

INTRODUCTION TO BIOLOGICAL (PHYSICAL) ANTHROPOLOGY
ANTH 102
Summer 2023

INSTRUCTOR: Marin A. Pilloud

Class Time and Location:

LECTURE:

MTWRF 9:00-12:00

LAB:

MTWRF – 2:30-5:30 (as indicated in the syllabus)

Required Text:

- Textbooks and materials are purchased and provided to students by the THINK program

Course Description:

Catalogue Description: Biological and evolutionary origins of humans, with consideration of population genetics, living primates, fossil records and human variation. Includes seven laboratory experiences.

Prerequisite: Completion of Core Curriculum Mathematics

Requirement or SAT of 610 or ACT 27 OR Accuplacer EA 80 and CL 84 OR COREQUISITE.

Corequisite: MATH 126 or MATH 127 or MATH 128 or MATH 176 or MATH 181.

Detailed Course Description: Physical anthropology focuses on human evolution and variation. Genetics and evolution provide the key theoretical underpinnings of this course, whether focus is long term primate evolution, hominid origins and evolution, or human adaptability and variation in recent human populations. In addressing fundamental questions, you will be challenged to think critically, apply sound scientific methodologies, and understand and assess quantitative data. To explore concepts within biological anthropology key technological advances will be highlighted. Such technological methods include advances in dating (e.g. potassium-argon, carbon 14, and thermoluminescence), diet and climate reconstruction (as studied through isotopic analysis), population genetics (e.g. DNA analysis), and the reconstruction of the human evolutionary past (e.g. skeletal imaging, histological analysis of skeletal structures, and biomolecular analysis). This course will employ a biocultural approach and emphasize the interaction between biology and culture through time. Such an approach will give students an appreciation for the interaction between biology, culture, and society in prehistory, history, the present, and into the future.

During the semester, you will encounter many dates, names, concepts, theories, etc. but the primary goal is for you to gain an understanding of major principles. Course objectives will be reinforced through several lab experiences throughout the semester that will give students a hands-on approach to the study of science, technology, and society within biological anthropology. By the end of the semester, you should be able to write a page on one of the general topic areas, explain various concepts and principles to someone not taking the class, read and critique an article on one of the subjects, etc. Over the course of time, you will forget many details.....but you should always retain a substantial part of the ‘big picture’ as outlined in the Student Learning Outcomes.

Core objectives:

- **CO4 Physical and Natural Phenomena**
Students will demonstrate an understanding of genetic and evolutionary principles and how these apply to hominid origins and evolution and biological variation among modern human populations. The associated lab will provide you with a hands-on opportunity to understand the basic principles of Mendelian and population genetics and make observations on primate, fossil hominid, and human skeletal anatomy.

Student Learning Outcomes:

1. Students will be able to explain the differences between evolutionary biology, based on scientific principles, and intelligent design or creation science, based on faith and belief systems.
2. Students will be able to explain how natural selection, genetic drift, and mutation have produced the biological differences among human populations (e.g., in skin color, eye color and form, blood group gene frequencies, body size, fingerprints, dental morphology, metabolic disorders, etc.)
3. Students will analyze the primary types of environmental stressors that have affected human evolution, including climate (e.g., extreme temperatures), disease (e.g., malaria), nutrition (e.g., over reliance on one staple), and demography (e.g., issues of crowding and sanitation following emergence of food production and beginning of sedentary life style). Moreover, students will evaluate how human populations adapt through behavioral (cultural), physiological, and genetic means, and how these interact (biocultural approach).
4. Students will learn to recognize how humans fall within the larger biological world (as primates, mammals, vertebrates, bilaterians), and describe what they owe to the rest of the animal kingdom that contributes to their current evolutionary form and what constitutes uniquely human traits both behaviorally and biologically.
5. Students will recognize that above all other biological changes in hominid evolution, the one that set humans off in a new direction was the development of bipedal locomotion (ca. 5-6 mya). Moreover, that some of the hallmarks of humanity, including speech, art, and music, developed within the past 50,000 years.

Course Requirements:

- **Exams:** There is 1 midterm and 1 final exam. The final exam is not comprehensive; however, it will build on and draw from concepts learned earlier in the course. Details of exam format will be provided in advance. Generally, exams will consist of multiple choice, fill-in-the blank, short answer, and other appropriate types of questions.
- **Quizzes:** There will be two quizzes given in class; one during each section of the course. These quizzes will be short answer, matching, and fill-in-the blank. Students will be allowed one sheet of notes for these quizzes. Details will be provided in class.
- **Labs:** There are 10 labs that must be completed during the lab section.

