

BI 357: Marine Biology, Winter 2022

Instructors:

Caitlin Plowman, cplowman@uoregon.edu, Office Hours via Zoom: Wednesdays, TBD

Nicole Nakata, nnakata@uoregon.edu, Office Hours via Zoom: Thursdays, TBD

Lauren Rice, lnr@uoregon.edu, Office Hours via Zoom: Tuesdays, TBD

Lectures: Tuesdays and Thursdays 2:00–3:20 pm (CRN 21745), CHI 128

Labs: Mondays 10:00–11:50 (21746), 12:00–1:50 (21747), 2:00–3:50 (21748), KLA 33

Biology Undergraduate Lab Assistants (BULAs):

Jenna Travers, Lab Section: 10:00–11:50

Daniel Tran, Lab Section: 12:00–1:50

Gianna Paden, Lab Section: 2:00–3:50

Course Description:

This course provides an overview of the diversity of marine organisms and their form, function, evolution, taxonomy, natural history, and ecological roles. We will incorporate understanding of physical, chemical, geological, and atmospheric processes, and we will discuss human influences on marine systems. We will foster an active and collaborative learning environment, with frequent discussion, activities, and clicker polls. This course includes lectures, laboratories, and an all-day field trip to the Oregon Institute of Marine Biology.

Learning Objectives:

Foundational Knowledge: What will you know?

- Identify marine organisms to major taxon (e.g. Phylum or below); and/or given the taxon, provide representative examples of organisms
- Describe the natural history of major groups of marine organisms—reproduction, growth, feeding, behavior, distribution, etc.
- Model trophic webs and ecosystem processes in a variety of marine ecosystems
- Explain how marine organisms and ecosystems are shaped by physical, chemical, geological, & atmospheric processes over time
- Make accurate observations and convey information using scientific terminology

Application: What will you be able to do?

- Construct general phylogenies and map characteristic features and evolutionary relationships of major groups
- Characterize biological communities and how they interact with the environment in a variety of marine ecosystems
- Evaluate the evidence for "how do we know," including data collection tools & techniques
- Communicate effectively through written, oral, graphical, and other means
- Interpret and evaluate scientific information

- Design a feasible study to investigate a research question
- Collect data & observations in an organized, meticulous, repeatable fashion
- Create clear and informative graphs, tables, and other data products
- Interpret lab results in context of other course materials

Integration: What kinds of connections will you be able to make?

- Connect concepts from physics, chemistry, geology, and biology
- Understand that humans and the oceans impact each other

Required Materials:

Text - There is no required textbook for this course. We will be using open source materials and scientific articles provided through Canvas.

iClicker - Please bring your iClicker to every class. Register it prior to class via Canvas using the iClicker link on the left, or on the iClicker website.

Lab Notebook - Please obtain a blank lab notebook that you will dedicate for use in this class and bring it with you to every lab session and on the field trip.

Course Requirements:

Each week you will be expected to:

Monday: pre-lab due before the start of your lab section; attend lab

Tuesday: 2:00 pm homework assignment due; 2:00 pm lecture

Thursday: 2:00 pm lecture; homework opens

Friday: 2:00 pm post-lab due; pre-lab opens

Grading Structure:

Pre-lab Assignments	= 4%	(20 pts)
Weekly Homework	= 16%	(80 pts)
Post-lab Assignments	= 16%	(80 pts)
Lab Notebook	= 4%	(20 pts)
Field Trip	= 4%	(20 pts)
Class Participation	= 16%	(80 pts)
Midterm	= 20%	(100 pts)
Final	= 20%	(100 pts)

Grading scale (Total possible points = 500)

>100 A+; 93-99.9 A; 90-92.9 A-; 87-89.9 B+; 83-86.9 B; 80-82.9 B-; 77-79.9 C+; 73-76.9 C; 70-72.9 C-; 67-69.9 D+; 63-66.9 D; 60-62.9 D-; <59.9 F

Course policies:

We will cultivate an inclusive, safe, and motivational work environment. All course materials can be found on our Canvas site. We will post lecture slides and readings. Other course policies are listed below. An absence or missed deadline is considered

excused if you email one of the instructors **before** the missed meeting or deadline, and considered unexcused if there was no prior communication.

Please let us know if you have a plan with the Accessible Education Center

(<https://aec.uoregon.edu/>) so that we can adjust our policies accordingly and give you the support you need.

Policies	Unexcused	Excused
Late work:	Will be accepted up to 1 week late, but only for 50% of total points	Talk to us - individual plans will be created based on circumstances
Missed lab:	Zero on that lab	Still write a post-lab, but use 3 primary sources to generate the results, include figure from paper and explain
Missed Field Trip:	Zero on the field trip	Talk to us - individual plans will be created based on circumstances
Missed Lecture:	Can miss up to 3 lectures without a penalty	
Tests:	Zero on that test	Makeup Test

Academic integrity:

All students will be expected to adhere to the University's guidelines on academic integrity as outlined in the Student Conduct Code: <https://policies.uoregon.edu/vol-3-administration-student-affairs/ch-1-conduct/student-conduct-code>. As detailed in the policy, academic misconduct means the violation of university policy involving academic integrity. This includes cheating ("any act of deception by which a student misrepresents or misleadingly demonstrates that the student has mastered information on an academic exercise that the student has not mastered"), and plagiarism ("using the ideas or writings of another as one's own.") We have a zero-tolerance policy for academic dishonesty. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures, which may include receiving a failing grade for this course. Finally, you do not have permission to post any course related material on outside private or public websites (i.e. coursehero, chegg, groupme, etc.). Violations of this request will be considered a form of academic misconduct.

