

ANTH 350 (LEC 02)
Laboratory Practice in Biological Anthropology
GFC Hours 1-2
Winter 2023

Instructor:	Dr. Courtney McConnan Borstad (she/her)	Lecture Location:	ES 743
Phone:		Lecture Day/Time:	Wednesdays 10:00 - 10:50 a.m.
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Office Hours:	By appointment		
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Prerequisite(s): ANTH 201

COURSE DESCRIPTION

Examines the basic concepts and methods of biological anthropology using an experiential learning model. Coverage includes genetics, osteology, primatology, paleoanthropology, and human biology with a strong emphasis on the role of evolutionary theory throughout.

LEARNING OUTCOMES:

The Department of Anthropology and Archaeology is committed to student knowledge and skill development.

Upon completion of this course, you should be able to:

- 1) list ways of knowing and use one of these, the scientific method, to critically evaluate conclusions made about the relationship between variables;
- 2) provide a clear explanation of cellular reproduction, protein synthesis, and the inheritance of traits;

- 3) provide a clear explanation and examples of the mechanisms that drive change in species over time (e.g. natural selection, sexual selection, genetic drift, gene flow, and mutation);
- 4) name human skeletal elements and their features, state what side they are from, estimate the sex of the individual, and identify bony lesions, if present.
- 5) be cognizant of cultural sensitivities, explain why we should or should not continue to study human skeletal remains;
- 6) explain to taxpayers why the Canadian government should or should not continue to fund research on non-human primates (e.g. How, exactly, might this work be relevant to the people of Canada?);
- 7) delineate the evidence for human evolution (For example, if you meet somebody at a bar who argues that humans originated 6,000 years ago through divine intervention, you will be able to suggest a different explanation for human origins, based on fossil, genetic, archaeological, and paleoenvironmental evidence.);

READINGS AND TEXTBOOKS

In the schedule below, you'll find a list of the **required** readings, videos, and podcasts. Optional readings are provided to enhance your knowledge of the subject in question.

Keep in mind that *you are not finished with the reading, podcast, or video assignment until you thoroughly understand it*. This will sometimes require you to read, listen to, or watch the assigned material more than once. An effective way of ensuring comprehension is to read, listen to, or watch the assignment then go back through it and summarize its main points and supporting evidence in your notebook.

REQUIRED TECHNOLOGY and EQUIPMENT

You will need access to a computer or similar equipment to enable you to read and post assignments on the class D2L site.

COURSE REQUIREMENTS AND ASSESSMENT

The metrics used in this course are designed to assess different types of knowledge and to ensure that my TA and I can determine where students might benefit from additional assistance to master the material. The marking components are as follows:

- Question sets & Learning journal (33%)

Weekly, you will receive short questions about the content of reading assignments, as well as questions that ask you to reflect on what you are learning, such as describing the most interesting thing you learned from the reading. Weekly, we will discuss your answers in small groups then as a class. How long should your answers be? This depends, but answers must

show that you gave each question a lot of thought and responded accordingly. Some can be answered with a brief sentence, while others require more. For example, if you answer question one of question set one ("How is social science research done?"), by stating that "It seeks to understand how humans operate as social animals without overgeneralizing on the basis of personal experience." --that would be a good start, but a few more sentences, including an example, would be required to demonstrate that you understand this way of knowing. In some cases, there will be no single or clear answer.

Do not cut and paste text from the readings *or* work with a classmate to answer the questions; rather, answer the questions in your own words. In evaluating your question sets, first we will determine whether or not all questions have been answered. If you did not, for example, answer 3 of 11 questions, we will deduct 27% (3/11) from your overall score. Second, we will carefully assess your work on 2 to 5 of the questions. Assuming you have completed all of the assigned questions, your work on the questions we carefully assess will determine your overall question set score.

