
BIO 362: Marine Biology
Fall 2017: LECTURE SYLLABUS

Course Information

Course: BIO 362: Marine Biology

Lecture: Tuesdays & Thursdays, 8:00 – 9:15

Lab: Monday, Tuesday, Wednesday, Thursday, 1:00 – 4:50 (see Lab Syllabus)

Place: Dobo 103

Prerequisites & Corequisites: BIO 201, BIO 202, BIO 366

Instructor

Asst/Prof. Kara E Yopak

Office: CMS 2332

Email: yopak@uncw.edu

Office Hours: by email appointment

E-mail is the best way to reach me; I will usually respond quickly, but please allow 24 hours for a response before you send a follow-up.

Course Website

We will primarily use BlackBoard and/or email to share class documents for class and labs. It is imperative that you check your UNCW email regularly for updates.

Text

The primary textbook for lecture readings is: Levinton, J.S. (2017) *Marine biology: function, biodiversity, ecology*. 5th Ed. New York, Oxford University Press.

You will need to purchase this textbook. We will be using it extensively throughout the course. Older editions of Levinton's book should be adequate, although the reading assignments may not match exactly.

Audience Response Card (aka Clicker):

For this course, we will be using the TurningPoint Student Response System ("Clickers") for which you will need to purchase a license, available through your Turning Account portal, or at the bookstore as a scratch off card. *This tool will be an essential component of our class meetings as we will use them for polling and daily quizzes that are part of your course participation grade.* We will begin using the Audience Response System (ARS) at our first class on August 17th, but grades will **not** start to be recorded until Thursday, August 24 to give you time to work out any issues.

To participate, you can purchase a clicker or use a personal electronic device (ie, a smartphone or laptop computer) and a license for your chosen device, which are available in 1, 2, 3 or 4-year increments and automatically include access to ResponseWare on mobile phones. Students who already own clickers will still need to purchase a license if yours is no longer current. You will then need to fully register your device. It is highly recommended that you purchase your license and register your device **before the first class**.

To see the steps on how to register, visit this link:

Course Overview

BIO362 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.

Learning Outcomes & Course Goals

At the end of this course, you will be able to:

- Communicate an understanding of the unique physical and biological properties and dynamics of marine ecosystems
- Identify the key components of marine communities and the relationships among them
- Compare the characteristics (biological, physical, chemical, geological) of various marine habitats
- Explain the role of important organisms or groups of organisms within a marine community
- 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

Unit Structure

This unit will be based around course lectures and assigned reading, as well as lab exercises that encourage you to integrate core concepts. All readings listed are from Levinton; they may be supplemented by additional readings from time to time. It is highly recommended that you use the Chapter(s) corresponding to each lecture to supplement themes discussed in class (see unit structure below). Notes will be posted on the day prior to each lecture, which you can print and bring to class to assist in your own note taking.

This schedule is tentative and subject to change, depending on University closures, the progress of the class, and the discretion of the instructor. You will be informed of any changes in class and via Blackboard.

Date	Chapter(s)	Lecture Topic
I. Water Properties & Intertidal Habitats		
Th 8/17	1, 2, 4*, 5	Introduction & Properties of Seawater
T 8/22	2	Basic Oceanography I
Th 8/24	2, 6	Basic Oceanography II: Currents, Tides & Waves
T 8/29	14, 15, 16	Intertidal Communities
Th 8/31	7, 16	Rocky Shores
T 9/5	14, 15, 16	Soft Sediment Intertidal & Subtidal
Th 9/7	16	Estuaries I: Physical processes
T 9/12	16	Estuaries II: Biological processes
Th 9/14	16	Salt Marshes & Mangroves
T 9/19	--	NO CLASS – Study Day
Th 9/21	Topic I	EXAM I
II. Open Ocean & Shallow Subtidal Habitats		
T 9/26	8, 10	Life in the Plankton
Th 9/28	11, 12	GUEST LECTURE: Phytoplankton & Primary Productivity
T 10/3	9	Nekton I
Th 10/5	--	Fall Break – NO CLASS
T 10/10	9	Nekton II
Th 10/12	9	Sensory Biology in the Ocean Realm
T 10/17	12, 13	Microbial Food Web
Th 10/19	17	Coral Reefs I
T 10/24	17	Coral Reefs II
Th 10/26	13, 17	Kelp/Seagrass
T 10/31	Topic II	EXAM II
III. Deep Sea Habitats, Climate Science, & Conservation		
Th 11/2	3, 12, 22	Climate Variability
T 11/7	3, 12, 22	Climate Change
Th 11/9	18	Deep Sea I
T 11/14	18	Deep Sea II
Th 11/16	21	Marine Fisheries
T 11/21	20	Marine Conservation & Marine Reserves
Th 11/23	--	Thanksgiving Break – NO CLASS
T 11/28	19	Polar Seas
Th 11/30		Review/Catchup
T 12/5	--	NO CLASS – READING WEEK
F 12/8	Comprehensive	FINAL EXAM (8:00-11:00)

