

Core 101-03: Change Over Time: Why Evolution is True (Fall 2019)

Lecture: Monday, Wednesday, Friday 12:00-1:10, Schaeffer 109

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Office hours: Tuesday 11:00-12:00, Monday and Wednesday 2:00-3:30

Textbook: Why Evolution is True, Jerry A. Coyne. Penguin Books, 2009.

Course description: Biological evolution has proven to be remarkably controversial. Although it is supported by an overwhelming amount of scientific evidence, many Americans do not accept that evolution happens. In this seminar, we will discuss scientific support for evolution and how this evidence has been synthesized into a cohesive theory. We will also discuss how anti-evolution movements attempt to discredit the scientific evidence, and how both sides of the debate build their arguments in written communications. By the end of the course, students will have acquired a solid understanding of the evidence for evolution and the process by which the scientific community builds support for a theory. We will also develop skills in evaluating and composing arguments based (or supposedly based) on data. This is a writing-intensive course, and will involve numerous opportunities to build skills in writing and revising in multiple genres.

Course objectives

Core 101 serves as an introduction to the liberal arts. To that end, in this class, students will:

- Evaluate textual arguments for their usefulness, cohesiveness and logic.
- Identify, access, and assess relevant information sources.
- Use effective oral expression strategies in contributing to class discussions and making formal presentations.
- Participate responsibly and respectfully in informal group discussions.

This is a writing-intensive course, with particular emphasis on building skills in effective written communication, in both formal and informal contexts. Throughout the course, students will:

- Explain, through well-developed argumentative writing, the significance of the form and/or content of material studied in class.
- Contextualize the political, historical, technological, and/or creative contexts that influence the form and content of course material.
- Draft and revise rhetorically effective sentences, paragraphs and essays.

Course policies

Course materials: All course materials, aside from the book, will be available on Blackboard. Readings should be done before class on the day that they appear in the syllabus. Unless otherwise discussed before the assignment is due, all materials should be turned in in hard-copy in class the day they are due.

Attendance: Much of our learning will take place in class, so attendance is required. There will be no consequences for the first three absences (no matter the reason). After that there will be a reduction of one grade level for each of three additional unexcused absences. More than six absences will result in failing the class. Absences for illness or athletic events will be excused; if other extraordinary circumstances cause you to miss class, talk to me about it.

Late work: Work that is turned in late without permission will have a penalty of 5% on that assignment for each day that it is late. Unless stated otherwise when an assignment is given, it is due in **hard copy** in class the day that it's due. Each student gets one freebie for printer troubles; in that case, you have until 5 PM to drop off a hard copy at my office or leave it in my mailbox. That's only for drafts that are due to me; for days when we're scheduled to do peer review, you must have it in class. Otherwise, work that is not handed in in class will be considered late.

Accommodations: If you have documented accommodations, I'll be happy to work with you to support those. Please talk to me about it as soon as possible so that I can make sure we have a plan in place. If you have a letter from the Office of Accessibility Services, you **must** meet with me review it and get my signature on the acknowledgement form.

Laptops and devices in class: There will be days when I request that you bring a laptop to class; if that isn't possible for you, please let me know so that I can make arrangements. Using laptops in class is allowed; however, there is a significant body of research that shows that most students don't learn as well when they take notes on laptops, and so I discourage you from doing so. If you get distracted by the internet during an activity or discussion, it will result in a lower participation grade. I do not want to see phones out in class unless there is a specific reason you need to be using it for class activities at that point. No laptops or phones should ever be out when other students are presenting to the class.

Professionalism and collegiality: A classroom is a community, and it runs most smoothly if all members treat each other with consideration and respect. Thus, a small portion of the grade for the course is based on professionalism. This includes elements such as paying attention to others when they speak in class, checking email and responding when necessary, checking the syllabus and course schedule frequently, following the [guide to emailing your professor](#), asking questions or requesting meetings ahead of time so that I have time to respond, being on time to class and meetings, communicating in a timely manner with other students when you're working together, and generally being considerate of other students, your peer mentor, and me.

Participation: Participation points will be based on engagement in class. This includes doing the reading and being prepared for class discussions, participating in class discussions, and being engaged in in-class activities. If you're present, prepared, and engaged, you should do well.

Assignments

Paper 1	5
Paper 2	7
Paper 3	8
Paper 4	10
Small writing assignments	12
Oral presentation 1	5
Oral presentation 2	10
Small presentations	6
Other assignments	12
Participation	15
Professionalism	5
Fifth hour	5
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Major assignments for the course

More details about each assignment will be given later, but a brief outline of major assignments follows.

The goal of the course is for you to *develop* your skills in writing and oral presentations. For this reason, the grades for the first formal paper and first oral presentation can be “overwritten” by grades for the final paper or presentation if that one has a higher grade.

Paper #1: Evaluating your education about evolution. 3 pages. For this paper, you will use provided sources to articulate a position about how evolution should be taught, and then analyze your past educational experiences in light of these guidelines.

Paper #2: Dobzhansky's famous claim. 4 pages. As a class, we will read and discuss an essay about the importance of evolution of the well-known evolutionary biologist Theodosius Dobzhansky. In this paper, you'll evaluate his argument and develop your own thesis on how evolution relates to observed patterns in biology.

Paper #3: Other controversial topics in the sciences. 3 pages. In this paper, you'll choose from a list of currently controversial topics in biology (genetic modification, vaccinations, etc). After talking and thinking about how to find accessible and reliable information about these topics, you'll write a paper taking a position on it and defending that position with scientific evidence.

Paper #4: Responding to intelligent design claims. 5 pages. For this paper, you will choose an argument made by proponents of creationism or intelligent design and respond to it, thinking critically about both the scientific evidence and the rhetorical structure of the argument.

Oral presentation #1: Each of you will choose an image/figure that is related to course content, do a rhetorical analysis of it, and give a five minute presentation.

Oral presentation #2: As a small group, you will reflect on what we've learned over the semester and design a guide to biology teachers for ideas and materials to include when teaching evidence for evolution. In the last week of class groups will present their guide to the class.

Fifth hour: As part of Core 101, students are encouraged to explore the campus community through Fifth Hour activities. For this class, you will be expected to attend two events. For one of your fifth hour activities, you're required to go to one of the Natural Science and Mathematics colloquia talks, which are hosted by the college on some Wednesday afternoons during the semester (if you have a scheduling conflict, talk to me). These talks are supposed to be for a general audience; after attending one, you'll write a 2-page reflection. For your other activity, attend something that you've never been to/done before, but which you think will be fun. The peer mentor will help keep you informed about events on campus that you could attend.