	<i>26: Origins of Anatomically Modern Humans</i> <b>In-class Quiz/ Practice Exam 3 – Covers readings and material since last exam</b>	
	<b>F 11/12</b>	Hominin Lab	
13	<b>M 11/15</b>	<i>27: Humans into the Holocene</i>	Ch. 12
	<b>W 11/17</b>	<i>28: The History of the Race Concept</i>	Ch. 13 G: Unfit podcast
	<b>F 11/19</b>	<i>29: Does Biological Race Exist?</i>	G: Unnatural Selection podcast
14	<b>M 11/22</b>	<i>30: Adaptation vs. Adaptability</i>	Ch. 14; Smedley & Smedley, 2005 (on Canvas)
	<b>W 11/24</b>	No class – Happy Thanksgiving!	
	<b>F 11/26</b>	No class – Happy Thanksgiving!	
15	<b>M 11/29</b>	<i>31: Adaptive Human Variation continued</i>	
	<b>W 12/1</b>	<i>32: Adaptive Human Variation continued</i>	
	<b>F 12/3</b>	<i>33: Human Variation wrap-up / Are we still evolving?</i> · Post-assessment quiz due	Ch. 16; Balter, 2005 (on Canvas)
16	<b>R 12/9</b>	<b>Exam 3 – Thursday, December 9th – 8:00-10:30am</b> Covers Chs. 9-14 & 16, Canvas readings, and material since the last exam	

**Respect:** In this class the expectation is of mutual respect. I will show respect for you, and I hope that you will show respect for me, any guests, and one another. Some examples of respect include (but are not limited to):

- Listening when others talk.
- Not having conversations with others while someone is talking.
- Not browsing the internet, chatting online or texting during class.
- Limiting interruptions. This means turning off your cell phone when you come to class or putting it on the silent mode.
- Entering the room quietly when you are late.

Forming connections in class can be so helpful! You may want to form study groups, get notes from one another if you have to miss class, or just bond over a shared interest in Anthropology! Take time to record the name, email address, and/or phone number of at least 2 students in the class that you can contact regarding missed notes and class information.