

BIEB 130: Marine Conservation Biology

Lecture: Tu/Th 11:00 am to 1220 pm, The Jeannie Auditorium

Discussion Section: Friday, 10:00-10:50 am, on Zoom: <https://ucsd.zoom.us/j/91064171449>

Professor: Dr. Carolyn Kurle, ckurle@ucsd.edu, Muir Biology 4218 (office)

Office Hour: Tuesdays, 2:00-3:00 pm via Zoom (<https://ucsd.zoom.us/j/97990299253>)

If you can't make my office hour, please attend the IA office hour (see below)

Contact: The best way to contact me is via email (ckurle@ucsd.edu). On all emails, **PLEASE put BIEB 130 in the subject line** to indicate your email is about this course. Also, please ask questions during lectures, discussion section, and my own and the TA's office hours.

Graduate Instructional Assistant (IA):

Alexia Fabiani (afabiani@ucsd.edu)

Office Hour: Wednesdays, 12-1 pm, on Zoom: <https://ucsd.zoom.us/j/91205070515>

Undergraduate Instructional Assistants (IA):

Mickey Cardona (mgwynn@ucsd.edu)

Ashley Miller Hong (afmiller@ucsd.edu)

Course Goals

- Understand the nature and impact of human activities on marine ecosystems
- Understand the biological principles underlying the mechanisms by which these impacts occur
- Appreciate the diversity of marine ecosystems and how we can use science to: identify impacts, measure them, and suggest novel approaches for ecosystem conservation, protection, and restoration
- Develop capabilities for accomplishing measurable conservation actions

Websites: Lecture notes: canvas.ucsd.edu under Files Tab and as a module; Video Podcast: podcast.ucsd.edu or at the Media Gallery tab on our Canvas page; Piazza for questions for and interactions with other students and IAs. Link to our Piazza course page: https://piazza.com/ucsd/spring2024/bieb130_sp24_a00/home.

Grading: 100 Points: Midterm Essay 1

100 Points: Midterm Exam 2

40 Points: Quizzes (4, 10-point quizzes given throughout the quarter)

20 Points: Attendance in lecture (see details below)

260 Total graded points available

10 Points: Extra credit points available (see below)

Canvas: Lecture notes and all reading material will be available on Canvas (<https://canvas.ucsd.edu>) by the day of lecture. Extension students can bring proof of enrollment to the ACMS Help Desk (Applied Physics and Math bldg. 1313, M-F, 8:00-4:30) to obtain Canvas access. More information for extension students can be found here: <http://extension.ucsd.edu/student/index.cfm>. **Contact the help desk at Canvas if you have problems.**

Raise your hand or text me with questions during class: You can anonymously text me questions on Google Voice at **619.663.6882** and I will pause throughout to check and answer your questions. This is a way for us to interact without you feeling self-conscious. I love the interaction texting offers, so please text questions! **NOTE: Raising your hand and asking a question is also completely welcome! I love this also!**

Lecture Attendance (starting April 4):

At the start of each lecture, I will provide a prompt to encourage thought and connection to yourself, your classmates, and me. You will write a sentence or two on Canvas (you can find the prompt on our Canvas site at Home, Attendance) at the start of class to record any thoughts/feelings/impressions the prompt brought forth in you. That will serve to mark you present in class that day. I'll repost the prompt throughout lecture, so you can respond at any time during lecture and that will count as attendance even if you're late. It will show that you've earned 1 point, but that is just to let us know that you were in lecture. The actual attendance point values are listed below.

If you come to 70% or more of the lectures (12 out of 17 monitored lectures) and answer the prompt, you will get full participation credit. To reiterate, you can miss 5 lectures and still get full participation credit. If you attend less than 20% of the time, you will get zero points.

