This course examines key issues concerning the foundations and implications of evolutionary biology, especially as they apply to human beings, as well as the role that the biological sciences more generally should play in both our philosophical and scientific understanding of humans.

Instructors:
Francisco Ayala, Bren Professor of Biology and Philosophy (fjayala@uci.edu)
Office Hours Wed 12-2PM 353 Steinhaus Hall
P. Kyle Stanford, Associate Professor of Logic and Philosophy of Science
( stanford@uci.edu ) Office Hours Thurs 1-3 PM 769 SST
With guest lectures by Paul Griffiths (Professor of Philosophy, University of Queensland) and Kevin Zollman (Logic and Philosophy of Science, UCI).

Teaching Assistants:
Valerie Foster (vfoster@uci.edu), Eco/Evo Bio, Tues 10-11&12-1, 152 Steinhaus Hall
Sam Hillier (shillier@uci.edu), LPS, Tues 11-12, Fri 10-11, SST 795
Rory Smead (rsmead@uci.edu), LPS, Mon 1-2, Tues 2-3, SST 788
Amanda Szucsik (aszucsik@uci.edu), Eco/Evo Bio, Mon 8-9, Fri 8-9, McGaugh Hall 5409

Texts: Philosophy of Biology (POB), edited by Michael Ruse (Macmillan, 1998) and selected articles to be distributed in class or made available electronically through Course Reserves.

Requirements: Three short (approx. 1000-word) essays and one long (approx. 4000-word) term paper, as well as brief weekly quizzes at the end of each class on the required reading and lectures. Your attendance and participation in class and in sections devoted to writing instruction is also mandatory and will be part of the calculation of your final grade (see below).

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecturer</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Jan 11</td>
<td>Ayala</td>
<td>Darwin’s Greatest Discovery: Natural Selection vs Intelligent Design</td>
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<td>Recommended reading: Ayala, “Intelligent Design: The Original Version”</td>
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<td>Jan 18</td>
<td>Stanford</td>
<td>Argumentative Writing Tutorial/The Nature of Selection</td>
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<td>Read POB Chs. 8 &amp; 9</td>
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*Paper #1 due Jan 25*

Jan 25 Ayala Adaptation and Novelty
Read, Ayala, “Adaptation and Novelty: Teleological Explanations in Evolutionary Biology”

Feb 1 Ayala I: Genetics, Intelligence and Race/II: Cloning, Genetic Engineering, and the Future of Mankind
Read Ayala, “Whither Mankind: The Choice Between a Genetic Twilight and a Moral Twilight” and POB Chs. 36 & 37.

*Paper #2 due Feb 8*
Feb 8  Stanford  Human Sociobiology and Evolutionary Psychology  
Read POB Chs. 23-24 and selection from Pinker, How the Mind Works.

Feb 15  Griffiths  The Gene: A Concept in Tension?  
Reading TBA

Paper #3 due Feb 22

Feb 22  Stanford  The Units of Selection: Genes, Groups, and Organisms  
Read Dawkins, The Extended Phenotype, Ch. 1 (“Necker Cubes and Buffaloes”) and 
selection from Sober and Wilson, Unto Others.

Mar 1  Stanford  Evidence and Evolution: Adaptationism, Punctuated Equilibrium, and 
Gould’s Challenge to “Orthodox” Darwinism  
Read POB Chs. 3, 4, 6, 10 & 11. Recommended reading” Ayala, “The Structure of 
Evolutionary Theory” On Stephen Jay Gould’s Monumental Masterpiece

First Draft of Term Paper due Mar 8

Mar 8  Zollman  The Uses of Evolutionary Game Theory  
Reading TBA

Mar 15  Ayala  From Biology to Ethics: The Difference of Being Human  
Evolutionist’s View of Human Nature”

Final Draft of Term Paper due Monday of Finals Week, Mar 20

Finally, here is a rough indication of how your final grade will be computed. It is only 
approximate because we like to reward improvement over the course of the quarter, exceptional 
preparation, participation in class and sections, and the like. These considerations will settle 
borderline grades, and will improve grades even farther in some cases.

1st short paper  10%
2nd short paper  10%
3rd short paper  15%
Draft & Final Term paper  35%
Quizzes/Attendance/Participation in section  30%

Total  100%