

Anthropology 3530: Bioarchaeology

Spring 2009

Tuesday / Thursday 12:30-1:45 PM

Moore G0121

Professor: **Dr. Jacqueline Eng**
Office: **Moore Hall 1045**
Office Hours : **T/Th 2-3pm in office (or by appointment)**
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COURSE DESCRIPTION & GOALS:

This class introduces students to the field of bioarchaeology, the study of human remains in archaeological contexts. Through lectures, readings and discussions, students will examine the reconstruction of skeletal populations for patterns of subsistence, diet, disease, demography, biological relatedness, and physical activity. By the end of the course, students will be expected to recognize the manifestations of these patterns on the human skeleton, and will be able to describe and critique the methods used by bioarchaeologists to gather and interpret information from human skeletal remains.

Goals of student learning:

- A global awareness of how humans have lived in the past
- An understanding of the biological consequences of environmental change
- Identify methods of excavation and curation, and how the analysis of skeletal remains can help us in reconstructing our biological and cultural past
- Knowledge of case studies regarding continuity and change in human behavior

Prerequisite: Anth 2500 Intro to Biological Anthropology (or equivalent), basic knowledge of human skeletal system.

REQUIRED READING:

- 1) *Bioarchaeology: Interpreting Behavior from the Human Skeleton* (1997) by Clark S. Larsen, Cambridge: Cambridge University Press.
- 2) Additional readings (PDFs) are available through Library reserves:
<http://loan.library.wmich.edu/ares/ares.dll>. Password: **bioarch**. Look for announcements in class and on the e-learning class page about supplemental readings. All readings must be completed BEFORE class on the day for which they are assigned.

CLASS WEBSITE: e-learning (log onto GoWMU, click on the green “e” button on top right). Announcements and supplemental material will be posted, and students **must** check regularly.

GRADING:

Attendance & Participation	15% - 60 points
Article/chapter discussion	10% - 40 points
Written assignment	10% - 40 points
Midterm	15% - 60 points
Research paper	35% - 140 points
Final	15% - 60 points
Total points for course grade:	400 points

Attendance & Participation: Regular attendance is mandatory and will benefit your understanding of concepts and class performance. Be on-time, be prepared for class, and do assigned readings so that you actively participate, especially on days where student article/chapter “discussion” is scheduled. To get points, you’ll need to talk! If you miss a class when there is a discussion, you can make up participation points by writing a 2 page typed paper summarizing the assigned readings. Participation will also involve assignments.

You can miss 2 classes, but after the second missed day, each subsequent missed class will result in the lowering of your final grade by 15 points. You must also provide written documentation (e.g., signed by a medical doctor) explaining absences. More than 5 unexplained absences will result in a failing grade for the class.

Exams: There will be a midterm and a final. The final is non-cumulative. Exams will comprise short response and long theoretical essay questions. Lecture material *and* reading assignments will be tested, as well as class discussions, and films/videos. There is material covered in lecture that is not found in the reading, and there is material in the reading that is not covered in lecture, so you must study *all material* carefully and completely in order to do well.

Exams are to be taken in class on the designated exam dates. No early or late exams are allowed except in the case of an extreme emergency. In the rare event that an emergency arises, it is your responsibility to: 1) inform the instructor in a timely manner, **prior** to the scheduled exam time, and 2) provide **written documentation** of the emergency (e.g., medical note from a certified physician). If there is a legitimate emergency for missing an exam, a makeup exam will be given at my discretion. There is a no-tolerance policy toward cheating, and anyone caught cheating on an exam will have their exam confiscated and will receive a zero grade for that exam.

- **Final Examination is on Wednesday, April 22 from 12:30-2:30pm.**

Article/chapter discussion: Each student will present an article that relates to the lecture topic and lead a brief discussion on the subject (5%). You will sign up for a topic on the first day of class. Each student will write a critique of the article he/she presents in the discussion (5%). The critique should briefly summarize the article, critique the methods, results and interpretations, and provide a personal reaction to the article (2 pages typed). On your assigned day you will write questions on the board for class discussion. All students should do the reading and be prepared to participate in the presented discussion questions as part of your participation points.

Research Paper and Presentation*:

Topic (5%): A one-paragraph typed summary of the paper topic is due in class on **Feb 3**.

Outline (5%): A detailed outline of the research paper and a list of at least 3 references (correctly cited) outside of those provided in the course are due in class on **March 19**.

Presentation (5%): Students will deliver Powerpoint presentations of their papers (6-8min) to the class on **April 14 and 16**. Classmates will critique presentations with a provided rubric.

