

TENTATIVE SYLLABUS

**ANTHROPOLOGY 4498B:
SPECIAL TOPICS IN ANTHROPOLOGY -
RESEARCH IN PALEOPATHOLOGY AND PALEODIET
&
ANTHROPOLOGY 9108B:
ADVANCED RESEARCH IN PALEOPATHOLOGY AND PALEODIET**

Course value: 0.5 credit

January – April 2018

Course Instructor: Dr. Andrea Waters-Rist (awaters8@uwo.ca)

Office: SSC 3427

Office hours: TBA

Class time: Tuesdays, 1:30-4:30 pm

Class location: SSC 2257

Course Description:

This course will explore disease and diet in past human populations with particular focus on the interaction of health and nutrition. A range of topics within paleopathology, the study of ancient disease, and paleodiet, the study of ancient diet, will be investigated to learn what can and cannot be discerned about human health through the analyses of skeletal and dental remains from archaeological contexts. Major techniques for reconstructing disease and diet from archaeological human remains are covered. The skeletal and dental markers of disease, injury, and diet are a source of evidence about the broader context in which people lived, for example providing information about changing environments, changing exposure to pathogens, population size and density, conflict between groups, the varied effects of the domestication of plants and animals, and activity patterns such as the gendered division of labour. Cutting-edge research in biological anthropology is utilizing the interaction of health and nutrition to address broad hypotheses about human adaptation and evolution.

This seminar course is open to graduate students and a limited number of senior undergraduate students. It consists of weekly meetings that combine short instructor lectures, class discussion, and student presentations. Class participation is mandatory. Graduate students will require a more comprehensive approach and the employment of advanced critical thinking skills to successfully complete the assignments and graduate students will be graded on a more advanced scale than undergraduate students.

Prerequisites for 4498B: Registration in fourth year, and permission of the instructor.

Recommended: Anthropology 3338F/G: Skeletal Biology or equivalent background.

Learning Outcomes:

On successful completion of this course, students will be able to:

1. Understand how disease can affect the morphology of bone and teeth via the relationships between cellular structures, soft tissues, connective tissues, and hard tissues.
2. Understand and recognize the main pathological conditions and anomalies that we can identify in human skeletal and dental remains.
3. Have improved understanding of the normal range of human skeletal variation against which pathological changes can be accurately diagnosed.
4. Understand the main methods used to reconstruct dietary variables of past populations via their bones, teeth and other biological remains.
5. Understand both the benefits and limitations of the study of disease and diet in past populations.
6. Critically read and evaluate paleopathology and paleodiet research from both methodological and theoretical perspectives.
7. Understand the synergy of diet and disease based on research in modern (i.e. ethnographic, clinical) and past contexts (i.e. historic, archaeological) considered within an evolutionary framework emphasizing biocultural variation and adaptation.
8. Effectively communicate well-supported arguments on complex topics in paleopathology and paleodiet.
9. Prepare a visually impactful and insightful research-based academic poster.

Assignments and Grading:

	Graduate	Undergraduate
Class Participation (including weekly questions)	20%	15%
Paleopathology Diagnosis Report	15%	15%
Class PowerPoint Presentation and Leading of Discussion	25% * done individually	25% * done in groups of two
Annotated Bibliography	20% * 10 references required	20% * 5 references required
Academic Poster and Poster Presentation	20%	25%

Required Readings:

1. Roberts, C. and Manchester, K. (2005) *The Archaeology of Disease*. 3rd edition. Ithaca: Cornell University Press.
2. McMichael, T. (2001) *Human Frontiers, Environments and Disease: Past Patterns, Uncertain Futures*. Cambridge: Cambridge University Press.
3. Other readings available under the Course Readings tab of the OWL course website.
4. Articles chosen by students leading a class will be made available via the OWL site as the course progresses.

Additional Recommended Textbooks:

1. Ortner, DJ. (2003) Identification of Pathological Conditions in the Human Skeletal Remains, 2nd edition. San Diego CA: Academic Press/Elsevier.
2. Aufderheide, AC and Rodrigues-Martin C. (1998) The Cambridge Encyclopedia of Human Paleopathology.
3. Waldron, T. (2008) Paleopathology. Cambridge University Press.
4. Sutton, MQ, Sobolik, KD, Gardner JK. (2010) Paleonutrition. University of Arizona Press.
5. Moffat T, Prowse T. (2010) Human Diet and Nutrition in Biocultural Perspective: Past Meets Present. Berghahn Publishing.

