ANT 475/575: Biology, Culture and Evolution  
Spring 2013  
Tuesdays & Thursdays, 9:30 – 10:45pm, 1 Moore Hall

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Office hours: Tuesdays/Thursdays 1-2pm

Prerequisites:

ANT 475: ANT 270 or permission of instructor  
ANT 575: graduate student in anthropology or permission of instructor

Course Description

This course provides a detailed introduction to the study of how humans bioculturally adapt to their physical, biological, and social environment, from the perspective of human evolutionary biology.

Objectives

Course Objectives and Student Learning Outcomes:
At the end of this course students should be able to:

1. Review, evaluate, and critique biocultural models of human health derived from human evolutionary biology, including those rooted in the study of ecology, demography, genetics/epigenetics, physiology, nutrition/energetics, and epidemiology.

2. Outline theoretical and methodological issues in the anthropological study of human adaptation through case studies in various populations.

3. Proficiently write a scientific research paper by searching for a topic, finding and critically reviewing source material, outlining the paper, and then writing and revising the manuscript.

This course carries "W" designation. Therefore, writing proficiency is required for a passing grade. Each writing assignment (see below) requires carefully edited prose and will be graded for intellectual content, originality, comprehension of reading material, coherence, logic, organization, grammar, punctuation, spelling, and prose style. Writing proficiency is an absolute requirement for passing this course. Students with writing difficulties will be encouraged to take advantage of the services of the Writing Center. (While the "W" designation does not apply to the graduate level course, the same expectation for writing proficiency applies.)
### Outline of Topics Covered During the Semester

**Part I: Theory and Historical Roots in Human Evolutionary Biology**

1. **1/10** Review of evolutionary theory
2. **1/15** Review of evolutionary theory, con’t.
   - *Read: Relethford (2008) Chapters 1-3* [note: this is review material; if you have taken ANT 270 and understand the basics of evolutionary theory, consider this an optional reading for reference]
3. **1/17** Human evolutionary biology – theoretical basis
   - *Read: HB Chapter 1 (Stinson et al.)*
4. **1/22** Human evolutionary biology – theoretical basis, cont.
5. **1/24** History of the discipline
   - *Read: HB Chapter 2 (Johnson and Little)*
   - **PAPER TOPIC DUE**

**Part II: Heredity and Human Variation**

6. **1/29** Principles of Genetics
   - *Read: HB Chapter 3 (Weiss and Tackney)*
7. **1/31** Genetics, Genomics, and Human Variation
   - *Read: HB Chapter 4 (O’Rourke and Enk)*
8. **2/5** Quantitative Variation and Genetics
   - *Read: HB Chapter 5 (Konigsberg)*
9. **2/7** Extended Discussion: Genetics and Genomics
   - **PAPER OUTLINE DUE**
10. **2/12** Principles of Epigenetics and Non-Genomic Inheritance
    - *Read: Jablonka and Raz 2009*
11. **2/14** Epigenetics: Applications to Human Health
    - *Read: Thayer and Kuzawa 2011*
12. **2/19** Extended Discussion: Epigenetics and Human Variation

**Part III: Stress, Adaptation, and the Distribution of Health**

13. **2/21** Human Adaptation to Climate
    - *Read: HB Chapter 6 (Beall et al.)*
    - **TAKE-HOME MIDTERM EXAM DISTRIBUTED**
14. **2/26** Human Nutritional Evolution
    - *Read: HB Chapter 7 (Leonard)*
15. **2/28** Human Energetics
    - *Read: HB Chapter 8 (Snodgrass)*
16 3/5  Extended Discussion: Energetics and Anthropometry
    TAKE-HOME MIDTERM EXAM DUE

17 3/7  Energetics and Anthropometry Lab

18 3/12 Epidemiology of Human Disease
    Read: HB Chapter 9 (Sattenspiel and Slonim)

19 3/14 Stress and Human Biology
    Read: HB Chapter 10 (Ice and James)