If you are present and answer the prompt for:

> 70% (12 of 17) of lecture days	you will receive	20 points
> 60% (10) of lecture days		15 points
> 40% (7) of lecture days		10 points
> 20% (3) of lecture days		5 points

Piazza: We will be using Piazza for answering questions or discussions of issues related to BIEB 130. You are automatically enrolled in Piazza via Canvas. The system is catered to getting you help fast and efficiently from classmates, the TA, IAs, and me. Rather than emailing questions to the teaching staff, consider posting your questions on Piazza so everyone can have access to your questions and our and your classmate's answers. You can do this anonymously and it allows others to see answers to questions they may not have thought of. Link to our Piazza course page: https://piazza.com/ucsd/spring2024/bieb130_sp24_a00/home. You can also find our Piazza page via the Piazza link on the left side of our Canvas page.

Lectures: The posted lecture notes are outlines, **and essential material will be presented in class that does not appear on web-posted notes or in the readings.** Lectures will also be posted as a **podcast** within 24 hours after each class time and can be accessed at Podcast.ucsd.edu or via the Media Gallery tab on the left of our Canvas page.

Readings: There is no textbook for this course. Instead, we have required readings available on Canvas that will pertain to lecture material and will be covered most closely in the discussion section. **The material from the readings will be the content for all quizzes.**

Exams: **The first midterm** will be in essay format. Your response to the essay question will be limited to 2 pages, type-written, single-spaced, 12-point font, with 1-inch margins. This will be handed in online via our Canvas page. You will get the question a week in advance, so you will have a week to prepare your answer using your own research from any source. You then write your essay and upload it to Canvas on May 2, 2024. **The window to submit your essay via Canvas will be open for 24 hours from 12:01 am to 11:59 pm PST on May 2, 2024.** If you can adequately answer the question in fewer than two, single spaced pages, then there is no need to fill two pages. However, anything written over two pages will not be graded, so restrain yourself. Please cite your sources using numbered citations and include those as a third page with your two-page essay. Grading of the essay WILL include grammar, structure, and clarity. Once graded, questions concerning the essays will be addressed in discussion section or in TA and/or Professor office hours.

The second midterm will consist of short and long answer questions covering material from all lectures and readings. **The exam window will be open for taking the exam via Canvas from 1:00 pm on June 6 to 2:30 pm June 11 (our scheduled final is June 11 and ends at 2:30 pm that day) and you will have 3 hours (the**

time you would have for a final during finals week) to complete the exam once you start. This exam is open notes, readings, and internet. **But please do not work together.**

Quizzes: There will be a total of four quizzes throughout the quarter. One quiz will be available to take every two weeks via Canvas. These 30-minute quizzes will cover the previous one to two weeks of discussion section reading material. The quiz schedule is listed below in the discussion section schedule. The format will be short answers and multiple choice. **Quizzes will be posted on Canvas on the Monday of a quiz week, and you can take the quiz at any time during the week until it closes the following Sunday night at midnight.** Once you open the quiz, you'll have 30 minutes to complete the questions, so pay attention to time as you work. You can access the readings while you take the quiz, but there isn't much time (**only 30 minutes**), so it behooves you to read the papers beforehand so you can answer the questions quickly.

There are no make-up exams or quizzes. If you miss an exam or quiz, you will be required to provide official documentation of an unavoidable emergency (serious illness, etc.). Without such documentation, you will receive no points for that exam or quiz. For exams, if you miss the first essay AND have valid documentation, the proportion of your grade that is based on your second midterm will be increased to cover the missed midterm. If you miss the second midterm AND have valid documentation, the proportion of your grade that is based on your essay will be increased to cover the missed midterm.