Paper (20%): Each student will prepare a 10-15 page (typed, double space, 1” margins, 12-font) research paper. The topic for the research paper is open to the student, but must focus on a theme discussed in bioarchaeological research, such as the biological consequences of agriculture, migration and culture contact, spread of infectious disease, warfare, etc. More details on last page.

*You must complete **all** components of paper for credit of the entire project. That is, you can NOT skip the presentation or any other earlier steps and still get credit if you only turn in the final paper. Any late work will be deducted so you will receive no more than **80%** of the total possible credit.

EMAIL: I will respond to an email within 24hrs during the weekdays; it may take longer during the weekends. Please limit your email to short questions and/or setting appointments to see me in person if you can not make the established office hours. Email is inefficient for answering in-depth questions that would be so much quicker in face-to-face exchange.

STUDENTS WITH DISABILITIES: If you are a student with a disability and would like to discuss special academic accommodations, please contact me as early as possible. Also please contact Disabled Students Resources and Services at 2210 Wilbur Ave (269) 387-2116.

ACADEMIC INTEGRITY: You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate Catalog that pertain to Academic Integrity. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. [The policies can be found at <http://catalog.wmich.edu> under Academic Policies, Student Rights and Responsibilities.] If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Academic Integrity. You will be given the opportunity to review the charge(s). If you believe you are not responsible, you will have the opportunity for a hearing. You should consult with me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.

COURSE SCHEDULE¹

Week	Date	Topic	Assignments/Reading
1	1/6	Course introduction; Osteology review	<i>Sign up for article discussion date</i> Larsen (2006 - pdf)
	1/8	Growth & development: determining age & sex	Burns, Walker (1995)
2	1/13	Field: excavation and recording; taphonomy	L: Ch. 1, Buzon et al. (2005:871-884)
	1/15	Lab: inventory and analysis, curation and conservation	Wood et al., Wright & Yoder
3	1/20	Paleodemography; Stress and deprivation, anemia	L: Ch.2 (6-9, 29-63); Ch. 10 (336-340), Wapler, King
	1/22	Infectious disease (trepanematosi, tuberculosis, leprosy)	L: Ch. 3 (82-108) , Boldsen & Mollerup, Djuric-Srejic & Roberts
4	1/27	Activity patterns: DJD, bone morphology	Writing assignment due , L: Ch. 5 & skim Ch.6 (195-203, 210-219); Weiss & Jurmain
	1/29	Dental disease (caries, tooth loss, periodontitis, wear)	L: Ch.3 (65-82) & Ch. 7 (247-269), Lukacs, Eshed
5	2/3	Population affinity: non-metrics, metrics, growth and stature	L: Ch. 9, Irish & Konigsberg, Cardoso Paper topics due
	2/5	DNA and isotopes	L: Ch. 8, Ambrose et al., Katzenberg, Eshleman et al.
6	2/10	Injury and violent death	L: Ch. 4, Kilgore et al., Tung
	2/12	Ethics, NAGPRA and Kennewick Man	Walker (2008), Ousley, L: p. 341-342
7	2/17	Midterm	
	2/19	Peopling of the New World	Kemp et al.
8	2/24	Transition to agriculture	Cohen & Armelagos, Pechenkina et al.
	2/26	Other NW economies: pastoral and marine lifeways	Prince & Steckel, Lambert
9	3/2-8	Spring Break	
10	3/10	Bioarchaeology of imperialism	Buzon (2006)
	3/12	Consequences of conquest and colonialism	Walker et al. (1989), Munson Chapman
11	3/17	Conquest and colonialism	Stojanowski
	3/19	Status	Sakashita et al., Walker & Hewlett (1990) Paper Outline due
12	3/24	Gender	Meskill, Crown & Fish, White
	3/26	Mortuary analysis: social persona, class, and status	Gamble, Stoodley
13	3/31	Sacrifice/Cannibalism	Billman, Winkelman
	4/2	Film: <i>Bones of Contention</i>	
14	4/7	Cultural modification	Torres-Rouff, Nystrom, Arcini
	4/9	Trophy taking	Milner et al., Andrushko
15	4/14	Final paper presentations	
	4/16	Final paper presentations	Final paper due in class
Final Exam: Wednesday, April 22 from 12:30-2:30pm			

- ¹ “L” refers to Larsen textbook, other names refers to readings found in the online library reserves. Read before the lecture date assigned.
- This syllabus is subject to change: any changes to the syllabus or readings will be announced in class/online.

