

Syllabus. Philosophy of Biology. MW2: 4117B; 2:15-3:30pm; Spring 2013.
Menser. 718-951-5311 (leaves messages at this number);
morphospace@gmail.com

GOALS

1/ to understand what knowledge is and how it is acquired by the use of differing methods in different disciplines; 2/ to develop the ability to think critically and creatively, to reason logically, and to express one's thoughts orally and in writing with clarity and precision; 3) to consider the social, political and economic contexts and implications of scientific theory and practice.

OBJECTIVE: to understand evolutionary biology as it arose with Darwin and has evolved until the present especially with respect to issues such as natural selection and morphological variation; philosophical issues of explanation; evidence, concepts and methods; and to understand key political, economic and cultural questions with respect to contemporary global food issues.

TEXTBOOK: course packet available at Far Better Copies at the corner of Campus Road and Hillel. (All readings are in the packet unless otherwise indicated.)

ASSIGNMENTS/GRADING: Quiz (10%), midterm (20%), Two 5 page papers (20% each); final exam (20%); attendance/participation (10%).

-**attendance:** two (excused) absences are permitted, each absence after that results in a 5 point drop (regardless of reason). The first paper may be rewritten. ONE UNANNOUNCED EXTRA CREDIT ASSIGNMENT WILL BE GIVEN DURING THE TERM; GRADES ARE NOT CURVED;

-Cheating or plagiarism on any assignment will result in an 0% on that assignment.

Class Policy: students are expected to participate in classroom discussion, be active in group work, and be respectful of their fellow students (discussions will get heated!) Note that texting during class results in decrease in participation grade.

Plagiarism Policy: The faculty and administration of Brooklyn College support an environment free from cheating and plagiarism. Each student is responsible for being aware of what constitutes cheating and plagiarism and for avoiding both. The complete text of the CUNY Academic Integrity Policy and the Brooklyn College procedure for implementing that policy can be found at this site: <http://www.brooklyn.cuny.edu/bc/policies>. If a faculty member suspects a violation of academic integrity and, upon investigation, confirms that violation, or if the student admits the violation, the faculty member **MUST** report it.

DISABILITIES POLICY: In order to receive disability-related academic accommodations students must first be registered with the Center for Student Disability Services. Students who have a documented disability or suspect they may have a disability are invited to set up an appointment with the Director of the Center for Student Disability Services, Ms. Valerie Stewart-Lovell at 718-951-5538. If you have already registered with the Center for Student Disability Services please provide your professor with the course accommodation form and discuss your specific accommodation with him/her.

COURSE OUTLINE

I. Biology and Philosophy; Creationism vs Darwinism

-Ernst Mayr, "The Place of Biology in the Sciences and its Conceptual Structure"

-William Paley, "Natural Theology"

-C. Darwin, selection from *The Origin of the Species*

-QUIZ

-P. Kitcher, "Darwin's Achievement"

-Fukuyma, especially 91, 96, 102, 106, 109; eye convergence 112, 114;

Darwin's finches 118; NYC NE region: 198; point mutation 269

FIRST PAPER DUE

II.A Evolution, Ecology, and the Political Economy of Globalization

-Clark, Globalization and Life Systems

II.B The Science and Politics of Sustainable Agriculture

-Norman Borlaug, "The Green Revolution and the Road Ahead"

-Vandana Shiva, "Monocultures of the Mind"

MIDTERM

-Tilman et al., "Agricultural Sustainability and Intensive Production Practices"

-Hugh Lacey, "Seeds and their Sociocultural Nexus"

-Elizabeth Royte, "Street Farmer" (on Will Allen and "Growing Power")

-FUTURE OF FOOD CONFERENCE, April 22-3;

III. Fitness and The Unit of Selection: Beavers

-Sterelny and Griffiths, "The Organism Strikes Back"; "Organisms, Groups and Superorganisms;

IV. Explanation: Morphospace

-Ron Amundson, "Two Types of Constraint"

-Sterelny and Griffiths, "Life on Earth: the Big Picture"

SECOND PAPER DUE

FINAL EXAM: Monday may 20, 1-3pm