



Department of Anthropology
Human Skeletal and Dental Biology
ANTH-4219
Winter 2022

CONTACT INFORMATION

Instructor: Dr. Whitaker
Email: kwhitake@lakeheadu.ca

Class times: Tues, Thurs 2:30 pm – 4:00 pm
Labs: Fri 11:30 am - 2:30 pm

Class location: Online through ZOOM / In person OA 2019
Lab Location: Online through ZOOM / In person OA 3001

Office Hours: Online through ZOOM/ In person Desk 5, next to office 3008 Tuesday 4:30-5:00 pm

Overview

Human osteology is an integral part to archaeological investigation. Beyond the associate evidence of the environment, structures and artefacts, human skeletons provide direct evidence of life in the past. Through the assessment of demographic profiles and paleopathology we are able to uncover information about the individual and a population in order to better inform us about continuation and change through both time and space.

Aims of the Course

Identify complete and fragmentary human bones and teeth.

Develop inferences about individuals and populations from skeletal remains.

Learn how human remains integrate with other aspects of archaeological inquiry.

Learning Objectives

Become proficient in several topics including bone biology, growth and development and functional morphology to enrich understanding of archaeologically derived osteological samples.

Be able to understand the complex inter-relationships between people and their wider environment.

Understand the strengths and weaknesses of osteological methods and practice.

Class Readings

The main text for this course will be:

White TD and PA Folkens. 2005. *The Human Bone Manual*. New York; Academic Press.

The majority of your readings that specifically apply to the labs will be derived from this text.

There will be additional readings from journal articles, as specified in the lecture outline in order to provide additional dimensions to the course. All of these readings are required, and you are expected to have completed them prior to the class in which they are discussed.

Assessments

Component	Value	Due Date
Scavenger Hunt	1% BONUS	January 23 by 11:59 pm
Attendance	5%	Ongoing
Bell-Ringers	30% (15% each)	#1 February 18 #2 April 1 Beginning of lab at 11:30 am
Lab Book	25%	Ongoing, due at end of each lab by 2:30 pm
History Cold Case Report	20%	March 10
Final Take-Home Exam	20%	April Exam Period April 11-24

COURSE SCAVENGER HUNT 1% BONUS – YOU MUST COMPLETE THE QUIZ TO PASS THE COURSE!

On the course website you will find a quiz which is focussed on being aware and understanding the content of the course. The aim is to make sure you are familiar with the course rules with respect to expectations as well as the various documents found in the Content section. You will have ten attempts to get 100% on the quiz, but it must be completed by 11:59 pm on January 23. If you achieve 100% you will receive a 1% bump to your final mark.

ATTENDANCE 5%

Attendance will be taken every class; this is because I do not teach the textbook. If you plan on passing this course, you are highly encouraged to come to class. Marks will be based on the following criteria: attending 90% or more classes receive 5%, attending 70-89% of classes receive 3%, attend 50-69% of classes receive 1.5%, attend less than 50% and you will receive 0 (zero).

BELL-RINGERS 15% EACH, 30% TOTAL

These will be approximately 1 (one) hour in length and will test your knowledge of the bones, landmarks and methods you have been learning throughout the course using timed stations. They will be cumulative, though they will mainly focus on the information learned since the last test. All possible landmark names are found in your lab book and the course textbook. The specific format for

our bell-ringers will be discussed during our first class, however the test will take place during the first hour of the lab (at 11:30 am) and will be done over ZOOM, with the exception of the first bell-ringer if we are back in person.

LAB BOOK 25%

The lab book will be used throughout the course (and it's free this year!) to guide you and provide the exercises you must complete. Make sure you read the relevant readings and sections before each lab and come prepared to complete your work while in lab. You will be submitting each weeks' pages at the end of each lab by email (unless we are in person!), **specifically due by 2:30 pm each Friday.**

HISTORY COLD CASE REPORT 20%

For this assignment you will watch an episode of History Cold Case (episode titles you can choose from will be available February 2), which are available on YouTube, and provide a 5 (five) page summary and review of the case, the methods used, conclusions reached and your overall opinion on the information contained in the program. Please use a minimum of 5 (five) scholarly sources to back up your opinion on the methods and conclusions. Finally, your concluding paragraph should discuss the value of these types of programs for audiences. Your report package will include: a title page, your report, a reference list using the required referencing format, and a completed Report Checklist. The package is **due March 10 at 4:00 pm**. If submitting by email, your single WORD file must be named Your Last Name Report (ie. Whitaker Report).

