

Department of Anthropology and Archaeology
University of Calgary
ARCHAEOLOGY 555
Human Osteology
Winter 2022

Instructor: Marina Elliott
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Teaching Assistant: Lily Hou

Office hours: Tues/Thurs 13h00-14h00, by appointment, via Zoom

Lectures: Tuesdays/Thursdays 09h30-10h45

Location: ES 743

Lab: Tues or Thurs 11:00 – 12:50 (labs start Jan 18)

Location: ES 743

Prerequisite(s): Anthropology 309 or 350 or Archaeology 417

Antirequisite(s): Archaeology 613.

Course Description:

Identification and interpretation of modern human skeletal and dental remains. Emphasis on functional anatomy, applied osteology and paleopathology.

Course Objectives:

This course will teach students to identify the 206 bones and 32 teeth of the human body and how these elements and their features are used by biological anthropologists to analyze remains from prehistoric and modern contexts. Lectures and labs will cover basic bone biology, growth and development, normal and abnormal anatomy and variation, and distinguishing human from non-human remains. Students will learn how to document the metric and non-metric aspects of bones, and how to use this information to estimate aspects of age, sex, stature, and health. We will discuss how skeletal remains are used in biological anthropology to interpret the past and present, and review the limits of the methods currently available. The responsible and ethical study of human remains will also be discussed.

Course Learning Outcomes:

- A detailed knowledge of human skeletal anatomy
- The ability to distinguish human from non-human remains
- The ability to estimate basic features from skeletal remains, including sex, age at death, and stature
- The ability to use standard osteometric equipment
- An understanding of how skeletal analyses contribute to studies in biological anthropology, including comparative anatomy, paleoanthropology, bioarchaeology, and forensic anthropology
- The ability to prepare a laboratory report

Meeting Schedule:

Section	Meeting Time	Meeting Dates
LEC 01	09h30-10-45	Tuesday and Thursday Classes begin Jan 10
LAB 01-02	11:00 am – 12:45 PM	- Tuesday <i>OR</i> Thursday - Labs begin the second week of class. *No lecture or lab Feb 21-25

Required Textbook and Lab Manual: (available at U of Calgary bookstore; online version or e-book is also acceptable)

1. *Human Bone Manual*, White, T.D. and Folkens, P.A. (2005) Academic Press/ Elsevier.
2. *Standards for data collection from human skeletal remains*, edited by Jane E. Buikstra and Douglas H. Ubelaker, Arkansas Archaeological Survey Research Series No. 44, latest edition.

** Please bring BOTH these texts to every class

Other recommended resources:

1. *Skeleton Keys: an introduction to Human Skeletal Morphology, Development and Analysis*, J.H. Schwartz, Oxford University Press, 2nd edition.
2. *Human Osteology and Skeletal Radiology: An atlas and guide*, Evan Matshes et al. CRC Press
3. *Human Osteology: a laboratory and field manual*. Bill Bass, Missouri Archaeological Society, 4th Edition.

Other required readings:

Additional readings will be made available on a list provided separately on D2L. These can also be accessed online from the [U of C Library](#).

Learning Technologies and Requirements:

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology.

- A computer with a supported operating system, as well as security and malware updates
- Standard Word processing software
- A current and updates web browser
- Webcam (built in or external), Microphone and speaker (built in or external)
- Broadband internet connection

Grading:

Bone Quizzes 20% (four quizzes, 5% each)
Lab worksheets 20% (four sheets, 5% each)
Lab Assignments 40% (four assignments, 10% each)
Final Exam 20% (Date set by Registrar's Office)

- * Attendance and participation in **BOTH** lectures and labs is required.
- * You need not pass all components to receive a passing grade in the course.

Bone Quizzes: Bone quizzes are closed-book “bell-ringer” (timed) quizzes that require identification of bones, bone features, and/or fragments. They will take place in lab. Pens, pencils, and erasers are permitted, but no other materials or devices are allowed, including course notes, e-texts, or online resources.

Lab worksheets: Worksheets will be given out during the lab to cover lecture material and provide extra practice. These are ‘open-book’, but must be completed **in-lab** and handed in at the end of each lab. Textbooks and notes are permitted, but electronic devices are not.

