



IB/ANTH 360 - Evolution and Human Health Course Outline - Fall 2011

Course Outline: Our health is inseparably tied to our evolutionary history. As a result, evolution is an important underpinning discipline for health professionals. This course first provides an overview of evolutionary processes, molecular evolution, human evolution, life history theory, and evolutionary-developmental biology. Second, it illustrates the application of these principles to our understanding of nutrition and metabolism, reproduction, disease and stress, and behavior. Third, it shows in practical terms how the principles of evolutionary medicine can be applied in medical practice and public health.

Prerequisites: IB 302 or [MCB 250](#) or [MCB 244](#), or consent of instructor.

Professor:

Dr. Karen Sears

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Office Location: 465 Morrill Hall

Office Hours: Tues. 10:30-11:30am

Teaching Assistant:

Brett Mommer

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Lecture: Psychology 23 Monday 1:00 – 1:50 pm

Discussions: Psychology 23
Section 1 - Wednesday 1:00 – 1:50 pm
Section 2 - Friday 1:00 – 1:50 pm

Lecture Exams: There will be three exams. Each exam will be worth 20% of the final grade. Exams will not be cumulative. There will be no final exam. No cell phones, PDAs, digital music players or other personal electronics are allowed in the lecture room during class or exams. Use of electronic devices during an exam may be construed as a violation of the student code of conduct.

Discussions: Discussions will occur once per week. These will take the form of discussions and relevant exercises to help us investigate the relationship between evolution and human health. Some of the discussions will have short homework assignments that must be completed before discussion. Sign-in at discussion will be required, and attendance will be incorporated into the discussion grade. Discussion participation and exercises will be worth 20% of the final grade.

Online Lectures: Most weeks there will be an online lecture that students are required to watch. After watching the lecture, students will be required to complete a quiz. Each quiz may be taken twice. If a quiz is only taken once, then the quiz grade will be as is. If a quiz is taken twice, then the quiz grade for that week will be weighted as 50% of the first quiz grade plus 50% of the second. Working together or otherwise cheating on the quizzes may be construed as a violation of the students code of conduct. Quiz grades will be worth 5% of the final grade.

Review Paper: In the second half of the course, students will be required to select a chronic or infectious disease, or an aspect of human anatomy, development or behavior from a provided list (one topic per student). They will then perform a survey of the primary literature to assemble a short research paper (~5 pages) on how evolution has influenced the trait/condition they have selected. Students will then be divided into small groups (~4) to read and critique each other's research papers. Critiques will be returned to students, and they will address the concerns/comments of the critiques and revise their research papers. Ultimately, students will turn in their original draft, their responses to the student critiques, and the final draft of their paper for evaluation. Grade will be determined by (1) quality of the final paper, (2) responses of the student to the student-based critique, and the incorporation of

changes into the paper, (3) the quality of the student's critiques of other student's papers. The review paper will be worth 15% of the final grade.

Final Grade Breakdown:

Exam 1	100pts
Exam 2	100pts
Exam 3	100pts
Discussion grade	100pts
Online lecture quizzes	25pts
Review Paper	75pts

Letter grades will be assigned according to the following standard scale:

Letter Grade	Percentage	Total Points
A	90-100%	450 - 500
B	80 - 89.9	400 - 450
C	70 - 79.9	350 - 400
D	60 - 69.9	300 - 350
F	0 - 59.9	0 - 300

Required Textbook: Principles of Evolutionary Medicine by Gluckman, Beedle and Hanson (2009)

Course Website: We will be using Moodle, and you should have an account if you are enrolled in this course. If you do not have access, contact Dr. Sears or Brett immediately.

Attendance Policies: ATTENDANCE AT LECTURE IS REQUIRED. Exam material will be largely (but not entirely) derived from lecture material. Lecture slides will be available on the website, but some important text may be blocked out. Therefore, there is no substitute for regular lecture attendance. If attendance is not possible, it is the responsibility of the student (i.e., YOUR responsibility) to contact Dr. Sears PRIOR to your absence to arrange for any materials distributed in class. If you miss a lecture, you should contact another student in the class to obtain lecture notes.

ATTENDANCE IN DISCUSSION IS REQUIRED. You must attend your discussion section and ONLY your discussion section. Discussion attendance will be incorporated into the final grade.

YOU WILL NOT BE PERMITTED to make up the exams or discussion if missed, unless you notify Dr. Sears of your absence at least ONE WEEK in advance. Rescheduling exams is entirely at the discretion of Dr. Sears. Make up exams will ALWAYS differ from the regular exam, and may be in a different format than the regularly scheduled exam (i.e., written or oral exam).

Course Policies: All students are assumed to have read and understood the "Code of Policies and Regulations Applying to All Students," University of Illinois, and will be expected to act accordingly.

The Code is available online at: <http://www.admin.uiuc.edu/policy/code/index.html>

Disabilities and Religious Observances:

Please contact Dr. Sears during the first week of classes to make requests for disability accommodations or observation of religious holidays.

We reserve the right to change this syllabus and/or the class schedule at any point during the semester. Schedule changes are likely. Changes will be made on the website, and will be announced in lecture (another great reason to attend every lecture).