20 3/19 Public Health Paradoxes
    Read: Worthman and Kohrt 2005

21 3/21 Extended Discussion: Stress, Adaptation and Health
    TERM PAPER DUE

Part IV: The Life Cycle and Population Dynamics

22 4/2  Evolution of the Human Life Cycle
    Read: HB Chapter 11 (Bogin and Smith)

23 4/4  Growth Variation: Biological and Cultural Factors
    Read: HB Chapter 12 (Stinson)
    PEER REVIEW DUE

24 4/9  Aging, Senescence, and Human Variation
    Read: HB Chapter 13 (Crews and Ice)

25 4/11 Extended Discussion: The Life Cycle

26 4/16 Mortality and Migration
    Read: HB Chapter 14 (Gage et al.)

27 4/18 Population Growth and Fertility Regulation
    Read: HB Chapter 15 (Ellison et al.)
    TERM PAPER REVISION DUE

28 4/23 Extended Discussion: Population Dynamics

29 4/25 Catch-up and Wrap-up

FINAL EXAM:  Tuesday, April 30, 8:00am

Attendance Policy

Class Attendance and Participation: This is a discussion-oriented class and attendance is required. Attendance will be monitored; unexcused absences will lower your grade. Classroom participation is an important requirement of the course and it will figure in the final grade.
Number & Timing of Major Assignments

1. **Advance Discussion Questions.** For each class when a reading is due, post on Blackboard Learn a commentary about the reading *no later than 8:30 AM on the day of the class*. Use about one paragraph to describe what you found most interesting about the reading, and anything that you would like clarified or further explained. Then, propose for discussion at least one concrete, practical example of how the material in this reading might matter to a non-specialist (think internet news site reader or cable news viewer – why should they care?) There is no need for a comprehensive summary of the reading. However, your commentary should make it clear that you read and thought about the chapter.

2. **Term paper.** You will write a paper on a pre-approved topic, using at least eight reliable, appropriate academic references. You will be required to submit a proposed topic by 1/24, an outline of the paper by 2/7, and the completed paper by 3/21. The paper should be 8-12 pages long, double spaced in 12-point Times New Roman font, with 1” margins. The page guidelines do *not include* the reference list, which must be appended to the end of the paper. The paper will be graded for intellectual content, originality, comprehension of reading material, coherence, logic, organization, grammar, punctuation, spelling, and prose style. You will receive a comprehensive style guide and an evaluation rubric in advance through the Blackboard Learn site. Adherence to the style guide is required, and will be reflected in your grade.

3. **Peer review and term paper revision.** You will complete a revision to the term paper based on feedback from Dr. DeCaro *and* feedback from one other student in the class. The revision will be graded using the criteria listed above, with the added requirement that your revisions take the comments into account. A portion of your term paper revision grade will be based on providing constructive, thoughtful comments on another student’s paper. The peer review is due on 4/4, and the term paper revision on 4/18.

4. **Midterm exam.** You will have an open-book, open-notes, take home midterm exam. All questions will be essay questions. This exam will be graded as a writing assignment. Therefore, the exam will be graded for intellectual content, originality, comprehension of reading material, coherence, logic, organization, grammar, punctuation, spelling, and prose style. The midterm will be distributed on 2/21, and is due on 3/5.

5. **Final exam.** You will have an open-book, open-notes final exam at the regularly scheduled time during finals week. All questions will be essay questions. The exam is comprehensive, although it will focus more on the material covered after the midterm. Given the limited time allowed to complete the exam (2½ hours), the primary grading criteria will be comprehension of the reading material and intellectual content, rather than
punctuation, grammar, etc. However, if your writing is poorly organized or difficult to understand, this will negatively affect your grade.

