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ANT481H1S

Special Topics in Biological Anthropology:
The Bioarchaeology of Infectious Disease

Winter Semester: Tuesdays, 10am-12pm

Location: AP130

Infectious disease is currently one of the leading causes of death worldwide. Disease related issues, such as avian influenza, salmonella and *E. coli* outbreaks, West Nile Virus, SARS, and HIV/AIDS are pertinent issues. But as Anthropologists, we realize the expression of infectious disease requires more than just the presence of a pathogen. Disease results from a complex interaction of biological, environmental and social variables. It is not a new phenomenon, nor is it limited to certain times, people or places; disease has had a significant impact on human physiology and cultural history. Modern advances in paleopathological methods, such as the use of molecular and chemical analyses of skeletal tissues, have allowed us to explore our disease history in greater detail, enriching our interpretations of the past. This course will explore our disease history through an anthropological lens, with an aim towards a better understanding of our interactions with infectious pathogens, as we investigate the biological and social ramifications of this primordial relationship.

Course Goals

Welcome to a problem-based learning course. You will have the opportunity to assist in the direction this course will take, and options for your final project will be explored during the first day of class. This course aims to exercise your ability to think critically, deductively and logically, as well as develop your leadership, cooperation, communication, and presentation skills. As this is an advanced class, you will be expected to independently acquire new information and to apply knowledge you have absorbed from your previous studies, in an effort to share this information and your opinions with your classmates. This is an interactive exercise, and active participation in weekly readings, class discussion and group work is essential in order for you and your peers to get the most out of the experience. Please bring your enthusiasm to class and be prepared to participate.

Format

Weekly readings and discussion will be supplemented at times by a brief lecture. Each week an interactive conversation period will explore and debate topical issues in more depth. You will be asked to cooperate and collaborate in small groups in order to answer two problem-based inquiry questions. But the primary focus of this course will culminate in a group project which you will independently contribute to and formally present to the rest of the class at the end of the semester.

Evaluation

Research Proposal	5%
- detail what your group's final project will be and outline your individual role within the project	
Assigned reading, discussion and follow-up	25%
Group Problem Solving	30%
- 2 problems @ 15% each	
Group project	40%
- ½ of your evaluation will consider your individual contribution (handed in)	
- ½ will consider your participation in your group presentation	

Major Learning Objectives

Group Project (40%)

This course will afford you an opportunity to direct your research interests into a group project (40%). There are many options for such a project, as long as it is topically related to the bioarchaeology of infectious disease. For example, you could choose to work on a collaborative publication on a bioarchaeological issue, a funding proposal for a project exploring some aspect of ancient disease, a conference symposium, a poster, or perhaps web page. These and other options will be explored in more detail during the second week of class, when you will be expected to organize your groups and settle on a project goal. You are encouraged to use your imagination and to bring some fresh ideas to class. A 2-3 page typed proposal, detailing your group project and your independent role in it will be due during the 4th week of class for 5% of your course mark (Jan. 29th). While some time may be allotted during class to work on your projects, you are also expected to continue this group work outside of class. At the end of the semester, you will hand in a copy of the independent work you contributed to your project. The last two weeks of class will be dedicated to group presentations of your projects, so you can share your work with your peers and gain feedback on your efforts.

Group Problem Solving (30%)

Two research problems will be posed to the class, and you will divide into groups in order to answer individual questions related to the problem (15% for each problem for a total of 30%). This involves an in-class exercise, and groups will present their answers to the rest of the class in order to generate discussion and stimulate problem-solving. The week following you will submit a 2-3 page written synopsis of the research question your group addressed. You will discuss in your own words how your question related to those explored by other groups and its relevance the general research problem initially posed to the class.

Reading Selection (25%)

At some point during the course – on a first-come first-serve sign up basis – you will be responsible for assigning an appropriate topical reading for the week and will lead the discussion on that reading in class. The week following your reading and discussion, you will submit your own written (2-3 pages) review of the reading. I would like you to explain why you selected the reading, discuss your impressions of how it was received by the class, and what you would or wouldn't change about your choice. You will need to

send me the bibliographic information and/or a link to your recommended reading at least a week prior to class, so we all have a chance to read it and prepare questions/discussion topics.

Required Readings

See readings listed on Blackboard. All readings are available on-line, no additional text fees are associated with this class. Please print your articles and bring them with you to class to facilitate discussion.

Additional Recommended Reading

Greenblatt, Charles L. and Mark Spigelman (Eds) (2003). *Emerging Pathogens: Archaeology, Ecology and Evolution of Infectious Disease*. Oxford University Press, Oxford, UK.

Ortner, Donald J. (2003). *Identification of Pathological Conditions in Human Skeletal Remains, 2nd Edition*. Academic Press, San Diego, CA.

Roberts, Charlotte & Manchester, Keith (2007). *The Archaeology of Disease, 3rd Edition*. Cornell University Press, Ithaca, NY.

Academic Regulations

As most of the assignments in this course require group work, late submissions are highly discouraged. Late assignments will only be accepted if an extension has been granted *prior to* the due date, and will be subject to a 10% deduction per day, weekends and holidays included. Hard copies of all assignments must be handed in during regular class times. No papers or assignments will be accepted by fax or e-mail. **Do not slide assignments under office doors.** All submitted assignments are expected to be typed and double-spaced with standard font size and margins.

Academic Integrity

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), suspension or expulsion from the university. Plagiarism entails the submission of work that is not your own *or* for which other credit has been obtained. This **includes** handing in former assignments and/or cutting and pasting text directly from internet sources.

For more information on academic integrity, please see the following handout available on the University website:

www.utoronto.ca/writing/pdf/plagsep.pdf

Date	Topic	Evaluations
08 Jan	Introduction to the course	
15 Jan	Discussion of possible group projects Background lecture: Paleopathological Methods	
22 Jan	Background lecture: Paleopathological Theory - Group project brainstorming and group organization	
29 Jan	- Bioarchaeological Case Studies – Interpreting Disease in the Past - Introduce your group project to the class for feedback	Outlines 5% – include your own <i>independent</i> role in your self-directed learning group
05 Feb	- Bioarchaeological Case Studies - Group project organization	
12 Feb	Research Problem 1 (identification) Each group = 20 minutes to problem solve - group presentation of answer to class Summarize answer to Research Problem	Problem 1 = 15% (written synopsis due in class on Feb. 26)
19 Feb	READING WEEK	
26 Feb	Research Problem 2 (interpretation) Each group = 20 minutes to problem solve - group presentation of answer to class Summarize answer to Research Problem	Problem 2 = 15% (written synopsis due in class on March 04)
04 Mar	Travel & Infectious Disease - changes in biological niche - Pandemics, confluence of disease pools	
11 Mar	Disaster & Infectious Disease – changes in environment - War, environmental disaster	
18 Mar	Social Inequality & Infectious Disease – changes in culture - Unequal access, gender, age	
25 Mar	Discussion: Future of Bioarchaeological Studies of Infectious Disease	Group projects due 40%
01 Apr	Group Presentations 20 minutes each	
08 Apr	Group Presentations 20 minutes each	