

Instructor: Erik Dopman erik.dopman@tufts.edu

Office Hours: Monday 9:45 - 11:45 by appointment in Barnum 209

Course Description: Examines hypotheses for patterns of biological diversity and for the apparent good fit of organisms to the environment.

Textbook: Futuyma, Evolution, 2nd edition (text or e-book); additional papers on Bio143 Blackboard site

Goals:

1. Ability to infer the patterns and processes of evolution.
2. An understanding of how evolution is the unifying theory of biology.
3. Describe and give examples of how evolution is relevant to our lives.
4. Develop skills to promote evolution literacy in our communities.

Assessment:

Class participation (5%), 3 Exams (75% tot.), 2 Problem Sets (20% tot.). Requests for regrades must be made within 1 week of exam return.

Dishonesty:

Academic dishonesty will result in a failing grade.

Disclaimer:

The instructor reserves the right to modify this syllabus.

Resources for you:

- A. Lecture Notes
 1. Reduced PDF versions available on course web page after each lecture
- B. Lecture Outline
 1. An outline of the day's lecture will be distributed at the beginning of each class
- C. Blackboard site
 1. Problem sets, handouts for class, and additional resources will be posted on the course web site <http://blackboard.tufts.edu/>
- D. Problem sets
 1. Problem sets containing practice problems and questions representative of exam material will be posted on Blackboard
- E. Evolution Companion Website
 1. Sign up to take online quizzes, flashcards, simulations exercises.
 - a) Go to the Evolution 2e companion site: www.sinauer.com/evolution
 - b) Click "Online Quizzes" in the list of resources on the left-hand side.
 - c) Click "Register."
 - d) Enter your instructor's email address and click "Submit."
 - e) Follow the instructions to create an account.

Class	Date	Day	Lecture	Unit	Title	Problem Set
1	8-Sep	W	1	Origins	200+ Years of Darwin	
2	10-Sep	F	2		Evolution: Evidence and Relevance	
3	15-Sep	W	3		The Modern Synthesis	
4	17-Sep	F	4	Mechanisms	Genetic variation	Problem Set I Distributed
5	22-Sep	W	5		Genetic drift & Gene Flow	
6	24-Sep	F	6		Natural Selection, the Genotype, & the Phenotype I	Problem Set I Due
7	29-Sep	W	7		Natural Selection, the Genotype, & the Phenotype II	
8	1-Oct	F	-		Exam	
9	6-Oct	W	8		Molecular Population Genomics	
10	8-Oct	F	9	Patterns	Phylogenetics I: Rationale & Concepts	
11	13-Oct	W	10		Phylogenetics II: Methods and Challenges	
12	15-Oct	F	11		Speciation I: Concepts and mechanisms	Problem Set II Distributed
13	20-Oct	W	12		Speciation II: Genetics	
14	22-Oct	F	13		Nature's Time Machine	Problem Set II Due
15	27-Oct	W	14		Patterns in the History of Life	
16	29-Oct	F	-		Exam	
17	3-Nov	W	15	Molecular Evolution	Genomes & Genes	
18	5-Nov	F	16		Evo-Devo	
19	10-Nov	W	17		Genetic Conflict	
20	12-Nov	F	-		Barnum Museum Lecture, 4 pm, Barnum 104: Dr. Jeffrey Feder, University of Notre Dame.	
21	17-Nov	W	18		Linking Genotype to Phenotype	
22	19-Nov	F	19		Studying Speciation	
-	24-Nov	W	-		Thanksgiving Break	
-	26-Nov	F	-		Thanksgiving Break	
23	1-Dec	W	20	Humans & Evolution	Evolution of Humans	
24	3-Dec	F	21		Creationism	
25	8-Dec	W	22		TBA	
26	10-Dec	F	-		Exam	