Earth is a planet of water – 71% of the surface of the earth is covered with an ocean of salt water that is, on average, 3500 meters deep (~2 miles). Throughout this vast fluid environment are an incredible array of organisms, swimming, floating, burrowing, breathing, and making their way as part of the biggest ecosystem on the planet. Few people get to see very much of this amazing realm, but our human species is totally dependent on the oxygen produced by the microscopic plants of the ocean, the way the ocean stores and transports heat and affects climate, produces food, and allows for transport of goods and services around the globe. In this class, we use resources that any citizen can understand and interpret to develop your appreciation for the diversity and beauty of the ocean, and of the way that science can be helpful to long-term protection of the ocean. By the end of the course, I hope you are a fan of the ocean and an enthusiastic ‘patron’ of the sea with a lifelong interest in the marine environment and ways it can be restored and sustained.

LEARNING OBJECTIVES – by the end of the term, the successful student should be able to:

1) Describe the basic features of ocean ecosystems and ecological communities – major ocean basins and open ocean, intertidal zone, estuaries, coral reefs, deep sea, continental shelf.
2) Explain and apply at least three systems for classifying marine organisms to representative species. These are – systems based on 1) motility and habitat (plankton, nekton, benthos, and related terms), 2) systems based on food web dynamics (e.g. herbivore, primary producer, detritivore), and 3) systems based on taxonomy and relatedness (e.g. species, genus, etc.)
3) Understand key defining features of major taxonomic groups of marine invertebrates, marine mammals, and fish (bony fish vs. cartilaginous fish).
4) Explain what an evolutionary ‘novelty’ is and use specific examples to show how the origin of a ‘novelty’ allows for an explosion of new types of animals.
5) Recognize common organisms from the Oregon intertidal or other major domains of the ocean (e.g. deep sea, coral reefs) and be able to create natural history ‘stories’ about them that incorporate knowledge of their basic biology.
6) Be proficient enough with the use of tide tables to be able to plan a trip to the coast for clamming, fishing, or tide pooling. Be able to adapt what you have learned about Oregon tide tables to tides in other parts of the world.
7) Be able to explain the role of physical and biological factors in creating intertidal zonation, identify adaptations different animals have to these factors, and create hypothetical communities likely to be found at different locations in the intertidal using data from field guides and other sources about their biology.
8) Be able to make informed choices about activities that affect the ocean, including consumption of seafood.
9) Be able to describe ways that humans utilized marine resources in pre-industrial times and reasons why over-fishing has become so much more of a problem since the Industrial Revolution.
10) Use examples to explain the scientific method and the way that data are used to refine and falsify hypotheses.
11) Be able to make scientific predictions and describe the results of hypotheses you have tested.
12) Recognize the difference between a scientific question, a scientific hypothesis, and a policy question or proposal.

Participation and Workload: This class involves a normal workload that requires about 120 hours of your time over the quarter. This time budget includes ~10 hours for each field trip, 38 hours of face-to-face time in the classroom, and considerable time on your own reading, analyzing data, doing projects, studying for bi-weekly online quizzes, and critically viewing several videos. There is considerable research now that shows people learn and retain more if they are asked to speak and think during class, and not listen to a professor talking for most of the ‘lecture’ so be prepared to PARTICIPATE. Many classes will have either “class prep assignments” or work you do in class. We will take roll, or collect these pre- or in-class assignments in each class session (including discussions). You can miss up to two regular class sessions without penalty, and one discussion session. However, you are responsible for everything covered in the classes or discussions you miss. The GA and instructor will do what we can to help you ‘catch up’; if you have a documented emergency, but it is also good to make some friends in the class who will also share their notes and understanding. (This is a good idea, even if you don’t miss any classes!!).

Field Trips: The content and goals of the course are best (and most easily met) if you go on both field trips. However, we understand that this can be difficult for everyone and those with a bona fide excuse will be able to earn full credit for going on both by participating in a book reading and review group that will take about 10 hours of time during weeks 6 through 10. This group will meet for the first time during the discussion period of Week 6.

Together we will explore Oregon’s wonderful coast. The first is to the Oregon Coast Aquarium on April 21 and the second is to the Oregon Institute of Marine Biology and Charleston Marine Life Center on May 5. You will need to have weather-appropriate clothing and be prepared to hike on somewhat uneven surfaces for part of each field trip. Students for whom this may be a problem should bring this to the attention of the instructors.

Images were published by the US Fish and Wildlife Service and are not copyrighted. They were published in *Fishes of the Gulf of Maine* by H. Bigelow and W. C. Schroeder (1953) [https://www.nmfs.noaa.gov/lineart/](https://www.nmfs.noaa.gov/lineart/)
Grading Policy: The course grade includes several components to allow you to show your engagement in the course and what you have learned in a variety of ways. Writing assignments, discussion reports, participation and preparation assignments, and field trip reports will be graded using a High Pass- A, Pass- B, Low Pass- C, and No Pass- D or F; this translate to 95, 85, 75 and 65, <60% of the assigned points for the work of A, B, C, D, F, respectively; A+ (100%) is assigned by instructor discretion for exceptional work. Late work is subject to 30% penalty per day late and cannot be turned in after grades are assigned to the rest of the class. “High Pass” or “Check plus” work always shows evidence of editing and includes a fairly high information content that links ideas in the work to course topics and reflects individual initiative to go beyond the basic assignment. Information is
also nearly 100% accurate. “Pass” or “Check” work shows evidence of extra effort but may not rise to the level of an “A” effort in one or more areas, and includes some inaccuracies. “Low Pass” or “Check minus” work has major deficiencies in several areas but the student made an effort and mastered the basics of the assignment. “No Pass” work that earns 65% credit represents some effort, is acceptable in at least one area, but deficient in others. When the grade is <60%, it is either because no aspect of the work rises to acceptable levels, major portions of the assignment are missing, or, despite some small aspect being acceptable, most of the work is extraordinarily subpar, and % awarded (0-59%) is determined by the instructor.