You will keep a **learning journal** that encourages you to reflect on what you learned from the assigned readings. Weekly, we will discuss your answers in small groups then as a class. How long should your journal be? Again, the answer is, "it depends". The journal is for you but must evidence effort on your part. We'll review your journal weekly to see that you are exerting this effort and to determine whether you are grasping the concepts.

- Lab work (26%) Weekly we will evaluate your work in the lab.

a) *Participation* (20% of lab work score): Your TA will observe your activities in each lab and score your participation based on your participation in all aspects of the lab; consistent engagement with your lab partners; and handling of the equipment, bones, and fossil casts.

If you miss more than five minutes of class by arriving late or leaving early, your score will automatically drop one point. If you arrive 10 minutes or more after the start of the class, your score will automatically drop two points. If you miss more than 15 minutes of class, you will earn a zero for the discussion for that day.

b) *Lab report* (80% of lab work score) Your TA will generally collect your lab each week and return it to you in class the following week. To evaluate your work, your TA will first check to see that the lab is complete. If the lab has 18 questions and you've answered only 15, we will deduct 17% (3/18) from your mark. Your TA will then mark those questions that require a synthesis of your findings. Assuming that you answer all of the questions, your TA's assessment of these questions will determine your overall mark on your lab report.

For *any* credit, your lab report must exhibit intellectual investment, critical thinking, be supported with data where required, and be written in *your own words*, not those of your lab partners. The "Lab Work & Question Set Grading Rubric" is in the Course Documents section of D2L. Familiarize yourself with the grading rubric and criteria for each letter grade prior to attending the first lab.

- Primate ethology lab (5%)

This lab (Lab #9) will be completed on your own time at the Calgary Zoo with the purpose of providing you with exposure to the study of non-human primate behavior. The observation of

the nonhuman primates will generally require 3-5 hours at the Calgary Zoo. To enter the zoo, you will need to purchase a ticket for \$34.95.

- Lab practicals (36%)

Your knowledge of the material covered in this course will be evaluated, in part, in three lab practicals. In lab practicals, you will have to identify actual items such as fossils, bones, structures of DNA, etc. that you've studied in lab. For example, you may be given a particular bone and asked to name it, the side of the body from which it came, and other information it might provide. On each practical you should expect some items that you haven't seen in lab, such as a new model, a different bone, or fossil.

The lab practicals will generally last about 25 minutes at the beginning of the class and be structured as "bell ringers"; that is, the questions will be laid out in stations around the lab and you will move from station to station in the lab every time a bell rings. In some cases, your lab practical may also include an essay question. In all cases, lab practicals are closed book and you will not be allowed to consult notes during the practical.

Your final grade will be calculated as follows:

Component	Percentage of Overall Course Grade
Question sets & learning journal	33%
Lab work ¹	26%
Primate ethology lab	5%
Lab practicals	36%

¹ This does not include the primate ethology lab report.

Missed exams/tests Missed examinations/tests cannot be made up without the approval of the instructor. Exams may only be deferred in the case of serious illness or medical emergency, religious observance, or domestic affliction (see: <https://www.ucalgary.ca/registrar/exams/deferred-final-exams>).

Students who miss a test/exam have up to **48 hours** to contact the instructor to ask for a makeup test/exam. Students who do not schedule a makeup test/exam with the instructor within this 48-hour period forfeit the right to a makeup test/exam. Makeup tests/exams may differ significantly (in form and/or content) from the regularly scheduled test/exam. Once approved by the instructor a makeup test/exam must be written within **two weeks** of the missed test/exam on a day/time scheduled by the instructor.

Regarding documentation Students may provide supporting documentation for an exemption/special request. This may include, but is not limited to, a prolonged absence from a course where participation is required, a missed course assessment, a deferred examination, or an appeal. Students are encouraged to submit documentation that will support their situation.

The decision to provide supporting documentation that best suits the situation is at the discretion of the student. Students cannot be required to provide specific supporting documentation, such as a medical note. Falsification of any supporting documentation will be taken very seriously and may result in disciplinary action through the Academic Discipline regulations or the Student Non-Academic Misconduct policy.

