Dr. Camilla Souto **Marine Biology (IB 108)** Summer 2019
June 24-August 16

COURSE DESCRIPTION:

This course will focus on the interactions among marine organisms and on their relationship to the environment. Topics will include an overview of marine organisms, functioning of marine ecosystems, anthropogenic impacts, and conservation. Lectures will consist of discussions of primary literature, videos, and student presentations; and discussion sections will review and expand on topics covered on lecture. By the end of the course, you should be able to compare marine ecosystems, identify the major marine organisms and explain their role within a community, explain the main abiotic factors affecting the distribution of marine organisms, and discuss the impacts that humans are imposing on the marine environment.

Ten Hints

1. Download the Powerpoint presentation before lecture and use it to take CAREFUL supplemental notes.

2. Go over your notes for clarity soon after the lecture. Ask yourself what point was being made in each part of the lecture. Were there examples to illustrate the point?

3. Complete the readings **before** the lecture.

4. Read and understand the **supplemental material posted on bCourses**.

5. Do the study questions.

6. Take advantage of the textbook resources (Study Center, Assessments, etc.) provided with Navigate 2.

7. Attend the Discussion section and ask the GSI or myself for help as soon as you realize you have a problem with something.

8. Find out what you had wrong on each exam, and why it was wrong. Learn the right answer (the final is cumulative).

9. Get the memorization out of the way early. Learn the taxonomic groupings and relatedness of the organisms discussed in class. Know the principal cladogram from the figure provided in bCourses. Then concentrate on *understanding* the rest of the course material, not just memorizing it.

10. Keep up with the course. Lectures cover a lot of material and once you are behind it will be difficult to recover.

INSTRUCTORS:

Your instructor is Dr. Camilla Souto. Her email address is csouto@berkeley.edu.
The name of your Discussion GSI will be announced soon.
Lectures are held M, Tu, W, Th from 2:10 – 4:00 PM in 3 LeConte Hall.
Dr. Souto's office hours are Mondays and Wednesdays 12:15 – 1:30 PM in 5190 VLSB and at other times by appointment. Discussion GSI's office hours will be announced at a later time.

ATTENDANCE AND USE OF ELECTRONIC DEVICES:

I promise to do my very best to help you learn the material in this course. I expect you to come to class rested, prepared, eager to learn, and to pay attention in class. For the best outcome, this requires us both to stay focused on learning. You may bring your laptop computer, but please be respectful to other students by using it only for taking notes or investigating material directly related to the lecture. When a fellow student sees you texting, shopping on Amazon, playing games, engaging in social media or email, or working on a different class, it's distracting. While you may think *you* can multitask, scientific studies have shown that students engaging in this behavior have reduced comprehension and receive lower scores on tests. But get this – you are not only penalizing yourself, but your peers who are in direct view of your behavior also score lower on tests (Sana, F., T. Weston, and N.J. Cepeda. 2013. Laptop multitasking hinders classroom learning for both users and nearby peers. Computers and Education 62:24-31).

DISCUSSION SECTION:

Attendance in the Discussion section is essential to make sure you understand the material presented in lectures. Your GSI will make a brief presentation about the topic covered in lecture and may show a video. There will be time during the Discussion section for you to ask questions about lecture material or any other aspect of the course.

GRADES:

Your grade in IB 108 is assigned according to your grades on two midterms (100 points each) and one comprehensive final exam (150 points). Exams consist primarily of multiple choice, short answer, and fill–in questions. They are based upon material in the lectures and reading assigned for the lectures. Copies of practice exams will be made available through bCourses. Exams will be graded, returned, and a key posted on bCourses generally within one week of each exam.

If you have a question regarding the grading of the lecture exam, describe the problem or question in *writing*, in a clear, concise, and well–organized statement. Attach the exam to this cover letter and give it to the Discussion GSI **within 5 working days** from the date the exam was returned to you. No corrections can be made after this time. Note that regrade requests are to be turned in during the Discussion section. Replies to regrade requests will be available through your Discussion GSI when completed.

Grades will be determined by the percentage of the total points received in the course: There are 350 total points.

