**Biological Sciences/Philosophy/Logic and Philosophy of Science 142W:**
**Philosophy of Biology (Writing)**
Wednesday 2-4:50 PM, Steinhaus Hall 134

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 Profesor 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).**

| Date | Lecturer | Topic |
|---|---|---|
| Jan 11 | Ayala | Darwin's Greatest Discovery: Natural Selection versus Intelligent Design |
| | | Recommended reading: Ayala, "Intelligent Design: The Original Version" |
| Jan 18 | Stanford | Argumentative Writing Tutorial/The Nature of Selection |
| | | Read POB Chs. 8 & 9 |

*Paper #1 due Jan 25*

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| 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
Read Ayala, "Human Nature. Biology Precedes, Culture Transcends: An 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.

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| 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% |