Darwin's name is associated with one of the great developments in modern science: evolution. But he was not the first evolutionist, and a number of evolutionary theorists think we are currently in a new intellectual revolution surrounding evolution. So what does it mean, now, to talk about the “Darwinian revolution”? In this course we will situate Darwin's achievement in a longer timeline of evolutionary thought before and after his lifetime, all the way down to the present. In doing so, we will follow two chief aspects of evolutionary thinking: its scientific twists and turns, and its broader cultural significance, as it appeared in religious and sociopolitical realms.

Level: Advanced
Breadth: Humanities
Prerequisites: None
L&S Credit Type: C
Honors-optional (%)

Learning Outcomes: In successfully completing this course,
Undergraduates will:
- Identify the main features of Darwin’s own theory and its similarities and differences from evolutionary theories before and since, based on primary historical sources;
- Summarize, compare, and contrast leading social and religious issues involved in the reception of Darwin’s theory in different cultures, based on secondary historical sources;
- Identify the differences between primary sources and secondary sources in the history of science, and use them appropriately in analyzing historical questions;
- Practice accuracy in temporal succession through making timelines; and
- Present a persuasive argument using evidence and analysis to explain change over time in the history of evolution.

Honors undergraduates will develop and exercise these skills further through
- an independent primary-source based research paper of 9-12 pages plus bibliography.

Graduate students will:
- Extract and analytically summarize arguments from secondary source books in the history of evolutionary theory;
- Develop an original historical argument based on primary sources and using secondary sources to construct a framework.

Readings:
All other readings will be posted on Canvas.
Course Requirements and Expectations:
This 3-credit course has 3 hours of group meetings per week (each class meeting counts as 1.5 hours according to UW-Madison's credit hour policy). The course also carries the expectation that you will spend an average of at least 2 hours outside of class for every hour in the classroom. In other words, in addition to class time, plan to allot an average of at least 6 hours per week for reading, writing, preparing for discussions, and/or studying for quizzes and exams for this class.

Undergraduate requirements:
30% Class participation: read the assigned readings; post a minimum of 10 questions/comments on the reading for class sessions (about 1 per week, due by 7 a.m. the day of class in order to receive credit); active listening and intelligent discussing in class.
20% Part I essay (1200-1500 words), due Friday March 1
20% Part II essay (1200-1500 words), due Monday, April 1
30% final cumulative essay, (1500-2100 words), due Wednesday, May 8
All papers are due in CANVAS by 5 pm.
Honors papers are due on the last class day; paper grade will be 20% of overall course grade, with 5% taken away from each other part of your grade.

Grad requirements:
50% class participation, including weekly postings like undergrads, and a separate 1-hour discussion approximately every other week on a separate reading list (time TBA);
50% 20-25 page research paper on an approved topic of your choice.

Grading: Assignments in this course are graded on a 4-point scale:
A = 3.67-4.0
AB = 3.34-3.66
B = 2.76-3.33
BC = 2.26-2.75
C = 1.6-2.25
D = 1-1.6
F = below 1.0.

The number grade tells you if your paper is at the high, middle, or low end of the grade range for any given assignment. Final grades will be tabulated from these ranges. See Grading Criteria on final page of this syllabus for more details on essay expectations.

It is the University of Wisconsin’s expectation (and mine) that you will know, understand, and abide by principles of academic honesty and integrity. Please review the Academic Guidelines and Expectations on pp. 7-8 of this syllabus for more details.

Access and Accommodation: I will make every effort to honor requests for reasonable accommodations made by individuals with disabilities. If you think you qualify for accommodation, please contact the McBurney Disability Resource Center to establish your eligibility for services. Requests for accommodation can be responded to more effectively if I receive them as far in advance as possible, preferably at the beginning of the semester. Such requests are confidential.
**Religious Observance:** If religious holidays or observances conflict with your participation in this course, please come talk to me **well in advance** for us to work out alternative arrangements.

If any other problems arise, either academic or personal, which might jeopardize your performance in the course, you must try to inform me after class or by the soonest available office hour, or by email (lknyhart@wisc.edu).
COURSE SCHEDULE

T 1/22: Course Introduction: Revolutions in Evolution?

