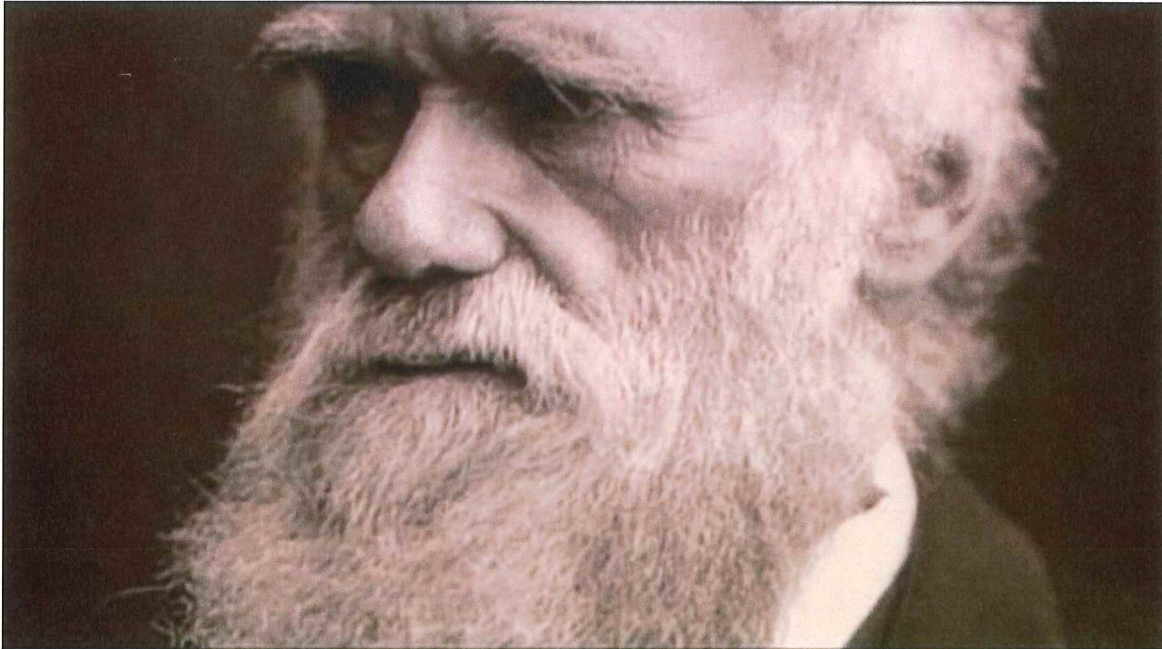


## History 312: The Darwinian Revolution

Dr. Jerry Jessee  
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Office Hours: T-Th 10-11:00, or by appt.  
jjessee@uwsp.edu  
346-2404

Location/Time:  
Monday & Wednesday  
3:35-4:50  
CCC 231

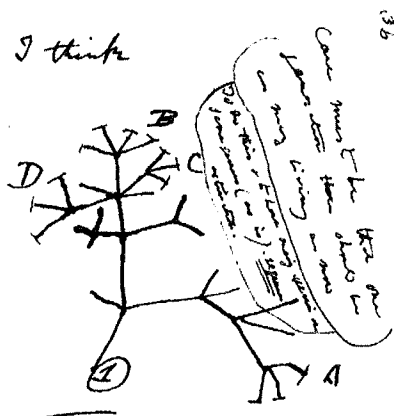


Charles Darwin, or "Charwin."

### Course Description:

Charles Darwin's theory of evolution through natural selection is one of the greatest (maybe *the* greatest) intellectual and cultural turning points in the modern era. Since the *Origin of Species* was published in 1859, the way we have thought about science, philosophy, religion, and society has been profoundly altered. In this course, we will study Darwin, his theory, and its impact from both a scientific and a humanistic perspective. That is, we are going to integrate a study of evolution (science) with a study of society (humanities) to better understand the reciprocal ways that Darwin's theory shaped and was shaped by society from the middle of the nineteenth century to today. This course, then, is broadly organized into two main units. The first part investigates in detail Darwin's theory, the way he came to it, the social and scientific context in which it emerged, and its reception among scientists. The second part will explore the broad ramifications of the theory, including debates about science and religion, eugenics, sociobiology, and other tricky contemporary issues.

