ANTH222: Introduction to Ecological & Evolutionary Anthropology

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Summer 2017	LECTURE: Tues & Thurs/9am-12:45pm	WDS 1114
	LAB: Mon & Wed/9am-11:30am	WDS 0124C

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Office Hours:
By appointment.
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Course Description
ANTH 222, an introductory course in Ecological and Evolutionary Anthropology, is an opportunity for students to learn basic concepts and methods for the interdisciplinary study of:
1. the evolution of human physiology and human behavior;
2. the relationship between hominids and non-hominid primates; and
3. the relationships between human populations (past and present) and their biophysical environment.

Students will explore the evolution of the human species and the nature of contemporary human variation. We begin with the principles of evolutionary theory, genetics, and ecology to establish a framework for the study of human evolutionary biology. Fossil evidence for human evolution will then be considered, including comparisons with non-human primate ecology and evolution, to reconstruct prehistoric lifeways. Finally, discussion turns to modern human variation and diversity, paying particular attention how biocultural adaptations to environmental stressors like climate, nutrition, disease, and culture have and continue to shape our species.

Course Learning Outcomes
By the end of the semester, students should be able to:
•Articulate basic principles of evolution and human genetics, including a history of the ideas leading to our current scientific understanding of these principles and how they are applied in contemporary society;
•Identify similarities and differences between humans and non-human primate species, including the biological basis for cooperation and competition;
•Demonstrate an understanding of the major trends in hominin evolution, including the fossil and molecular evidence for the origins of anatomically modern humans;
•Evaluate influence of genetics, ecology, and sociocultural factors on biological variation, diversity, and adaptation in non-human primates and modern human populations; and
•Apply biocultural and ecological perspectives to explicate human reproductive biology, growth and development, disease patterns, diet/foodways, and livelihoods.

Important Note:
In this course, you will have the opportunity to examine and handle real skeletal remains of modern (donated) humans and a variety of non-human animals. Photographs of human remains will also be shown in lecture to illustrate the evolution of key features in our hominin ancestors.

Grading

Grades are WEIGHTED as follows:

Exam 1	20%
Exam 2	20%
Exam3/Final Exam	20%
Lab Participation	15%
Lab Exercises/Assignments	20%
Zoo Report	5%
Total	**100%**

Exams: You must arrive on-time for all examinations. Although the last exam is not cumulative, you may need to review material from previous lectures for it. Exams are primarily based on my lectures and incorporate in-class discussions, examples, journal articles and videos so as to favor students who attend class.

Final grades will be assigned based on the following percentages.

A (93-100%)	**B- (80-82%)**	**D+ (67-69%)**
A- (90-92%)	**C+ (77-79%)**	**D (63-66%)**
B+ (87-89%)	**C (73-76%)**	**D- (60-62%)**
B (83-86%)	**C- (70-72%)**	**F (0-59%)**

No extra credit is available.

Class Expectations

Students are expected to:
Conduct themselves in a mature manner.
Attend class regularly and on time.
Take notes in class from *verbal* lecture (i.e. do not rely solely on my PowerPoint slides).
Read the text chapters assigned.
Be familiar with the syllabus and follow the outlined policies.
Pay attention to changes to the syllabus and class schedule (come to class, check your e-mail and Canvas for any changes/updates).

Class Behavior

Students are expected to conduct themselves in a mature manner. The classroom is not your dining hall, living room, or lounge. No eating in the classroom. Please turn cell phones off or on silent. If it is an emergency, please take your call outside of the classroom.
Examples of unacceptable behavior include arriving late to class, sleeping, reading material not related to the class, talking about issues not related to the classroom discussion, making and receiving phone calls, writing text messages, using the computer for non-note taking purposes, etc. If a student behaves in a disruptive manner, s/he will be asked to leave the classroom. If a student is sleeping, s/he will be awakened and asked to leave. ***My policy is zero tolerance for any type of disruptive behavior. Any disruptive behavior results in your immediate exit from the classroom***. Offense will result in a warning and then a 5% deduction from your final grade for subsequent offenses. A referral may also be made to the Office of Student Conduct or to the University Campus Police.