FINAL EXAM 20%

The exam will consist of essay questions that require you to extrapolate data and think critically. As a result of the lectures, labs, and assigned readings, you will have developed these skills throughout the course and as long as you have reviewed all of these components (which will enable you to draw in examples and create a discussion), this should be straightforward. **No outside reading or research is allowed (you will not pass the exam if you use outside research).** There will be a review during the last class, and you are free to discuss any concerns and questions you have with me. You will include a title page, a single Reference List, and a completed Final Exam Checklist, all in one file. **Please save your single Word file as Last Name Final Exam (ie. Whitaker Final Exam).** The take-home exam will take place **during the April exam schedule and will last 48 hours.** This cannot be submitted late and there are no extensions.

Lecture Schedule

DATE	LECTURE TOPIC	READINGS
JANUARY 11	INTRODUCTION	T: 1-6
JANUARY 13	MACRO AND MICROSCOPIC STRUCTURES	T: 31-48; PARAL ET AL. 2007
JANUARY 14	LAB 1: INTRODUCTION TO THE SKELETON	T: 67-74

JANUARY 18	THE SKULL	T: 75-86; OSSENBERG 2013
JANUARY 20	THE MORTUARY CONTEXT	T: 7-20; IRISH <i>ET AL.</i> 2005
JANUARY 21	LAB 2: THE SKULL	T: 87-126
JANUARY 25	THE AXIAL SKELETON	KEENLEYSIDE 2015; ARDAGNA <i>ET AL.</i> 2005
JANUARY 27	THE OSTEOLOGICAL PARADOX	WOOD <i>ET AL.</i> 1992
JANUARY 28	LAB 3: THE AXIAL SKELETON	T: 155-192
FEBRUARY 1	THE APPENDICULAR SKELETON	NAKAI <i>ET AL.</i> 2002, PATRICK AND WALDRON 2003
FEBRUARY 3	METHODOLOGY I	CHOVALOPOULOU <i>ET AL.</i> 2017; MAYS <i>ET AL.</i> 2004
FEBRUARY 4	LAB 4: THE APPENDICULAR SKELETON	T: 193-286
FEBRUARY 8	THE DENTITION	ERDALE 2008; DOMETT <i>ET AL.</i> 2013
FEBRUARY 10	METHODOLOGY II	ODES <i>ET AL.</i> 2017; CAROTENUTO <i>ET AL.</i> 2019
FEBRUARY 11	LAB 5: THE DENTITION	T: 127-54
FEBRUARY 15	SEXING THE SKELETON	WALRATH <i>ET AL.</i> 2004; KUZMINSKY <i>ET AL.</i> 2020
FEBRUARY 17	INTER AND INTRA OBSERVER ERROR	HEATHCOTE 1981; BECKETT 2017
FEBRUARY 18	LAB 6: BELL RINGER #1 + ESTIMATING BIOLOGICAL SEX	T: 385-97
FEBRUARY 21-25	READING WEEK	
MARCH 1	AGEING THE SUBADULT SKELETON	BECK AND SMITH 2019; PANY-KUCERA <i>ET AL.</i> 2019
MARCH 3	DIET AND QUALITY OF LIFE	T: 320-23; 411-14; ORTNER AND MAYS 1998
MARCH 4	LAB 7: SUBADULT AGE ESTIMATION	T: 359-366, 372-374
MARCH 8	AGEING THE ADULT SKELETON	FALYS AND LEWIS 2011; NIKITA 2014
MARCH 10	INTRODUCTION TO PALEOPATHOLOGY	T: 414-18; MILLER <i>ET AL.</i> 1996
MARCH 11	LAB 8: ADULT AGE ESTIMATION	T: 365-71, 374-85
MARCH 15	PALEODEMOGRAPHY AND THE DEMOGRAPHIC PROFILE	PAINE 2000
MARCH 17	DENTAL AND DEGENERATIVE DISEASE	T: 325-332; LUKACS 1992; WALDRON 1997
MARCH 18	LAB 9: THE DEMOGRAPHIC PROFILE	T: 398-411
MARCH 22	INFECTIOUS DISEASE	FARMER 1996; WOO <i>ET AL.</i> 2019
MARCH 24	INTRODUCTION TO FORENSICS	BROWN 2019; PINHEIRO <i>ET AL.</i> 2004;
MARCH 25	LAB 10: PALEOPATHOLOGY	T: 317-20

MARCH 29	TRAUMA	STIRLAND 1997; PROKOPEC AND HALMAN 1999
MARCH 31	TRAUMA AND TREATMENT IN THE ARCHAEOLOGICAL RECORD	GRAUER AND ROBERTS 1996
APRIL 1	LAB 11: BELL RINGER #2 + TRAUMA	T: 309-16
APRIL 5	ETHICS	T: 21-30; SNODDY ET AL. 2020
APRIL 7	WRAP-UP	BUIKSTRA AND GORDON 1981

Readings (this is the required format, points to pay attention to: Single space, LEFT alignment, NO indents, NO brackets around publication year, NO periods for initials, NO pg/vol just the numbers and PERIOD at the end of each reference.)