This course does not require any scientific background, nor does it aim to turn you into a biologist. Rather, by studying Darwin's ideas in their broader social, cultural, and scientific contexts, you will begin to put together an intellectual tool box that will enable you to critically analyze science and enter, with an informed judgment, into the fascinating, complex, and controversial debates taking place today concerning biology's increasing role in our society.



I think  
 Some more like this than the others  
 I think the first gradation is from D to C  
 Then between A & B. various  
 sort of relation. C & B. The  
 first gradation, B & D  
 rather greater distinction  
 than former would be  
 Darwin's first evolutionary tree

**Course Objectives:**

Throughout the course, we will emphasize:

- The ability to understand and evaluate opposing viewpoints.
- The ability to assess the quality of evidence and discern general patterns.
- To understand the role and value of science in society.
- To show a healthy skepticism towards scientific claims.

**Required Reading:**

Texts:

- Charles Darwin, *On the Origin of Species*
- David Quammen, *The Reluctant Mr. Darwin*
- Mary Shelley, *Frankenstein*
- H.G. Wells, *The Island of Dr. Moreau*
- Richard Lewontin, *Biology as Ideology*

**Desire2Learn (D2L):** In addition to the books above, you will also be required read various articles and texts. These will be available on D2L. They are noted in the schedule below with an asterisk (\*). **If you so desire, you can use an appropriate electronic reader to read these instead of printing them (i.e. laptop, ipad, kindle, etc.). Not your phone! If ya'll can't handle this, I will go back to having you print them. You must bring them to class on the day we discuss them.**

**Grades (weighted percentages):**

- Participation: 20%
- Tests: 35%
- Paper: 40%
- On the Origin* Chapter Summary: 5%

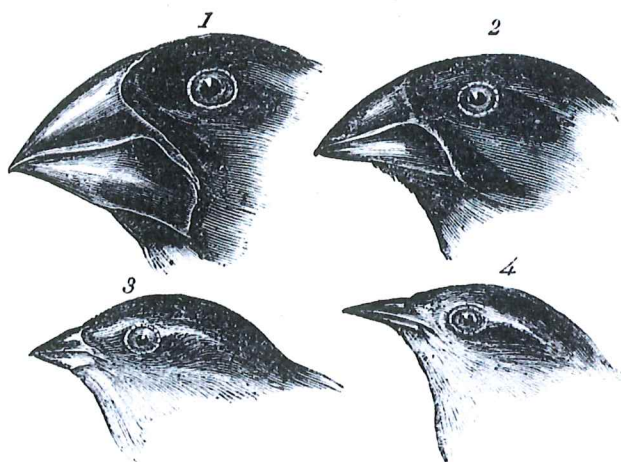
Total: 100%

Grading Scale (percentage):

A	93-100	B-	80-82	D+	67-69
A-	90-92	C+	77-79	D	60-66
B+	87-89	C	73-76	F	59 and below
B	83-86	C-	70-72		

**Assignments:**

*Participation:* This course is reading heavy and requires serious analytical thinking. Consequently, it is imperative that you attend class and actively engage in discussions, lecture, and group work. Each class, you will be required to complete all the reading and be prepared to discuss them with the whole class and with your peers. See rubric below.



1. *Geospiza magnirostris*.  
3. *Geospiza parvula*.

2. *Geospiza fortis*.  
4. *Certhiidea olivacea*.