Academic Integrity
Each student is expected to earn his/her degree on the basis of personal effort. Consequently, any form of cheating on examinations or plagiarism on assignments is unacceptable. If you are caught cheating in an exam, you will receive an F in the course. Refer to the University of Maryland Code of Academic Integrity: http://www.president.umd.edu/policies/docs/III-100A.pdf

Note-taking
My notes are not available to students. You may use your computer for note-taking only (i.e., not web-searching and email checking), and as long as it is not disruptive to the class. ***I do not give permission to tape or record my lectures.***

Students with disabilities
Accommodations are made for students who are registered with the Disability Support Service (DSS) Office and who provide a University of Maryland DSS Accommodation form that is updated for the current semester. Only written DSS documentation of the accommodation will be considered. This form must be presented before the end of the second week of classes. We are not able to accommodate students who are not registered with DSS or who provide us with documentation that has not been reviewed and approved by UMD's DSS Office after the second week of classes.
See: http://www.ugst.umd.edu/courserelatedpolicies.html

University Emergency Closure
In the event that the University is closed for an emergency or because of inclement weather, I will communicate to you via CANVAS or email to make schedule adjustments, including rescheduling of assignment due dates if necessary. Official closures and delays are announced on the campus website and local radio and TV stations. The snow phone line is 301-405-SNOW.

Lecture Attendance and Make-up Policy
Class attendance is necessary in order to do well in this course. **Make-up exams will be given only under extraordinary circumstances** (e.g. illness or injury, death in the family). If you miss an exam, you **must notify me within 24 hours of your absence** and then you may only make up the exam if you have a **documented excused absence**. Otherwise, you will receive a grade of zero for the exam you missed. If the absence is excused, the student must make-up the exam within one week of the date of absence. The make-up exam may be different from the exam given on the scheduled date and time. Any student who will miss class due to a religious holiday must notify the instructor in writing by the end of the second week of classes

Required Textbook/Reading Material:
LECTURE: Relethford J. 2013. The Human Species. Ninth edition. McGraw-Hill.

LAB: France, Diane L. 2011. Lab Manual and Workbook for Physical Anthropology. Seventh edition. Wadsworth/Thomson.

Laboratory Sections

The laboratories are conducted by the teaching assistants who are there to guide you during the lab. The labs provide opportunities for hands-on exploration of concepts discussed in lecture. *Lecture and lab topics will not necessarily match each week.*

LAB: Attendance Policy

Attendance will be taken in the first 15 minutes of lab. Tardiness is not tolerated. If you are absent for your lab, including arriving 15 or more minutes late to your lab, you will receive a 0 for the day's participation points and the day's exercises.

If you are more than 15 minutes late to lab, you may still participate in the lab in order to learn the material for exams, but you will receive 0 points on all graded items for the day.

Lab exercises must be completed IN-CLASS. If you do not attend, you will not be able to complete the in-class lab exercises, and will therefore lose the points for those particular exercises. You will not be able to make-up in-class lab exercises without an excused absence. Examples of excused absences include: medical emergencies, death in family, court appointments, etc. If you miss class for one of these reasons, you must e-mail the lab instructor **BEFOREHAND or within 24 hours of the missed class** in order to make up the missed assignment(s). Any student who will miss class due to a religious holiday must notify the instructor in writing by the end of the second week of classes.

LAB: Due Dates Policy

Completed lab exercises are **due at the end of the class period**, unless otherwise stated by the instructor. Sometimes, if time runs out, you may be permitted to "take home" an in-class lab exercise. The completed exercise is then **due the next immediate lab class**. If you are absent the day the in-class exercise is assigned and it is unexcused, you lose the points. You may NOT turn in the exercise the following week when you attend. If you are present when the in-class exercise is started but are either absent the next lab meeting it is due or are present but do not have the exercise in-hand to submit, you lose those points. Absolutely all assignments are due **IN-CLASS**. They are not accepted otherwise.

LAB: Cheating/Plagiarism

Many of the in-class labs will be conducted in groups so you answers may be similar to one another. Despite this, **each of you must submit your own individual exercises and reports.** The zoo report must also be completed INDIVIDUALLY and you must submit your own unique report.

→ **Do not complete the labs beforehand** because you might a) be doing it wrong. OR b) be doing extra work because sometimes certain questions may be eliminated from the exercises.

→ **Eating or drinking is not permitted in lab.**

→ **Closed-toe shoes only.**

CLASS SCHEDULE

NOTE: The instructor reserves the right to change the course outline, schedule, exam dates, or other syllabus content as necessary during the course of the semester. It is the student's responsibility to attend class and check e-mail and Canvas to be informed of any changes made to the schedule and syllabus.

