

EEB/ANTH 305 - "EVOLUTION & SOCIETY" – FALL 2014

Course Description

This course developed from our experiences as science educators attempting to accurately present scientific material in a social climate that is often skeptical of science and hostile to the concept of evolution. The goal of this course is to expose students to critical thinking about what science is and is not; the development of evolutionary biology and hostility toward it; and current topics in biology with an evolutionary aspect.

The course will use a combination of lecture, writing activities, and team discussion to address these issues, and research papers and oral presentations will be used by students to demonstrate their understanding of the nature of science, the field of evolutionary biology, and their roles and relevance in contemporary U.S. culture.

Meeting Times and Place

TR 2:10-3:25 PM, EPS 405 (3 credit hours; Anthro section CRN #40252; EEB section CRN #41501)

Instructors

Dr. Stan Guffey, Division of Biology
342 Hesler; Office Hours: by appointment.
974-6204 (direct); sguffey@utk.edu

Dr. Michael Gilchrist, Dept. of Ecology & Evolutionary Biology
439 Hesler; Office Hours: T 9:00-10:00 AM, F 11:00-12:00 & by appointment.
974-3065 (department); mikeg@utk.edu

Structure

Daily course activities will generally consist of homework questions on and in class discussion of assigned readings. Simultaneously, students will also develop and address a research questions, related to the course material, in the form of ~4 page essays.

Students will be working in teams formed during the first class meeting. Teams will serve as the basis for class discussions, a subset of homework activities, and development of student essays.

Course Learning Objectives

Further develop student understanding of and ability to conduct and present research answering well defined and delineated questions while, simultaneously deepening their understanding of the nature of science in general and biological evolution in particular. Specific objectives include

- 1) Discuss scientific epistemology: what scientific knowledge is, how scientific knowledge is developed and differs from non-scientific modes of inquiry.
- 2) Appreciate science as a dynamic human enterprise and explain how scientific knowledge is both durable and always subject to revision.
- 3) Distinguish between scientific and non-scientific explanatory schema including:
 - a) Identify, analyze, and critique pseudoscientific explanations of natural phenomena.
 - b) Be able to address commonly made assertions that evolutionary biology is unscientific, incomplete, unable to make predictions, and is socially and culturally harmful.
- 4) Outline the development of evolutionary thought, and summarize current understanding of evolutionary insights on topics such as cooperation, morality, aging, and eugenics.
- 5) Explain how misunderstanding and misuse of scientific and evolutionary ideas can develop and persist in US culture including:
 - a) Outline the evolution of opposition to the teaching of evolution in the US.
 - b) Describe how the strategies of opposition have changed in the context of legal decisions and changes in society.
- 6) Be able to evaluate the quality of a given source, peer reviewed journal, magazine, or blog, and the reliability of the evidence presented therein.

Expectations

Students are expected to master the materials presented in lecture and assigned reading to the point at which they can analyze, integrate, and synthesize information related to nature of evolution and it's role in U.S. culture. In order to reach this goal it is crucial that students (a) read the the assigned material before class, (b) complete assigned homework activities before class, (c) attend and actively participate in all class sessions, and (d) seek help when needed through the online discussion board or their instructors' office hours

Assessment

Grading: Final student grades will be determined using the following criteria

Point Range	Performance Level	Grade
100-93%	Outstanding	A
90-93%	Excellent	A-
87-90%	Very Good	B+
83-87%	Good	B
80-83%	Reasonable	B-

77-80%	Fair	C+
73-77%	Satisfactory	C
70-73%	Unsatisfactory	C-
67-70%	Poor	D+
63-67%	Very Poor	D
60-63%	Extremely Poor	D-
< 60%	Failure	F

When discussing your grade with the instructors please use the *Performance Level* definition. For example, students should say "I want to perform at an outstanding level in this course" rather than "I need to get an A in this course". Note that University guidelines state that one credit hour corresponds to an average of three hours of student effort per week. Thus, students should plan to spend on average nine hours working on this course. Additional effort may be required, especially for students striving to excel in the course or make up for pre-existing weaknesses.

Students are responsible for ensuring that they receive appropriate credit for their work. Any errors in grading or grade entry should be brought to the instructors attention within two weeks of its posting on Bb or return of the assignment, whichever is later.

Students performance in the course will be based on their performance in the following activities.

Homework Assignments: In order to help the students master the material presented and produce engaging and useful discussions, student are expected to answer homework questions related to each meetings readings. The lowest two grades will be dropped and each homework assignment will contribute equally to the student's average homework grade. Homework will count for 33% of a student's final grade.

Writing Assignments: There will be five (5) writing assignments with the following due dates and topic areas. Note that assignments are due on days the class does not meet in order to ensure that students adequately prepare for the following class discussion.

- 1) Monday, September 8 at Noon – Misunderstanding science: an example
- 2) Monday, October 6 at Noon -- Is Intelligent Design science?
- 3) Monday, November 3 at Noon – Student developed topic
- 4) Monday, December 8 at Noon – Student developed topic

Papers are to be submitted as hard copies in a clearly labeled box in 569 Dabney Hall.

