

Fall 8-15-2014

# HIC 2000G-001: Biological Evolution in the Humanities

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**HIC2000G:  
BIOLOGICAL EVOLUTION IN THE HUMANITIES  
FALL 2014; 3 Credit Hours**

**Instructors:** Dr. Charlotte Pence and Dr. Gary Fritz

**Offices:** 1112 Life Sciences Annex (G. Fritz); 3745 Coleman Hall (C. Pence)

**Office hours:** Fritz: 10:00-11:00 MWF and 11:00-1:00 Thurs. (1112 Life Sciences Annex)

Pence: 11:00-12:00 Tues., 1:00-2:00 and 3:00-4:00 Wed. (3745 Coleman Hall)

**Office Phone:** 581-2514 (G. Fritz); 581-2428 (C. Pence) **E-Mail:** [cpence@eiu.edu](mailto:cpence@eiu.edu) [gnfritz@eiu.edu](mailto:gnfritz@eiu.edu)

**Text Books:** 1) Becoming Interdisciplinary-An Intro to Interdisciplinary Studies by Kendall/Hunt

2) Techniques of Close Reading by Sage

3) Most of our readings come from the two provided course packets. A replacement will not be provided if lost.

### **COURSE DESCRIPTION**

This interdisciplinary course examines the influence, effects and outcomes of the foundational theory of modern biology (the theory of evolution) on the humanities. In the late 19<sup>th</sup> century, Charles Darwin proposed a theory of biological evolution that offered a new paradigm regarding the history of life on earth and, therefore, our place in it. This seemingly radical theory, though, stood on the shoulders of many predecessors including both contributions from the humanities and natural sciences. Today, the theory of evolution is arguably one of the most well supported, robust theories in science and has transformed the way we perceive and understand ourselves and the diversity of life-forms that surround us. This course examines the interweaving of human culture, history and philosophy with the development and understanding of the theory that explains our organic history.

### **COURSE OBJECTIVES**

1. Explore the practical and theoretical foundations of interdisciplinary study;
2. Apply the tools and perspectives of various humanities disciplines, separately and in a hybridized approach, to a contemporary problem;
3. Write analytically and effectively about objects of study from an interdisciplinary perspective;
4. Use quantitative reasoning to solve problems;
5. Demonstrate effective verbal communication about an important contemporary problem.

## WEEKLY SCHEDULE

\*Please note the following schedule may be changed in the event of extenuating circumstances. Check for updates via D2L's email and in-class announcements.

WEEK	CLASS LECTURES, DISCUSSION, AND ACTIVITIES	ASSIGNMENTS: Please read the assigned material by the due date and be prepared to discuss. Pop quizzes will be given.
<b>Weeks 1-4: INTRODUCTION TO THEORY AND SCIENCE</b>		
1 Tues, 8/26 Dr. Fritz  Thurs, 8/28 Dr. Pence	1. Introduce course and syllabus. 2. Begin Powerpoint #1 on Darwin's Theory and Science. 3. Balance Bracelet Activity.  1. Discuss assigned reading.	1. Selection from <i>Darwin's Ghosts: The Secret History of Evolution</i> by Stott, preface and chapter one.
2 Tues, 9/2 Dr. Fritz  Thurs, 9/4 Dr. Pence	1. Continue with Powerpoint #1 on Darwin's Theory and Science. 2. Go through Woozelology example of selection.  1. Discuss assigned reading. 2. What is the role of science in Erasmus Darwin's poetry? 3. What is the representation of science in Shelley's literary work?	1. "Beyond Reason: Science in the Mass Media." Jere Lipps. Read pages 71-80.  1. Selection of Erasmus Darwin's poetry. 2. Excerpt of <i>Frankenstein</i> by Mary Wollstonecraft Shelley: preface, letter 3 and 4, & chapters 3 and 4.
3 Tues, 9/9 Dr. Fritz	1. Begin Powerpoint #2 on evidence for evolution.	1. Chapter 2, "The Evidence for Evolution" in <i>Evolutionary Analysis</i> by Scott Freeman and J. Herron. 2. Film on "Your Inner Fish" Part 1 (on reserve)

