

EEB/ANTH 305 - "EVOLUTION & SOCIETY" – FALL 2013

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 and discussion to address these issues, and written papers and oral debates will be used to further the goals of critical thinking about the field of evolutionary biology and its role 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 #40277; EEB section CRN #41617)

Instructors

Dr. Stan Guffey, Division of Biology
342 Hesler; Office Hours: W 9:00 – 10:00, R 8:00 – 9:00 and 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

The format is based heavily on class participation and is intended to be interactive, both between the instructors and students, and particularly among you, the students in the classroom and online. Our intent is to involve you in your own learning thereby making you responsible for the content and most importantly making the course content and discussion experience useful for your own lives and future.

Students will be put together in groups of 5-6 students. These groups will be formed during the second class meeting and will serve as the basis for a number of class activities, including online discussions, class dialogs, and the group projects.

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 its role in U.S. culture. In order to reach this goal it is crucial that students (a) read the assigned material before class, (b) attend and actively participate in all class sessions,

(c) do the assigned activities and adequately prepare for class dialogs, and (d) seek help when needed through the online discussion board or their instructors' office hours

Student 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".

Additionally, 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.

Student's performance in the course will be based on the following activities.

Online Discussions: Students are expected to actively participate in the online discussion of the topics within their respective groups. We will be using Piazza's Discussion Board for this purpose. The Discussion Board is available via the course's Blackboard's (Bb) site.

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.

Student Discussion Board participation will be evaluated after each dialog of the course. Evaluation will be based on the quality and quantity of postings by each student. A satisfactory level of participation for a student is one well thought out and well posed question and one correct and adequately *referenced* response to a fellow student's question or answer.

Note that if you use a resource other than a "Recommended" one, you should justify the source's validity or trustworthiness after giving your answer. For example, "it's from a peer reviewed journal" or "its sponsored by a reputable institution" such as the Cancer Society or the National Institutes of Health. Your Discussion Board participation will contribute to 10% of your grade.

Classroom Dialogs: Contribution to each of the 5 scheduled classroom dialogs is a central responsibility for each student. Dialogs will be based on questions provided by the Instructors. Although students can discuss the question with each other, students are expected to independently write up their own ~1 page response to the question. Student responses should include at least two references. Responses should be use double-spacing, 12-point font, 1- inch margins. Citations should use parenthetical author-date references and a corresponding reference list. Citations and references should be formatted according to the Chicago Manual of Style 16th Edition (for a brief guide see www.uvm.edu/wid/writingcenter/ChicagoStyleSciences.pdf). Responses should include the student's group name as well as their own.

Students will bring *two* copies of their ~1 page answer to the dialog question to class the day of the dialog. Students will turn in one copy to the instructor for grading and use the other copy during the first 25 minutes of class. During this time each group will come up with a consensus answer based on a synthesis of their individual answers which they will email to the instructors. All the groups will then get together to discuss their answers. Groups have 24 hours to revise their synthesized answer if they wish to do so before turning them in. Group essays should include both the group name and the names of the individuals in the group. During both the group and full class parts of the dialogs, each student is expected to clearly articulate your point(s) of view or questions and to engage your classmates (and instructors). Student answers should be based on logical arguments and facts rather than just personal feelings.

These dialogs will contribute to 35% of your grade. Grades will be based on the quality of the individual student answer, the group answer (weighted by peer evaluation of each one's contribution), and student participation in the class dialog.

Writing Assignments: There will be three (3) writing assignments whose due dates are:

- 1) Tuesday, October 1
- 2) Thursday, October 31
- 3) Tuesday, November 26

Each essay is to be 3 or 4 pages in length (no less than 850 and no more than 1000 words) excluding references and formatted following the same rules as the Dialog responses.

Essays should address a question that both interests the student and builds upon the ideas covered in the course materials. Students are required to vet their essay questions at least 8 days before the essay due date. We expect that 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.). A satisfactory essay will generally include at least three references from reputable sources. These assignments will contribute to 40% of your grade.

Group Project: More details on this will follow. Much of the Group Project work will take

place during the final weeks of class and during the final exam period (Thursday December 5th, 2:45-4:45 pm). The group project will contribute to 15% of your grade.

Assigned Materials

Readings and other materials will be assigned regularly throughout the semester and will be posted to the “Course Materials” section of our Bb site. Students are expected to read the assigned material before the relevant class meeting.

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.

Late assignments will be accepted at the instructors’ discretion and generally docked one grade per day unless a documented excuse is provided.

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 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.

Course Schedule

Day	Dialog Topic	Lecture Period	Instructor	
Thursday	22-Aug	1	Introduction to Course & Biological Evolution	Guffey/Gilchrist
Tuesday	27-Aug	1	What is science? What is not science?	Guffey
Thursday	29-Aug	1	Natural Selection, Genetic Drift, and Mutation	Gilchrist
Tuesday	3-Sep	1	Evolutionary Insights and Misconceptions	Gilchrist
Thursday	5-Sep	2	Development of evolutionary thought	Guffey
Tuesday	10-Sep	2	Dialog #1: Science and pseudoscience	
Thursday	12-Sep	2	Development of 'creation science'	Guffey
Tuesday	17-Sep	2	Intelligent Design & Dover PA	Guffey/Gilchrist
Thursday	19-Sep	2	Case Studies in Evolution	Gilchrist
Tuesday	24-Sep	3	The Evolution of Aging	Gilchrist
Thursday	26-Sep		Dialog #2: Evolutionary Thought & Creationism	
Tuesday	1-Oct ¹	3	Human and Pathogen Evolution	Gilchrist
Thursday	3-Oct	3	The Evolution of Cooperation	Guffey
Tuesday	8-Oct	3	Ecological theater, evolutionary play	Guffey
Thursday	10-Oct	3	Phylogeny, speciation, and extinction	Guffey
Tuesday	15-Oct	4	Evolution, Morality, & the Naturalistic Fallacy	Gilchrist
Thursday	17-Oct		No class: Fall break	
Tuesday	22-Oct		Dialog #3: Evolutionary Explanations	
Thursday	24-Oct	4	Evolution and Genetic Disorders	Gilchrist
Tuesday	29-Oct ²	4	20th century eugenics	Guffey
Thursday	31-Oct ³	4	Nature/Nurture and modern eugenics	Guffey
Tuesday	5-Nov	4	Paleofantasies	Gilchrist
Thursday	7-Nov	5	Human Molecular Evolution	Gilchrist
Tuesday	12-Nov		Dialog #4: Evolution & Human Behavior	
Thursday	14-Nov	5	Successes & Failures in Rapid Evolution	Gilchrist
Tuesday	19-Nov ⁴	5	Climate Change and the 6th Mass Extinction	Guffey
Thursday	21-Nov	5	Possible Promise & Perils of GMOs	Gilchrist
Tuesday	26-Nov ⁵		Dialog #5: Evolution in the Modern World	
Thursday	28-Nov		No class: Thanksgiving	
Tuesday	3-Dec		Working session	
Thursday	5-Dec		Final Exam Period 2:45 - 4:45	

¹ First paper due

² Topic question for second paper due

³ Second paper due

⁴ Topic question for third paper due

⁵ Third paper due