Paral V, K Witter and Z Tonar. 2007. Microscopic examination of ground sections – A simple method of distinguishing between bone and antler? *International Journal of Osteoarchaeology* 17: 627-34.

Ossenberg NS. 2013. Brief Communication: Cranial nonmetric trait database on the internet. *American Journal of Physical Anthropology* 152: 551-3.

Irish JD, M Kobusiewicz, J Kabacinski and R Schild. 2005. Short Communication: Two additional Egyptian Neolithic burials exhibiting unusual mortuary treatment of teeth. *International Journal of Osteoarchaeology* 15: 136-9.

Keenleyside A. 2015. Sagittal clefting of the fifth lumbar vertebrae of a young adult female from Apollonia Pontica, Bulgaria. *International Journal of Osteoarchaeology* 25: 234-37.

Ardagna Y, A Richier, G Vernet and O Dutour. 2005. A case of beheading dating from the Celtic Period (La Tène B, Sarliève-Grande Halle, France). *International Journal of Osteoarchaeology* 15: 73-76.

Wood JW, GR Milner, HC Harpending and KM Weiss. 1992. The Osteological Paradox: Problems of inferring prehistoric health from skeletal samples. *Current Anthropology* 33: 343-70.

Nakai M, K Inoue and S Hukuda. 2002. First paleopathological example of Kienböck's Disease from early modern Sakhalin Ainu. *International Journal of Osteoarchaeology* 12: 107-11.

Patrick P and T Waldron. 2003. Congenital absence of the patella in an Anglo-Saxon skeleton. *International Journal of Osteoarchaeology* 13: 147-9.

Chovalopoulou M-E, A Bertatos and SK Manolis. 2017. Mycenaean burial in Kastrouli-Desfina, Greece. *Mediterranean Archaeology and Archaeometry* 17: 265-9.

Mays S, M Brickley and N Dodwell. 2004. *Human bones from archaeological sites: Guidelines for producing assessment documents and analytical reports*. Centre for Archaeology Guidelines: English Heritage.

Erdale YS. 2008. Occlusal grooves in anterior dentition among Kovuklukaya inhabitants (Sinop, Northern Anatolia, 10th Century AD). *International Journal of Osteoarchaeology* 18: 152-66.

- Domett KM, J Newton, DJW O'Reilly, N Tayles, L Sherwan and N Beavan. 2013. Cultural modification of the dentition in prehistoric Cambodia. *International Journal of Osteoarchaeology* 23: 274-86.
- Carotenuto G, CW Schmidt, J Viciano and R D'Anastasio. 2019. Pseudopathological vertebral changes in a young individual from Herculaneum (79 C.E.). *Anthropologischer Anzeiger* 76: 79-89.
- Odes EJ, AH Parkinson, PS Randolph-Quinney, B Zipfel, K Jakata, H Bonney and LR Berger. 2017. Osteopathology and insect traces in the *Australopithecus africanus* skeleton StW 431. *South African Journal of Science* 113: 56-62.
- Walrath DE, P Turner and J Bruzek. 2004. Reliability test of the visual assessment of cranial traits for sex determination. *American Journal of Physical Anthropology* 125: 132-37.
- Kuzminsky SC, TJ Snyder and TA Tung. 2020. The limited efficacy of 3D models for teaching students sex estimations based on cranial traits: A case for investment in osteology teaching labs. *International Journal of Osteoarchaeology* 30: 275-80.
- Heathcote GM. 1981. The magnitude and consequences of measurement error in human craniometry. *Canadian Review of Anthropology* 3: 18-40.
- Beckett RG. 2017. Digital data recording and interpretational standards in mummy science. *International Journal of Paleopathology* 19: 135-41.
- Beck J and BH Smith. 2019. Don't throw the baby teeth out with the bathwater: Estimating subadult age using tooth wear in commingled archaeological assemblages. *International Journal of Osteoarchaeology* 29: 831-42.
- Pany-Kucera D, A Kern and H Reschreiter. 2019. Children in the mines? Tracing potential childhood labour in salt mines from the Early Iron age in Hallstatt, Austria. *Childhood in the Past* 12: 67-80.
- Ortner D and S Mays. 1998. Dry bone manifestations of rickets in infancy and childhood. *International Journal of Osteoarchaeology* 8: 45-55.
- Falys CG and ME Lewis. 2011. Proposing a way forward: A review of standardisation of the use of age categories and ageing techniques in osteological analysis (2004-2009). *International Journal of Osteoarchaeology* 21: 704-16.
- Nikita E. 2014. Age-associated variation and sexual dimorphism in adult cranial morphology: Implications in anthropological studies. *International Journal of Osteoarchaeology* 24: 557-69.
- Miller E, BD Ragsdale and DJ Ortner. 1996. Accuracy in dry bone diagnosis: A comment on paleopathological methods. *International Journal of Osteoarchaeology* 6: 221-29.
- Paine RR. 2000. If a population crashes in prehistory, and there is no paleodemographer there to hear it, does it make a sound? *American Journal of Physical Anthropology* 112: 181-90.
- Lukacs JR. 1992. Dental paleopathology and agricultural intensification in South Asia: new evidence from Bronze Age Harappa. *American Journal of Physical Anthropology* 87: 133-50.
- Waldron T. 1997. Osteoarthritis of the hip in past populations. *International Journal of Osteoarchaeology* 7: 186-9.
- Farmer P. 1996. Social inequalities and emerging infectious diseases. *Emerging Infectious Disease* 2(4): 259-69.