Part I: From “Transformism” to Darwin’s Evolution
Analytic Focus: Situating the origin and development of Darwin’s theory
Skills focus: close reading of primary sources, using secondary sources to offer context, especially about the audiences for which the primary sources were written.

A. “Life” in Paris

R 1/24: Lamarck’s Transformism
What has been Lamarck’s reputation in the history of science? What were key features of Lamarck’s transformism? How did Lamarck seek to avoid extinction in his vision of the order of nature?

T 1/29: The Meaning of Fossils

R 1/31: The Cuvier-Geoffroy Debate
What were Cuvier and Geoffroy arguing about? What was the big deal?

B. “Darwin’s” Theory

T 2/5: Darwin and the Voyage of the Beagle
What did Darwin include in his natural history writing? How did he react to encountering the very foreign peoples he met on the voyage? How does Beer’s essay help to contextualize Darwin’s writing?
R 2/7: Vestiges
What is Chambers up to in this selection? How does Yeo contextualize Chambers’ Vestiges for us?
What issues does he draw out for understanding its reception?

T 2/12: Origin of Species 1: Natural Selection
In his first four chapters, Darwin sets up and introduces his theory of natural selection. How does he prepare the reader to be persuaded of its validity?

R. 2/14: Origin of Species 2: Evolution
What sorts of evidence does Darwin bring to bear in favor of his theory? What does he set up as the alternative?
Darwin (in Secord, ed.) Origin, 179-211; reviews and responses, 212-230

T 2/19: Darwin on Human Descent and Sexual Selection
What features of evolution does Darwin’s theory of sexual selection explain? How is sexual selection tied to race, in his theory? How should we understand Darwin’s attitudes toward race and gender? Did he do “bad” science?

R 2/21: British Interpretations of Sexual Selection and Sex Differences
What was at stake in sexual selection in late nineteenth-century Britain?
Darwin, Descent of Man, 313-18; “Reviews and responses,” 334-337 in Secord

Receive Unit 1 Essay Question

Part II: Darwinism in the World
Analytic Focus: Comparative reception of Darwinism
Skills Focus: Comparison/Contrast
Questions for this unit: what issues do different authors highlight in interpreting the reception of Darwin’s theory in different countries? How should we assess the roles of particular individuals, religious and cultural contexts, and institutional factors in understanding how Darwinism was received across the world?
T 2/26: The German Reception of Darwin’s Theory

R 2/28: Darwin’s Reception in France
Grad student report on Harvey

FRIDAY 3/1: Part I Essay Due by 5 pm in Canvas.

T 3/5: Darwin in Arabic
Grad student report on Elshakry

R 3/7: Darwin in Chinese
Grad student report on James Pusey, China and Charles Darwin

T 3/12: Darwinism in the U.S. 1: The Scientists

R 3/14: Darwinism in the U.S. 2: Creationism and the Scopes Trial
Receive question for comparative essay
Spring Break

T 3/26: Global comparison/review
R 3/28: Timeline construction

Monday 4/1: Comparative (Part 2) Essay due by 5 pm in Canvas.

Part 3: Reimagining the Tree of Life and How It Came To Be
Analytical Themes: Rethinking our assumptions about evolution; insiders and outsiders; audiences
Skills:

T 4/2: The Modern Evolutionary Synthesis 1
What constituted “the modern synthesis,” according to Julian Huxley (a participant)? According to Stephen Jay Gould (looking back on it later)?

R 4/4: The Modern Evolutionary Synthesis 2
Gould characterizes Mayr’s 1942 *Systematics and the Origin of Species* in relation to some of the main themes Gould himself is interested in. What are these? What is Mayr’s goal in Ch. 5 of his book? How does his definition of species contribute to the synthesis? What does it exclude?

T 4/9: Evolutionary Humanism after World War II
How did the evolutionary synthesists interpret the place of humans in nature after World War II? What lessons did they seek to impart to the broader public?

R 4/11: The Descent of Woman
How did you respond to reading Morgan? How does her writing compare with Huxley’s and Simpson’s? How do you account for the differences?
Elaine Morgan, *The Descent of Woman* (New York: Stein and Day, 1972), 14-33

4/16: Punctuated Equilibrium and the Expansion of Evolutionary Theory


4/18: Rethinking the Ancestry of Life: Carl Woese and Archaea
Ernst Mayr, “Two empires or three?” PNAS 95, August 1998, 9720-9723


4/25: Horizontal Gene Transfer and Symbiogenesis

4/30: Review of final unit, Timeline work

5/2: Course Wrap-up

FINAL ESSAY DUE WED. MAY 8 by 5 pm.

