

University of California, Davis
Department of Philosophy
PHILOSOPHY OF BIOLOGICAL SCIENCES
PHI 108, Winter 2012
176 Chemistry, TR 1:40-3 PM

Contact Information

Instructor: Professor Roberta Millstein

Office: 2287 Social Sciences and Humanities (aka SSH, Death Star: corner of 3rd and A)

Office Hours: Tues 12:30-1:30 PM, Thurs 3:10-4:10 PM, and by appointment - **CORRECTED**

E-mail: RLMillstein@UCDavis.edu (*the best way to reach me*)

Phone: 530-554-1398 (Skype voicemail)

Philosophy Dept. Office, my mailbox: 1240 SSH **Philosophy Dept. Phone:** 530-752-0703

Discussion Sections: Tues 6:10-7 PM (A01)

209 Wellman Jared Poon, jarpoon@ucdavis.edu

Tues 7:10-8 PM (A02)

Vadim Keyser, vkeyser@ucdavis.edu

Required Text

All required readings available on course website on SmartSite, <https://smartsite.ucdavis.edu/>

Course Description

This class will consider the following conceptual and methodological issues in biology: the proper definition of “natural selection” and “fitness”; explanations of female sexuality; challenges to neo-Darwinism; the question of whether there are any biological laws or whether model building suffices; the concepts of “species” and “population”; the debate over whether race is a social construction or biological reality.

The goals of this course are: 1) to introduce you to some of the major issues within the philosophy of biology; 2) to encourage you to critically examine your own beliefs as well as the beliefs of others; 3) to provide the opportunity to discuss, both in class and in a more sustained written form, your ideas and arguments concerning important issues in the philosophy of biology.

Class Policies

If you have a documented disability and wish to discuss academic accommodations, or if you would need assistance in the event of an emergency evacuation, please visit my office within the first two weeks.

You are responsible for *all* material covered in class, including announcements, discussions, etc. – whether you are in class or not. **Take notes on discussions as well as lecture.** Since we will be discussing the readings in class, you should bring the reading for the day to each class.

Announcements are usually made at the beginning of class, so **please be on time.** Comings and goings are disruptive and distracting, so please keep them to a minimum. Cell phones are also distracting; please turn them off. Please do not bring guests (friends, children, etc.) without my permission. Eating in class is ok if it is done quietly and unobtrusively.

Class Requirements

Your grade will be based on the following (all dates subject to change):

- 5%** - Comments/questions on each day's readings, posted to the Forums on SmartSite *before* class. CR/NC.
- 5%** - Group work in your Discussion Section. CR/NC.
- 30%** - Two 2-page analytical essays submitted on SmartSite by **6 PM Mon: Feb 6 and Feb 27**
- 5%** - Term paper draft submitted on SmartSite by 6 PM Fri **Mar 9** + two peer reviews submitted on SmartSite by 6 PM Sat **Mar 10** (CR/NC; late=NC)
- 35%** - 5-7 page term paper submitted on SmartSite by **6 PM Thurs, Mar 15.**
- 20%** - Take-home final exam submitted on SmartSite by **10 AM Friday, Mar 23**

You must complete the two analytical essays, the term paper, and the final exam in order to pass the class. In the case of a borderline grade, **class participation** will be given serious consideration.

Important note on plagiarism/cheating:

It is a violation of the Code of Academic Conduct to turn in work that is not your own. This includes: turning in the work of another student with your name on it, buying/copying a paper off the Internet, using the words *or* ideas of others without proper quotation and citation. In accordance with Regulation 550 of the Davis Division of the Academic Senate, **a grade of "0" will be assigned to examinations or assignments on which cheating, plagiarism or any other form of academic dishonesty is admitted or determined to have occurred by proper adjudication.** If you have trouble with the class material or have personal issues that prevent you from doing your work, come talk to me.

Tentative Schedule - All dates and readings are subject to change.

Date	Topic	Reading (by author)
Jan 10	Introduction	Syllabus
Jan 12	Natural selection	Darwin 1859 - Chs. 3 & 4 (excerpts)
Jan 17		Lennox and Wilson 1994
Jan 19	Population genetics	Millstein and Skipper 2007 (pp. 22-36 only)
Jan 24	What is "fitness"?	Mills and Beatty 1979
Jan 26		Rosenberg and Bouchard (SEP) 2008
Jan 31	Adaptationism & female sexuality	Lloyd 1993
Feb 2		Caton 2006, Puts and Dawood 2006
Feb 7	Challenges to neo-Darwinism	Jablonka 2011
Feb 9		Haig 2011
Feb 14	Laws in biology?	Beatty 1995
Feb 16		Mitchell 2000
Feb 21	Models in population biology	Levins 1966
Feb 23		Orzack and Sober 1993
Feb 28	What is a "species"?	Mayr 1996
Mar 1		Andersson 1990, Ereshefsky 1992
Mar 6	What is a "population"?	Wells and Richmond 1995
Mar 8		Gannett 2003
Mar 13	Do "races" exist?	Appiah 1996
Mar 15		Gannett 2007