Woo EJ, J-H Kim, W-J Lee, H Cho and S Pak. 2019. Syphilitic infection in a pre-modern population from South Korea (19th century AD). *Anthropological Science* 127: 55-63.

Brown C. 2019. The USS *Oklahoma* identification project. *Forensic Anthropology* 2: 102-12.

Pinheiro J, E Cunha, C Cordeiro and DN Vieira. 2004. Bridging the gap between forensic anthropology and Osteoarchaeology – a case of vascular pathology. *International Journal of Osteoarchaeology* 14: 137-44.

Stirland AJ. 1997. Care in the Medieval community. *International Journal of Osteoarchaeology* 7: 587-90.

Prokopec M and L Halman. 1999. Healed fractures of the long bones in the 15th to 18th century city dwellers. *International Journal of Osteoarchaeology* 9: 349-56.

Grauer A and C Roberts. 1996. Paleoepidemiology, healing and possible treatment of traumas in the Medieval cemetery populations of St. Helen-on-the-Walls, York. England. *American Journal of Physical Anthropology* 100: 531-44.

Snoddy AME, J Beaumont, HR Buckley, A Colombo, SE Halcrow, RL Kinaston and M Vlok. 2020. Sensationalism and speaking to the public: Scientific rigour and interdisciplinary collaborations in paleopathology. *International Journal of Paleopathology* 28: 88-91.

Buikstra JE and CC Gordon. 1981. The study and restudy of human skeletal series: the importance of long-term curation. *Annals of the New York Academy of Science* 376: 449-65.

Course, Department and University Policies

Class expectations: You are expected to read this outline in its entirety and follow all guidelines as they are clearly set out. If you have any questions, ask them as soon as possible. I will not necessarily be checking my email the night before an assignment is due so, please plan accordingly. This class will be a respectful place; no insulting language or actions will be tolerated. **There is absolutely no photography or lecture recording permitted in this class.**

Courtesy in Communication: Feel free to email me regarding concerns, however please read through the course outline first, as often, the answer can be found here. If, in fact, your answer can be found within the course documents, I will direct you there to find your answer. Email is also best for quick one-off questions, if you have a more complicated situation, I suggest discussing it “face-to-face” during office hours.

In composing your email, you must send it from your Lakehead account (I am not allowed to reply to personal email accounts so if I do not reply, that is why), include your course number in the subject field and write a formal email by addressing myself in a respectful manner (Dr. Whitaker – please do not refer to me as Kathleen), use complete sentences and sign your email with your full name and student number. Please do not simply attach assignments to blank emails or write as though you are

sending a text to your friend (this drives me crazy). I will try to answer emails in a timely manner, usually within 48 hours, though I will not be responding to emails from 6:00 pm on Friday to 9:00 am on Monday.

Readings: You are expected to complete all readings BEFORE the assigned class. We may discuss the readings in class, but your lectures will not follow them so come to class prepared to ask and answer questions.

Attendance: It is HIGHLY recommended you attend all classes. It is expected you will show up and participate in every class. Lecture notes and power point presentations WILL NOT be provided so it is up to you to ensure you are keeping up with the pace of the course. Please see me as soon as possible if you feel you are getting behind.