The length of the essay will depend on the the exact research question chosen by the student and the claims and supporting evidence necessary to convincingly support the student's answer. In general, students should strive to choose a question that can be answered in 3 or 4 pages in length (no less than 850 and generally no more than 1000 words) excluding references and title page. A satisfactory essay will generally include at least one references for each claim made. Essays should be formatted using double-spacing, 12-point font, 1-inch margins and include a cover page. Citations should use parenthetical author-date references and a corresponding reference list. See Turabian

(2010) for additional details.

It will be necessary for you to do reading outside of the assigned course materials and to cite those materials (websites, journal articles, magazines, etc.). Additional details about the content and structure of the writing assignments will be posted on Bb. The course is structured so that the the assigned readings and activities will help the students identify and develop their research question within the assigned topic area. These assignments will count for 34% of a student's final grade.

Course Participation: In order to encourage active student participation both during class and on the course's Discussion Board. Course Participation performance will be based on both instructor and peer assessment (see below). Course Participation will count for 33% of a student's final grade. Thus failing to participate in class could cause a student who otherwise performs at 'Reasonable' level to receive an 'Unsatisfactory' final grade.

Assigned Readings

The following text is required for all students:

Turabian, K. L. (2010) Student's Guide to Writing College Papers, 4th ed., revised by G. G. Colomb, J. M. Williams, and University of Chicago Press editorial staff. Chicago: University of Chicago Press.

The instructors apologize for it not being available in the UT Book Store, but is available in both new, used, and electronic forms through many online retailers.

The Forward and first two chapters will be posted online to accommodate the fact that students may not be able to acquire the book immediately.

Readings and related activities will be assigned regularly throughout the semester. Readings other than Turabian (2010) be posted to the "Course Materials" section on Bb. Assignments will announced on Bb. In order to be able to productively participate during the course discussions and activities, students must read the assigned material and complete any assigned activities before the relevant class meeting.

Course Discussion Board

The subject matter and materials covered in this course are designed to challenge students. Students are expected to have many questions during the course of the class. In order to maximize student learning from these questions, when these questions arise outside of the classroom they should be posted on the course's Discussion Board. This means that students should **not** email the instructors with general, course related question since the instructor will simply direct you to the Discussion Board.

As mentioned to above, students are expected to actively participate in the courses's online Discussions Board. Participation includes posting and answering student questions or providing additional information that supports or refutes ideas explored in lecture or the assigned readings. The questions can be fact based ("I don't understand ..." or "How does ...") or more open ended ("If this is true then does it imply ..."). The question should be one you're interested in knowing the answer to. The course will be using Piazza's Discussion

Board for this purpose. Piazza's Discussion Board software is easy to navigate and has many useful features not found in Bb's default Discussion Board such as allowing students to edit each other's questions and/or answers and allowing the instructor to endorse specific answers.

Peer Evaluations

In order to ensure fair grading of student involvement during team activities, online peer evaluations will be used. Students will be emailed with an invitation to fill out the evaluation. Students must properly complete the evaluations in order to receive credit for an assignment.

In order to ensure the integrity of the peer evaluation process, the following rules must be observed by all students. Failure to follow these rules constitute a form of academic dishonesty and will violation of the University's Honor Statement and will be dealt with accordingly.

- Students may not discuss how they score one another with each other. Doing so undermines the ability of your peers to give anonymous feedback.
- Discuss or develop an agreed upon strategy or plan. Doing so undermines the purpose of the evaluations which is to accurately assess the contribution of team members to the project.

Miscellanea

Blackboard Announcements will be the main means of alerting student to course activities and changes. Students are expected to check for these announcements on a frequent basis.

Email is appropriate for questions or issues specific to an individual student. When emailing your Instructor, please ensure that the term "E&S305" is included at the start of the subject line or else it risks not being read. Email is not the appropriate for asking your instructors general questions related to evolution or the structure of the course. Instead, students should post such question on to the relevant Discussion Board thread.

The syllabus is subject to change at the instructors' discretion. Updated versions will be announced in class and posted on Bb.

Disability Accommodations

Any student who feels s/he may need an accommodation based on the impact of a disability should contact either of us privately to discuss your specific needs. Please contact the Office of Disability Services at 865-974-6087 in Hoskins Library to coordinate reasonable accommodations for students with documented disabilities.

ACADEMIC INTEGRITY IS THE CORE VALUE OF LEARNING COMMUNITIES

University of Tennessee Standard of Conduct #1: "Cheating, plagiarism, or any other act of academic dishonesty, including, but not limited to, an act in violation of the Honor Statement." You are expected to abide by The University of Tennessee honor statement in this course and in all other of your university activities:

“An essential feature of The University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.”

Penalties for academic dishonesty assessed by the instructor may range from the grade of zero for the assignment, to an F for the course. All infractions will be reported to the Office of Student Conduct and Community Standards, the Dean of the College of Arts and Sciences, and the Dean of the College in which the student is enrolled. The Office of Student Conduct and Community Standards may charge a student with violating Standard of Conduct #1 regardless of the response of the instructor to the alleged academic dishonesty. You should read and be familiar with the requisites of academic honesty and what constitutes academic dishonesty as outlined in the 2014-2015 Undergraduate Catalog and Hilltopics