Date/Topics	**Assigned Readings**
Week 1: May 30	
Introduction to biological anthropology	Chapt 1: Science & Evolution
Characteristics of science	
Development of the theory of evolution	
Molecular genetics	Chapt 2: Human Genetics
Mendelian genetics	
Mutations	
Week 2: June 6	
The synthetic theory of evolution	Chapt 3: The Forces of Evolution
Principles of Ecology	
Osteology Primer	
Week 3	
****Tues/June 13****	
9-10:15am: Exam 1	
10:30am: After Exam Lecture	
Primate characteristics	Chapt 5: The Primates
Primate diversity	Chapt 6: Primate Behavior & Ecology
Thurs/June 15	
Primate diversity	Chapt 6: Primate Behavior & Ecology
Characteristics of Living Humans	Chapt 7: The Human Species
Paleoanthropology	Chapt 8: The Fossil Record
Week 4: June 20	
Paleoanthropology	Chapt 8: The Fossil Record
Primate evolution	Chapt 9: Primate Origins and Evolution
Hominoid evolution	
Early Hominins	Chapt 10: The First Hominins

Week 5

****Tues/June 27****

9-10:15am: Exam 2

10:30am: After Exam Lecture:

Genus Homo	Chapt 11: The Origin of the Genus Homo
	Chapt 12: The Evolution of Archaic Humans
Anatomically modern humans	Chapt 13: The Origin of Modern Humans

Thurs/June 29

Human variation	Chapt 14: Race & Human Variation
Natural selection in human populations	Chapt 15: Recent Human Evolution
Agriculture, disease, urbanization	Chapt 17: The Biological Impact of Agriculture & Civilization

Week 6

~Tues/July 4: July 4th Holiday/No Class~

****Thurs/July 6: 9-10:15am: Exam 3/Final Exam****

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Date/Chapter/Topic	**Lab Exercises**
Week 1	
Wed/May 31	
Zoo Report Assigned Today - Zoo Report Instructions	
Chapter 8: Observation of Living Primate Behavior & Morphology	
Exercises 8.2, 8.3 & 8.4 due Wed/July 5	
Chapter 1: Cellular Genetics	
Cellular genetics	Exercise 1.1
DNA Typing	Exercise 1.3
Chapter 2: Population Genetics	
Gamete formation	Exercise 2.1
Week 2	
Mon/June 5	
Chapter 2: Population Genetics	
Phenotype summary	Exercise 2.2
Genotype formation	Exercise 2.3
Pedigree exercises	Exercise 2.4
Wed/June 7	
Chapter 2: Population Genetics	
Blood-type genetics	Exercise 2.5
Hardy-Weinberg Population Genetics Lab	
Week 3	
Mon/June 12	
Chapter 3: Human Osteology	
The human skeleton	Exercise 3.2
Fragment identification	Exercise 3.3
Chapter 4: Growth and Development	
Skeletal development	Exercise 4.1
Dental development	Exercise 4.2
Wed/June 14	
Chapter 5: Biological Classification	

Biological classification	Exercise 5.1
Chapter 6: Comparison of the Skeletons of Quadrupeds, Bipeds & Brachiators	
Quadrupeds, bipeds & brachiators	Exercise 6.1
Metric comparison of skeletons	Exercise 6.2

Week 4

Mon/June 19

Chapter 7: Comparing the Living Primates	
Living primate clades	Exercise 7.1
Dental trends	Exercise 7.2
Comparing extant primates	Exercise 7.3

Wed/June 21

Chapter 9: The First Primates	
Early evolution of primates	Exercise 9.1
Chapter 10: Miocene Hominoid Evolution	Exercise 10.1

Week 5

Mon/June 26

Chapter 11: The Early Hominins	
The early hominins	Exercise 11.1
Chapter 12: The Genus *Homo*	
The genus *Homo*	Exercise 12.1

Wed/June 28

Chapter 13: Anthropometry, Nonmetric Traits, and Dermatoglyphics	
Measurement record	Exercise 13.1
Statistical analysis	Exercise 13.2
Dermatoglyphics	Exercise 13.5

Week 6

Mon/July 3

4th of July Break

Wed/July 5

Chapter 14: Abnormalities in the Skeleton	
Abnormalities in the skeleton	Exercise 14.1
Chapter 15: Human Skeletal variation & Forensic Anthropology	
Forensic anthropology	Exercise 15.1

*****ZOO EXERCISES DUE TODAY*****
(Exercises 8.2, 8.3 and 8.4)