Late Assignments: You are expected to submit all work on time. If an assignment is late, 5% will be deducted for every 24 hours past the due date and will not be accepted after three days (72 hours after the deadline). **You must email your assignment if you are submitting it after class.** The Anthropology Department will not accept assignments in person or by email. Deadlines are firm and **no extensions** will be given unless there are extenuating circumstances and the appropriate documentation (e.g. obituary) is provided. If an extension is requested, Dr. Whitaker must be informed by email at least 24 hours BEFORE the assignment is due. **Please note, stating that you have a lot of other course work is not grounds for an extension, and honestly, no professor wants to hear this.** Required documentation will be specific to each case as appropriate. You must have a response from Dr. Whitaker indicating the granting of an extension as confirmation it has been accepted. **ALWAYS** keep a backup copy of your work and always keep returned work until the end of term!

Submitting Assignments by Email: Due to changing circumstances, you may not be submitting your assignments in physical class, you are still expected to submit all assignments on time, which is by 4:00 pm on Tuesday or Thursday, as that is when class ends. In submitting your assignment compose an email (refer to the section above on Communication with Dr. Whitaker) and include your assignment as a single **WORD** attachment (no other formats will be accepted). Please name the attachment in the format Last Name Assignment Type (ie. Whitaker Report). I will not accept an assignment if it is not named in the correct format.

Regrading Assignments: If you feel you deserve a different mark on an assignment, please use the following procedure: **take 24 hours to consider your assignment.** Read through all of the comments and think about what aspects you understand and agree with and where you have concerns. After 24 hours compose a written explanation of why you feel you deserve a different mark by specifically referring to areas within your paper and the grading rubric for your specific assignment. Do not

discuss your work in relation to other students', but rather within the context of the work you have put into it and the assignment expectations. Email your explanation as an attachment and also include a copy of your marked assignment. You can expect a response within 72 hours, however, keep in mind your mark could remain the same, be increased, or possibly decreased upon a secondary review.

Academic Conduct: You are expected, as a university student, to abide by and follow the student code of conduct. This means you will submit only your own, original work. If it is found that you have been less than honest in your submission you may receive a mark of zero for the assignment or the course and may possibly face further penalties. Just don't do it.

Recording: No form of mechanical or electronic recording device, including cell phone cameras, may be used in this class without the express written approval of the instructor. This includes but is not limited to audio recordings, video recordings, and still photographs.

GENERAL REGULATIONS

Student Accessibility Services (SAS) (Thunder Bay) and Student Affairs (Orillia) coordinate services and facilitates reasonable academic accommodations for students with disabilities. Academic accommodations are provided on the basis of documentation of a disability. Additional information is available at the following campus websites:

Thunder Bay: <http://learningassistance.lakeheadu.ca/>.

Orillia: <http://orillia.lakeheadu.ca/about-us--orillia-student-affairs/>

ACADEMIC DISHONESTY:

The University takes a most serious view of offences against academic honesty such as plagiarism, cheating and impersonation. Penalties for dealing with such offences will be strictly enforced.

A copy of the "Code of Student Behaviour and Disciplinary Procedures" including sections on plagiarism and other forms of misconduct may be obtained from the Office of the Registrar.

The following rules shall govern the treatment of candidates who have been found guilty of attempting to obtain academic credit dishonestly.

(a) The minimum penalty for a candidate found guilty of plagiarism, or of cheating on any part of a course will be a zero for the work concerned.

(b) A candidate found guilty of cheating on a formal examination or a test, or of serious or repeated plagiarism, or of unofficially obtaining a copy of an examination paper before the examination is scheduled to be written, will receive zero for the course and may be expelled from the University.

Students disciplined under the Code of Student Behaviour and Disciplinary Procedures may appeal their case through the Judicial Panel.

Note: "Plagiarism" shall be deemed to include:

1. Plagiarism of ideas as where an idea of an author or speaker is incorporated into the body of an assignment as though it were the writer's idea, i.e. no credit is given the person through referencing or footnoting or endnoting.
2. Plagiarism of words occurs when phrases, sentences, tables or illustrations of an author or speaker are incorporated into the body of a writer's own, i.e. no quotations or indentations (depending on the format followed) are present but referencing or footnoting or endnoting is given.
3. Plagiarism of ideas and words as where words and an idea(s) of an author or speaker are incorporated into the body of a written assignment as though they were the writer's own words and ideas, i.e. no quotations or indentations (depending on format followed) are present and no referencing or footnoting or endnoting is given.

A listing of University Regulations can be found at:

<http://calendar.lakeheadu.ca/current/contents/regulations/univregsintro.html>

The code of student behaviour and disciplinary procedures can be found

at: <http://policies.lakeheadu.ca/policy.php?pid=60>