

**ANTH 407/507: EVOLUTIONARY THEORY**  
**Spring Quarter 2008**  
**4 Credit Hours**

**Class Times:** MW 8:30-9:50am  
**Class Location:** 260 Condon

**Instructor: Dr. Josh Snodgrass**

Office: 354 Condon Hall  
Office Hours: MW 1:00-2:00 & by appointment  
Phone: 346-4823  
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**Prerequisite:** None (ANTH 270 and/or introductory biology sequence recommended)

**Course Description:** This course provides a theoretical framework in evolutionary biology with which to explore human evolutionary history and aspects of modern human biology and behavior.

**Course Content:** After surveying the historical development of evolutionary theory and the state of current knowledge regarding mechanisms of evolutionary change, we turn our attention to patterns and processes in human evolution. Issues to be addressed in this course include the evolution of primate life histories, the origin of modern human biological variation, and evolutionary medicine.

**Format:** Directed discussion with weekly group presentations.

**Required Readings:** Assorted articles and book chapters

**Evaluation Criteria:** Grade in the course will reflect participation in class discussions (including submission of discussion questions at least once per week), role in group presentation, and performance on a final research paper (12-15 pages). Graduate students will additionally complete an annotated bibliography, which summarizes readings and synthesizes course material.

**Undergraduate Students**

Class Participation	25%
Group Presentation & Discussion	30%
Discussion Questions (3 per week)	10%
Final Research Paper ( <b>Due 6/12</b> )	35%

**Graduate Students**

Class Participation	25%
Group Presentation & Discussion	25%
Annotated Bib. ( <b>Due 5/5 &amp; 6/4</b> )	25%
Final Research Paper ( <b>Due 6/12</b> )	25%

Beginning in the fourth week of class, each student will give a presentation as a member of a small group (2-3 students per group). The group will be responsible for giving a presentation (approximately 15 minutes) on an article related to the topic of the week (you choose this article and post it on Blackboard) and leading a class discussion that integrates it with other course material. Prepared discussion questions are encouraged.

The final research paper will be 12-15 pages (double-spaced). The specific topic of the paper is the choice of the student, provided it is appropriate for the class. The research paper should incorporate readings from the course.

Graduate students will compile an annotated bibliography that summarizes any *three* of the readings from each week. Each entry will be no more than one page long (single-spaced) and should 1) **briefly** summarize the main points of the article, and 2) place the article into the framework of the class, linking it with other ideas and critically evaluating it. Writing should be concise and focused around a few main points. The annotated bibliography from the first five weeks will be due May 5 and from the second half of the class on June 4.

**Class Schedule:**

<b>Week</b>	<b>Date</b>	<b>Topics</b>	<b>Required Readings</b>
1	3/31	Course Overview & Requirements	
	4/2	Evolution: History of an Idea; Setting the Stage; The Pre-Evolutionary Worldview	<u>For Wednesday:</u> Bowler 2003 (Chapters 1-4); Goodrum 2004a & 2004b
2	4/7	Darwin & Natural Selection; Variation; The Non-Darwinian Revolution?	<u>For Monday:</u> Darwin's <i>Origin of Species</i> (Chapters 4, 5 & 14); Bowler 1988 (Chapters 1 & 2)
	4/9	<b>No Class</b> —Dr. Snodgrass at the annual meeting of the Human Biology Association  <i>Optional video: Darwin's Dangerous Idea (on reserve at Knight Library)</i>	
3	4/14	The Modern Evolutionary Synthesis (Neo-Darwinism); The New Physical Anthropology	<u>For Monday:</u> Jepsen 1949; Davis 1949; Mayr 1980; Washburn 1951
	4/16	Adaptation; The Adaptationist Program; Critique of the Adaptationist Program	<u>For Wednesday:</u> Mayr 1988 (Chapter 9); Gould & Lewontin 1979
4	4/21	Species Concepts; Variation; Speciation; Tempo & Mode of Evolution; Macroevolution	<u>For Monday:</u> Ridley Chapters 13 & 14; Chandler & Gromko 1989; Mayr 1988 (Chapter 20); Mayr 2001 (Chapter 10)
	4/23	<b><i>Student Presentation &amp; Discussion: Application to Primate/Human Evolution</i></b>	<u>For Wednesday:</u> Student Group Article
5	4/28	Sexual Selection; Sex; Male-Male Competition; Female Choice	<u>For Monday:</u> Darwin's <i>Descent of Man</i> (Chapters 8 & 21); Freeman & Herron (Chapter 10)
	4/30	<b><i>Student Presentation &amp; Discussion: Application to Primate/Human Evolution</i></b>	<u>For Wednesday:</u> Student Group Article
6	5/5	The Evolution of Behavior; Kin Selection and Social Behavior; Altruism; Parent-Offspring Conflict <b>1<sup>st</sup> Annotated Bib Due (Grad Students only)</b>	<u>For Monday:</u> Trivers 1974; Alexrod & Hamilton 1981; Dennett 2002; Freeman & Herron 2004 (Chapter 11)
	5/7	<b><i>Student Presentation &amp; Discussion: Application to Primate/Human Evolution</i></b>	<u>For Wednesday:</u> Student Group Article

7	5/12	Development and Evolution; Ontogeny & Phylogeny; Constraint; Developmental Genetics & Evolution	<u>For Monday</u> : Gottlieb 1992 (Ch. 11); West-Eberhard 2005; Futuyma Chapter 20
	5/14	<i>Student Presentation &amp; Discussion: Application to Primate/Human Evolution</i>	<u>For Wednesday</u> : Student Group Article
8	5/19	The Evolution of Life Histories; Trade-Offs; Ontogeny; Senescence	<u>For Monday</u> : Stearns 1976; Freeman & Herron 2004 (Chapter 12); Hill & Hurtado 1996 (Chapter 1).
	5/21	<i>Student Presentation &amp; Discussion: Application to Primate/Human Evolution</i>	<u>For Wednesday</u> : Student Group Article
9	5/26	<b>No Class—Memorial Day</b>	
	5/28	Evolution & Human Health; Darwinian/Evolutionary Medicine <i>Student Presentation &amp; Discussion: Application to Primate/Human Evolution</i>	<u>For Wednesday</u> : Trevathan et al. 2008 (Ch. 1); Nesse & Williams 1994 (Ch. 14); Student Group Article
10	6/2	Evolutionary Biology, Creationism, and Society; Teaching Evolution; Darwin's Place on Campus	<u>For Monday</u> : Scott 2004 (Chapter 3); Holden 2006; Pennock 2005; Miller 2005
	6/4	<i>Student Presentation &amp; Discussion: Application to Primate/Human Evolution</i>  <b>2<sup>nd</sup> Annotated Bib Due (Grad Students only)</b>	<u>For Wednesday</u> : Student Group Article
		<b>Research Paper (Undergraduate and Graduate Students) Due 6/12 @ 5:00 pm</b>	