
**ARKY 555 (LEC01, LAB01)
Human Osteology
GFC Hours 3-2
Winter 2023**

Instructor:	Dr. Courtney McConnan Borstad (she/her)	Lecture Location:	ES 743
Phone:		Lecture Days/Time:	TR 1230 - 1345
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Office:			
Office Hours:	By appointment		
Teaching Assistant:	Lily Hou		
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Prerequisite(s): ANTH 309, ANTH 350, or ARKY 417.

COURSE DESCRIPTION

Identification and interpretation of human skeletal and dental remains. Emphasis is on functional anatomy and reconstruction of prehistoric lifeways.

LEARNING OUTCOMES:

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

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

1. Demonstrate understanding of the ethical responsibilities of studying and curating human remains.
2. Correctly identify the bones of the human skeleton and their associated landmarks on anatomical models, on bone, and/or in illustrations.
3. Describe the structure and function of bone.
4. Describe the processes involved with bone growth and development.
5. Correctly apply and interpret standard techniques for estimating age, sex, and stature.
6. Distinguish between expected skeletal variation and common pathological/traumatic/taphonomic processes that affect bone.
7. Describe applications of current bioarchaeological research (including, but not limited

to, paleodemographic analyses, biological distance, and dietary reconstruction).

READINGS AND TEXTBOOKS:

- The Human Bone Manual. 2005. Tim. D. White and Pieter A. Folkens. Academic Press. **Required.**
- Standards for Data Collection from Human Skeleton Remains: Proceedings of a Seminar at The Field Museum of Natural History. 1994. Editors: Jane E. Buikstra and Douglas H. Ubelaker. Arkansas Archaeological Survey Research Series No. 44. **Required.**
- Additional **required** readings as indicated in the Schedule below. Links will be provided on D2L.

REQUIRED TECHNOLOGY and EQUIPMENT:

Students will need a computer or similar device to access D2L and the course materials online.

COURSE REQUIREMENTS AND ASSESSMENT

Component	Weight	Due Date
Lab Practical #1	15%	See course outline below
Midterm Exam	20%	Feb. 28, 2023
Lab Practical #2	15%	See course outline below
Osteobiography Lab Report	10%	Apr. 11, 2023
Final Exam	40%	TBA (Registrar scheduled)

EXAMS

- 1) Lab Practical Exams
 - a. These will be held during your scheduled 555 lab time and consist of “bell-ringer” questions held at a number of stations in the room. You will have a short amount of time (usually 60-90 seconds) to identify the bone and answer any other questions at that particular station before moving to the next.
 - b. These lab practicals are closed book.
- 2) Midterm Exam
 - a. The ARKY 555 midterm will consist of multiple choice, diagram labeling, and short answer questions. The exam will cover material from the first class up until and including the Feb 16th class, including assigned readings.
 - b. The midterm is closed book.
- 3) Final Exam
 - a. The final exam will have a similar format to the midterm exam (multiple choice, short answer, and labeling diagram questions).
 - b. It is cumulative for the material covered in lectures and the labs.
 - c. The final exam is closed book.

ASSIGNMENT

1) Osteobiography Lab Report 10%

- a. This is a report of your bioarchaeological assessment of a given individual or assemblage.
- b. Access to the materials will occur over the last two full weeks of the lab course component.
- c. Specific grading expectations and criteria are posted on D2L and will be discussed further in class.
- d. The lab report is to be handed in via the D2L dropbox.
- e. Late submissions will not be accepted without instructor approval.

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.

Deferral of the registrar-scheduled final exam requires Registrar approval
<https://www.ucalgary.ca/registrar/exams/deferred-final-exams>

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%
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*****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

- Please keep food and drinks outside the lab (ES 743) to prevent spills and messes.
- Photography or videorecording of the lab materials, even if intended for personal use in studying, is not permitted.

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 COURSE SCHEDULE

Please note, this schedule is subject to change based upon time constraints

Date	Topic	Lab Activity	Readings
T Jan 10	Introduction to course/syllabus Terminology	Lab etiquette and safety; Anatomical descriptors	White & Folkens Ch. 6
R Jan 12	Bioarchaeology and ethics Bone structure and function		Lambert and Walker 2019 (pp. 3-42)
T Jan 17	Bone structure and function	Using the microscope; Bone histology	White & Folkens Ch. 4
R Jan 19	Bone growth and remodelling		
T Jan 24	Skull- Structure and function; anatomical landmarks	Skull anatomy	White & Folkens Ch. 7; Buikstra and Ubelaker pp. 71-74.
R Jan 26	Skull- normal variations		
T Jan 31	Spine and thorax- structure and function	Hyoid, vertebrae, and thorax anatomy	White & Folkens Ch. 7 and 9
R Feb 2	Spine and thorax- normal variations		
T Feb 7	Shoulder and arm- Structure and function	Shoulder and arm anatomy	White & Folkens Ch. 11, 12 ,13

Date	Topic	Lab Activity	Readings
R Feb 9	Shoulder and arm- normal variations		
T Feb 14	Taphonomy and post-mortem modifications	LAB PRACTICAL #1	Symes 2022
R Feb 16	Commingled remains		
Feb 19-25	Term Break, No Classes		
T Feb 28	IN-CLASS MIDTERM EXAM Lecture following: Pelvis- Structure and function	Os coxae, sacrum, coccyx	
R Mar 2	Continue with pelvis		White & Folkens Ch. 14; Cox 2000.
T Mar 7	Lower limbs and feet- Structure and function	Lower limb and foot anatomy	White & Folkens Ch. 15, 16
R Mar 9	Lower limbs and feet- Normal variation		Ostendorf Smith & Woollen 2020
T Mar 14	Teeth: Micro- and macrostructures	Dentition: Permanent and Deciduous	White & Folkens Ch. 8; Buikstra & Ubelaker Ch. 5
R Mar 16	Cultural modifications of teeth		Lee & Larson 2017
T Mar 21	Palaeopathology		Halcrow et al. 2013
R Mar 23	Chemical Analyses of Bone and Teeth in Bioarchaeology	LAB PRACTICAL #2	Gregoricka 2021
T Mar 28	What is an osteobiography? Age and Sex Estimation in Adults: Theoretical and methodological considerations	Sex and Age Estimation in Adults and Juveniles Start of osteobiography lab reports	White & Folkens Ch. 19 (pp.359-400); Buikstra and Ubelaker Ch. 3, Hollimon 2012 Ubelaker & DeGaglia 2017
R Mar 30	Age and Sex Estimation in Juveniles		Buikstra and Ubelaker Ch. 4; Schaefer et al. 2009, Ch. 9 pp. 337-355.
T Apr 4	Metric and Non-metric Analyses: Methods, theory, and applications	Continue with lab reports. Stature regression; use of osteometric	Pilloud and Hefner 2016; Dunn et al 2020.
R Apr 6	Metric and Non-metric Analyses		Buikstra and Ubelaker Ch. 8

Date	Topic	Lab Activity	Readings
		boards, calipers, dental casts, etc.	
T Apr 11	Paleodemography and Course Review	OSTEOBIOGRAPHY LAB REPORTS DUE	Milner et al. 2019
April 15-26	Winter Final Exam Period		

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>