



## ANTH 350.01: Laboratory Practice in Biological Anthropology Department of Anthropology and Archaeology

### Course Outline, Winter 2022

**PRE-REQUISITE:** ANTH201

**CLASSROOM LOCATION:** ES 743

This course will be **in-person**.

\*one lecture at the Calgary Zoo

**CLASS DAYS & TIMES:** in-person lecture, Mondays 10:00 – 10:50

In-person lab, Mondays 11:00 – 12:50

**INSTRUCTOR:** Dr. Kathleen Reinhardt

**Office:** ES 602E

**E-mail:** kathleen.reinhardt@ucalgary.ca

**Office Hours:** Mon/Wed 2:00 – 3:00pm

**Tel:** (403) 220-6688

#### INSTRUCTOR EMAIL POLICY:

Please note that all course communications must occur through your @ucalgary email, and I will respond to emails sent via student's @ucalgary emails within 48 hours. Please include the course title (ANTH 350 L01) in the subject heading, and your full name in the email.

**NAME & EMAIL CONTACT OF TEACHING ASSISTANT(S):** Abby Colby, Abigail.Colby@ucalgary.ca

#### COURSE DESCRIPTION:

This course is designed to help us to answer question in Biological Anthropology by providing a concentrated introduction to human biology, the human place in the animal kingdom, the evidence for primate and human evolution, and how to analyse and present data in the field. We will consider the **scientific method** and **evolutionary theory**, as they provide the foundation upon which biological anthropologists base their work. We will then cover **human genetics** at the molecular and population levels. Next, we will learn to identify both **primate and human skeletal** remains, which will help us to understand the lives of prehistoric human populations and provide a basis for subsequent sections on the fossil evidence for human evolution. In order to help us understand our place in the natural world, we will next turn our attention **to biological classification** and comparative studies. Subsequently, we will cover the evidence for human evolution and the major developments in the evolution of our species. This consideration of the evolution of humans should help us to understand modern human biology, our relationship with the rest of the natural world, and possibly inform our future action as a species. With the understanding that we share recent ancestors with other primates, we will then study non-human **primate ecology**. Primate ecology can help us to determine whether aspects of our behaviors and mental capacities reflect ancestral evolutionary heritage or are new features evolved or socially acquired by our lineage. We will then learn **how to analyse and present data collection** both through behavioural observations and laboratory measurements, two approaches largely used across the field of Biological Anthropology research.

#### \*COURSE LEARNING OUTCOMES

At the end of this course, students will be able to:

1. List ways of knowing and use 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. Identify the types, features, sex, side, and several lesions of human skeletal remains;
5. Identify primate skeletons, and distinguish between primate groups, age and sex;
6. Collect, analyze and present data on primate behaviour and morphology;
7. Delineate the evidence for human evolution.

**\*LEARNING RESOURCES**

- Required readings and labs will be posted on D2L at least one week before each class. (see d2L.ucalgary.ca)

**\*LEARNING TECHNOLOGIES AND REQUIREMENTS**

In order to successfully engage in their learning experiences at the University of Calgary, students taking in-person classes are required to have reliable access to the following technology, to access the D2L site which contains lecture slides, weekly readings and other relevant class resources and materials:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Current antivirus and/or firewall software enabled;
- Broadband internet connection.

**CLASS SCHEDULE**

Grey font = no class

\* indicates no on-campus meeting

**Important Dates**

January 10 – First day of ANTH350

February 14 – Lab Practical 1

February 20 to 26 – Term break, no classes

Mar 28 – Lab Practical 2

April 04 – Calgary Zoo Lab

April 18 – Cumulative Lab Journal due

(Topics subject to change)

Jan 10 <b>No Lab</b>	Introduction to the Course Social Science, Anthropology and Biological Anthropology
Jan 17 Lab 1	Physiological homeostasis, stress, science and human variation The Scientific Method
Jan 24 Lab 2	Forces of Evolution: Natural Selection Darwin’s Finches