**QUIZZES & FINAL:** Quizzes and final will be online and timed. While the quizzes and final are open-book, you will need to prepare for them as if they were closed book or you will not be able to finish properly. Correct answers should be based on material covered in the class and accompanying materials. The time allotted will be 1.5-2X the time that would be allowed to take a similar exam in class as a closed-book exam. Technically correct answers that clearly come from other sources will not be counted for full credit and may not be counted at all. The bi-weekly quizzes will be available on Friday of the week they are assigned and due by Sunday at mid-night. There is no make-up for bi-weekly quizzes. Quiz grade will be based on the average of the quizzes you take, with the lowest grade dropped. You will also have an opportunity to submit a change of answer to two questions on the quiz during the Monday discussion of each quiz.

**Academic Integrity:** Ideas and creative expression are the cornerstone of the intellectual life of the University. Plagiarism and other forms of dishonesty in the academic endeavor are thus contrary to the goals of the University and an enlightened life, just as personal integrity, collaboration and honest sharing of ideas (with credit given where it is due) is part of the path to new knowledge and a just society. Students are expected to adhere to University policy on academic misconduct and are responsible for consulting with the instructors if they have any questions about proper procedures for attribution, cooperative projects, or other acts that might be construed as plagiarism or other forms of misconduct. It is your responsibility to verify that any action that might be construed as academic misconduct is approved by the instructor BEFORE you take it! So, feel free to ask. Also see guidelines at [http://policies.uoregon.edu/vol-3-administration-student-affairs/ch-1-conduct/student-conduct-code](http://policies.uoregon.edu/vol-3-administration-student-affairs/ch-1-conduct/student-conduct-code) and information about plagiarism at [http://researchguides.uoregon.edu/citing-plagiarism](http://researchguides.uoregon.edu/citing-plagiarism).

**Inclusivity and Accessibility:** Freedom of academic inquiry, equity among our entire diverse array of students, and responsiveness to individual needs so that everyone is able to perform at their best are all core values for the UO and the Ocean Planet Team. Accommodations for documented disabilities will be made most easily if you let us know as soon as possible what accommodations are needed. For some accommodations, you may need register with the Accessible Education Center ([https://aec.uoregon.edu](https://aec.uoregon.edu)) but if any aspect of the course is causing difficulty of access for you, please speak to an instructor whether or not you are also working with the AEC. While we cannot all totally understand each other’s personal experiences, we can all work to eradicate discrimination and we can all share and benefit from each
other’s perspectives with respect and generosity. Courtesy and thoughtfulness will enrich our journey together this term, and are expected from everyone.

**Prohibited Discrimination and Harassment Reporting**
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](http://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 [respect.uoregon.edu](http://respect.uoregon.edu) or [aaeo.uoregon.edu](http://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](http://respect.uoregon.edu). Specific details about confidentiality of information and reporting obligations of employees can be found at [titleix.uoregon.edu](http://titleix.uoregon.edu).

**TEXTBOOKS:**

Required:
  - UO Bookstore
- *Whelks to Whales – R. M. Harbo – UO Bookstore
- SimULINK Voucher or online purchase of SimBio Virtual Labs - details for purchase shown below
- iClicker
- Additional Readings will be posted on Canvas.
- *On Reserve in Science Library
GETTING ACCESS TO ONLINE SimULINK – you must be registered by next Tuesday to receive full credit for the first discussion session.

It is important that you review the information below before you subscribe to the SimUText for Ocean Planet at University of Oregon. To avoid possible problems, do not wait until the last minute.

- CHECK YOUR TECH! Visit https://simutext.zendesk.com/hc/en-us/categories/200170134-Check-Your-Tech to confirm that the SimUText application will work on your computer, and/or to explore your options if there is a problem.
- If you purchased a SimUText Voucher from your bookstore, be sure to have it with you when subscribing, as you will need to enter your voucher code.
- When you are ready to subscribe and download installers, follow this link to initiate the process: https://www.simutext.com/student/register.html#/key/UdDv-M3z3-ehcd-4JAh-fRVZ
- After you have completed the subscription process, if you need to download the SimUText application installers again, you will be able to access them by logging into the SimUText Student Portal (https://www.simutext.com/student).

Save this email! Should you encounter problems, you may need your course-specific Access Key. It is: UdDv-M3z3-ehcd-4JAh-fRVZ

Problems or questions? Visit SimUText Support (http://simbio.com/support/simutext)