- Final Presentation: All students will present on how they can see evolutionary theory in the modern world. More details will be given in class.

Attendance:

University policies: There are no official absences from any university class. It is the personal responsibility of the student to consult with the professor regarding absence from class. In the event that a student misses a class because of an official university function or event or because of serious personal considerations, the Office of the Associate Vice President for Student Life Services may, at its discretion, send an explanation to the instructor involved or to the faculty in general. The instructor shall make the final determination on whether the missed work can be done at a time other than during the regularly scheduled class period.

It is the policy of NSHE to be sensitive to the religious obligations of its students. Any student missing classes, quizzes, examinations or any other class or lab work because of observance of religious holy days will, whenever possible, be given an opportunity during that semester to make up the missed work. The make-up work will apply to the religious holy day absence only. It shall be the responsibility of the student to notify the instructor in advance in writing, if the student intends to participate in a religious holy day which does not fall on state holidays or periods of class recess. This policy shall not apply in the event that administering the assignment at an alternate time would impose an undue hardship on the instructor or the institution which could not reasonably have been avoided.

The University of Nevada, Reno deeply values and supports the participation of undergraduate students in university-approved extracurricular activities. It is the spirit and intent of this policy to offer fair and equitable opportunities to all students, including those who must miss class due to participation in university approved extracurricular activities. University-approved extracurricular activities are defined as those sanctioned by the college dean and/or the provost, and may include, but are not limited to, intercollegiate athletics, band, drama, forensics and recruitment. Students who represent the University at such events shall be provided with alternate, timely accommodations for exams, quizzes, or other course assignments missed as a result of their participation. The alternate accommodations should in no way penalize or disadvantage the student. It is the responsibility of the student to provide written notice to their instructor of their participation in official University activities as soon as the student is aware of the potential need to miss class.

Effective fall 2014, the Student Health Center will no longer provide medical excuses for missed classes, exams, or assignments. This policy is based on their limited resources, which are better dedicated to providing health care; the inability for us to make valid determinations about illnesses or injuries students may have effectively managed through self-care; and our commitment to student privacy. Exceptions to this policy may occur if, in the judgment of a health care provider at the Student Health Center, the student will be out of class for an extended period of time due to a serious illness or medical condition. Examples of serious illnesses or medical conditions may include but are not limited to:

- Mononucleosis, which may require bed rest and/or removal from campus

- Hospitalization and/or surgery
- Severe injury or illness requiring prolonged bed rest
- Highly contagious diseases (chicken pox, measles)

This policy is consistent with the recommendations of the American College Health Association and is similar to other colleges and universities. Reference: Policy adapted from Nazareth College and Drexel University

Class policies: Some lecture material will not be in the text; it is important to attend class regularly to do well in the course. Arriving to class late or leaving early is not acceptable, UNLESS discussed with the instructor ahead of time. Such behavior is disruptive and disrespectful to the instructor and the other students in the class. Attending class also means being present in class. Cell phone disruptions, sending text messages, sleeping, listening to headphones, and chit-chatting in class is unacceptable behavior. Please help to maintain a pleasant learning environment for all involved. Should you miss class, or plan on missing a class, get the notes from a classmate and check Canvas for lecture material. I will be happy to go over any course material with you should you have any questions, either in person during office hours or via e-mail.

No early exams will be given. Make-up exams will be at the instructor's discretion. If you miss an exam you have 24 hours to contact the instructor via e-mail or the department. Official documentation is required (doctor's excuse, accident report, etc.) for make-ups. All make-up exams will be essay and must be taken within 3 days after the exam. Otherwise, the student will receive a "0" for that exam. Refer to the course outline for the chapters and dates of the exams. If you have any conflicts with the exam dates, see the instructor immediately. You will not be able to make-up in class assignments/labs.

Grading: Final grades are based on the following point scale (in percentages of total points): (+/- system) A = 100-90%, B = 80-89%, C = 70-79%, D = 60-69%, F = <60%

Points:

Mid-term	100
Final Exam	100
Labs	275 (11@25)
Final Presentations	50

TOTAL **525**

Philosophy of Grading: I do not give grades; students earn their grades. Your final grade is your responsibility. The only legitimate reason to change a grade is if there was a mistake in grading. Any questions about grading must be discussed with the instructor within the first week following the return of any graded material.