Discussion section: We have only one discussion section that will be led by the TA for this class and supported by the undergraduate IAs. This will be held on Zoom (see link above). All required readings are open for discussion and will be covered in the quizzes and these readings are found on Canvas and are listed below in the discussion section schedule. **Attendance in section is not mandatory.**

Extra Credit: To earn 10 points of extra credit, 1) identify a real and important marine conservation issue, and 2) present evidence of your effort to understand the issue (write a one-page, single or double spaced, summary of the issue), and 3) take a direct action to improve that issue (volunteer work, letter writing, etc.). You will turn this in via Canvas and **this is due by June 6 at midnight.**

Grading: Your final letter grade will be based on your TOTAL number of points. **If everyone earns enough points that they fall at or above 90%, I have no problem giving everyone an A- or better.** However, that is unlikely (but I'd love to have you prove me wrong!). Therefore, if warranted, letter grades will be based on a curve. This means I will make sure that the top 20% of students will receive A- or above grades (even if that means going below 90%); the next 30% of students will receive B- and above grades; the next 40% of students will receive C or D grades, and the final 10% will receive F grades. **And let me reiterate, ALL students getting a 90% or higher will get at A- or better, regardless of whether it's 20% or 100% of you.** In addition, unless I end up curving the class to achieve 20% A- or better grade allocation, if you receive an 80% to 89%, you will get a B- to B+, and if you get 70% to 79%, you will get a C- to C+.

Academic Integrity/Cheating: Please don't cheat. It's not necessary. Your essays and exams will be automatically routed through a plagiarism check and high plagiarism scores will be flagged for academic integrity violations and students who are found cheating will be handed over to the Academic Integrity Coordinator. For information: <http://students.ucsd.edu/academics/academic-integrity/index.html>.

OSD students: Contact the Office of Students with Disabilities (OSD) at 858.534.4382, 858.534.9709 (TTY) or through their website (<http://disabilities.ucsd.edu/index.html>). Coordinate scheduling of exams with me within the first two weeks of the quarter.

Enrollment questions: Visit academic advising (<https://students.ucsd.edu/academics/advising/>).

Lecture Schedule

Date	Subject
April	
2	1. Overview of Marine Conservation and Humans and nature
4	2. Marine vs. Terrestrial Ecosystems
9	3. Marine Habitats
11	4. Marine Biodiversity and Ecosystem Services
16	5. Marine Ecosystems: Stability, Food Webs, Trophic Cascades, Subsidies
18	6. Population Biology and Extinction
23	7. Fisheries Management I: Fishing Down Food Chains, Shifting Baselines
25	8. Fisheries Management II: Traditional Management Models
30	9. Fisheries Management III: Habitat Destruction, Bycatch
May	
2	Midterm 1: Essay due NO CLASS
7	10. Marine Protected Areas, Marine Spatial Planning
9	11. Ecosystem Based Fishery Management
14	12. Coastal Development
16	13. Aquaculture
21	14. Introduced Species
23	15. Pollution, Harmful Algal Blooms, Eutrophication
28	16. Ocean Climate, El Niño, Pacific Decadal Oscillation
30	17. Climate Change
June	
4	18. Ocean Acidification
6	Midterm 2/Final Exam NO CLASS

Discussion Section Schedule; *Quiz week

Week	Subjects	Papers for discussion
April 1	No Sections	NA
8	Humans are Nature	Kurle et al. 2023, Dalrymple 2022, Dickinson 2013
15*	Biodiversity and Ecosystem Services	EMB 2019 Valuing Marine Diversity paper, Five-minute New York Times video here: https://www.youtube.com/watch?v=Ggo07G1XB6A Or here: New York Times: Alexander Skarsgard Explains the Answer to Everything
22	Population Biology	Kindsvater et al. 2016
29*	Fisheries Management	Collie et al. 2016, Anderson et al. 2024
May 6	Fisheries Management/MPAs	Gill et al. 2017
13*	Aquaculture	Clark 2019 (2 articles), Kim 2017, Visser 2018, Mapes 2018, Weinberger 2019, York 2011, Goodyear 2015 (these are short)
20	Pollution	Eisenstein 2021, Lincoln et al. 2022
27*	Climate Change	Talukder et al. 2022, Hoegh-Guldberg & Poloczanska 2017
June 5	Review for Final	NA