

Final: 11.18.2014

# LAB COURSE INFORMATION

## BIOLOGY OF THE MARINE ENVIRONMENT LAB

### MARS 1020L – Spring 2015

Marine Sciences 1020 L is a companion laboratory course for MARS 1020 that provides a hands-on exploration of topics relating to the fundamental biological principles in marine organisms and ecosystems. This laboratory course is specifically designed for the nonscience student. An effort has been made to design labs which are directly applicable to daily life. The corresponding lecture course, MARS 1020 is a co-requisite for this course. **MARS 1020 and 1020L will count in Area II of the UGA core curriculum as a life science with a lab. MARS 1020 cannot be taken without the lab portion (MARS 1020L) of the course.**

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#### **Principle Course Objectives:**

Upon completion of this laboratory course, students will have an understanding of marine organisms and their environments, the structure and function of marine communities, how biological processes operate in marine environments, and the effect of human activities on sea life. Some of the laboratory activities are observational while other laboratory exercises are experimental.

**Instructors:** A list of laboratory teaching assistants, their office hours and location along with contact phone number and email addresses are posted on the lab course eLC web page

Students are encouraged to take advantage of the opportunity to discuss course material directly with their lab instructor(s) during office hours. Students are encouraged to address concerns regarding grading of assignments, progress in the lab course, and help with course material during office hours rather than during the lab class. I will be able to give you the one-on-one attention that your questions/concerns deserve if you meet during office hours.

**Laboratory Course Administration:** If you have questions regarding the lab course content, your progress in the laboratory portion of the course, laboratory attendance problems, laboratory assignments, or any other concerns, please feel free to speak to Dr. Catherine Teare Ketter in room 110J, Marine Sciences Building. You can contact her at (705) 583-0862 or by email at [cmscatk@uga.edu](mailto:cmscatk@uga.edu). All lab course material will be posted as PDF or PPT files on the lab course eLC. Please check during the first couple of days to be certain that you have eLC web access for MARS 1020 and MARS 1020L. If the course does not appear on your eLC list of courses, you need to notify Dr. Teare Ketter or your lab instructor. We can add you to eLC manually if we have your UGA myID. Course files will be posted PDF, PowerPoint, and EXCEL formats. You will need to download Adobe Acrobat Reader (if you do not already have this software) in order to view the PDF files. If your home computer does not support MS Office applications or Adobe Acrobat files, you should use a UGA computer lab to access course files. Some of the files containing embedded images will be large. If try to download these files via a dial-up connection, you will be there all day. Use a UGA site (such as the library or the student-learning center) and save them to a flash drive or CD-R if you want to avoid the print charges.

**Required Texts:** *Marine Biology*, 9th edition), Castro & Huber, 2013, and *A Photographic Atlas of Marine Biology* (1<sup>st</sup> edition), Wisehart, Rempala, & Leboffe– these titles available are available from the UGA Bookstore and some of the off-campus bookstores. A copy of the lecture text and laboratory texts are on reserve in the Sciences Library for room use only. ***The lab manual will be available as individual PDF files on the MARS 1020L eLC web page. You will need to print out the labs (full size) and bring them with you to lab class each week.***

**Materials for Lab Classes:** You will be expected to bring all three texts (lab manual, photographic atlas, and lecture text) with you to each lab class. You might also want to purchase colored pencils for your observational drawings in your lab manual.

**Attendance:** Attendance at all of the scheduled lab classes is required (please refer to pages ix-x of the Lab Manual). To further encourage student attendance, **students who attend all of the labs** (which means coming on time and completing all of the work for the class period) **will be allowed to drop their lowest quiz grade at the end of the semester**. Missing a single class means that you have missed a significant portion of the course. ***DO NOT schedule any other appointments or activities during the time that you are scheduled to be in lab.*** A “valid” excuse is an excuse which involves a serious health or personal emergency and is written, verifiable, and covers the date and time of the student’s scheduled lab class. Students who miss one, two, or three lab classes will be allowed to make-up any lab for which they have a valid excuse provided that they contact their lab instructor within 48 hours of the absence. Making up a lab involves completing a written make-up exercise and taking a make-up quiz. Students who do not have a valid excuse for a lab or who fail to complete the make-up work within the allocated time will not receive credit for the completing the lab exercise. No more than three labs can be made up, regardless of the reasons for excess absences. A grade of WP, or WF will be assigned to withdrawing students as a function of class attendance, grades earned at the point of withdrawal, circumstance, and UGA policy. More information about absences and UGA student attendance policies can be found at <http://bulletin.uga.edu/bulletin/ind/attendance.html>. Students who are facing significant health or personal challenges should contact the Office of the Vice President for Student Affairs at 706-542-3564. The Vice President for Student Affairs Office will need to handle verifying your circumstances and notifying your instructors of your hardship. This is also the office that handles emergency withdrawals.

