

OEB275r: Survey of Evolutionary Biology, Spring 2008

Lead Instructor: Scott Edwards

Teaching Fellow: Chris Organ, MCZ 500A,

All classes meet at 1:30 pm (tentative); Mon MCZ 101; Wed Biolabs 1079

SYLLABUS

Week	Date	Presenter	Module topic
Course Scope and Introduction			
1	Th Jan. 31	Scott Edwards	Course Introduction
Macroevolution and Evo-Devo			
2	Mon Feb. 4	Charles Marshall	Tempo of life on earth – the big picture
	Wed Feb 6	Marshall discussion	
3	Mon Feb. 11	Farish Jenkins (2 pm)	Evolution of mammals and the Great American Interchange
	Wed Feb. 13	Jenkins discussion	
4	Mon Feb. 18 (holiday)		
	Wed Feb. 20	Arkhat Abzhanov	Evolution and development
	Fri Feb 22	Abzhanov discussion	
Phylogenies and the Comparative Method			
5	Mon Feb. 25	Scott Edwards	What is a phylogeny and how do we make one?
	Wed Feb. 27	Edwards computer lab	
6	Wed Mar. 5	Chris Organ (OEB Postdoc, Edwards lab)	Bayesian methods for comparative analysis
	Fri Mar 7	Organ computer lab	
Natural Selection, Speciation and Cooperation			
7	Mon Mar. 10	Brian Langerhans (Grad. Student, Losos Lab)	Measuring natural and sexual selection
	Wed Mar 12	Langerhans discussion/demonstration	
8	Mon Mar. 17	Martin Nowak	Evolutionary Dynamics
	Wed Mar 19	Nowak discussion/debate	
	Mar 22-30	Spring break	
	Mon Mar 31	Hopi Hoekstra	Mapping adaptive traits
9	Wed Apr 2	Hoekstra discussion	
10	Mon Apr. 7	Marcus Kronforst (CGR Fellow)	Speciation and adaptation
	Wed Apr 9	Marcus Kronforst discussion	
Ecology, Biodiversity and Experimental Evolution			
11	Mon Apr. 14	Chris Marx	Evolution in experimental

			populations
	Wed Apr 16	Marx discussion	
12	Mon Apr 21	Ann Pringle	What an evolutionist should know about ecology – Or, the imagined dichotomy between ecological and evolutionary time scales.
	Wed Apr 23	Pringle discussion	
4	Mon Apr 28	Brian Farrell	Specialization and biodiversity
	Wed Apr 30	Farrell discussion	
13	Sat May 3	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.