Reappraisal of Graded Term Work: <http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

Reappraisal of Final Grade: <http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

Department of Anthropology and Archaeology Grading Scheme:

A+	95 – 100%	B+	80 – 84.9%	C+	67 – 70.9%	D+	55 – 58.9%
A	90 – 94.9%	B	75 – 79.9%	C	63 – 66.9%	D	50 – 54.9%
A-	85 – 89.9%	B-	71 – 74.9%	C-	59 – 62.9%	F	< 50%

*****Please note that no extra credit or ‘make up’ work is available in this class*****

You do not need to pass each course component to earn a passing grade in the class

Land Acknowledgement

The Department of Anthropology and Archaeology acknowledges the traditional territories of the people of the Treaty 7 region in Southern Alberta, which includes the Blackfoot Confederacy (comprising the Siksika, Piikani, and Kainai First Nations), as well as the Tsuut’ina First Nation, and the Stoney Nakoda (including the Chiniki, Bearspaw, and Wesley First Nations). The City of Calgary is also home to Métis Nation of Alberta, Region 3.

Acknowledgment and Respect for Diversity

The Department of Anthropology and Archaeology views diversity of identity as a strength and resource. Your experiences and different perspectives are encouraged and add to a rich learning environment that fosters critical thought through respectful discussion and inclusion.

COURSE POLICIES

1. How can you get in touch with the TA or me? If you have a question, it may already be answered in this this syllabus, course assignment documents, course rubrics, or D2L. Check there first. If you have questions about the class material *that are not answered in these domains*, please contact me. If you have questions about technical aspects of the class that are not answered elsewhere, please contact the teaching assistant. If you have a question about a mark earned, arrange to meet with me in person to discuss this. If you would like to meet with me, please suggest some possible times when writing to me. Write ‘ANTH 350’ in the ‘Subject’ portion of the email. In the body of your message please provide your first and last name and use proper, not text-message, grammar. By identifying the subject of your email and writing a clear message, you will help your TA and me to reply more efficiently to your emails. We will do our best to reply within one business day to your message.

2. Office Hours: Whether you would like to discuss in greater detail something that was touched on in class or the assigned material or are having difficulty with some aspect of the course, both my TA and I are happy to meet with you. To schedule a meeting, please contact us with several suggested dates.

3. Phones & social media in class: Please do not use your phone and refrain from using social media in class. Unless you have my permission to do so via an Academic Accommodation, you may not record our class lectures.

UNIVERSITY POLICIES

ACADEMIC ACCOMMODATIONS

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit <https://live-ucalgary.ucalgary.ca/student-services/access>. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor or the Department Head. The full policy on Student Accommodations is available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure>.

ACADEMIC INTEGRITY POLICY

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. The University Calendar includes a statement on the principles of conduct expected of all members of the university community (including students, faculty, administrators, any category of staff, practicum supervisors, and volunteers), whether on or off university property. This statement applies in all situations where members of the university community are acting in their university capacities. All members of the university community have a responsibility to familiarize themselves with the principles of conduct statement, which is available at: www.ucalgary.ca/pubs/calendar/current/k.html.

ACADEMIC MISCONDUCT

The University of Calgary is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect.

Academic dishonesty is not an acceptable activity at the University of Calgary, and students are **strongly advised** to read the Student Misconduct section in the University Calendar at: www.ucalgary.ca/pubs/calendar/current/k-3.html. Often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are (1) presenting another student's work as your own, (2) presenting an author's work or ideas as your own without adequate citation, and (3) using work completed for another course. Such activities will not be

tolerated in this course, and students suspected of academic misconduct will be dealt with according to the procedures outlined in the calendar at: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure>

For students wishing to know more about what constitutes plagiarism and how to properly cite the work of others, the Department of Geography recommends that they attend Academic Integrity workshops offered through the Student Success Centre:
<https://www.ucalgary.ca/student-services/student-success/learning/academic-integrity>

INSTRUCTOR INTELLECTUAL PROPERTY

Course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the professor(s). These materials may NOT be reproduced, redistributed or copied without the explicit consent of the professor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing. Information on Instructor Intellectual Property can be found at <https://www.ucalgary.ca/legal-services/university-policies-procedures/intellectual-property-policy>

FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary.

