

OEB275r: Frontiers of Ecology and Evolutionary Biology, Spring 2009

Lead Instructor: Scott Edwards; sedwards@fas.harvard.edu, 384-8082

Teaching Fellow: Ricardo Godinez; rgodinez@fas.harvard.edu; 496-8387

All classes meet at 1:30 – 3 pm; Mon MCZ 101; Wed 1:30 - 3 pm room Fairchild 177

SYLLABUS

Week	Date	Presenter	Module topic
Course Scope and Introduction			
1	Fr Jan. 30	Scott Edwards	Course Introduction
Macroevolution and Evo-Devo			
2	Mon Feb. 2	Charles Marshall	Macroevolution and the fossil record
	Wed Feb. 4	Marshall – discussion	Macroevolution
3	Mon Feb 9	Arkhat Abzhanov	Historical and conceptual introduction to evolutionary developmental biology
	Wed Feb. 11	Ann Pringle	Biodiversity outside the animal kingdom
4	Mon Feb. 16	holiday	
	Wed Feb. 18	Cassandra Extavour	Molecular Mechanisms of Developmental Evolution I
	Fri Feb 20	Cassandra Extavour	Molecular Mechanisms of Developmental Evolution II
Phylogenies and the Comparative Method			
5	Mon Feb. 23	Gonzalo Giribet	Foundations of systematics and biogeography
	Wed Feb 25	Gonzalo Giribet	Foundations of systematics and biogeography
	Mon Mar 2	Scott Edwards	Population genetics and phylogeography
	Wed Mar 4	Scott Edwards – computer lab	Population genetics and phylogeography
6	Mon Mar 9	Chris Organ	Phylogenies and the comparative method
	Wed Mar 11	Chris Organ – computer lab	Phylogenies and the comparative method
Natural Selection and Speciation			
7	Mon Mar. 16	Hopi Hoekstra	Natural selection
	Wed Mar 18	Hopi Hoekstra	Natural selection

8	Mar 21 – 29	Spring break	
	Mon Mar 30	Marcus Kronforst	Speciation
	Wed Apr 1	Marcus Kronforst – computer lab	Speciation
Cooperation and Experimental Evolution			
9	Mon Apr 6	Chris Marx	Microbial and experimental evolution
	Wed Apr 8	Chris Marx	Microbial and experimental evolution
10	Mon Apr. 13	Kevin Foster	Cooperation and Conflict
	Wed Apr 15	Kevin Foster	Cooperation and conflict
The Ecology of Biodiversity			
11	Mon Apr. 20	TBD	
	Wed Apr 22	TBD	
12	Mon Apr 27	Paul Moorcroft	The neutral theory of biodiversity
	Wed Apr 29	Paul Moorcroft	The neutral theory of biodiversity
13	Sat May 2	Brian Farrell	Field Trip to Boston Harbor Islands

Lectures and modules will be targeted to 1st year OEB grad students, but grad students from other years and departments, and advanced undergraduates, are encouraged to enroll.

The course will be graded.

Assignments will vary among modules. Their structure may take the form of reporting on a question in succinct (2-3 page) essay to defining a set of terms given by Professor, or linking a specific concept to the students' own study systems.

Second part of modules (non-lecture part) will consist of paper discussions, computer lab sessions in Science Center Macintosh Lab, and possible debates or intensive question/answer.