

# MARINE BIOLOGY

Summer A | May 14 – June 21 | 2018

## 1. Course Information

**Course Number:** ZOO 4403C

**Credit hours:** 4

**Location:** 611 Carr

**Lecture:** T & Th, periods 2-3 (9:30 am – 12:15 pm)

**Field trips:** May 19-23, June 1, 8, 15

**Instructor:** Lianne Jacobson

**Teaching assistant:** Philip Shirk

**Office:** 616 Bartram Hall

**Office hours:** By appointment

**Pre-requisites:** BSC 2011 and 2011L, or equivalent, with minimum grades of C. You must be able to swim and be very comfortable in the water.

**Course fees:** \$174.44. These fees are automatically charged to your UF account, and cover the costs for gas, disposable lab items, and maintenance of University vehicles used for the field trips.

**Lab fees:** \$~400.00. These fees are also automatically charged to your UF account. These fees cover lodging, lab fees, and food for the trip to the Whitney Lab, travel costs, boat fees, and other course supplies. Food is not included for the day trips.

**Course website and email communication:** If you do not have access to Canvas by the first day of class, please notify me immediately. I will post all course documents and announcements on Canvas, and I will use Canvas for all e-mail communication related to the course. If you have a course-related concern, please send me an e-mail through Canvas. You are responsible for all announcements made in class and/or posted on the course website.

## 2. Required materials

**Textbook:** *Marine Biology - function, biodiversity, ecology* (4th edition) by Jeffrey S. Levinton, available at bookstore or can rent via amazon (ISBN 978-0199857128)

**Lab materials:** If a student has access to a laptop, they should bring it to all labs highlighted in red on the schedule. If a student does not have access, please notify the instructor as soon as possible.

**Field materials:** On the day trips, most of the time in the field will be spent snorkeling. Students will need access to a snorkel, mask, and fins. Students will need to arrange all other "personal" gear (e.g., clothing, bug spray, sunblock, headlamp, sleeping bag, pillow, backpack, towel, etc.)

## 3. Content

**Description:** Marine biology is the study of functional biology, ecology, and biodiversity of life in the sea.

**Objectives:** You will learn how physical conditions govern life in the sea, how ecological processes influence species distributions, and how humans have disturbed marine ecosystems. You will develop a Research Proposal that will reinforce the lecture material. You will be trained to collect and analyze ecological data, as well as identify a wide range of marine organisms and gain familiarity with many of Florida's marine habitats.

### Learning outcomes:

- 1) Recognize the diversity, physiological mechanisms, and ecological processes of marine organisms and systems
  - Formative assessment: Questions during lecture and field trips
  - Summative assessment: Pre-labs, exam
- 2) Synthesize knowledge of physical and chemical processes of the ocean and the biology of organisms, to ask questions about natural history and ecology
  - Formative assessment: Questions during lecture, discussions of hypotheses and project ideas
  - Summative assessment: Data summaries, research proposal, and exam

- 3) Form hypotheses after observing marine habitats, and justify the type of experiment that would be used to test those hypotheses
  - Formative assessment: Hypothesis exercise, discussion of hypotheses
  - Summative assessment: 5 hypotheses exercise, project plan, project plan, research proposal
- 4) Effectively communicate in written and oral form, demonstrating the ability to effectively search the literature and the ability to use effective presentation skills
  - Formative assessment: Peer review
  - Summative assessment: Presentation, research proposal
- 5) Manage and analyze data collected in the field and from online databases
  - Formative assessment: Discussion during data analysis
  - Summative assessment: Data submissions, lab reports

\*Modified from the Learning Outcomes set for Marine Biology majors at Scripps Institute for Oceanography

**Tentative schedule:** Check canvas for updated version of this schedule.

		Activity	Ch	Assignments	Points
May	15 T	<b>Lecture:</b> Sounding the deep and the oceanic environment & <b>Discuss:</b> hypothesis exercise	1,2		
	17 Th	<b>Lecture:</b> The chemical and physical environment Part I & <b>Discuss:</b> Physiology experiment	4	Pre-lab report	5
	18 F	No Class			
	19 Sa	<b>St. Augustine:</b> Unpack collect organisms, observe, set up experiment			
	20 Su	<b>St. Augustine:</b> Monitor experiment, trial measurements, discuss hypotheses			
	21 M	<b>St. Augustine:</b> Lecture (The chemical and physical environment Part II), more measurements, explore	4		
	22 T	<b>St. Augustine:</b> Lecture (Ecological and evolutionary principles Part I), more measurements, discuss hypotheses	3	5 hypotheses exercise	5
	23 W	<b>St. Augustine:</b> More measurements, take down, clean up, head home		Submit proofed data	10
	24 Th	No Class			
	25 F	No Class			
June	29 T	<b>Discuss:</b> project ideas & <b>Lab:</b> Analyze data from physiology experiment		Lab report	60
	31 Th	<b>Lecture:</b> Ecological and evolutionary principles Part II & <b>Discuss:</b> Diversity survey	3	Pre-lab report	5
	1 F	<b>Homosassa Bay:</b> Diversity Survey		Submit proofed data	10
	5 T	<b>Lecture:</b> Reproduction, dispersal, and migration Part I & <b>Lab:</b> Analyze diversity data	6	Lab report	30
	7 Th	<b>Lecture:</b> How to give a presentation & <b>Discuss:</b> Seagrass ecology lab		Pre-lab report	5
	8 F	<b>Seahorse Key:</b> Seagrass ecology lab		5 hypotheses exercise	5
	12 T	<b>Lecture:</b> Reproduction, dispersal, and migration Part II & <b>Discuss:</b> proposal plan	6	Proposal plan	5
	14 Th	<b>Presentions</b>		Presentation & Peer evaluation	30
	15 F	<b>Seahorse Key:</b> Seagrass ecology lab		Submit proofed data	10
	19 T	<b>Lab:</b> Analyze seagrass ecology data		Lab report	60
21 Th	<b>Exam</b>		Exam	150	
22 F	No Class		Research proposal	60	