Academic Misconduct: All students should become familiar with the rules governing alleged academic misconduct, including what constitutes academic misconduct and how it applies to plagiarism and test-taking. Ignorance of the rules governing academic misconduct or ignorance of what constitutes academic misconduct is NOT an acceptable defense. All work handed in for this class must be your own. Cheating, plagiarism, or otherwise obtaining grades under false pretenses constitute academic dishonesty according to the code of this university. Academic dishonesty will not be tolerated and penalties can include canceling a student's enrollment without a grade, or giving an F for the course or for the assignment. For more details, see the UNR general catalog.

Statement of Disability Services: Any student with a disability needing academic adjustments or accommodations is requested to speak with me or the Disability Resource Center (Thompson Building, Suite 101) as soon as possible to arrange for appropriate accommodations.

Statement on Audio and Video Recording: Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.

Statement on Title IX: Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc.

If you or someone you know has been harassed or assaulted, you can find the appropriate resources at this UNR website www.unr.edu/eotix, or you can ask the instructor for more direction.

Land Acknowledgment: The University of Nevada, Reno sits on land which originally belonged to indigenous groups, specifically the Washoe people, until the California Gold Rush in the mid-19th century. During the Gold Rush, the Washoe were forcibly displaced, assimilated, and dispossessed of their land. This university was established as a “land grant college” via the Morrill Act of 1862. This act appropriated an estimated 17 million acres of land currently or previously inhabited by indigenous Americans and distributed them to state governments for the creation of colleges or universities. From their establishment onward, access to these institutions has often been disproportionately available, explicitly or implicitly, to White students. While the fight for reparations is ultimately beyond the scope of this course, a holistic approach demands that we acknowledge and sit with the context of our learning and our discipline.

Diversity Statement: In this course we will collectively work to create an atmosphere where diverse perspectives are recognized, respected, and seen as a source of strength. It is my intent to present materials and activities that are respectful of diversity: that include, but are not limited to gender, sexuality, ability status, age, socioeconomic status, ethnicity, race, religion, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. There is a clear lack of diversity within biological anthropology, which appears to stem from early introduction to the material. It is my intent to create an inclusive environment in terms of research and discussions that grow diversity, not discourage it.

Personal Pronouns: Everyone deserves the dignity of being addressed in a way that is in accordance with their personal identity. In this class, students will have the opportunity to indicate their preferred name and pronoun preferences. Be respectful and refer to individuals using the pronouns they use for themselves. If anyone sees that I or others in the class have made a mistake please correct the individual as you feel comfortable, and I will do the same.

Academic Misconduct: All students should become familiar with the rules governing alleged academic misconduct, including what constitutes academic misconduct and how it applies to plagiarism and test-taking. Ignorance of the rules governing academic misconduct or ignorance of what constitutes academic misconduct is NOT an acceptable defense. All work handed in for this class must be your own. Cheating, plagiarism, or otherwise obtaining grades under false pretenses constitute academic dishonesty according to the code of this university. Academic dishonesty will not be tolerated and penalties can include canceling a student’s enrollment without a grade, or giving an F for the course or for the assignment. For more details, see the UNR general catalog.

Course Outline

This is a rough outline of what we will cover this quarter. Any changes to this schedule will be announced in class and e-mailed to students.

LECTURE: MTWRF 9:00-12:00

Dates	Topic	Larsen	Articles
10 July	Class introduction Introduction to Anthropology History of Evolutionary Thought	1,2	Popper 1963 Gould 1994
11 July	Genetics	3	
12 July	Genes and Evolution	4	
13 July	Biology in the Present: Human variation/skeleton	5	
14 July	Biology in the Present: Primates	6	
17 July	Primate Social Structure	7	
18 July	FIELD TRIP		
19 July	Fossils/Review for Mid-Term	8	
20 July	Primate Evolution	9	
21 July	Early Hominins	10	
24 July	Early Homo	11	
25 July	Human Dispersal/Agriculture	12, 13	
26 July	Bioarchaeology/Forensic Anthropology	--	Pilloud 2016
27 July	Conclusions/Presentations	14	
28 July	FINAL		

LAB: MTWRF 2:30-5:30

Dates	Topic
10 July	Scientific Method
11 July	Molecular Genetics
12 July	Population Genetics
13 July	Human Skeleton
14 July	No lab
17 July	Comparative Anatomy
18 July	FIELD TRIP TO ZOO – primate lab
19 July	Mid-Term
20 July	Primate Evolution
21 July	Australopithecines
24 July	Early Homo
25 July	Human Migration
26 July	Bioarchaeology/Forensic Anthropology
27 July	Review for Final

28 July	No lab
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