Jan 31 Lab 3	Population genetics and Inheritance of traits Hardy-Weinberg, Genetic drift, Founder Effect
Feb 07 Lab 4	Presenting scientific research Data management and statistical analyses
<b>Feb 14</b> Lab 5	<b>Lab Practical 1</b> What makes a primate? Distinguishing primates from other mammals
Feb 21	Term Break
Feb 28 Lab 6	Primate skeletal biology: Distinguishing the different primate groups Identifying ecology from morphology
Mar 07 Lab 7	Human skeletal biology pt. I Postcranial bones & features
Mar 14 Lab 8	Human skeletal biology pt. II Skull and dentition
Mar 21 Lab 9	Paleoanthropology Comparative morphology of apes and hominins
<b>Mar 28</b> Lab 10	<b>Lab Practical 2</b> Measuring behaviour
<b>Apr 04/Lab 11 *</b>	Primate ethnology at the <b>Calgary Zoo</b>
Apr 11	Make-up Lab

#### **\*EXAMINATIONS**

This course has no exams. Students are graded on the quality of work produced in two Lab Practicals, the production of a Scientific Poster and Lab Journal created over the course (described below).

#### **\*ASSESSMENT COMPONENTS**

- Closed book: the use of aids such as textbooks, course notes or electronic devices will not be permitted during Lab Practical's.

**Lab Practical 1 (20%):** An in-person lab practical (closed book), covering material from discussions and labs from Jan 10 – Feb 07 (Labs 1-4). The assessment is structured in stations around the lab. Students will move from station to station in timed sessions, where lab material are provided. The practical will last the duration of class discussions, after which labs will resume as usual.

Date: February 14, in-class

**Lab Practical 2 (30%):** An in-person lab practical (closed book), based on materials from discussions and labs from Feb 14 to Mar 21 (Labs 5-9). The assessment is structured in stations around the lab. The assessment is structured in stations around the lab. Students will move from station to station in timed sessions, where lab material are provided. The practical will last the duration of class discussions, after which labs will resume as usual.

Date: March 28, in-class

**Scientific Poster (20%):** You will create a research poster on topics in Biological Anthropology discussed throughout this course, designed in the style of one presented for a scientific meeting. The poster should be composed of a summary of 2-5 published articles, including self-produced tables and figures.

Date: April 11 by 11:59pm (via D2L)

**Cumulative Lab Journal (30%):** Across the duration of this course, you will partake in weekly in-class assignments and exercises. You will produce a Lab Journal, comprising each of these assignments, including: 1.) Weekly Question sets; 2.) Course reflections; 3.) Lab Reports; 4.) Primate Ethology Lab. This product can then serve you as your own personal Lab Journal/Manual, to serve in future studies/research. Weekly question sets will additionally be submitted each week before class (via D2L) to reflect class participation.

I suggest using a notebook or binder with enough space for 30-40 pages, to include this material. You may choose to hand-write or type each week's assignments. This work will be assessed on: correctness of lab assignments, organization, completeness, and clarity of writing and presentation.

Date: **Weekly question sets** - no later than 9:45am each Monday, via D2L

**Cumulative Journal:** due April 18

#### **\*MISSED OR LATE ASSIGNMENTS**

Classroom materials missed due to absenteeism are the sole responsibility of the student. If students miss a required component of the course, they must contact the instructor in writing within 24 hours to discuss options to submit and/or make-up for that component.

Assignments submitted after the deadline will have 5% of their mark deducted for each day late.

**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>

Students may be asked to 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. Supporting documentation may be dependent on the reason noted in their personal statement/explanation provided to explain their situation. This could be medical certificate/documentation, references, police reports, invitation letter, or a statutory declaration, etc. 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.