**Darwin's Finches.**

	<b>Excellent "A"</b>	<b>Proficient "B"</b>	<b>Developing "C"</b>	<b>Unacceptable "&gt;C"</b>
<b>Frequency</b>	Student frequently initiates conversation more than once in class.	Student initiates contribution once in each class.	Student contributes only every few classes.	Student does not initiate contribute and requires professor to solicit input.
<b>Quality</b>	Comments are always insightful, constructive, and demonstrate clear engagement with class material. Always employs appropriate terminology.	Comments are mostly insightful, constructive, and demonstrate engagement with class material. Frequently employs appropriate terminology.	Comments are sometimes constructive with signs of engagement and insight. Terminology and comments not always relevant to discussion.	Comments are uninformative, lacking appropriate terminology, and demonstrate lack of engagement with class material.
<b>Listening</b>	Student listens attentively and builds upon remarks of others.	Student mostly attentive and usually builds upon remarks of others.	Student is often inattentive and requires reminders to stay focused. Student sometimes disruptive.	Student does not listen to others, does not pay attention, and/or detracts from the discussion.

*Tests:* Each required book will be tested. The tests will consist of 3-4 short answer questions and will be entirely online through the D2L quiz function. The test will be made available roughly 24 hours before our scheduled class to discuss the book at hand. The test will also be timed. **You may not make up tests.** So, be sure to properly put aside time for them.

*Papers:* There will be a 10-12 page paper. The paper will deal with the impact of Darwinian ideas on 20<sup>th</sup> century science and society. These papers will be uploaded to D2L by the start of the final on December 22. Bring a hard copy to class that day as well.

In addition, you will be required to write a 1-2 page summary of one of the later chapters of *On the Origin of Species*. We will discuss these assignments as we get into the semester.

#### **Other Stuff:**

*Electronics:* **All electronics must be turned off during class, unless we are using them for discussion.** These include cell phones, laptops, and tablets. In some cases laptop use may be permitted, if the student has an accommodation approved by the Disability Services Office (see below). Notes must be taken by written hand.

*Late Work/Absences:* Stuff happens. Sometimes life takes priority over school work. If something comes up and you need to miss a class or cannot finish an assignment on time, let me know immediately. I do not always grant extensions on assignments, but I do try to be flexible. It is imperative, therefore, that when incidents arise you do your diligent best to keep me informed.

*Plagiarism:* For information on plagiarism, consult <http://www.uwsp.edu/centers/rights>. See Chapter 14, *Student Academic Standards and Disciplinary Procedures*, pages 5 -10, for the disciplinary possibilities if you are caught cheating. I will vigorously pursue all incidents of plagiarism. Also I use turnitin.com for the essays.

*Equal Educational Opportunities:* If you have a learning or physical challenge which requires classroom accommodation, please contact the UWSP Disability and Assistive Technology Center (6<sup>th</sup> Floor of the Learning Resources Center) with your documentation as early as possible in the semester. They will then notify me, in a confidential memo, of the accommodations that will facilitate your success in the course. Voice: (715) 346-3365, TTY: (715) 346-3362, <http://www.uwsp.edu/special/disability/studentinfo.htm>.

*Writing/Reading Help:* This is a reading and writing intensive course. If you need help you can visit the Tutoring and Learning Center in the basement of the Library. They are there to help you with papers etc. This is totally free! Their webpage is <http://www.uwsp.edu/tlc/Pages/writingReadingTutorials.aspx>. You can also call them to make an appointment at (715) 346-3568.

*Notice on Copyright of Course Material:* As the instructor, I retain all copyright on lectures, slides, assignments, and other course materials. I do not allow anybody to photograph, film, or otherwise record lectures without my express permission. I do not allow anybody to distribute course materials or otherwise send audio or visual recordings of lectures to people not currently enrolled in this class without my express permission. Posting course material I have created onto course-sharing websites directly violates my copyright on my academic materials.