\*Activities highlighted in RED require a laptop, let us know if you do not have one available to bring to class

## 4. Expectations

**Responsibilities:** To ensure that all students have the potential to succeed, it is my responsibility to be timely, organized, transparent, and communicative. As a student, it is your responsibility to complete all assignments on time, actively participate, and to voice questions and concerns- while remaining receptive to the answers.

**Time commitment:** The University policy is that each credit hour is associated with 45-hour commitment (= 180 hours total), including time spent studying and reading. This class is only 6 weeks, so please prepare for the accelerated pace (~30 hours per week). An approximate breakdown of this time is 40% field/lab, 30% lecture, and 30% studying.

**Attendance:** Attendance is required for all class meetings, including lectures, labs, and field trips. You are responsible for all course materials. This class is at an accelerated pace and there are many field trips. Thus, a lot of the course material cannot be completed at an alternate time. It is very important that you arrive on time for all activities. If you are late for a field trip, we might not be able to wait for you.

If you are aware of a planned conflict, it is your responsibility to make me aware of any planned conflicts BEFORE the absence - this does not guarantee that you will be able to complete the material at an alternate time. If there is an unforeseen conflict, it is in your best interest to speak to me as soon as possible. If the conflict DOES NOT satisfy *acceptable reasons* for an excused absence, you will receive a zero for all missed activities. Please find the UF policy for excused absences here: (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>). To justify an excused absence, it is your responsibility to provide all relevant documentation.

**Conduct in class:** This is a small class, and there will be many assignments that require you to work with your peers. Please be respectful to your peers, instructor, and TA.

Regarding electronic devices, you are welcome to take notes on a laptop. Please do not use your devices that can be disruptive during class; this could include: phones, video recorders, digital cameras and MP3 players. If you repeatedly disrupt class, you will be asked to leave, and will not have the opportunity to complete missed work.

**Academic honesty and honor code:** All students must review and abide by the University Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>).

**Accommodations for students with disabilities:** We would like to accommodate all students with disabilities. To do so, the student must first request an Accommodation Letter from the UF Disability Resource Center (<https://www.dso.ufl.edu/drc>). Once we receive the Accommodation Letter, we will be able to discuss arrangements with you, the student.

**UF counseling, self-help, and career services:** Life can be very difficult, and these situations are often complicated by coursework. If you are experiencing a personal problem or struggling with your coursework, please make use of the available resources: counseling ([www.counseling.ufl.edu/cwc/](http://www.counseling.ufl.edu/cwc/), 352-392-1575), emergency counseling ([www.counseling.ufl.edu/cwc/Emergency-Services](http://www.counseling.ufl.edu/cwc/Emergency-Services), or call 911), self-help (: [www.counseling.ufl.edu/cwc/SelfHelp-Resources.aspx](http://www.counseling.ufl.edu/cwc/SelfHelp-Resources.aspx)), career guidance ([www.crc.ufl.edu/](http://www.crc.ufl.edu/), Reitz Union, 352-392-1601).

**Software use:** All faculty, staff, and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate

## 5. Grading

### Approximate breakdown of points:

Exam	150	(30% of semester grade)
Lab reports	150	(30% of semester grade)
Research proposal	105	(21% of semester grade)
Participation	50	(10% of semester grade)
Pre-labs and data entry	45	( 9% of semester grade)
Total	500	

Your final score will not be rounded (for example, an 89.9% will not be rounded up to a 90%). The grade scale is (all numbers are percentages):

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
≥94	≥90	≥87	≥84	≥80	≥77	≥74	≥70	≥67	≥64	≥61	<61

If Marine Biology is one of your critical-tracking courses, keep in mind that a "C-" does not qualify. For more information, please see:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

**Late assignments:** All assignments must be completed on time. Every day that an assignment is turned in late, you lose 10% of the total points possible for that assignment. If you have a planned conflict, you must make arrangements BEFORE the absence,

**RE-Grading:** If you believe that one of your assignments or exams was incorrectly graded, you may submit a written request for a re-grade. If we re-grade your assignment or exam, the entire document will be reviewed. You must submit an official request within a week of receiving the graded assignment or exam. Your request must include two items, 1) written statement explaining why you think the assignment or exam was incorrectly graded and 2) the original assignment or exam.

If you think there was a clerical or arithmetic mistake, you do not need to submit the assignment or exam for regrading. Bring this type of mistake to my attention at the end of class or by e-mail.