Students can make a Statutory Declaration as their supporting documentation (available at [ucalgary.ca/registrar](http://ucalgary.ca/registrar)). This requires students to make a declaration in the presence of a Commissioner for Oaths. It demonstrates the importance of honest and accurate information provided and is a legally binding declaration. Several registered Commissioners for Oaths are available to students at no charge, on campus, please see [ucalgary.ca/registrar](http://ucalgary.ca/registrar).

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.

### **\*GRADING**

A student's final grade for the course is the sum of the separate assignments. It is not necessary to pass each assignment separately in order to pass the course.

Letter grades are assigned according to the following:

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

University's undergraduate/graduate grading system:

<https://www.ucalgary.ca/pubs/calendar/current/f-1.html>.

## **ADDITIONAL COURSE INFORMATION**

### **CLASS REGULATIONS AND PARTICIPATION EXPECTATIONS**

Students are expected to attend in-person class regularly and to be fully present and engaged in class discussions.

- **Try to arrive on time** to prevent disruption to the class. If you are late, please take a seat near the door to minimize disruption.
- **Leaving class during the lecture can be disruptive and is strongly discouraged.** If you know you have to leave early one day, please let me know and sit near a door.
- **Conversing with classmates during labs is encouraged.** This is a discussion-based course, and you're encouraged to share your ideas and questions with the class. However, please refrain from discussions unrelated to the coursework, as this is unfair to your classmates who may miss material that will subsequently appear in practical exams and assignments.

## **CONDUCT**

Students, employees, and academic staff are also expected to demonstrate behaviour in class that promotes and maintains a positive and productive learning environment. As members of the University community, students, employees, and academic staff are expected to demonstrate conduct that is consistent with the University of Calgary Calendar, the Code of Conduct and Non-Academic Misconduct policy and procedures, which can be found at: <http://www.ucalgary.ca/pubs/calendar/current/k.html>

## **USE OF INTERNET AND ELECTRONIC COMMUNICATION DEVICES IN CLASS**

Students are responsible for being aware of the University's Internet and email use policy, which can be found at <https://www.ucalgary.ca/policies/files/policies/electronic-communications-policy.pdf>

- **The use of laptops, smart phones, iPads, cell phones etc. is not permitted in this class.** Flat surface devices with stylus (i.e. no visual or auditory distraction to others) are allowed, but the assumption is that you are taking hand written notes and are not online. You can use your devices while waiting for class to start but they must be put away as soon as I start the lecture.

## **COURSE EVALUATIONS AND STUDENT FEEDBACK**

Student feedback will be sought at the end of the course through the standard University Student Ratings of Instruction (USRI) and Faculty course evaluation forms. A midterm evaluation may also be included to provide students an opportunity to provide feedback, for the instructor to adjust their approaches to teaching and learning, and to continuously improve the course. Students are welcome to discuss the process and content of the course at any time with the instructor.

## **COURSE POLICIES AND PROCEDURES**

### **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 MISCONDUCT**

“Academic Misconduct” includes such things as cheating, falsification, plagiarism, unauthorized assistance, and failure to comply with exam regulations or an Instructor’s expectations regarding conduct required of Students completing academic assessments. Students who participate in, or encourage the commission of, Academic Misconduct will be subject to disciplinary action which could include Probation, Suspension, or Expulsion from the University. For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <https://www.ucalgary.ca/pubs/calendar/current/k-3.html>

Further support on academic integrity is available at: <https://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.

### **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.

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### **SEXUAL VIOLENCE POLICY**

The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. The University of Calgary's sexual violence policy guides us in how we respond to incidents of sexual violence, including supports available to those who have experienced or witnessed sexual violence, or those who are alleged to have committed sexual violence. It provides clear response procedures and timelines, defines complex concepts, and addresses incidents that occur off-campus in certain circumstances. Please see the policy available at <https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>

**\*OTHER IMPORTANT INFORMATION**

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
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information
- Emergency Evacuation/Assembly Points
- Safewalk