Assignment Details:

1. Class Participation. All students are expected to participate in class discussion. Beginning the 2nd week of class all students are required to bring one comprehensive question or comment they've developed for each assigned chapter or article that is designed to stimulate discussion and debate. You may be called upon to read your question if class discussion is slow. Your questions will be handed in at the end of class.
2. Paleopathology Diagnosis Assignment. You will be given a package containing photographs of pathological bony lesions in a skeleton and a description of the osteological and bioarchaeological context of the burial. Your job is to write a concise 1300-1500 word report (I will stop reading after 1500 words, references not included), using the method of differential diagnosis, to identify the most likely disease that caused the lesions. More details about this assignment will be made available.
3. PowerPoint Presentation and Leading Class Discussion. Every student is expected to lead one class. Graduate students will do this individually while undergraduate students will do this in teams of two (or three if necessary). This involves presenting the topic via a PowerPoint presentation of 20 – 30 minutes, and leading the questions and discussion of the topic during the latter half of the class. In addition to the readings that are already assigned for that week the student(s) is/are responsible for assigning one additional research article to the class that provides an example of their topic in an archaeological context. The research article must be approved by the instructor and made known to the class no later than one week before the class. A list of acceptable journals from which to choose your article will be made available.
4. Annotated Bibliography and Abstract. Abstracts and annotated bibliographies are useful techniques in the preparation of a research paper or poster. An abstract is a brief synopsis or summary of the most important points that you plan to discuss in your paper or poster (note, an abstract is not merely a condensed table of contents or an introductory paragraph). The abstract for your poster should be no more than 250 words in length. In addition, graduate students must have an annotate for ten peer-review journal articles or book chapters, and undergraduate students for five articles/chapters, related to your poster topic. An annotate is a brief (150-300 words) paragraph that describes and evaluates the article/chapter. The purpose of the annotate is to provide an overview of the paper (that

will be useful to other readers and yourself in the future) that assesses the relevance and quality of the work. More details on the abstract and annotated bibliography will be made available.

5. Academic Poster. Every student is responsible for the creation of an academic poster using PowerPoint or Adobe Acrobat. They cannot choose the same topic as the class they led. Poster topic ideas will be suggested in class. Instructor approval of your poster topic is required. Further specification of poster requirements (e.g. – less than 1500 words, required headings, use of figures and tables, page dimensions, recommended font size, etc.) will be made available. Each student will then be required to present their poster in class (it will be projected onto a screen; you do not need to print your poster) and give a four-minute oral summary. You will be cut-off after four minutes. There will be two additional minutes allotted for questions from your instructor and/or fellow students.

Additional Policies:

Attendance:

Attendance at every class is mandatory. While I will not keep attendance I will require you to hand in your chapter/article questions after each class thereby keeping track of your attendance (or at least your participation should you choose to attend class without having prepared any questions). Notify me as soon as possible via e-mail if you are unable to attend a class due to illness or other serious personal emergencies. As it is not possible to re-schedule the class you are leading, nor the day and time of your poster presentation, only MAJOR extenuating circumstances will be taken into consideration, and an additional assignment will need to be completed if the student does not want to receive a grade of zero. An unexcused absence will result in a grade of zero that cannot be made up in any other way.

Late Assignments: Extensions on assignments will only be given in the case of major medical or personal emergencies. Each day past due will result in the deduction of 5% off the grade for that assignments. Assignments more than five days late will not be accepted and the student will receive a grade of zero for that assignment.

General University Policies:

All students should familiarize themselves with Western's current academic policies regarding accessibility, plagiarism and scholastic offences, and medical accommodation.

These policies are outlined (with links to the full policies) at:

http://anthropology.uwo.ca/undergraduate/course_information/academic_policies.html

Mental Wellbeing: Students who are in emotional/mental distress should refer to Mental Health@Western http://uwo.ca/health/mental_wellbeing/index.html for a complete list of options about how to obtain help.