A– ≥ 90% B– ≥ 80% C– ≥ 70% D– ≥ 60% F< 60%

Grades are assigned on a percentage basis, not on the basis of a "curve". This means that you are not competing with other students in the course for each grade. I encourage you to help one another learn the material and to study together. If I didn't think the material was important, I wouldn't cover it in lecture or ask the GSI to discuss it in section, so I expect you to understand at least 90% of the material to get a high grade.

Overall Point Breakdown:

Midterm I Exam	100
Midterm II Exam	100
Final Exam (cumulative)	150
Total	350

Midterm I (lectures through 7/5):	Monday (10:00–11:40) July 8, 2019 in TBD
Midterm II (lectures from 7/10-26):	Monday (10:00–11:40) July 29, 2019 in TBD
Final Examination (entire summer):	Friday (10:00–11:40) August 16, 2019 in TBD

There will be no lecture immediately following an exam for any of the exam dates.

MAKE–UP EXAMINATIONS:
Midterm exams – Make–up examinations are given at the discretion of the instructor, and will be given only under the following conditions: (1) exceptional circumstances prevent your attendance, for example a sudden hospitalization (subject to verification); (2) you have contacted Dr. Souto at least 24 hours before the exam is scheduled to begin (email: csouto@berkeley.edu). When you write, be prepared to state the problem and provide a phone number where you can be reached. Note that Dr. Souto's email can be obtained from the UC Berkeley directory if you forget it. (3) Make–up examinations may consist of an oral examination with Dr. Souto. She will email you to schedule the makeup as soon as possible after the original examination date.

There is no make–up or rescheduling of the final exam.

TEXTBOOKS, READING, bCOURSES:

The required text is *Marine Biology* by P. Castro and M.E. Huber (2016). You may find a used copy of this book; new copies can be obtained at the UCB bookstore or online.

A list of readings for each lecture is provided below.

bCourses will be your headquarters for announcements, supplemental readings, study questions, and more.

Skim the required reading before lecture so the terms and concepts will be somewhat familiar to you as you listen to the lecture. After the lecture, center your reading on the topics covered in lecture and laboratory sections. Pay attention to the material necessary to do the study questions.

If the material in the textbook is unrelated to material covered in the lecture or study questions, then it is unlikely to appear on exams. READ SELECTIVELY, and use your textbook as a reference to help you learn concepts, terms, and ideas introduced in other portions of the course. If you are having difficulty with lecture material, don't let new terms in the reading confuse you further; focus on lecture material first.

Assigned Readings

Date	Lecture Topic	Chapter
June 24	The Ocean as a Habitat	Chapter 1
June 26	Physical and Chemical Oceanography	Chapter 2
June 28	Patterns of Association (including taxonomy)	Chapter 3
July 1	Marine Microbes (viruses, bacteria, phytoplankton)	Chapter 4 and bCourses reading on viruses
July 3	Seaweeds and Marine Plants	Chapter 5
July 5	Microbial Heterotrophs and Invertebrates I	Chapter 6
July 8	**Midterm 1** (material through 7/5)	
July 10	Invertebrates II	Chapter 6
July 12	Marine Vertebrates I: Fishes and Reptiles	Chapter 7
July 15	Marine Vertebrates II: Seabirds + Marine Mammals	Chapter 8
July 17	Estuaries	Chapter 9
July 19	Coastal Seas I: Intertidal Communities	Chapter 10
July 22	Coastal Seas II: Subtidal Communities	Chapter 10 and bCourses reading on kelp forests
July 24	Coral Reef Ecosystems	Chapter 11
July 26	The Open Sea (pelagic communities)	Chapter 12
July 29	**Midterm 2** (material from 7/10-26)	
July 31	Deep Sea	Chapter 13
August 2	Polar Seas	Chapter 14
August 5	Harvesting Living Marine Resources (overfishing)	Chapter 15
August 7	Plastics and Pollution	reading on bCourses
August 9	Climate Change (sea level rise, ocean acidification, etc.)	reading on bCourses
August 12	Advances in Marine Technology to Study the Ocean (rebreathers, ROVs, autonomous vehicles, etc.)	reading on bCourses
August 14	Review	No Reading
August 16	**Final Examination** (cumulative)	