**\*Note:** I reserve the right to alter this syllabus for any reason.

**Schedule:**

Week	Topic	Readings
<b>Unit I: Science and the History of Science</b>		
1	Course Introduction	
2	No class.	
	What is "science" and how do we study it?	* "General introduction," Hatton and Plouff, <i>Science and its Ways of Knowing</i> . * Carl Sagan, "Can We Know the Universe?" * Robert Pirsig, "On Scientific Method."
3	Gender and Science	* Schiebinger, "Gender and Natural History."
	Isaac Newton and Reductionism in Science	Begin reading <i>Frankenstein</i> .
4	Reductionism in Biology	
	<b>Test</b> and Discussion <i>Frankenstein</i>	Finish, Shelley, <i>Frankenstein</i> .
<b>Unit II: Darwinian Roots</b>		
5	Humboldt and Space; Lyell and Time	Darwin, <i>Origin</i> : "Introduction" (pgs, 11-15) & "Appendix: An Historical Sketch" (pgs 429-39).
	Adam Smith, Thomas Malthus, and the Social Construction of Evolution	* Malthus, <i>An Essay on the Principles of Population</i>
6	Voyage of the <i>HMS Beagle</i>	Quammen, <i>The Reluctant Mr. Darwin</i> , 11-83.
	Darwin After the Beagle.	Quammen, <i>The Reluctant Mr. Darwin</i> , 84-152.
7	<b>Test</b> and Discussion of Quammen, <i>The Reluctant Mr. Darwin</i> .	Quammen, <i>The Reluctant Mr. Darwin</i> , entire.
	<b>Unit III: Darwin's Dangerous Idea</b>	
8	<i>On the Origin I</i>	Darwin, <i>Origin</i> , chs 1-4 (pgs 17-124).
	<i>On the Origin II</i>	<b>Origin Summary Chapter Due in class.</b>
	Natural Selection Laboratory <b>(Test)</b>	
9	Consilience of Induction, <i>On the Origin</i> , and its Scientific Reception	* Whewell, "Consilience of Induction." * Darwin, <i>Origin</i> , "Recapitulation and Conclusion" (pgs 401-27).

		* Re-read Quammen, <i>The Reluctant Mr. Darwin</i> , 205-53.
	<b>Unit IV: Reductionism in Modern Biological Thought</b>	
	<i>The Descent of Man</i>	* Gould, "Kropotkin was No Crackpot." * Selections from Huxley's books and Darwin's <i>Descent of Man</i> .
10	Vivisection	
	<b>Test</b> and Discussion of <i>Moreau</i>	Wells, <i>Island of Dr. Moreau</i>
11	Social Darwinism and Eugenics	* Sanger, "No Healthy Race without Birth Control."
	Scopes, Creationism, and Intelligent Design	* The Butler Act (1925). * Menchen, "Obituary for William Jennings Bryan." * Bryan, "The Origin of Man."
12	Mendel and the Modern Synthesis	* Kohler, "Moral Economy, Material Culture, and Community in <i>Drosophila</i> Genetics."
	Ecology	* Forbes, "The Lake as a Microcosm" (1887). * Lindeman, "The Trophic-Dynamic Concept in Ecology" (1942).
13	Environmentalism I: Neo-Malthusianism	* Hardin, "Living on a Lifeboat," * Hardin, "Lifeboat Ethics."
	Environmentalism II: The Ecosphere	* Rachel Carson, "The Obligation to Endure," <i>Silent Spring</i> . * Dawkins, "The Extended Phenotype" * Lovelock, "Gaia Hypothesis"
14	Sociobiology and Evolutionary Psychology	* Gould, "Male Nipples and Clitoral Ripples."
	<b>Test</b> and Discussion Lewontin, <i>Biology as Ideology</i>	Lewontin, <i>Biology as Ideology</i> .
15	Film: <i>Gattaca</i>	
	Film: <i>Gattaca</i>	
16	Wrap up	
<b>Final: Tuesday, December 22, 12:30-2:30 (Paper due)</b>		