

Principles of Evolution

11:216:486

Spring Semester

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Details:

Monday, Thursday – (12:35 – 01:55)

Cook-Douglass Lecture Hall 103, Cook Campus

Senior-level course (3 Credits)

Prerequisites:

General Biology and Genetics – required

Chemistry and Statistics – recommended

Optional Textbook:

Futuyma DJ. 2005. *Evolution*. Sinauer Assoc., Sunderland, Mass.

Learning Goals:

- Understanding evolution as a process, rather than just as outcome
- Using what we know proactively
- Clear written expression in appropriate language for subject matter

Exams and Grading:

3 in-class exams, each covering 1/3 of the material

Previous exam provided in advance, to convey the flavor

Crib with answers handed out with exams returned

A: 92 – 100

B+: 85 – 91

B: 78 – 84

C+: 71 – 77

C: 65 – 70

D: 50 – 64

F: < 50

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Spring Term

Date	Topic	Sakai	Futuyma
1	Introduction and Overview	S-01	-----
2	Evolutionary Paradigm	S-02	<u>Fut</u> : Chap-01
3	Systematics and Evolution	S-03	<u>Fut</u> : Chap-02
4	Evolution in Environmental Context	S-04	<u>Fut</u> : Chap-03
5		S-05	<u>Fut</u> : Chap-04
6	The Fossil Record	S-06	<u>Fut</u> : Chap-04
7	The History of Life	S-07	<u>Fut</u> : Chap-05
8	Evolutionary Biogeography	S-08	<u>Fut</u> : Chap-06
9	Biodiversity; Q & A Session	S-09	<u>Fut</u> : Chap-07
10	1st Exam (in class)	-----	Chap-01 – 06
11	Mutational Variation	S-10	<u>Fut</u> : Chap-08
12	Heritable Variation	S-11	<u>Fut</u> : Chap-09
13	Population Genetics	S-12	<u>Fut</u> : Chap-09
14	Genetic Drift	S-13	<u>Fut</u> : Chap-10
15	Single Gene Selection	S-14	<u>Fut</u> : Chap-11&12
16	Spring Break	Rev	-----
17	Spring Break	Rev	-----
18	Polygenic Selection	S-15	<u>Fut</u> : Chap-13
19	Coadaptation; Q & A Session	S-16	<u>Fut</u> : Chap-14
20	2nd Exam (in class)	-----	Chap-07 – 13
21	Life History Evolution	S-17	<u>Fut</u> : Chap-17
22	Behavioral Evolution	S-18	<u>Fut</u> : Chap-14
23	Kin Selection	S-19	<u>Fut</u> : Chap-14
24	Species as Biological Entities	S-20	<u>Fut</u> : Chap-15
25	Speciation as a Process	S-21	<u>Fut</u> : Chap-16
26	Molecular Evolution	S-22	<u>Fut</u> : Chap-19
27	Human Evolution in the Tropics	S-23	Slide Show
28	Human Evolution; Q & A Session	S-24	scattered
29	Evolution & Creationism	S-25	<u>Fut</u> : Chap-22
33	3rd Exam (in class)	---	Fut: Chap-14-22