WEEK	CLASS LECTURES, DISCUSSION, AND ACTIVITIES	ASSIGNMENTS: Please read the assigned material by the due date and be prepared to discuss. Pop quizzes will be given.
Thurs, 9/11 Dr. Pence	1. Discuss assigned reading. 2. <b>Take-Home Exam #1 Given.</b>	1. Excerpt from <i>On the Origin of Species</i> , 1 <sup>st</sup> edition by Darwin, pp 60-67 and 459-469. 2. "Mutability" by William Wordsworth.
4 Tues, 9/16 Dr. Fritz  Thurs, 9/18 Dr. Pence	1. Continue Powerpoint #2 on evidence for evolution. 2. Show Youtube clip on human/chimp chromosome fusion.  1. Discuss assigned readings. 2. Activity: analyze differing versions of the last sentence to <i>Origin</i> .	1. No additional reading this day. 2. <b>Take-Home Exam #1 DUE.</b>  1. Excerpt from <i>On the Origin of Species</i> , 1 <sup>st</sup> edition by Darwin, pp 470-end. 2. Final Exam Project Proposal: Topic approved by this date. Set up an appointment with one of us.
	<b>Weeks 5-7: HISTORICAL CONTEXT &amp; PUBLIC REACTION TO DARWIN</b>	
5 Tues, 9/23 Dr. Fritz  Thurs, 9/25 Dr. Pence	1. Powerpoint #3 on historical context and public reaction to Darwin.  1. Discuss assigned readings, which are a variety of poems, pre and post <i>Origin of Species</i> . 2. Design, the adaptation of means to ends, is a hard concept to define, given its many contexts. What are the scientific definitions? And what are the concepts of "design" in these poems? 3. How does Frost's concept of design in nature compare with Wordsworth's? The other writers featured today?	1. Darwin and Teilhard: Some Final Thoughts. H. James Birx, 38-43 pp.  1. "Lines Composed a Few Miles above Tintern Abbey...." by Wordsworth. 2. "Hap" by Thomas Hardy. 3. "Design" by Robert Frost. 4. "Dover Beach" by Matthew Arnold. 5. "Dover Bitch" by Anthony Hecht. 6. "Spirit in the Dark" by Robert Gibb.

WEEK	CLASS LECTURES, DISCUSSION, AND ACTIVITIES	ASSIGNMENTS: Please read the assigned material by the due date and be prepared to discuss. Pop quizzes will be given.
<p>6 Tues, 9/30 Dr. Fritz</p> <p>Thurs, 10/02 Dr. Pence</p>	<p>1. Guest lecturer: Dr. Richard England.</p> <p>1. Discuss assigned reading. 2. In what ways, if any, does Wonderland represent an evolutionary world? 3. Do rudeness and confrontation have a survival benefit in Wonderland? 4. What is the status of nonsense and reason in Wonderland? 5. <b>Take-Home Exam #2 Given</b></p>	<p>1. Reading TBA by guest lecturer.</p> <p>1. <i>Alice in Wonderland</i> by Lewis Carroll, chapters 1, II, XI, and XII.</p>
<p>7 Tues, 10/7 Dr. Fritz</p> <p>Thurs, 10/09 Dr. Pence</p>	<p>1. Powerpoint #3 on historical context and public reaction to Darwin.</p> <p>1. Discuss 20<sup>th</sup> century poets referencing Darwin.</p>	<p>1. <b>Take-Home Exam #2 DUE</b></p> <p>1. Selections from Sarah Lindsay. 2. Selections from Ted Hughes.</p>
<b>WEEKS 8-12: EFFECTS IN THE HUMANITIES</b>		
<p>8 Tues, 10/14 Dr. Fritz</p> <p>Thurs, 10/16 Dr. Pence</p>	<p>1. Powerpoint #4 on population genetics, eugenics, and social Darwinism. 2. Do class exercise on the math of eugenics</p> <p>1. Guest lecturer: Malgorzata Rymysz-Pawlowska</p>	<p>1. Reading TBA by guest lecturer.</p>