* Chapter 4 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.

Assessments

Students will be evaluated via exams, class assignments, participation, and lab exercises in order to show their understanding of topics and ability to integrate information. The unit is assessed as follows:

Activity	Description	Percentage of Final Grade
Exams	Exams I & II	15% each
	Cumulative final	20%
Participation	TurningPoint audience response system ("clickers") & in-class assignments	15%
Labs	Final Lab Grade (see Lab Syllabus)	35 %

Exams: There will be two midterm exams during the semester, plus a comprehensive final exam. The final exam will be cumulative and will also cover material covered since the second exam. Exams will be based on the theory covered in lectures *and* the core reading material set for each lecture. They will include a combination of multiple choice, fill-in-the-blank, and short answer style questions. Final letter grade will be determined by a percentage of total points. Letter grades will not be given for individual exams – only percentage grades will be provided.

Class Participation: As this will be a highly interactive class, participation is a significant part of your evaluation. I will assess your participation through periodic in-class quizzes and assignments, many of which will be accomplished with the TurningPoint audience response system (ARS). *If you forget your clicker, you will receive a zero for the ARS in-class participation that day.*

Laboratory: The final lab grade comprises 35% of the total course grade. See Lab Syllabus for details.

The lab portion of this course is **absolutely interconnected** with the lecture material. Therefore, all students are expected to attend ALL labs. You will be part of a lab team and your absence will require the other members of your team to perform extra work. **For every unexcused absence in lab, your final lab grade will be reduced by 5%.** Lab work will vary between labs and will include microscope work, written reports, and dissection. Each student will turn in all lab work at the date given in the syllabus. All work that is not turned in will be considered late and cannot be made up at a later date.

Final Letter Grade:

The final grade is based upon the percentage scores below. The percentages required for each grade may be changed at the discretion of the instructor.

Letter Grade	Percentages
A	94-100%
A-	90-93%
B+	87-89%
B	84-86%
B-	80-83%
C+	77-79%
C	74-76%
C-	70-73%
D+	67-69%
D	64-66%

D-	60-63%
F	< 60%

Resources

Additional materials and study materials are available through the textbook website at: <http://global.oup.com/us/companion.websites/9780199857128/student/>

These include:

- Marine Biology Explorations. Explore the ocean's biodiversity through interactive exercises that will take you through 9 different marine habits; including over 450 photos with annotations!
- Extensive Web links to marine biology topics and research literature. You will also find information on careers in marine biology and worldwide marine laboratories.
- Key Concepts. Full-sentence summary statements help students identify central points of discussion and to see the basic progression of materials.
- Basic Facts listed for each phylum handily group the organisms' taxonomy, structure, and function, for ease of reference.
- A full Glossary of terms from the text serves as a review aid.
- Text References to scientific literature that direct instructors and students to the author's source material.

