

# ANT 4468 – Health and Disease in Human Evolution

## Class Meetings

- Spring 2023: Tuesdays (Periods 5+6) and Thursdays (Period 6)
- B304 Turlington Hall

## Instructor

- Instructor – John Krigbaum, Ph.D.
- Office location: 1350A Turlington Hall
- Office hours: Mondays and Wednesdays, 1-3pm (and by appointment)
- Phone: (352) 294-7540
- Email: [krigbaum@ufl.edu](mailto:krigbaum@ufl.edu) (or via Canvas, preferred)

## Course Description

*Mortui viventes docent* (“the dead are our teachers”)

Health and the human condition is of central interest within the field of anthropology, and the recent pandemic underscores concerns we all face moving forward. Covid-19 is a wake-up call, but it was only a matter of time. Diseases have had a profound effect on society and biology for millennia. Biocultural factors and recent human evolution has influenced human vulnerability to disease. Likewise, disease producing organisms (pathogens) have undergone their own evolution within the changing human condition (and associated man-made environments). Such co-evolution of humans and pathogens varies because of their respective adaptation to diverse ecologies. Humans are quite resilient, but different ecological contexts present their own set of health problems, often compounded, that humans must adapt to.

This course will examine biocultural aspects of human health and disease from an evolutionary and bioarchaeological perspective. Environmental, genetic, physiological, and cultural factors will be reviewed as to their role in affecting the well-being of different populations around the world. Skeletal pathologies present in the body may be indicative of a variety of disorders and diseases, including stress-related afflictions due to health disparities caused by myriad sociocultural factors (e.g., poor nutrition, duress, poverty). Anthropological perspectives and the prehistoric record through the lens of paleopathology sheds important light and perspective on these issues and complements students interested in the life sciences, including medicine and public health.

Students are encouraged to employ critical thinking and to rely on data and verifiable sources to interrogate all assigned readings and subject matter in this course as a way of determining whether they agree with their classmates and/or their instructor. No lesson is intended to espouse, promote, advance, inculcate, or compel a particular feeling, perception, viewpoint or belief.

## Required Texts

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

Lieberman, D. (2013) *The Story of the Human Body: Evolution, Health, and Disease*. New York: Vintage Books. (author's [webpage](#))

Required articles/videos with asterisk (\*) in bold will be listed in Canvas modules. There will also be articles/videos listed that are not required in each module.

## Materials and Supplies Fees: N/A

## Description of Graded Work

This course includes three exams and a final paper/website that will include a presentation to the class on your project. In addition, there will be homework assignments (n=6) and online quizzes (n=6) to round out course requirements (750 points total).

Assignment	Description	Requirements	Points
Lab-Based Activities/ Homework	In class, students will work in teams of 2-3 on scheduled lab days. Homework based in part on lab activities or assigned reading will be due the following week.	In Class / Upload Assignment	100
Participation	In class, students contribute to discussion and lab-based activities. (n=6)	In class	50
Quizzes	Online quizzes will help students keep up to date on lecture/lab material and reading. Lowest score dropped. (n=6)	Online	50
Exam 1	In class exam based on material covered in the first third of this class (Weeks 1-5).	In Class	100
Exam 2	In class exam based on material covered in the second third of class (Weeks 6-9).	In Class	100
Final Exam	In class Cumulative Final Exam based on material covered in final third of class (Weeks 11-15), including student presentations. Exam will also include comprehensive review of key concepts introduced throughout class. Final Exam will be held on May 4, 2023 from 10:00 AM - 12:00 PM.	In Class	150
Precis	Draft outline/precis for final website/paper project.	Written work	50
Final Paper	Final website/paper project (~6-8 double-spaced pages, not including references) on topic of interest.	Written work	150

## Grading Scale

For information on how UF assigns grade points, visit: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

A	94 – 100%		C	74 – 76%
A-	90 – 93%		C-	70 – 73%
B+	87 – 89%		D+	67 – 69%
B	84 – 86%		D	64 – 66%
B-	80 – 83%		D-	60 – 63%
C+	77 – 79%		E	<60

## Grading Rubric(s)

### Participation Rubric (In Class Discussion/Lab Activities)

	Excellent	Good	Average	Insufficient	Unsatisfactory
Knowledgeable: Shows evidence of having done the assigned work.					
Thoughtful: Evaluates carefully issues raised in assigned work.					
Considerate: Takes the perspective of others into account and listens attentively.					

