

## **Syllabus Fall 2010 pcb 4044**

### **Contact:**

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Class Home

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### **Marine Ecology Class in Spring: Overview**

### **Philosophy of my courses:**

“Study Nature, Not Books.”

Learn Science first, Facts second.

### **My lecture style:**

- Use chalk on the board - Less material more in depth mixed with ppt
- Organize lectures around questions and concepts.
- Ecology in action segments

### **Take Home Assignments: Reading Summaries**

There will be 3 take home assignments that will consist of 1-page summaries of assigned journal articles.

-Read the papers through, but think about take home lessons and whether or not those were supported by the data. We are not going to be critical of the methods.

What is/are the major point(s)?

What is/are the hypothesis/es?

How was/were the hypothesis/es tested?

What are the results?

What are the implications of the results?

### **Tests:**

- 75 minutes (both periods if need be)
- based primarily on lectures
- 10 multiple choice, fill in the blank, matching; 3 short answer; 1

essay

- Focus on different levels of learning:

Tests designed to challenge you with A, B and C level questions.

*Facts:* Regurgitation

*Synthesis:* Known Facts to explain Known concepts

*Critical Thinking:* Known facts combined with new facts to make new ideas

**Missed assignments and tests:**

Without a Doctors note, a zero. Its fair to everyone.

**Grading:**

15% Test 3

15% Test 4

10% Take Home Assignments

**Course Objectives:**

1. Learn important facts about Ecology.
2. Ensure students have a basic understanding of what Ecology, Evolution and Science are.
3. Ensure that students can find, understand, and critique primary literature in Ecology.
4. Convey to students the importance of Creativity, Motivation, Patience, Persistence, and Observation in Science and Ecology.
5. Empower students to *do* science and think independently in any field.
6. Teach students to be synthesizers and critical thinkers.
7. Teach students to convey effectively their scientific thoughts and analyses in writing and in oral presentations.

## 2010 LECTURE SCHEDULE

Date		TOPIC
8/24	T	Overview & Intro & Evolution
8/26	Th	Structure of Ecology & What does an ecologist do?
8/31	T	Physical Environment. Energy & Climate
9/2	Th	Biomes
9/7	T	Elements and Global Cycles
9/9	Th	Climate Change
9/14	T	Impact of Transportation & Review
9/16	Th	<b>Exam 1</b>
9/21	T	Ecosystem Nutrient Cycles
9/23	Th	Ecosystem Services
9/28	T	Primary Productivity & Energy Flow
9/30	Th	Physiological Ecology 1
10/5	T	Physiological Ecology 2
10/7	Th	<b>Exam 2</b>
10/12	T	Intro; Sex and Sociality
10/14	Th	Sex and Sociality, Population Ecology
10/19	T	Population Ecology
10/21	Th	Competition
10/26	T	Competition
10/28	Th	Predation
11/2	T	<b>Exam 3</b>
11/4	Th	Predator-Prey and Co-Evolution
11/9	T	Positive Interactions
11/11	Th	<b>Veteran's Day Holiday</b>
11/16	T	Food webs
11/18	Th	Disturbance Ecology
11/23	T	Island Biogeography
11/25	Th	<b>Thanksgiving Holiday</b>
11/30	T	Community Structure and Dynamics
12/2	Th	Biodiversity and Conservation Ecology

12/7 T

**Exam 4; Last Class Day**