

BIEB 130: Marine Conservation Biology

Lecture: Tu/Th 930-1050 am, CTL 0125

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

Office Hour: Tuesdays, 1:00-2:00 pm via Zoom (<https://ucsd.zoom.us/j/96948927972>)

If you can't make my office hour, please attend any of the TA/IA office hours (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 sections, and my own and the TA's office hours.

Teaching (TA) and Instructional (IA) Assistants:

Ugbad Farah (ufarah@ucsd.edu)

-Remote Office Hour: W, 12-1 pm, Zoom: 955 3466 2857

Nils Gungor (ngungor@ucsd.edu)

-Remote Office Hour: M, 1130-1230, Zoom: 926 3054 1813

Sydney Korovec (skorovec@ucsd.edu)

-Remote Office Hour: W, 5-6 pm, Zoom: 848 9103 5393, Passcode: DIA06

Keeley Lanigan (klanigan@ucsd.edu)

-Remote Office Hour: Tu, 11-12, Zoom: 960 2181 3290, Passcode: Squid

Dillon Travis (dtravis@ucsd.edu)

-Remote Office Hour: F, 1-2 pm, Zoom: 403 488 5527, Passcode: 907657

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: Use the **access code bieb130** and sign up for Piazza here: https://piazza.com/university_of_california_san_diego/spring2023/bieb130; Link to our Piazza course page: https://piazza.com/university_of_california_san_diego/winter2022/bieb130/home

Grading: 100 Points: Midterm Essay 1

100 Points: Midterm Exam 2

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

27 Points: Participation and Attitude in discussion section (3 points per discussion section)

20 Points: Attendance in lecture (see details below)

10 Points: Presentations in final two weeks of Discussion Sections

10 Points: Summary statements of presentations given in Discussion Sections

307 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: I use Google Voice during lecture. You can anonymously text me questions at **858.324.4345** 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!**

Lecture Attendance (starting April 6):

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 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 write the prompt on the board 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 2 points, 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 watch the podcast

If you are present and answer the prompt for:

> 70% (12) 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. The system is catered to getting you help fast and efficiently from classmates, the TAs, and me. Rather than emailing questions to the teaching staff, consider posting your questions on Piazza. You can do this anonymously if you wish and it allows others to see answers to questions they may not have thought of. Please sign up and use this resource.

Use the **access code bieb130** and sign up for Piazza here:

https://piazza.com/university_of_california_san_diego/spring2023/bieb130

Our Piazza page is: https://piazza.com/university_of_california_san_diego/spring2023/bieb130/info

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.

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 discussion sections.

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 4, 2023. **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 4, 2023.** 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 sections 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 for 24 hours from 12:01 am on June 8 to 11:59 pm June 13 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 20-minute quizzes will cover the previous 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.** Once you open the quiz, you'll have 20 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 20 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 midterm 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, you will receive an incomplete for the course and be re-tested in the next quarter.

Discussion sections: Section attendance via Zoom will be monitored, and active participation will be a portion of your grade (see 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.

Presentations/Summary statements: There is no final exam in this class. Instead, you will have an opportunity to expand on a marine conservation topic (either alone or in a group) and make a presentation to your discussion section in the final two weeks of class on that topic. It may be something you want to learn more about, it may be a call to action about a problem, it could be an expansion of what you are doing for extra credit. There are many directions you could go with this. Your IA/TAs will provide you with some guidance in their office hours and discussion sections. Students can group together based on mutual interest in topic ideas. **Please finalize your groups by week 7** so your TA can plan the schedule of presenters and allow for adequate time management. Everyone is required to present, and everyone is required to write brief summaries (1 to 2 sentences) of all presentations in your section. Presentations can take the form of PowerPoint slides, plays, puppet shows, musical numbers, etc., but should aim to last 5 to 10 minutes. The exact amount of time will depend on the number of students/groups who participate in each section and will be organized by your TAs. This is a perfect opportunity to educate others on a topic we didn't cover or covered only briefly or get the class to do something beneficial for a marine conservation problem.

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 to your TA by June 8.**

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. Anyone 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/>).

Discussion Sections

Time	Place	TA/IA
M, 4-450 pm	Zoom: 960 2181 3290, Passcode: Squid	Keeley Lanigan
M, 5-550 pm	Zoom: 960 2181 3290, Passcode: Squid	Keeley Lanigan
Tu, 12-1250 pm	Zoom: 403 488 5527, Passcode: 907657	Dillon Travis
Tu, 1-150 pm	Zoom: 403 488 5527, Passcode: 907657	Dillon Travis
Tu, 3-350 pm	Zoom: 955 3466 2857	Ugbad Farah
W, 11-1150	Zoom: 955 3466 2857	Ugbad Farah
W, 2-250	Zoom: 926 3054 1813	Nils Gungor
W, 4-450	Zoom: 848 9103 5393, Passcode: DIA06	Sydney Korovec

Lecture Schedule

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

Discussion Section Schedule; *Quiz week

Week	Subjects	Papers for discussion
April 3	No Sections	NA
10	Humans are Nature	Kurlle et al. 2023, Dalrymple 2022, Dickinson 2013
17*	Biodiversity and Ecosystem Services	EMB 2019 Valuing Marine Diversity Watch the 5 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
24	Population Biology	Kindsvater et al. 2016
May 1*	Fisheries Management	Collie et al. 2016
8	Fisheries Management/MPAs	Gill et al. 2017
15*	Aquaculture	Clark 2019 (2 articles), Kim 2017, Visser 2018, Mapes 2018, Weinberger 2019, York 2011, Goodyear 2015 (these are short)

22	Pollution, Climate Change	Hoegh-Guldberg & Poloczanska 2017, Welch 2016, Eisenstein 2021, Mazur 2021 (these are short)
29*	Presentations	NA
June 5	Presentations	NA