BIO 362 :: Marine Biology
UNCW Fall 2015
LECTURE SYLLABUS

Course time and location

11:00 am –12:15 pm Tuesdays and Thursdays in Dobo Hall 103

Course website: http://people.uncw.edu/whitejw/courses/Bio362/F2015.html

Instructor contact information

Dr. J. Wilson White
Office: Friday Hall 1051
Office phone: 910-962-3058
E-mail: whitejw@uncw.edu

E-mail is the best way to reach me; please include "Bio 362" in the subject line to get my attention. I will usually respond quickly, but please allow 24 hours for a response before you send a follow-up.

Office hours by appointment. I am nearly always available, just email me to set up a meeting.

Course goals and philosophy

Prerequisites and Co-requisites: BIO 201, BIO 202, BIO 366

Course Catalog Description: The coastal and oceanic biota and their relationship to the marine environment.

Course Description: This course is intended for Biology and Marine Biology majors and builds on the foundations laid in introductory biology and ecology courses. We will take an ecological approach to examining the marine ecosystem. This means we will investigate the relationship of organisms to their environment and to each other. We'll start by examining the properties that make the marine environment different from terrestrial habitats, i.e., it is immersed in saltwater. We will also discuss the characteristics of flowing water, tides, waves, and other currents.

Our discussion will then move on to specific marine habitats and their resident flora and fauna. We will discuss the geological, chemical, physical and biological characteristics of each habitat. Emphasis will be placed on the adaptations of organisms for a given habitat, and the ecological role played by certain groups. Along the way, we will examine the cycling of nutrients and energy within each habitat. It is not enough to be able to identify which organism belongs in which habitat, rather we are striving to understand the function of organisms in their environment.

We will end the course with a discussion of human effects on the marine environment. We'll draw from the scientific literature and the popular press to build an understanding of the challenges faced by the marine environment and the consequences of these challenges.

Course Goals: By the end of this course, students will be able to

1) Communicate an understanding of the unique physical and biological properties and dynamics of marine ecosystems
2) Identify the key components of marine communities and biogeochemical cycles.
3) Compare the characteristics (biological, physical, chemical, geological) of various marine habitats.
4) Explain the role of important organisms or groups of organisms within a marine community.
5) Assess the relationship among components of marine communities and biogeochemical cycles.
6) Predict the outcome of perturbations to marine communities and biogeochemical cycles.

Course expectations:

You are responsible for reading and preparing for class in advance, for attending class regularly, and for conscientiously studying for examinations. Students who fail to meet those expectations are not likely to succeed in the course.

Attendance and participation in lab is mandatory, and the lab grade comprises 33% of the total course grade.

Readings

The primary textbook for lecture readings is:
Levinton, J.S. (2013) *Marine biology: function, biodiversity, ecology*. 4th Ed. New York, Oxford UP.

Older editions of Levinton's book should be adequate, although the reading assignments may not match exactly.

Evaluation

1. Exams. There will be two exams during the semester plus a final exam. The final exam will be cumulative and will also cover material covered since the second exam.

2. Short assignments. You will complete written assigments during class and as homework periodically throughout the semester.

3. Laboratory. The total lab grade comprises 33% of the total course grade. See lab syllabus for details.

Attendance Policy: You are expected to arrive on time for, and participate in, all class meetings. Attendance will occasionally be taken for record-keeping purposes, but is not formally graded. However, absent students may miss in-class assignments, which may not be announced ahead of time. *There are no make-up in-class assignments*.

If you have a planned absence on official university business (and tell me ahead of time) or a documented medical emergency that prevents attendance on the day of an exam, I will arrange to subsitute the exam grade. There are no other acceptable reasons for a substitution. The substitution will consist of double-counting the final exam grade in place of the missed exam.

Grading Policy

The final course score will be calculated as follows. Individual assignment grades may be curved but there is no curve on the final course grade.