Tentative Course Schedule:

Week	Lab (Mon)	Lecture (Tues, Thurs)
Part 1: Introduction		
1	Jan 3: No lab	Jan 4: Syllabus, course overview, intro Jan 6: Marine geology
2	Jan 10: Stratification	Jan 11: Basic oceanography Jan 13: Systematics, tree of life
Part 2: Marine Organisms		
3	Jan 17: No lab	Jan 18: Algae, primary production Jan 20: Inverts I - through bivalves
4	Jan 24: Algae	Jan 25: Inverts II - after bivalves Jan 27: Vertebrates
5	Jan 31: Inverts	Feb 1: Marine science history (Dr. Craig Young) Feb 3: Midterm
Part 3: Marine Ecosystems		
6	Feb 7: Functional morphology	Feb 8: Coastal - sandy beach, rocky intertidal Feb 10: Coastal - mudflats, marshes (Christina Ellison) Feb 12 (Sat): Field Trip option 2
7	Feb 14: Fish Dissection	Feb 15: Coastal Tropical - coral reefs, mangroves Feb 17: Pelagic - gelatinous zooplankton (Dr. Kelly Sutherland)
8	Feb 21: Jellyfish	Feb 22: Pelagic - fish and macrofauna Feb 24: Shelf and slope Feb 27 (Sun): Field Trip option 2
Part 4: Special Topics (Starts Thursday, Mar 3)		
9	Feb 28: Zooplankton/ Larval Diversity	Mar 1: Deep sea Mar 3: Reproduction
10	Mar 7: Symbiosis	Mar 8: Symbiosis, marine disease (Dr. Reyn Yoshioka) Mar 10: Humans and the oceans
F	Mar 14: No Lab	Final exam day and time TBD

UO resources to support your learning & well-being

Tutoring and Academic Engagement Center

Remote tutoring support: (<https://engage.uoregon.edu/services/>)

Remote learning resources (<https://engage.uoregon.edu/remote-learning-resources/>)

Counseling Center

Call anytime to speak with a therapist who can provide support and connect you with resources. Located on the 2nd Floor of the Health Center (541) 346-3227

Accessible Education Center

The University of Oregon is working to create inclusive learning environments. The instructors believe strongly in creating inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your participation, please notify us as soon as possible. You are also encouraged to contact the Accessible Education Center. If you are not a student with a documented disability, but you would like for us to know about class issues that will impact your ability to learn, we encourage you to come visit during office hours so that we can strategize how you can get the most out of this course. (541) 346-1155, uoaec@uoregon.edu

Center for Multicultural Academic Excellence (CMAE)

The CMAE mission is to promote student retention and persistence for historically underrepresented and underserved populations. They develop and implement programs and services that support retention, academic excellence, and success at the UO and beyond. We reaffirm our commitment to all students, including undocumented and tuition equity students. (541) 346-3479, <https://inclusion.uoregon.edu/center-multicultural-academic-excellence-cmae>

[Duck Rides](#) provides essential nighttime transportation services for UO students and employees. This is a new partnership between UO's existing student ride services and will replace these services as an adjustment to COVID-19. Duck Rides is committed to providing friendly and necessary transportation to students in a safe manner.

Discrimination and Harassment

Prohibited Discrimination and Harassment

Any student who has experienced sexual assault, relationship violence, sex or gender-based bullying, stalking, and/or sexual harassment may seek resources and help at safe.uoregon.edu. To get help by phone, a student can also call either the UO's 24-hour hotline at 541-346-7244 [SAFE], or the non-confidential Title IX Coordinator at 541-346-

8136. From the SAFE website, students may also connect to Callisto, a confidential, third-party reporting site that is not a part of the university.

Students experiencing any other form of prohibited discrimination or harassment can find information at aaeo.uoregon.edu or contact the non-confidential AAEO office at 541-346-3123 or the Dean of Students Office at 541-346-3216 for help. As UO policy has different reporting requirements based on the nature of the reported harassment or discrimination, additional information about reporting requirements for discrimination or harassment unrelated to sexual assault, relationship violence, sex or gender based bullying, stalking, and/or sexual harassment is available at [Discrimination & Harassment](#).

The instructors of this class are Student-Directed Employees. As such, **if you disclose to any of us, we will respond to you with respect and kindness. We will listen to you, and will be sensitive to your needs and desires. We will not judge you. We will support you.** As part of that support, we will direct students who disclose sexual harassment or sexual violence to resources that can help. **We will only report the information shared to the university administration when you as the student requests that the information be reported** (unless someone is in imminent risk of serious harm or is a minor). Please note the difference between ‘privacy’ and ‘confidentiality.’ As Student-Directed Employees, we can offer privacy because we are not required to report certain information to the university. However, we cannot be bound by confidentiality in the same way that a counselor or attorney is. Confidential resources such as these means that information shared is protected by federal and state laws. Any information that we as student-directed employees receive may still be accessed by university or court proceedings. This means, for example, that we could still be called as a witness or required to turn over any related documents or notes that we keep.

Please note also that we are required to report all other forms of prohibited discrimination or harassment to the university administration. Specific details about confidentiality of information and reporting obligations of employees can be found at titleix.uoregon.edu.

Mandatory Reporting of Child Abuse

UO employees, including faculty, staff, and GEs, are mandatory reporters of child abuse. Child abuse pertains to individuals who are under the age of 18. This statement is to advise you that your disclosure of information about child abuse to the instructor may trigger my duty to report that information to the designated authorities. Please refer to the following links for detailed information about mandatory reporting: [Mandatory Reporting of Child Abuse and Neglect](#).