Note there are links to each of these resources on Blackboard under "Course Resources"

The University Learning Center:

We encourage all students to take advantage of the resources offered through the University Learning Centre, located at:

DePaolo Hall 1056 & 1003, first floor
910.962.7857
www.uncw.edu/ulc

The University Learning Center's (ULC) mission is to help students become successful, independent learners. Tutoring at the ULC is NOT remediation: the ULC offers a different type of learning opportunity for those students who want to increase the quality of their education. ULC services are free to all UNCW students and include the following:

- Learning Services (University Studies): <http://www.uncw.edu/ulc/learning/index.html>
- Math Services: <http://www.uncw.edu/ulc/math/index.html>
- Study Sessions: <http://www.uncw.edu/ulc/includes/StudySessions.html>
- Supplemental Instruction: <http://www.uncw.edu/ulc/si/index.html>
- Writing Services: <http://www.uncw.edu/ulc/writing/index.html>

Course Policies

Classroom Environment

I encourage participation and open discussion during class to facilitate learning. This can only occur in environment that encourages and promotes inclusiveness, mutual respect, acceptance, and open-mindedness among students and instructors. The values endorsed in the [Seahawk Respect Compact](#) will be upheld in the classroom, and any students deviating from this code will be required to leave.

Attendance

You are expected to arrive on time for, and participate in, all class meetings. Regular attendance will keep you up to date on class announcements, introduce you to the material, allow you to gauge the relative importance of material covered both in class and in the text, provide you with opportunities to actively engage in learning, and lay the foundation upon which you will prepare for exams. Attendance will occasionally be taken for record-keeping purposes, but is not formally graded. However, absent students will miss in-class assignments, which may not be announced ahead of time. *There are no make-up in-class assignments or participation via the TurningPoint audience response system (ARS).*

BlackBoard + Email

It is critical to *actively check* your UNCW e-mail account as part of this course. Students are also expected to log into the unit's BlackBoard site regularly. BlackBoard is used to post important information such as announcements, lecture notes, video links, and Assignments. It is your responsibility to let me know immediately if you are having trouble receiving class e-mails or accessing BlackBoard information. Although notes will be posted for each lecture, the lectures themselves will **not** be made available online.

Exams

My expectation is that you will be present for all of the exams. Make-up exams will **not** be given without an acceptable and documentable excuse, such as a medical or family emergency. 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, communicate with me to arrange for a make-up. Other reasons, including being out of town, oversleeping, or forgetfulness, are not considered acceptable excuses.

Following an exam, to contest an answer scored as incorrect, you **must** submit a written argument to the instructor by the **next** scheduled class after receiving your grade. Your response should include why you believe the instructor's answer to the question is wrong and why your answer is correct. Documentation is essential for successful argumentation.

Copyright

Any dissemination of lecture slides, recordings, handouts, or any other derivative work without permission of the instructor is prohibited by UNCW policy. UNCW Copyright Use and Ownership Policy (<http://www.uncw.edu/policies/documents/01210.copyrightpolicy.pdf>) specifies that class notes are considered derivative of original intellectual property of the course instructor. As such, the course instructor (not the student) retains copyright ownership and must provide specific permission to distribute and/or reuse their intellectual property for anything other than personal scholarship by the student. Commercial use, display, or dissemination of such notes or recordings, will generally constitute an infringement of the content creator's copyright. Materials that qualify as student-owned are listed in the policy.

Cell Phones and Other Electronic Devices

Please turn off cell phones and other electronic devices during lectures. Cell phones and other electronic devices (including Smart Watches) **MUST** be completely powered down and stowed during exams.

Disabilities

If you are a person with a disability and anticipate needing accommodations of any type for this course, you must first notify Disability Services (DePaolo Hall, <http://uncw.edu/disability/about/index.html>), provide the necessary documentation of the disability,

and arrange for the appropriate authorized accommodations. Once these accommodations are approved, please identify yourself to me as soon as possible so that we can implement these accommodations.

Academic Dishonesty

Academic dishonesty will not be tolerated. As a student at UNCW you are bound by the [Student Academic Honor Code](#). Violations of the Student Code of Conduct are subject to university discipline. Action can include assignment of a grade of "0" on the appropriate assignment, assignment of an "F" grade in the course, or referral to the College of Arts and Sciences for more severe action. This includes use of any electronic device during an exam unless it has been preapproved. The Department of Biology and Marine Biology strongly supports the honor code and any actions that run counter to this code will not be tolerated in this course.

Violence and Harassment:

UNCW practices a zero-tolerance policy for violence and harassment of any kind. For emergencies contact UNCW CARE at 962-2273, Campus Police at 962-3184, or Wilmington Police at 911. For University or community resources visit <http://uncw.edu/wrc/crisis.htm>.