COPYRIGHT LEGISLATION

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy>) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks, etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

SUPPORTS FOR STUDENT LEARNING, SUCCESS, AND SAFETY

Please visit the Registrar's website at: <https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

- Wellness and Mental Health Resources
- Student Success Centre
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information

- Emergency Evacuation/Assembly Points
- Safewalk

TENTATIVE CLASS SCHEDULE

Date	Lab #	Topic	Reading ¹
Jan. 11	1	Physiological homeostasis, stress, science, and human variation	Your syllabus! Zimmer & Emlen (2016)- Ch. 1
Jan. 18	2	Forces of Evolution: Natural Selection	Zimmer & Emlen (2016)- Ch. 2, Creation (2009 film), HHMI (ND, finch video)
Jan. 25	3	Natural Selection (cont.) & Molecular Genetics	Bragg (2001)-podcast, Zimmer & Emlen (2016)- Ch. 5, HHMI (ND)- finch video, film: " Creation "
Feb. 1	4	Population genetics & Inheritance of traits	Lewis (2020)- Ch. 15
Feb. 8	5	Forces of Evolution: Hardy-Weinberg, Genetic Drift (Founder Effect)	BBC & Rosling (2010), Smith (2014), Anywhere Math (ND), article of choice
Feb. 15	6	Lab Practical # 1 (covers Labs 1-5) Human skeletal biology I: cranium	Grimaldi, J (2009), BBC (2010), Salt (2009), Written in Bone, Keenleyside & Lazenby (2015)
Feb. 22	Reading Week: No classes		
Mar. 1	7	Human skeletal biology II: post-crania	Keenleyside & Lazenby (2015), Barry (2017), 2 articles of choice
Mar. 8	8	Lab Practical # 2 (covers Labs 6-7) Human skeletal biology III: age & sex estimation of skeletons, skeletal lesions	Preston (2014), Thompson (2015), articles of choice
Mar. 15	9	Primatology- <i>You go to the zoo on your own any time prior to Mar.15th. On Mar. 15th, you will turn in your work and discuss your findings.</i>	Williams (2010)- Ch. 5, Marks (2018)
Mar. 22	10	Paleoanthropology: Oligocene to Pliocene	First Primates (2008), Marks (2018)
Mar. 29	11	Paleoanthropology: Genus <i>Homo</i>	Your Inner Monkey (2014), Wilson (2003), Warinner (2013)
Apr. 5	12	Review class	n/a

Date	Lab #	Topic	Reading ¹
Apr. 12	13	Lab Practical # 3 (covers Labs 8-10 and evolutionary mechanisms considered in Class 3/Lab 2)	n/a

¹ Details concerning the assigned readings, podcasts, and videos can be found in the Question Sets for each week in D2L. Readings, podcasts, and videos assigned may change during the semester if I find a better source. Both the Question Sets and your labs will be posted in D2L at least one week prior to each lab. Note that you must read the lab for each week prior to coming to class.

IMPORTANT DATES

M Jan 9	First day of Winter Term lectures
R Jan 19	Last day to drop a class without a financial penalty
F Jan 20	Last day to add or swap a course
F Jan 27	Fee payment deadline for Winter Term full and half courses.
Feb 20-24	Reading Break. No classes.
F Apr 7	Good Friday, University closed. No classes.
M Apr 10	Easter Monday, University closed. No classes.
W Apr 12	Winter Term Lectures End. Last day to withdraw with permission from Winter Term half courses.
Apr 15-26	Winter Final Exam Period

<https://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html#fall2017>