**Lab Grades: Your lab grade will be comprised of the average of the laboratory quizzes, written homework assignments, and a reflective on-line journal.** There are weekly quizzes, written homework assignments, written reflective journal entries discussing the merits of each lab exercise and what your “take-home message” was from the lab, and a peer grade for your contributions to your group assignments. Since we are piloting new version of old labs and a couple of new lab exercises, your journal entries will help us to assess the impact of each lab on your understanding of the course material as well as the fit between lecture, lab, and student expectations. Your constructive comments will be used to drive curriculum changes. The quizzes will assess your understanding of the previous lab’s material as well as your preparation for the current lab class and effectively serve as practice tests for lecture content. It is expected that you will have read your lab handout prior to coming to class, and that you have a general working knowledge of the lab exercise which you are about to do. Your participation and attendance will be considered at the end of the term. Any questions regarding lab quiz grades, on-line journal grades or missed work should be directed to your lab instructor within ONE WEEK of the assignment.

**Incompletes:** The grade of Incomplete (I) is assigned to students who, for reason of accident or illness, who were unable to complete a segment of the course. In no case will an Incomplete be given as a means of avoiding a failing grade.

**Group Work:** You will be randomly assigned to a lab group the second week of lab and you will work in that group for the remainder of the term. One of the goals of the laboratory portion of this course is to learn how to work effectively in a group. Working cooperatively with others is an important skill necessary to success in academic and professional endeavors. Some of your written assignments you will complete as a group and everyone in the group will receive the same grade for this assignment. At the end of the term, you will be asked to complete a peer group work assessment for all of your group

members and everyone will receive a peer group work grade that is the average of your peer evaluations for your contribution to the group. Some of your written assignments will be completed individually and your lab instructor will be very clear about which assignments are to be completed on your own. You will be evaluated by your peers at the end of the term, and your contributions to group work assignments will be 5% of your lab grade (10 points/200 points).

**Access Statement:** The University of Georgia Study School of Marine Programs is committed to providing access for all people with disabilities and will provide accommodations if notified prior to the start of the semester. If you will need large type, Braille, or audio materials, please call Dr. Catherine Teare Ketter (706) 583-0862, [cmscatk@uga.edu](mailto:cmscatk@uga.edu)). Please contact the Disability Resource Center if you will need a sign language interpreter, assisted listening device, or other classroom accommodations. If you would like to discuss classroom and/or testing accommodations, please contact Dr. Catherine Teare Ketter (706) 583-0862, [cmscatk@uga.edu](mailto:cmscatk@uga.edu)) as soon as possible (prior to the first week of labs). **Please remember that you will need a separate “professor letter” for the lecture and the lab portions of this course.**

**Academic Honesty:** It is the student’s responsibility to be familiar with the University of Georgia’s policy on academic honesty as published in the booklet *A Culture of Honesty: Policies and Procedures on Academic Honesty*. Evidence of academic dishonesty will be turned over to the Office of the Vice President for Academic Affairs for consideration and possible action. The minimum penalty for student found guilty of academic dishonesty is a grade of “F” in the course and a note on the student’s transcript. There have been several recent changes in the academic honesty policy at UGA. This information is available on-line at [http://www.uga.edu/honesty/ahpd/culture\\_honesty.htm](http://www.uga.edu/honesty/ahpd/culture_honesty.htm)

**Cell Phones, Lap Tops, and Other Personal Electronic Devices:** Cell phones should be turned off or placed on “silent mode” during lecture and lab class periods. Please be considerate of your fellow classmates and don’t engage in cell phone conversations during class. If you receive an emergency phone call, please ask to be excused from class and conduct your conversation outside of class. Cell phones are expressly forbidden in class during exam periods. Ipods, tablets, notebooks, and other distracting electronic devices should not be used during lecture and are prohibited during lab classes. It is distracting to your classmates and disrespectful to your instructor(s). Lap tops are not allowed in lab due to the chemicals and salt water frequently used unless you have a documented special need for your computer. We want to foster a learning environment that encourages active engagement; listening to music, playing electronic games, and text messaging during class or lab does not promote academic success.