WEEK	CLASS LECTURES, DISCUSSION, AND ACTIVITIES	ASSIGNMENTS: Please read the assigned material by the due date and be prepared to discuss. Pop quizzes will be given.
<p>9 Tues, 10/21 Dr. Fritz</p> <p>Thurs, 10/23 Dr. Pence</p>	<p>1. Powerpoint #5 on sex determination/gender. How does Darwin affect our ideas of what is normal and natural?</p> <p>1. Discuss assigned reading 2. <b>Take-Home Exam #3 Given</b></p>	<p>1. The Evolution of Human Sexuality. R. Thornhill and S. Gangestad, TREE (1996), 18-101 pp.</p> <p>2. Darwin and Gender. Lawrence Birken, 24-29 pp.</p> <p>3. Animals' Fancies: Why members of some species prefer their own sex. Tina Adler, Science News (1997), 8-9 pp.</p> <p>1. Read selected poems by Brad Tice, Sharon Olds, Keetje Kuipers, Jill McDonough, and Gary Soto.</p>
<p>10 Tues, 10/28 Dr. Fritz</p> <p>Thurs, 10/30 Dr. Pence</p>	<p>1. Powerpoint #5 presentation on sex determination continued.</p> <p>1. Discuss assigned reading. What are Dr. Fausto-Sterling's main claims as to why our attempts at prescribing gender fail?</p>	<p>1. <b>Take-Home Exam #3 DUE</b></p> <p>1. Read "The Biology of Fatherhood" by Anne Fausto-Sterling.</p>
<p>11 Tues, 11/4 Dr. Pence</p> <p>Thurs, 11/6 Dr. Pence</p>	<p>1. Lecture: "Literary Evolutionists on Why We Read." 2. Discuss assigned reading.</p> <p>1. Lecture: "Literary Evolutionists on Why We Read" continued. 2. Activity: Movie clip of moving shapes</p>	<p>1. Read "The Lady with the Dog" by Anton Chekhov.</p> <p>1. Excerpt from <i>The Storytelling Animal: How Stories Make Us Human</i> by Jonathan Gottschall, chapters 1, 2, and first part of 3.</p>

WEEK	CLASS LECTURES, DISCUSSION, AND ACTIVITIES	ASSIGNMENTS: Please read the assigned material by the due date and be prepared to discuss. Pop quizzes will be given.
12 Tues, 11/11 Dr. Fritz	1. Guest lecture by Dr. Don Holly: "Picturing the Past: How Artists (and Society) Have Imagined Human Evolution in Art."	1. TBA by guest lecturer. 2. Submit annotated bibliography. Minimum 5 sources.
Thurs, 11/13 Dr. Pence	1. Guest Lecturer: Joseph Carroll. 2. <b>Take-Home Exam #4 Given.</b>	1. TBA by guest lecturer.
<b>WEEKS 13-16: APPLICATION/RELEVANCE AND PRACTICALITY</b>		
13 Tues, 11/18 Dr. Fritz	1. Powerpoint #6 on human evolution today. Are humans still evolving?	1. <b>Take-Home Exam #4 DUE</b>
Thurs, 11/20 Dr. Pence	1. What are pop cultural representations of biological evolution in the future? 2. What is accurate and inaccurate about artificial and natural selection as depicted in the movie? 3. What emotional tenors within the movie are similar to <i>Frankenstein</i> ?	2. Chapter 1: 'a Case for Evolutionary Thinking: Und HIV, in Evolutionary Analysis by Freeman and Herro 3. ...And a glimpse forward (or WHO Needs Darwin) by Paul Ewald  1. Watch the movie <i>Gattaca</i> . Available in the library on reserve.
14 11/25 and 11/27	THANKSGIVING BREAK: NO CLASSES	
15 Tues, 12/2 Dr. Fritz	1. Powerpoint #6 continued	

Thurs, 12/4 Dr. Pence	<ol style="list-style-type: none"> <li>1. Discussion on the two poems. What brings comfort as the physical body shuts down? What does the direct, conversational tone contribute to both poems?</li> <li>2. Discuss Final Exam Project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Read "How To Watch Your Brother Die" by Michael Lassell</li> <li>2. Read "Atlantis" by Mark Doty.</li> </ol>
16 Tues, 12/9 Dr. Fritz	<ol style="list-style-type: none"> <li>1. Powerpoint #6 continued</li> </ol>	
Thurs, 12/11 Dr. Pence	<ol style="list-style-type: none"> <li>1. Reflect on the course and what was learned.</li> <li>2. Discuss Final Exam Project.</li> <li>3. Workshop three introductory paragraphs to the final project.</li> <li>4. Do course evaluations.</li> </ol> <p><b>FINAL PROJECT DUE during Finals Week: Tues., Dec. 16<sup>th</sup>, 2:45.</b></p>	

**Online PowerPoint Lectures:** PowerPoint slides presented in class will be posted online for you to print and bring to class. These slides, however, do not include all the material covered in class or information on the board. Thus, you need to come to class prepared to take notes and ask questions. A good idea is to bring a copy of the slides to class so that you can add notes to each slide.