Lab Assignments: There will be four lab assignments, each worth 10%. These assignments will focus on practical aspects of the methods presented in lecture and lab. Students will use lab time to collect data and will complete the write-up out of class time. **Lab assignments will be due at the beginning of the following lab class.**

Please note: Labs involve working with real human skeletal remains and students are expected to handle the material with care and respect at all times.

Final Exam: The final exam will consist of fill-in-the-blank, multiple choice and short essay questions that draw from both the lecture and lab materials. You will have two hours to complete the exam. The final exam is closed-book: pens, pencils, and erasers are permitted, but no other materials or devices are allowed, including course notes, e-texts, or online resources.

Grading Scheme:

Each item of course work will be weighted as above and a final mark out of 100 calculated. This will then be converted to a letter grade as follows:

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%

Missed Exams or Assessments:

It is important that students attend quizzes in their assigned lab section. Students who are unable to take a scheduled quiz must contact the instructor as soon as possible before the quiz or within 24 hours to make necessary arrangements for the makeup quiz. Makeup quizzes will take place at a time set by the instructor or teaching assistant, normally within one week of the original quiz time. Make-up quizzes may be provided online. Deferred quizzes may be allowed only in the following circumstances: illness, domestic affliction, or religious conviction. **Holiday travel and misreading the course outline are not valid reasons for missing/late incomplete quizzes, exams, or assignments.**

** Late assignments have a penalty of 10% per day.

Please note: 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). 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.

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.

Deferral of the registrar scheduled final exam requires Registrar approval. Students may also refer to the following links for additional information:

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>

Lecture and Lab Schedule:

Week	TUES	THURS	Lab
Week 1: January 11/13	Course introduction Expectations and responsibilities Anatomical terminology	Bone biology: Function, Structure and Composition of human bone	<i>No Lab</i>
Week 2: January 18/20	Bone growth, development and remodeling Ethics in human osteology	Normal Anatomy: The Skull Part I	Introduction to the lab Lab worksheet 1 (5%) Lab 1 assigned
Week 3 January 25/27	Normal Anatomy: The Skull Part II	Normal Anatomy: Dentition	Lab 1 due (10%) Lab worksheet 2 (5%)
Week 4 February 1/3	Normal Anatomy: the axial skeleton (hyoid, spine, ribs, sternum, sacrum)	Methods: Human vs Non-human bone identification	Quiz 1 (5%)
Week 5 February 8/10	Normal anatomy: shoulder girdle, upper limbs & hands	Methods: Excavation and recovery	Lab 2 assigned
Week 6 February 15/17	Normal anatomy: the pelvis and lower limbs	Normal anatomy: metric and non- metric variation	Lab 2 Due (10%) Lab worksheet 3 (5%)
Week 7 February 21-25	No Classes: Reading week	No Classes: Reading week	No Classes: Reading week
Week 8 March 1/3	Individualization: creating a biological profile Adult age-at-death estimation	Individualization: Sex and stature estimation	Quiz 2 (5%)
Week 9 March 8/10	Individualization: Sub-adult age- at-death estimation	Individualization: Bioarcheology of children	Lab 3 assigned
Week 10 March 15/17	Individualization: Population affinity	Osteobiography: pathology and health	Lab 3 due (10%) Lab worksheet 4 (5%)
Week 11 March 22/24	Osteobiography: body modifications	Osteobiography: migration, movement and mingling	Quiz 3 (5%)
Week 12 March 29/31	Applications of osteology: paleoanthropology	Applications of osteology: bioarchaeology	Lab 4 assigned
Week 13 April 5/7	Applications of osteology: forensic anthropology	Applications of osteology: Future directions	Lab 4 due (10%) Quiz 4 (5%)
Week 14 April 12	Last day of classes – review and recap	Course complete	

E-mail:

Students are encouraged to use office hours to ask questions. For after-hours questions, the use of e-mail is acceptable. While instructors/TAs will try to answer your emails as soon as possible, they may not be able to do so on weekends or holidays. They will try to answer emails within two business days.

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.

Support and Resources:

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

- Emergency Evacuation/Assembly Points
- Wellness and Mental Health Resources
- Student Success Centre
- Student Ombuds Office
- Student Union (SU) Information
- Safewalk