Preliminary Weekly Schedule

	Topic	Readings T.B.A.
Week 1: Jan. 9	<p>INTRODUCTION</p> <p>1. Review Syllabus (~45 min)</p> <p>2. Instructor Lecture (~1.45 hours): Introduction to Paleopathology: Theory and Methods; Lesion Terminology; The Differential Diagnosis</p>	1. Roberts and Manchester Chapter 1
Week 2: Jan. 16	<p>THE OSTEOLOGICAL PARADOX</p> <p>1. Student Presentation #1 (Grad student only) (~30 min): The Osteological Paradox</p> <p>2. Student Presentation #2 (Grad student only) (~30 min): Responses to the Osteological Paradox</p> <p>3. Students Lead Class Discussion (~1.5 hours): The Osteological Paradox in the Field of Paleopathology</p>	<p>1. The Osteological Paradox. Wood et al. 1992.</p> <p>2. The Osteological Paradox 20 Years Later: Past Perspectives, Future Directions Sharon N. DeWitte & Christopher M. Stojanowski. 2015. Journal of Archaeological Research: 397-450.</p>
Week 3: Jan. 23	<p>JOINT DISEASE</p> <p>1. Instructor Lecture (~30 min): Overview of Main Joint Diseases in Paleopathology</p> <p>2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Joint Disease Research</p> <p>3. Student & Instructor-Led Discussion (~1.5 hours)</p>	<p>1. Roberts and Manchester Chapter 6</p> <p>2. Student Assigned Case-Study</p>
Week 4: Jan. 30	<p>INFECTIOUS DISEASE</p> <p>1. Instructor Lecture (~30 min): Overview of Main Infectious Diseases in Paleopathology</p> <p>2. Student Presentation (Undergrad or Grad) (~30 min): Example of Infectious Disease Research</p> <p>3. Student & Instructor-Led Discussion (~1.5 hours)</p>	<p>1. Roberts and Manchester Chapter 7</p> <p>2. Student Assigned Case-Study</p>
Week 5: Feb. 6	<p>Trauma/Injury</p> <p>1. Instructor Lecture (~30 min): Overview of Main Traumatic Injuries in Paleopathology</p> <p>2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Trauma Research</p> <p>3. Student & Instructor-Led Discussion (~1.5 hours)</p>	<p>1. Roberts and Manchester Chapter 5</p> <p>2. Student Assigned Case-Study</p>
Week 6: Feb. 13	<p>Metabolic Disease</p> <p>1. Instructor Lecture (~30 min): Overview of Main Metabolic Diseases in Paleopathology</p>	<p>1. Roberts and Manchester Chapter 8</p> <p>2. Student Assigned Case-Study</p>

	<p>2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Metabolic Disease Research</p> <p>3. Student & Instructor-Led Discussion (~1.5 hours)</p>	
<p>Week 7: Feb. 27</p>	<p>Dental Disease and Endocrine Disease</p> <p>1. Instructor Lecture (~1 hour): Overview of Main Dental and Endocrine Diseases in Paleopathology</p> <p>2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Dental OR Endocrine Disease Research</p> <p>3. Student & Instructor-Led Discussion (~1.5 hours)</p>	<p>1. Roberts and Manchester Chapter 4</p> <p>2. Roberts and Manchester Chapter 8</p> <p>3. Student Assigned Case-Study</p>
<p>Week 8: Mar. 6</p>	<p>Neoplastic Disease and Congenital Disease</p> <p>1. Instructor Lecture (~1 hour): Overview of Main Neoplastic and Congenital Diseases in Paleopathology</p> <p>2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Neoplastic OR Congenital Disease Research</p> <p>3. Student & Instructor-Led Discussion (~1.5 hours)</p>	<p>1. Roberts and Manchester Chapter 3</p> <p>2. Roberts and Manchester Chapter 9</p> <p>3. Student Assigned Case-Study</p>
<p>Week 9: Mar. 13</p>	<p>1. Instructor Lecture (2.5 hours): Introduction to Paleodiet: Theory and Methods; Diet vs. Nutrition; Stable Isotope Analysis; Trace Element Analysis; Dental Calculus; Other Methods (Coprolites, GI Track Contents via Soil analyses)</p>	Tba
<p>Week 10: Mar. 20</p>	<p>1. Instructor Lecture (~30 min): Plant Foods (Macronutrients)</p> <p>2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Plant Food Research</p> <p>3. Student & Instructor-Led Discussion (~1.5 hours)</p>	Tba
<p>Week 11: Mar. 27</p>	<p>1. Instructor Lecture (~30 min): Animal Foods (Macronutrients)</p> <p>2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Animal Food</p> <p>3. Student & Instructor-Led Discussion (~1.5 hours)</p>	Tba
<p>Week 12: Apr. 3</p>	<p>1. Instructor Lecture (~30 min): Micronutrients (Vitamins and Minerals)</p> <p>2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Micronutrients</p>	Tba

	3. Student & Instructor-Led Discussion (~1.5 hours)	
Week 13: Apr. 10	<ol style="list-style-type: none"> 1. Instructor Lecture (~30 min): Breastfeeding and Weaning Research 2. Student Presentation (Undergrad or Grad student) (~30 min): Example of Breastfeeding and Weaning Research 3. Student & Instructor-Led Discussion (~1.5 hours) 	Tba