**Except for the advance discussion questions, ALL take-home assignments are due by 11:59pm on the date specified, and will be accepted only through the Blackboard Learn dropbox created for that assignment. The official timestamp used by Blackboard Learn will be used to determine whether an assignment is late or on time.**

**Additional Expectations for Graduate Students**

There are several additional expectations for students enrolled in this class as ANT 575:

1. The final paper will be 15-20 pages, rather than 8-12 pages.

2. The final exam will be a lengthier take-home final, treated as a writing assignment. Graduate students will not, however, take the in-class final.

3. Graduate students will be asked to select and read an additional article of their choice from current scientific literature, which is related to the topic of each day’s class session, in advance of each class. Appropriate places to look for such material might be *American Journal of Physical Anthropology*, *American Journal of Human Biology*, and *Annals of Human Biology* (although there are other places to look as well). Articles selected for this assignment should be original research reports rather than review articles whenever possible, published within the last 5 years. When time permits, graduate students may be asked to discuss their additional readings with the class, and should come prepared to do so.

4. Graduate student reading commentaries should be longer and more detailed, and should include a discussion of both readings (the one assigned for the entire class, and also the one individually selected.)

5. All assignments will be evaluated according to a standard appropriate for graduate-level coursework.

**Grading Policy**

- Advance Discussion Questions: 12.5%
- Class Discussion: 12.5%
- Term Paper: 10%
- Term Paper Revision: 15%
- Midterm Exam: 25%
- Final Exam: 25%

*IMPORTANT NOTE: Because this is a writing course, to pass you MUST receive at least a passing grade the final writing assignment, which is the term paper revision. To*
receive a passing grade, you will need to show (at minimum) that you write with the skill normally required of an upper division student in Anthropology. This is true regardless of how well you do in other aspects of the course!

Policy for Making-Up Missed Course Work

Extensions policy:

1. Advance discussion questions posted after 8:30am but before midnight on the day of class will be accepted for half credit. After that, no advance discussion questions will be taken for any reason. Advance discussion questions must be submitted on time even if you were excused from class. However, two missed advance discussion questions will be dropped from your grade (or, if none are missed, the two lowest grades will be dropped). Save these “free misses” to take care of emergencies that might arise.

2. Your topic, outline, term paper, peer review, and term paper revision must be submitted electronically, using the appropriate Blackboard Learn dropbox, by 11:59pm on the day they are due for full credit. After that, except by prior arrangement and with a very good reason, assignments will lose 10% credit off of the maximum of 100% for each day (or part of a day) they are late. Many assignments being due at the same time is never a good reason, and extensions will not be authorized on that basis. If your topic or outline is late, the 10% reduction will come off your maximum grade for the term paper. (Note: Instead of a 10% reduction, if the peer review is not submitted on time you will receive no credit for that portion of your term paper revision grade. Your fellow students depend on receiving this feedback on time so they can complete their own revisions, so no extensions will be approved for any reason.)

3. Your take-home midterm exam must be submitted electronically, using the appropriate Blackboard Learn dropbox, by 11:59pm on the day it is due. The midterm will not be accepted late except by prior arrangement and with a very good reason. Given that you have over a week to complete the midterm, there are very few emergencies that should prevent you from submitting the midterm on time. Multiple midterms being due during the same week is not a good reason – you need to plan in advance for this. Unauthorized late midterm exams receive zero credit.

4. The final exam date and time are set by the university. You must appear at the correct date and time.

Required Course Material

Readings noted in the syllabus that do not come from the textbook will be provided electronically through Blackboard Learn.

**Academic Dishonesty Policy**

All acts of dishonesty in any work constitute academic misconduct. This includes, but is not limited to, cheating, plagiarism, fabrication of information, misrepresentations, and abetting of any of the above. The Academic Misconduct Disciplinary Policy will be followed in the event that academic misconduct occurs. Students should refer to the Student Affairs Handbook, which can be obtained in the Office of Student Life and Services in the Ferguson Center.

**Disability Policy**

If you are registered with the Office of Disability Services, please make an appointment with me as soon as possible to discuss any course accommodations that may be necessary. If you have a disability but have not contacted the Office of Disability Services, please call 354-5175 or visit Osband Hall to register for services.