

# EVOLUTIONARY BIOLOGY

## Spring 2014

EEB 2245/2245W  
Tu/Th 9:30-10:45 am  
TLS 154

### Instructors:

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### Grading:

**EEB 2245:** Your grade will be based on your performance in four lecture exams. Your lowest score on the first 3 exams will be dropped, and your scores on **the two remaining exams and the final exam** will each constitute one-third of your final grade. University regulations require that students who miss the final exam without an excuse from the Dean of Students receive an F for that exam. Thus, you are required to take the final exam. **Note:** because you are allowed to drop your lowest grade, *we will not give make-up exams.*

**EEB 2245W:** Your final grade in the **lecture** portion of the course will be calculated as above. This grade will constitute 75% of your final course grade. Your grade in the **W part** of the course, as determined by your “W” instructor, will constitute the remaining 25% of your final course grade, except that ***an F in the W part of the course will result in an F for the entire course. An F in the lecture part of the course will also result in an F for the entire course.*** Refer to the 2245W handout and website ([http://hydrodictyon.eeb.uconn.edu/eebedia/index.php/EEB2245W\\_Spring\\_2014](http://hydrodictyon.eeb.uconn.edu/eebedia/index.php/EEB2245W_Spring_2014)) for further information. **Dr. Elizabeth Jockusch** (BioPharm 305B; tel: 486-4452; [elizabeth.jockusch@uconn.edu](mailto:elizabeth.jockusch@uconn.edu)) is the coordinator of the W part of the course.

### Text:

Futuyma, D. J. 2013. *Evolution*. 3<sup>rd</sup> ed. Sinauer Associates, Inc. (ISBN 978-1-60535-115-5)

### Course website:

[http://hydrodictyon.eeb.uconn.edu/eebedia/index.php/Evolutionary\\_Biology\\_Spring\\_2014](http://hydrodictyon.eeb.uconn.edu/eebedia/index.php/Evolutionary_Biology_Spring_2014)

**LECTURE SYLLABUS**  
**(Please read assigned chapters, as indicated below, prior to class)**

	<b>Date (2014)</b>	<b>Topic</b>	<b>Reading</b>
1.	T Jan 21	Introduction to the Geological Time Scale; the Fossil Record	Ch. 4 (77–81)
2.	Th Jan 23	Life in the Precambrian; evolution of the Metazoa	Ch. 5 (103–110)
3.	T Jan 28	Cambrian explosion & Life in the Paleozoic	Ch. 5 (111–119)
4.	Th Jan 30	Life in the Mesozoic	Ch. 5 (119–125)
5.	T Feb 4	Life in the Cenozoic	Ch. 5 (125–132)
6.	Th Feb 6	Evolution of primates	Ch. 4 (90–95)
7.	T Feb 11	Evolution of biodiversity & extinction	Ch. 7
8.	Th Feb 13	<b>EXAM #1</b> (covers Lectures 1–6)	
9.	T Feb 18	Characters, homology & homoplasy	Ch. 3
10.	Th Feb 20	Systematics & reconstructing evolutionary history	Ch. 2
11.	T Feb 25	Evolution and development	Ch. 21
12.	Th Feb 27	Biogeography & major patterns of distribution	Ch. 6
13.	T Mar 4	Continental drift & Historical Biogeography	Ch. 6
14.	Th Mar 6	<b>EXAM #2</b> (covers Lectures 7 & 9–13)	
15.	T Mar 11	Populations, variation, & the Hardy-Weinberg principle	Ch. 1 (7-12), 9, 13
16.	Th Mar 13	Agents of evolutionary change: mutation and gene flow (migration)	Ch. 9
	<b>T Mar 18</b>	<b>SPRING BREAK- no class</b>	
	<b>Th Mar 20</b>	<b>SPRING BREAK- no class</b>	
17.	T Mar 25	Sampling error: genetic drift and the bottleneck/founder effects	Ch. 10
18.	Th Mar 27	Charles Darwin and natural selection, part 1	Ch. 1 & 11
19.	T Apr 1	Natural selection, part 2	Ch. 11, 12, 13
20.	Th Apr 3	Adaptation and life history evolution, part 1	Ch. 13 & 14
21.	T Apr 8	Life history evolution, part 2	Ch. 14
22.	Th Apr 10	<b>EXAM #3</b> (covers Lectures 15–21)	
23.	T Apr 15	Sexual selection ( <i>guest lecture</i> )	Ch. 15
24.	Th Apr 17	Levels of selection ( <i>guest lecture</i> )	Ch. 16
25.	T Apr 22	Species and species concepts	Ch. 17 & 18
26.	Th Apr 24	Geographic variation, clines, and allopatric speciation	Ch. 17 & 18
27.	T Apr 29	Non-allopatric speciation	Ch. 18 & 22
28.	Th May 1	Evolution above the species level	Ch. 22
	May 8, 8–10am	<b>EXAM #4</b> (covers Lectures 23–28)	