### Final Paper/Website Rubric (to be uploaded)

## Attendance Policy

Students will receive two unexcused absences during the semester. After that, students will be docked 10 points a class, unless advance arrangements are made with the Instructor. There will be no make-ups for exams/quizzes unless clear documentation is provided. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

## Students Requiring Accommodation

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

## UF Evaluations Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

## University Honesty Policy

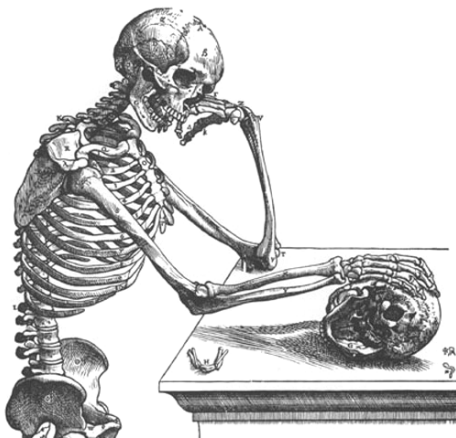
UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

## Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

## The Writing Studio

The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at <http://writing.ufl.edu/writing-studio/> or in 2215 Turlington Hall for one-on-one consultations and workshops.



Vesalius, Andreas (1543) Skeleton Contemplating a Skull, from *De Humani Corporis Fabrica*.

Topic by Week / Date		Health & Disease in Human Evolution (ANT 4468)		Reading		Labs	Online	Deadlines
				R & M	Lieb.		Quizzes	
I. Introduction								
	T	10-Jan	Biocultural Aspects of Health and "Disease"	1	1			
	R	12-Jan	Natural Selection and Disease Process					
II. Paleopathology Basics								
	T	17-Jan	Epidemiological Transitions	2	7			
	R	19-Jan	Paleodemography and the Osteological Paradox					
III. The Human Skeleton in Biocultural Context								
	T	24-Jan	The Human Skeleton: A Practical Experience		8	1		
	R	26-Jan	Growth, Development, and Human Life History				Quiz 1	
IV. Congenital Conditions and Neoplastic Disease								
	T	31-Jan	Anomalies, Dysplasias, and Syndromes	3 + 9	9	2		HW #1 Due
	R	2-Feb	Neoplastic Disease				Quiz 2	
V. Dental Disease								
	T	7-Feb	Acquired Dental Pathologies and Dental Wear	4				HW #2 Due
	R	9-Feb	Exam I (in class)					
VI. Trauma								
	T	14-Feb	Fractures and Interpersonal Violence	5	10			
	R	16-Feb	Domestic Violence					
VII. Joint Disease								
	T	21-Feb	Osteoarthritis	6	11	3		HW #3 Due
	R	23-Feb	Activity Patterns				Quiz 3	
VIII. Infectious Disease								
	T	28-Feb	Nonspecific and Specific Infection	7		4		
	R	2-Mar	Treponemal Disease, Tuberculosis, and Leprosy				Quiz 4	
IX. Hemopoietic and Metabolic Disorders								
	T	7-Mar	Metabolic and Endocrine Disease	8				HW #4 Due
	R	9-Mar	Exam 2 (in class)					

Topic by Week / Date	Health & Disease in Human Evolution (ANT 4468)		Reading			Online	
			R & M	Lieb.	Labs	Quizzes	Deadlines
SPRING BREAK							
	T	14-Mar	No Class				
	R	16-Mar	No Class				
X. The Ancient Microbiome							
	T	21-Mar	Ancient DNA and Metagenomics		5		Precis Due
	R	23-Mar	Microbial Archaeology				
XI. Reconstructing Paleodiet							
	T	28-Mar	Stable Isotopes and Trace Elements		6		
	R	30-Mar	Bioarchaeology and Identity			Quiz 5	
XII. Epidemiology							
	T	4-Apr	Quantitative and Qualitative Approaches		10	13	HW #5 Due
	R	6-Apr	Bioarchaeology and Public Health			Quiz 6	
XIII. Student Presentations							
	T	11-Apr	n=6				HW #6 Due
	R	13-Apr	n=3				
XIV. Student Presentations							
	T	18-Apr	n=6				
	R	20-Apr	n=3				
XV. The Future							
	T	25-Apr	Recap and Review				Paper Due
XVI. Finals							
	W	4-May	Cumulative Final Exam -- 10:00 AM - 12:00 PM				