# LAB OUTLINE - Biology of the Marine Environment Lab

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Lab No	Date	Lab Topic	Readings Assignments	Point Values
1	January 05, 2015	<b>LABS DO NOT MEET THIS WEEK!</b>		
2	January 12, 2015	Introduction to MARS 1020L and The Scientific Method	MARS 1020L Introduction, pp ix-xii; Properties of Water Laboratory Exercise on eLC lab manual.	QUIZ (8 points) at the end of lab class + 2 points for eLC journal entry.
3	January 19, 2015	Introduction to UGA's Science Library	Handout on eLC lab web page, <b>Library Homework Assignment due at the beginning of lab January 26, 2015; individual assignment</b>	QUIZ (8 points) at the beginning of the class period + 2 points for eLC journal entry.
4	January 26, 2015	Microscopes and Cells	Microscopes & Cells Laboratory Exercise, eLC lab manual.	QUIZ (8 points) at the beginning of the class period + 2 points for eLC journal entry.+ <i>Library Homework assignment ( 10 points)</i>
5	February 02, 2015	Prokaryotes and Protists	Unicellular Organisms & Macroalgae Laboratory Exercise, eLC lab manual; <b>optional extra credit Algal Scavenger Hunt (group project)</b>	QUIZ (8 points) at the beginning of the class period + 2 points for eLC journal entry.
6	February 09, 2015	Photosynthesis and Primary Production (new revised lab)	Energy Flow in Marine Ecosystems Laboratory Exercise, eLC lab manual	QUIZ (8 points) at the beginning of the class period + 2 points for eLC journal entry. + <i>optional extra credit Algal Scavenger Hunt (1-5 points).</i>
7	February 16, 2015	Osmosis and Osmoregulation	Osmosis and Osmoregulation Laboratory Exercise, eLC lab manual, <b>Osmoregulation lab Report due at the beginning of lab February 23, 2015; group assignment</b>	QUIZ (8 points) at the beginning of the class period + 2 points for eLC journal entry.
8	February 23, 2015	Invertebrates	Invertebrates Laboratory Exercise, eLC lab manual	QUIZ (8 points) at the beginning of the class period + 2 points for eLC journal entry + <i>Osmoregulation Lab Report (5 points).</i>
9	March 02, 2015	Marine Fishes	Marine Fishes Laboratory Exercise, eLC -new lab manual, <b>Designer Fish assignment due the beginning of lab March 16, 2015; individual assignment.</b>	QUIZ (8 points) at the beginning of the class period + 2 points for eLC journal entry.
10	March 09, 2015	<b><i>Spring Break:LABS DO NOT MEET THIS WEEK!</i></b>		
11	March 16, 2015	Animal Behavior	Animal Behavior Laboratory Exercise, eLC lab manual, <b>Animal Behavior Experimental Write-up due at the beginning of lab March 23, 2015; group assignment.</b>	QUIZ (8 points) at the beginning of the class period + 2 points for eLC journal entry, . + <i>Designer Fish assignment (15 points).</i>
12	March 23, 2015	Whale and Turtle Migration	Whale & Turtle Migration Laboratory Manual, eLC lab manual, <b>Data presentation and write-up for Whale/Turtle Migration lab due at the beginning of lab the week of April 06, 2015; group assignment.</b>	QUIZ (8 points) at the beginning of the class period + <i>Animal Behavior Experimental write-up (5 points)</i> + 2 points for eLC journal entry.
13	March 30, 2015	Lake Herrick I: Introduction to Aquatic Ecosystems	Lake Herrick I Laboratory Exercise, eLC lab manual.	QUIZ (8 points) at the beginning of the class period+2 points for eLC journal entry.

14	April 06, 2015	Lake Herrick II: Group-designed field experiment	Human Activity and the Marine Environment Discussion Readings, eLC lab manual <b>Homework assignment due at the beginning of lab April 13, 2015 ; individual assignment.</b>	QUIZ ( <b>8 points</b> ) at the beginning of the class period + <b>2 points</b> for eLC journal entry <i>Whale &amp; Turtle Migration lab write-up (5 points)</i> .
15	April 13 2015	The Marine Environment and Human Activity	Lake Herrick II Laboratory Exercise, eLC lab manual. <b>Data presentation and write-up for Lake Herrick self-designed experiment lab due at the beginning of lab April 20, 2015 group assignment</b>	QUIZ ( <b>8 points</b> ) at the end of the class period + <b>2 points</b> for eLC journal entry+ Peer Group Work Assessment ( <b>10 points</b> ) + Lake Herrick experimental <i>lab results write-up assignment (5 points)</i> .
16	April 20, 2015	Spatial Distribution, Sampling, and Fishes	Spatial Distribution, Sampling, and Fishes Laboratory Exercise, eLC lab manual	QUIZ ( <b>8 points</b> ) at the beginning of the class period + <b>2 points</b> for eLC journal entry + <i>Marine Environment position paper (10 points)</i> .