Guidelines for Research Papers (10-15 pages in length)

Abstract

The title page, which includes the paper title and your name, should be followed by an abstract of 250 words or less. The abstract should be written in complete sentences and should succinctly state the problem your paper is concerned with, as well as your principle observations and conclusions; it should be intelligible without reference to the rest of the paper. It should not contain phrases such as “This paper will...”

Introduction

In this section, restate the problem your paper is concerned with and discuss why this topic is worth considering (i.e., what is its significance for the field of bioarchaeology). Briefly (i.e., in a few sentences) introduce the reader to any controversies or alternative hypotheses proposed in the literature on your topic. At the end of the introduction it is a good idea to give a brief overview of how the rest of the paper is organized so that the reader may follow the logic of your presentation. Try to keep the introduction as short as possible, one or two pages should suffice.

Body of the Paper

In this section you should include a detailed presentation of the data you have collected as a result of your literature review and discuss the conclusions you have arrived at based on your research.

If you are evaluating several alternative hypotheses, it is a good idea to use subheadings to divide the discussion into sections dealing with each hypothesis. In each of these sections, include a clear statement of the hypothesis as well as evidence that supports and contradicts it.

After discussing the literature on your topic, you should critically evaluate the opinions expressed by various authors. Which hypotheses appear to you to be most likely based on the available evidence? What alternative hypotheses can you think of that have not been considered by previous authors? What kinds of research should be done in the future to rule out some of the alternative hypotheses you have discussed?

Conclusions

In this section you should reiterate the important points covered in the body of the paper and summarize the conclusions you have arrived at as a result of your research.

References

- At the end of the paper include a bibliography of all of the references referred to in your paper. Use the format for references of the *American Journal of Physical Anthropology*. Minimum citations: **10**, but aim for more (if you did not develop idea on your own, cite it!). They must be **primary** sources, not secondary (e.g., use peer reviewed academic journal articles, not popular online or newspaper articles)
Citation examples:
- In the text of your paper cite references as follows: a study by Verano (2003) revealed or Verano (2003:109) states that "tuberculosis was present..."
- In "References Cited" section: Coppa A, Cucina A, Mancinelli D, Vargiu R, Calcagno JM. 1998. Dental anthropology of central-southern Iron Age Italy: the evidence of metric versus nonmetric traits. *American Journal of Physical Anthropology* 107:371-386.

Partial List of Journal Titles to Consult:

- *American Journal of Physical Anthropology*
- *International Journal of Osteoarchaeology*

- *American Antiquity / Antiquity*
- *Current Anthropology*
- *Archaeometry*
- *Journal of Anthropological Archaeology*
- *Journal of Archaeological Science*
- *World Archaeology*
- *Yearbook of Physical Anthropology*
- *Annual Review of Anthropology*

Suggested Research Paper Topics

Below are some suggested topics, but is certainly *not* limited to these alone; rather, the list is meant to provide some possible topics for your consideration. If you wish to consult with me about the topic or references, please feel free to do so and I'll be happy to suggest references and key areas you should look into. Again the referencing style must be in the format of the *American Journal of Physical Anthropology* (similar to APA: <http://www.wmich.edu/library/help/guides/style.php>).

Growth disruption: bone or enamel defects
 Height as an indicator of stress and growth status
 Dental development as an indicator of childhood stress
 Tooth size: its meaning and implications for stress
 Fluctuating asymmetry (e.g., left/right arm)
 Iron deficiency anemia
 Bone mass
 Dental caries and dental disease
 Periosteal reactions and health
 Trepanematosi (e.g., syphilis)
 Tuberculosis
 Leprosy
 Violence
 Accidental injury (fractures)
 Cannibalism
 Osteoarthritis
 Ancient medical intervention (e.g., surgeries, trepanation)
 Cultural modification of bone or teeth
 Bone structure and biomechanics
 Mastication and cranial form
 Tooth wear (or microwear): function and tooth use
 Dietary reconstruction and bone chemistry
 Chemical indicators of poor health: lead in the environment
 Population history: DNA or use of discrete (non-metric) traits
 Migration: isotopic evidence
 Repatriation and NAGPRA
 Paleodemography
 Gender and bioarchaeology
 Status and bioarchaeology
 Specific regional bioarchaeological case studies (e.g., Santa Barbara Channel Islands, Dickson Mounds, La Florida, Peru/Andes, Nubia)
 Shift from foraging to farming
 Impact of conquest and/or colonization on health