**Final project:**

For your project, you must address how the theory of biological evolution has impacted and influenced your particular discipline. The project must focus on the effect/influence (such as causing or influencing a paradigm shift within a discipline) of evolutionary theory on your academic discipline; you should not simply iterate a description of the particulars of Darwin's theory. For example, if you are an education major you might consider submitting a detailed lesson plan including assigned readings, class activities, etc. on this topic. If you are in the Communications Department and interested in advertising, you might do a survey of ads and analyze/address the influence of evolutionary thought (and also, for example, what is accurate or incorrect regarding the representation of evolutionary theory in ads). If you are studying for a career in physical therapy, you might consider how modern evolutionary ideas have influenced the way we approach and treat patients and diseases that are subject to physical therapy. You need to submit a proposal for



your project by the end of the fourth week of class. Annotated bibliographies (minimum of 5 sources) are due at the end of week twelve. **Final projects will be due on Tuesday, Dec. 16<sup>th</sup> at 2:45 in the classroom.**

## **GRADING POLICY**

### **Late Assignment Policy and Extra Credit Policy**

**NO** late weekly assignments will be accepted and no extra credit will be given.

### **Lecture Exams and quizzes**

There will be four take-home exams (approximately one every three weeks) and a final project, all worth 100 points each. There will also be a number of pop quizzes given at the beginning of class.

### **Point Distribution**

Exam 1: 100 points

Exam 2: 100 points

Exam 3: 100 points

Exam 4: 100 points

Pop quizzes, worth fifteen points each

Final Exam Project: 100 points

Grades will be assigned based on points earned in exams, pop quizzes, assigned homework, and a final project.

### **Grading Scale**

The grading scale for this class is fixed. Minimum cut-off points for grades are as follows:

90% and above	= A
80-89%	= B
70-79%	= C
60-69%	= D
59 % or less	= F

EXAM 1	September 16
EXAM 2	October 7
EXAM 3	October 28
EXAM 4	November 18
FINAL PROJECT	December 16 <sup>th</sup> at 2:45 (Final Exam Day)

**Note:** If you have a problem or question concerning a grade you receive on any particular assignment or exam, you must bring it to our attention within five school days after you have seen your grade in order for us to consider your situation. Failure to adhere to this policy forfeits your chance of grade reconsideration.

### **Attendance**

For any missed class sessions, it is the student's responsibility to obtain lecture notes, announcements or assignments either from another student, or by contacting the instructor. Ignorance of an announcement/assignment because of an absence does not entitle one to special consideration. To help build a community, the course depends upon everyone's participation and attendance. Therefore, missing four courses will lower your final grade by ten percent. (An "A" becomes a "B" for example.) Five absences will lower your final grade by another ten percent. (An "A" becomes a "C"). Six absences will result in failure of the course. To allow adequate time for class discussion and in-class writing, arrive on time. Being late twice (or leaving early twice) will be considered an absence. Be aware that there is no such thing as an "excused absence." Finally, if you arrive without the day's reading printed out or in book-form in front of you, you will be counted as absent.

## **COURSE POLICIES**

### **Laptops and other electronics**

Turn off your phone and any other electronics before entering class. Do not use a laptop in class; unfortunately, many students that use laptops often use them in ways that are distracting to other students (Facebook, games, email, etc.) and set the wrong tone for the class.

**Academic integrity**

Students are expected to maintain principles of academic integrity and conduct as defined in EIU's Code of Conduct (<http://www.eiu.edu/judicial/studentconductcode.php>). Violations will be reported to the Office of Student Standards.

All lecture exams, and class assignments will be completed in strict observation of the student conduct code at EIU. Plagiarism and other forms of Academic dishonesty will not be tolerated; if you are involved in such an incidence, you will receive a failing grade for the course and referred to the Student Judicial Affairs Office for other appropriate measures. You are responsible for all assignments in your own words and through your own efforts. It is expected that students will be sensitive to the needs of their fellow students and exhibit appropriate classroom behavior.

**Students with disabilities**

If you are a student with a documented disability in need of accommodations to fully participate in this class, please contact the Office of Student Disability Services (OSDS). All accommodations must be approved through OSDS. Please stop by Ninth Street Hall, Room 2006, or call 217-581-6583.

**The Student Success Center**

Students who are having difficulty achieving their academic goals are encouraged to contact the Student Success Center ([www.eiu.edu/~success](http://www.eiu.edu/~success)) for assistance with time management, test taking, note taking, avoiding procrastination, setting goals, and other skills to support academic achievement. The Student Success Center provides individualized consultations. To make an appointment, call 217-581-6696, or go to 9th Street Hall, Room 1302.