

PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

BIOLOGICAL ANTHROPOLOGY
ANT 2100

Class Hours: 3.0

Credit Hours: 3.0

Laboratory Hours: 0.0

Date Revised: Fall 06

Catalog Course Description:

An introduction to human biological variation as the result of evolutionary processes. Examples based upon contemporary, historic, and prehistoric populations are used to introduce anthropological methods for the analysis of variation using living persons, genetic material, and skeletal remains.

Entry Level Standards:

Previous exposure to Mendelian genetics; ability to understand and work with equations.

Prerequisite:

ANT 1100 or consent of instructor

Textbook(s) and Other Course Materials:

Stanford C, Allen JS and SC Anton. *Biological Anthropology*. Pearson Prentice Hall, 2006.

Relevant course readings not in the text will be placed in the library. Students are responsible for reading the appropriate materials for each lecture.

I. Week/Unit/Topic Basis:

Week	Topic
1	Introduction, biological anthropology
2	Human genetics I
3	Human genetics II
4	The four forces of evolution
5	Microevolution and population genetics (Hardy-Weinberg Equilibrium)
6	Macroevolution and speciation
7	Case studies in human microevolution
8	Human growth
9	Approaches to human variation, "race," and genetic distance

10	Skeletal biology
11	Human adaptations
12	Health and disease
13	Demography
14	Forensic anthropology exercise (Group project)
15	Group presentation, review
16	Final Exam

II. Course Objectives*:

- A. Understand the contemporary human species as the result of unique evolutionary processes. I, II, III
- B. Learn that the sociological/cultural concept of “race” is not a biological classification. I, II, III, IV
- C. Understand the dynamic nature of human populations as the result of genetic drift, flow, natural selection and mutation. II, III, V
- D. Comprehend the utility of population history studies for medical and epidemiological research. II, III, IV, V
- E. Increase his/her ability to synthesize information about the human species and relate it to contemporary issues and concerns in health care, cultural and social interaction, and political problems such as ethnic cleansing. I, III, IV
- F. Gain exposure to basic quantitative and analytical methods of population genetics, demography, and skeletal biology. I, V, VI.4
- G. Understand basic genetic concepts. V
- H. Increase his/her ability to reason and think critically. I, V
- I. Practice articulating ideas, opinions, and critiques of issues presented in the classroom. I
- J. Work with classmates on a mock forensic case that requires application of anthropological methods and teamwork to provide a description of age-at-death, ancestry, sex, and manner of death for the individual. Oral reports will be presented to the class. I, V

*Roman numerals after course objectives reference TBR’s general education goals.

III. Instructional Processes*:

Students will:

1. Research scientific journal articles using library online databases and write a paper on a relevant topic in biological anthropology using word processing software. *Communication Outcome, Humanities/Fine Arts Outcome, Social/Behavioral Sciences Outcome, Technological Literacy Outcome*
2. Work with basic equations used in population genetics, demography, and skeletal

biology, drawing conclusions from the data. *Natural Sciences Outcome, Mathematics Outcome*

3. Develop an understanding of the “race” concept as a socio-cultural reality, rather than a biological one; assess the social and political consequences of this misunderstanding in contemporary society and throughout history. This will include writing a short (2-3 page) report that details the biological race concept’s lack of scientific validity. *Social/Behavioral Sciences Outcome, Communication Outcome*
4. Read and critique scientific explanations of population variability, evolutionary process, and methods of analysis. *Communication Outcome, Natural Sciences Outcome*
5. Work with a team of classmates to analyze a mock “forensic case” for presentation to the class. *Communication Outcome, Natural Sciences Outcome, Transitional Strategies, Active Learning Strategies*
6. Illustrate comprehension of class material on 4 in-class exams. These will include an essay component that requires students to present a logical argument supporting a particular viewpoint or explaining a scientific concept. *Communication Outcome*
7. Read assigned readings and participate in discussions of class and reading material. *Communication Outcome, Humanities/Fine Arts Outcome, Active Learning Strategies*
8. Practice professionalism by attending class on a regular basis, being dependable, cooperative, and respectful of course topics while contributing to class discussion and projects. *Transitional Strategies, Active Learning Strategies*
9. Demonstrate comprehension of course material on 3 in-class exams which may include an essay component that requires students to present a logical argument supporting a particular viewpoint or explaining a scientific concept. *Communication Outcome*

*Strategies and outcomes listed after instructional processes reference TBR’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

IV. Expectations for Student Performance*:

Upon successful completion of this course, the student should be able to:

1. Discuss the process of mitosis, meiosis, and genetic inheritance. A, C, G
2. Understand the outcome of micro- and macroevolution. A, C, F, G
3. Explain the concepts of natural selection and evolution as they relate to the human species. A, C, D, E, G, H
4. Understand that human populations exhibit variant susceptibility to disease because of their unique histories and exposure to forces of natural selection. A, C, E, G
5. Generate conclusions based upon their own analysis of numerical data. F, H, I
6. Use appropriate reference materials and the Internet for research. D, E, H, I
7. Compile an informational report with proper citations. C, E, F, I
8. Read scientific documents analytically. F, H, I

9. Effectively communicate scientific concepts to peers in a clear, concise oral presentation. I, J
10. Discuss the difference between the social and biological concepts of "race." A, B
11. Explain why the biological concept of "race" is not scientifically valid. A, B
12. Discuss how studies of human variation and genetic distance are carried out. E, F
13. Discuss morphological differences between males and females as exhibited in the human skeleton. F, E, J
14. Discuss age-related changes in the human skeleton. D, E, F, J

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures: 400 points

Exams (4): 100 points each

B. Laboratory Expectations:

N/A

C. Field Work: 340 points

Homework assignments: 100 points: collect 10 of 15

"Race" concept report: 50 points: 2-3 pages maximum

Research paper: 100 points: 5-7 pages maximum

Research presentation: 50 points: Grades determined by averaging scores awarded by student's peers

"Forensic case": 40 points

D. Other Evaluation Methods:

N/A

E. Grading Scale:

90-100%	(666-740)	A
85-89%	(629-665)	B+
80-84%	(592-628)	B
75-79%	(555-591)	C+
70-74%	(518-554)	C
60-69%	(444-517)	D
59% and below	(below 443)	F

VI. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75

percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

C. Accommodations for disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at <http://www.pstcc.edu/sswd/>.