

Philosophy of Biology: The Arguments in the *Origin of Species*

Instructor: Andrea Sullivan-Clarke

Hours: TBA and by appt.

E-Mail: weebs@uw.edu

Office: Savery Hall 384

Overview: The primary goal of this course is to grasp the various forms of reasoning present in Charles Darwin's *Origin of Species*. Darwin claims in the final chapter that the text is "one long argument" in support of his theory of natural selection. What type of argument might that be? In order to test his claim, we will look at the context in which Darwin formulated his theory; to include the debates on scientific methodology, the Malthusian theory of economics, and the link between religion and science. During our investigation, we will consider the objections of Darwin's contemporaries as well as the modern critiques challenging Darwin's claim.

Goals and Objectives:

- Locate Darwin's theory within a contextual framework
- Identify the various logical forms of reasoning
- Critically evaluate challenges to Darwin's claim

Text: Darwin, Charles, and James T. Costa. *The Annotated Origin: A Facsimile of the First Edition of on the Origin of Species*. Cambridge, Mass: Belknap Press of Harvard University Press, 2009.

Ruse, Michael *The Darwinian Revolution*; Hull, David *Darwin and His Critics*; El

Electronic supplemental readings provided.

Requirements:	Reading Response/In-Class Assignments	100 points
	Midterm examination	150points
	Short Essay (3-5 pages)	100 points
	Final Exam	150 points
<hr/>		
	Total	500 points

TENTATIVE COURSE READINGS AND CALENDAR

Week 1 **INTRODUCTION: ARGUMENTATION**
Distribute syllabus, Overview of Class
Basic Argument Forms (Mill, Herschel, Whewell)
Electronic readings, Preface to the Origin

Week 2 **HISTORICAL CONTEXT**

Charles Darwin
DeBeer, Lyell, Owen
Voyage on the *HMS Beagle*
Scientific Societies and Key Figures (Ruse)
Electronic readings

- Week 3 **VARIOUS ACCOUNTS OF EVOLUTIONARY THEORY**
William Paley's Argument from Design
Robert Chamber's Vestiges of Creation
LaMarckian Inheritance of Acquired Characteristics
Electronic readings, Chapter One of the Origin
- Week 4 **DOMESTIC BREEDING AND NATURE**
Laws from Similarities (Sterrett article)
Breeding Pamphlets
Comparative Anatomy (Cuvier)
Electronic readings, Chapter 2 of the Origin
- Week 5 **THE STRUGGLE FOR EXISTENCE**
Malthus' Economic Theory
Comparative Anatomy (Owen)
Electronic readings, Chapter 3 of the Origin
- Week 6 **DARWIN'S THEORY OF NATURAL SELECTION**
The Standard View (Ruse and Recker articles)
Electronic readings, Chapter 4 of the Origin
- Week 7 **DARWIN'S RESPONSE TO CREATIONISM**
Inference to the Best Explanation
Strong Induction and the Supernatural (Hull)
Electronic readings, Chapter 6 of the Origin
- Week 8 **DARWIN'S CRITICS (HISTORICAL)**
Fleeming Jenkin, J.S. Mill, William Hopkins (Hull)
Sedgwick, Buckland (Appelman)
Electronic readings, Chapter 9 of the Origin
- Week 9 **DARWIN'S CRITICS (MODERN)**
Analogy in Context (Guildenhuys article)
Negative Analogy (Richards article)
Critique of Analogy (Fodor article)
Electronic Readings
- Week 10 **THE RECAPITULATION**

Electronic readings and Chapter 14 of the Origin

Scales and Criteria for Grading

When converting total points to decimal grades the following scale will be used. To determine your overall class grade, add up all of the points you earned for each assignment, **double that total**, and then use the following chart.

Total Class Points	Decimal Points
1000-930	1000-965 = 4.0, 964-930 = 3.9
929-900	929-920 = 3.8, 919-910 = 3.7, 909-900 = 3.6
899-870	899-890 = 3.4, 889-880 = 3.3, 879-870 = 3.2
869-830	869-860 = 3.1, 859-840 = 3.0, 839-830 = 2.9
829-800	829-820 = 2.8, 819-810 = 2.7, 809-800 = 2.6
799-770	799-790 = 2.4, 789-780 = 2.3, 779-770 = 2.2
769-730	769-760 = 2.1, 759-740 = 2.0, 739-730 = 1.9
729-700	729-720 = 1.8, 719-710 = 1.7, 709-700 = 1.6
699-670	699-690 = 1.4, 689-680 = 1.3, 679-670 = 1.2
669-630	669-660 = 1.1, 659-640 = 1.0, 639-630 = 0.9
629-600	629-615 = 0.8, 614-600 = 0.7
599-0	599-0 = 0.0

There will be no curves and no extra credit in this class. You will not be graded relative to your fellow students. It is possible for *everyone* to get an A (4.0) or an E (0.0) or anything in-between. In order to pass the course you must complete all assignments.

Overview of Requirements:

1. **Reading Responses/In-Class Writing Assignments** These assignments are designed to promote the student's engagement with the readings as well as develop the student's critical reasoning skills. Format requirements for assignments outside of class will be provided in advance.
2. **Midterm** This exam tests for knowledge of the material presented in readings and lectures. Format: multiple choice, true/false, and short answer/essay.
3. **Short Essay** This 3-5 page essay is an exercise in philosophical exposition and critique. You will be asked to clearly present an argument that has been presented in lecture or defended in one of the readings. As part of the exercise, students should anticipate a strong objection to a specific premise of the argument and formulate a response to that objection.
4. **Final Exam** The final exam, like the midterm, tests for knowledge of the material presented in readings and lectures. It is cumulative; that is to say, it will cover the course in its entirety. The format is the same as the midterm: multiple choice, true/false, and short answer/essay.

General Information

1. **Attendance and Participation.** There is a strong correlation between attendance and doing well in the course. We will begin by discussing the context in which Darwin created his theory. The class builds upon that context; therefore, the terminology, examples, and theories will come up again and again. Thus, attendance, participation, discussion, and asking questions, are all very important.

2. Cheating and Plagiarism. University policy defines "plagiarism" as "a specific form of cheating which consists of the misuse of the published and/or unpublished words of another by representing the material so used as one's own work." Cheating and plagiarism will not be tolerated in this course. All cases of suspected misconduct will be forwarded to the UW committee on student conduct..