ACADEMIC GUIDELINES AND EXPECTATIONS

Essays: Every essay you write should take the form of an argument supporting a thesis. Since all essays are open-book, grading will NOT depend solely or even primarily on the correctness of the facts marshaled for your argument; this correctness is assumed as a base-point. Rather, much of your grade will be based on the persuasive power, sophistication, originality, and succinctness of your argument. (More on this during the course.)

Extensions are only granted if requested before the due date, and only in case of illness or other serious emergency. All extensions will have a definite new due date established. Papers received after the new due date will be subject to late paper penalties.

Late paper policy: any piece of writing that you hand in late without an extension will have the following penalties assessed: a quarter of a point for every working day late. For example, if the paper on its merits deserves a B (3.0), after one day it would receive a B/BC (2.75), after two days a BC (2.5), after three a BC/C (2.25), after four a C (2.0). NOTE: LATE FINAL ESSAYS WILL NOT BE ACCEPTED.

Academic Credit and Plagiarism: Students may not copy sentences or ideas from others (including authors, websites, or other students) without giving credit to those sources; if someone else’s words are so wonderful that you cannot substantially rephrase them, you must put them inside quotation marks, using the exact same words. If you omit the quotation marks or the credit, you are plagiarizing. Plagiarism is
grounds for failure on the assignment plagiarized; repeated plagiarism is ground for failure in the course. If you use 3 or more words in a row from another source, they must be placed in quotation marks and footnoted. Otherwise, it is plagiarism. For more details on what plagiarism is and how to avoid it, consult a style manual, the Writing Lab, or the History Lab.

**Appealing a Grade:** If you have questions about a grade, come speak to me. If the problem is not resolved, speak with the History of Science Undergraduate Advisor, Scott Burkhardt. He will attempt to resolve the issue informally and inform you of the Appeals Procedures if no resolution is reached informally.

**GRADING SCALE FOR TAKE-HOME ESSAYS:**

A: For outstanding essays only. Thesis and argument are clear, thought-provoking, and based on correctly understood facts; material used to support the argument synthesizes ideas from different parts of the course (readings, lectures, discussions from different weeks); relationships drawn between facts and ideas are sophisticated, subtle, and/or original. Writing is grammatically correct and succinct. The argument flows well from point to point, without any puffery or wasted words.

AB: For very good essays that for some reason fall short of the criteria listed above. For example, the argument may be murky in one place; information may be presented that doesn't directly or clearly contribute to the argument; writing style may be awkward here and there, or flawed by one or two consistent (if minor) grammatical errors.

B: For solid, workmanlike essays. The essay may pursue a straightforward but not especially deep or sophisticated argument; it is okay as far as it goes, but doesn't penetrate the material very far. It may have a flash of brilliance that is unfulfilled, counterbalanced by minor grammatical problems, a weakness in argumentation, and/or a significant misunderstanding of events or chronology.

BC: The essay shows some of the basics of the ideal essay, but is weakened by a lack of serious think-work or writing problems. It may make superficial connections without offering sufficient evidence to make the connections plausible or persuasive, or it may have what is in principle a good argument supported by incorrect facts or chronology. Alternatively, it may provide a fairly solid argument with minor flaws, from which the reader is repeatedly distracted by awkward or ungrammatical prose.

C: A grade signifying some serious problem in essay-writing. It may deliver facts without a recognizable thesis or argument; it may wander away from the point; or it may be a thoughtful attempt so weakened by writing problems (grammar, punctuation, word choice) that it is difficult for the reader to understand a crucial point you are trying to make.

D: A marginal grade. There may be enough in here to show you have attended a few classes and/or done some of the reading, but the essay indicates no effort at synthesis or thinking on your own, or else shows a serious misunderstanding of the nature of the material and/or the assignment. Also used for essays that are just barely coherent.

F: For unacceptable essays. An essay may be judged unacceptable if it contains plagiarism (see above); if it consists primarily in content inappropriate to the question or the material for this course; if it shows a complete misunderstanding of the course content; or if the writing fails to meet standard college-level requirements of basic communication in English.