Assignment	Proportion of total score
Exam I	0.15
Exam II	0.20
Final Exam	0.25
Short assignments	0.07
Final lab grade	0.33

The final course letter grade will be assigned based on the following scale (final scores are rounded up to the nearest integer percentage):

Total course score (%)	Grade
≥ 93	A
90–92	A-
88–89	B+
83–87	B
80–82	B-
78–79	C+
73–77	C
70–72	C-
68–69	D+
63–67	D
60–62	D-
< 60	F

Class Meeting Calendar

This is only a rough guide, and is subject to change. The definitive course schedule, including updates and other information, is maintained on the course website. All readings listed are from Levinton; they may be supplemented by additional readings from time to time.

Mtg #	Date	Topic	Reading
I. Water properties & intertidal habitats			
1	Aug 20	Introduction, Properties of Seawater	1, 2, 5, 3*
2	Aug 25	Basic Oceanography	2, 5
3	Aug 27	Currents, Tides, Waves	5, 6
4	Sept 1	Intertidal Communities	11, 12, 14
5	Sept 3	Rocky Shores	13, 14
6	Sept 8	Soft sediment intertidal & subtidal	14, 16
7	Sept 10	Estuaries – physical processes	14
8	Sept 15	Estuaries – biological processes	14
9	Sept 17	Salt marshes	14
10	Sept 22	Mangroves	15
11	Sept 24	**Exam I**	
II. Open ocean & shallow subtital habitats			
12	Sept 29	Life in the plankton	7
13	Oct 1	Phytoplankton and Primary Productivity	9, 10
14	Oct 6	Zooplankton	4
15	Oct 8	Nekton	8
	Oct 13	***Fall Break***	
16	Oct 15	Microbial Food Web	9
17	Oct 20	Coral Reefs 1	15
18	Oct 22	Coral Reefs 2	15
19	Oct 27	Kelp/seagrass	16
20	Oct 29	**Exam II**	
III. Deep sea habitats, climate science, and conservation			
21	Nov 3	Climate variability	10, 19
22	Nov 5	Climate change	10, 19
23	Nov 10	Deep sea	16
24	Nov 12	Deep sea chemosynthetic communities	16
25	Nov 17	Marine Fisheries	18
26	Nov 19	Marine conservation & marine reserves	17
27	Nov 24	Polar seas	16
	Nov 26	***Thanksgiving***	no class
28	Dec 1	Review/Catch-up	
29	**Dec 8**	**Final Exam 11:30 AM – 2:30 PM**	

* Chapter 3 is an overview of ecological concepts. If you are taking Bio 366 concurrently (or it has been a while since you took it) I recommend reviewing this chapter.

Course Policies

Personal electronics
Personal electronics (phones, tablets, laptops) may be used for course-related activities. All devices should be silent. If device usage becomes a distraction, the instructor may ask a student to leave the classroom or may ban device usage altogether. In general, be respectful of classmates when using devices.

Food, etc.
No food is permitted in the classroom. Drinks in lidded containers are acceptable. Smoking, including e-cigarettes, is not permitted in class.

University Policies

Disabilities
I am happy to make accomodations to students with disabilities. Students with diagnosed disabilities should contact the Office of Disability Services (962-7555). Please give me a copy of the letter you receive from Office of Disability Services detailing class accommodations you may need. If you require accommodation for test-taking please make sure I have the referral letter no less than three days before the test.

Violence and harrassment
UNCW practices a zero tolerance policy for any kind of violent or harassing behavior. If you are experiencing an emergency of this type contact the police at 911 or UNCW CARE at 962-2273. Resources for individuals concerned with a violent or harassing situation can be located at http://www.uncw.edu/wsrc/crisis.html.

Academic Honor Code
The Department of Biology and Marine Biology and I strongly support the Academic Honor Code as stated in the Student Handbook and Code of Student Life. We will not tolerate academic dishonesty of any type. This includes plagiarism, as outlined in the Student Handbook.

I encourage you to study together and work on homework assignments in groups outside of class. However, by submitting a homework assignment with your name on it, you are certifying that you contributed to the group effort. If you do work in a group I ask that you acknowledge your collaborators.