

**SYLLABUS - Biology 112 – Evolution, Form and Function of Organisms
Fall 2014**

10:50-12:15 Tuesday / Thursday. SSM 129

Instructor: Dr. Erik Sotka

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Office hours: 10:15-10:45 AM Tuesday and Thursday in SSM 148

Communication: The best way to get a hold of me is through my email.

Course objectives: This is a foundation course for science majors and provides an introduction to evolution and a study of the major groups of organisms with an emphasis on their structure, form, and function (Note: Bio 112L is a corequisite of Bio 112.)

My expectations: My goal is to facilitate your discovery of the fantastic world of biology, teach some basic principles that will help with future biological courses, and prepare you for the power and peril of emerging biological technologies. It's essential that you maintain an active presence in the class. You will have opportunities to "meet" and interact with your classmates online. All conversation should be positive and supportive.

Required materials: *Biological Science* 5th edition by Scott Freeman (Hardcover or eText versions).

Course organization: The course material has five (5) midterm exams, each of which take 35-40 minutes. Exams are multiple choice and short answer. These exams are tough, because the material is detailed and dense and I tend to ask questions that force you to apply knowledge you have gained. I STRONGLY urge that you 1) read the text before class, 2) take copious, detailed lecture notes and 3) re-write your notes 1-2 days later. **By the Honor Code, you agree to not use notes, books or online resources during the test.** At the end of the course, there will also be a final exam that is cumulative.

Point Distribution:

Midterm exam (100 pts X 4) 400 (note: I throw out the worst of the 5 midterms)

Final exam 100

Total 500

Tentative Grading Scale:

93-100 A	80-82 B-	67-69 D+
90-92 A-	77-79 C+	63-66 D
87-89 B+	73-76 C	60-62 D-
83-86 B	70-72 C-	<60 F

All student discipline will be governed by the contents of the Honor Code¹.

Supplemental Instruction: To be announced.

¹ <http://studentaffairs.cofc.edu/honor-system/studenthandbook/>

Extra Credit

We will offer potential extra credit options all of *minor* point value. A maximum of 21 points may be awarded. NOTE: These extra credits are a token to encourage general campus/civic involvement. *Your time is better spent studying for an exam than doing extra credit!!*

We will announce in lecture the seminars with content appropriately associated with Biology – but times generally include:

Option 1) Biology Department Seminars: Dates and times will be announced in class

Option 2) Ft. Johnson Marine Seminars: Friday 4-5 pm seminars at Ft. Johnson MMRI Auditorium (next to CofC Grice Marine Lab) <http://gricemarinelab.cofc.edu/research/marine-science-seminar/index.php>

Directions to the CofC Marine lab <http://gricemarinelab.cofc.edu/about-the-laboratory/directions/index.php>

Option 3) Study skills seminars. <http://csl.cofc.edu/study-strategies/workshops/index.php>

To receive credit for options 1-3 you must hand in a typed one page summary of the seminar that you participated in which also includes a description of what you learned from this seminar in the dropbox folder in Oaks. We encourage you to be involved in these seminars to get jazzed up by the enthusiasm of other professional biologists, even after you have exhausted your extra credit options. Three points of extra credit for each seminar write up.

Option 4) Fill a gallon size Ziplock (or other brand or equivalent volume in a recycled bag) full of trash from below the high tide line at Folly Beach – and a typed paragraph on the human impact of this trash on the Folly Beach biological environment. Three points of extra credit.

Schedule. Suggested chapter readings for particular lectures are in brackets (e.g, [15] = Chp. 15). This is subject to change at any point.

Date	Topic
12-Jan	Evolution by natural selection [25]
17-Jan	Evolution by natural selection [25]
19-Jan	Evolution of populations [26]
24-Jan	Evolution of populations [26]
26-Jan	Speciation [27]
31-Jan	Speciation [27]; Exam 1
2-Feb	Plant form and function [37]
7-Feb	Plant form and function [37]
9-Feb	Plant transport [38]
14-Feb	Plant nutrition [39]; Exam 2
16-Feb	Plant "behavior" [40]
21-Feb	Plant reproduction [41]
23-Feb	Plant development [24]
28-Feb	Plant development [24]
2-Mar	Exam 3
7-Mar	SPRING BREAK
9-Mar	SPRING BREAK
14-Mar	Animal form and function [42]
16-Mar	Nervous systems [46]
21-Mar	Sensory systems [47]
23-Mar	Animal movement [48]
28-Mar	Endocrine systems [49]; Exam 4
30-Mar	Animal nutrition [44]
4-Apr	Osmoregulation [43]
6-Apr	Circulation and gas exchange [45]
11-Apr	Immune system [51]; Exam 5
13-Apr	Animal reproduction [50]
18-Apr	Animal reproduction [50]
20-Apr	Animal development [23]
25-Apr	catch up
2-May	Final Comprehensive Exam (8-11am)