## Fall 2011 ANT 4468 // ANG 6930 – Health and Disease in Human Evolution

# Department of Anthropology, University of Florida

**Time:** Tuesdays 8:30 – 9:20 (Period 2), Thursdays 8:30 – 10:25 (Periods 2-3)

Place: B304 Turlington Hall Basement

Website: http://lss.at.ufl.edu \* E-Learning in Sakai

Instructor: Dr. John Krigbaum, Associate Professor office: B374 Turlington Hall Basement office hours: W 10:00 – 12:00 or by appointment e-mail: krigbaum@ufl.edu (\* <u>best contact method</u> \*) tel: (352) 392-2253 x243/244

**Course Overview** Mortui viventes docent ("the dead are our teachers")

Health and the human condition have long been an area of interest in anthropology. Throughout human evolution, biological and cultural factors have influenced human vulnerability to disease. Likewise, disease producing organisms (pathogens) have undergone their own evolution within the human arena. Such co-evolution of humans and pathogens varies in modern human groups because of our adaptation to a wide diversity of habitats. Different ecological contexts present their own set of health problems humans must adapt to.

This course will examine human health and disease from both an evolutionary and an ecological perspective. Environmental, genetic, physiological, and cultural factors will be reviewed as to their role in affecting the well-being of different prehistoric and recent human populations. Skeletal pathologies present in the body (indicative of infectious disease, poor nutrition, or physical activity) will be introduced and discussed with respect to the inferred quality of adaptation of past individuals and populations

Grading (out of 500 possible points) - WARNING: I will be a stickler with points!

350 points –	two "in class" exams (100 pts each). one <u>Comprehensive</u> Final, December 14, 7:30-9:30 am (150 pts) class paper/project (web page &10 minute class presentation, 50 pts each)		
20 points – 30 points – -10 points –	two in-class quizzes misc. homework each unexcused absence		
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ercentile breakdown:	93.50-100 = A; 90-93.49 = A-; 86.5-93.49 = B+; 83.5-86.49 = B;
	80-83.49 = B-; 76.5-79.99 = C+; 73.5-76.49 = C; 70-73.49 = C-;
	66.5-69.99 = D+; 63.5-66.49 = D; 60-63.49 = D-; <59.99 = E.

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

#### REQUIRED TEXTS

Dobson, M. (2008) *Disease: The Extraordinary Stories Behind History's Deadliest Killers.* Quercus Books.

Sapolsky, R.M. ((2004) Why Zebras Don't Get Ulcers. Holt.

Waldron, T. (2009) Paleopathology. Cambridge University Press.

Course Reader – available at Orange & Blue Textbooks (across from Krispy Kreme donuts)

#### **RECOMMENDED TEXTS**

Brothwell, D.R. (1981) *Digging Up Bones*, 3<sup>rd</sup> edition. Ithaca: Cornell University Press.

Larsen, C.S. (1999) *Bioarchaeology: Interpreting Behavior from the Human Skeleton.* Cambridge: Cambridge University Press.

Roberts, C. and Manchester, K. (2005) *The Archaeology of Disease*, 3<sup>rd</sup> edition. Ithaca: Cornell University Press.

White, T.D. and Folkens, P.A. (2005) The Human Bone Manual. New York: Academic Press.

E-Books

Cox, M. and Mays, S. (2000) *Human Osteology In Archaeology and Forensic Science*. London: Medical Medial Ltd.

Mays, S. (2002) The Archaeology of Human Bones. New York: Routledge.



# Class Schedule -- ANT 4468 / ANG 6930 Health & Disease in Human Evolution

### I. Introduction

- T 23-Aug Introduction
- R 25-Aug The Human Skeleton: A Practical Experience

### **II.** Paleopathology Basics

T 30-Aug Essentials of Paleopathology1-Sep Anthropological Aspects of "Health" and "Disease"

#### **III. Evolutionary Perspectives**

- T 6-Sep Genetics and Evolutionary Theory: A review of Modern Evolutionary Thinking)
  - 8-Sep Natural Selection and Disease Process

### IV. The Fossil Record

- T 13-Sep Non-Human Primate Pathology
  - 15-Sep Hominin Paleopathology

#### V. Diseases of the Joints

T 20-Sep In-Class Quiz I 22-Sep Osteoarthritis

#### VI. Diseases of the Joints con't

- T 27-Sep In-Class Exam I
  - 29-Sep Bone Forming & DISH

### **VII.** Infectious Disease

- T 4-Oct Non-Specific vs. Specific Evidence
  - 6-Oct Infectious Disease in (Pre)Historical Contexts

#### **VIII. Metabolic Disease**

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- T 11-Oct Hormonal Impabalences
  - 13-Oct Endocrine Disturbances & Dysplasias

### IX. Trauma

T 18-Oct Fractures 20-Oct Dislocations, Deformations, and Trephinations

### X. Tumours & Soft Tissue Diseases

- T 25-Oct Cancers
  - 27-Oct Other

#### XI. Growth & Development Disorders

T 1-Nov Growth-related changes to the subadult skeleton 3-Nov Stress and the subadult skeleton

#### **XII. Dental Disease**

T8-NovOverview of Dental Pathologies10-NovDental Anthropology--Teeth as Tools

### XIII. Epidemiological Approaches

T 15-Nov In-Class Exam II 17-Nov Paleodemography

#### XIV. Isotopes & Elements

T 22-Nov Stable Isotopes and Trace Element Studies of Human Diet 24-Nov THANKSGIVING

#### **XV. Class Presentations**

T 29-Nov

1-Dec

### **XVI. Class Presentations & Review**

- T 6-Dec
- W 14-Dec **Comprehensive** Final Exam (7:30 9:30 am)