Class Hours: 3.0           Credit Hours: 3.0
Laboratory Hours: 0.0      Date Revised: Fall 2015

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:


Relevant course readings not in the text will be placed in the library/in D2L. Students are responsible for reading the appropriate materials for each lecture.

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction, biological anthropology</td>
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<tr>
<td>2</td>
<td>Human genetics I</td>
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<tr>
<td>3</td>
<td>Human genetics II</td>
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<td>4</td>
<td>The four forces of evolution</td>
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<td>5</td>
<td>Microevolution and population genetics (Hardy-Weinberg Equilibrium)</td>
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<td>6</td>
<td>Macroevolution and speciation</td>
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<td>7</td>
<td>Case studies in human microevolution</td>
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<tr>
<td>8</td>
<td>Human growth</td>
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<tr>
<td>9</td>
<td>Approaches to human variation, “race,” and genetic distance</td>
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II. Course Goals*:

The course will:

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. Expected Student Learning Outcomes*:

The student will 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.

IV. 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+
V. 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.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

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 office. Students must present a current accommodation plan from a staff member in Disability Services (DS) in order to receive accommodations in this course. Disability Services may be contacted by sending email to disabilityservices@pstcc.edu, or by visiting Alexander 130. More information is available at www.pstcc.edu/sswd/