

# Course Info and Policies

**Course:** Bi357 (CRN 21778), Marine Biology, 4 credits, @ University of Oregon, Winter 2019.

**Instructor:** Dr. Lisa Munger [lmunger4@uoregon.edu](mailto:lmunger4@uoregon.edu)

**GE:** Caitlin Plowman [cplowman@uoregon.edu](mailto:cplowman@uoregon.edu)

**GE:** Lauren Rice [lnr@uoregon.edu](mailto:lnr@uoregon.edu)

**Lecture:** Tuesday & Thursday, 2:00 pm – 3:20 pm, Jaqua 101

**Lab:** Monday in Huestis 112, three sections:

10:00-11:50 am (21779)    12:00-1:50 pm (21780)    2:00-3:50 pm (21781)

## Office hours:

Lisa Munger: Thursday 3:45 pm – 5 pm, Klamath 32

Caitlin Plowman: Wednesday 10:00 - 11:00 am, Klamath 32

Lauren Rice: Tuesday 9:00-10:00 am, Onyx 275

**Important Dates:** (for add/drop dates, etc. see [Academic Calendar Winter 2019](#))

- Tues 08 Jan: first day of Bi357 **lecture**
- Mon 14 Jan: first day of Bi357 **lab**
- Mon 21 Jan: **no lab** -- holiday to honor Dr. Martin Luther King, Jr.
- Sat 16 Feb: field trip to OIMB – option 1
- Sat 02 Mar: field trip to OIMB – option 2
- Thurs 14 March: **last day** of Bi357 lecture
- Mon 18 March: final exam period for Bi357, 12:30 pm – 2:30 pm

**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, clicker polls, and team work. This course includes lectures, laboratories, and an all-day field trip to the Oregon Institute of Marine Biology.

## Required materials:

**iClicker:** Please bring your iClicker remote to every class. Register it prior to class via Canvas using the i>clicker 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. Something relatively sturdy with a true book bind (i.e., not a spiral-bound) is preferable.

**Readings:** There is no required textbook for this course. Instead, each week you will read a scientific paper relevant to what we're covering in class. These [Readings](#) and other resources will be posted in Canvas--> [Modules](#). The [Labs](#) also provide important background information that ties in with the course--please read them before lab section.


**Canvas:** The course website, schedule, readings, assignments, and quizzes will be accessible online via Canvas. **Please submit assignments in Canvas** unless otherwise specified. We may also use Canvas for discussions, sharing data, etc.

**Technology/Devices:** I usually encourage use of internet-enabled technology (smartphones, tablets, laptops, etc.). We will often use devices to look up information, record and share data, and take photographs. We may also utilize apps and software that are appropriate to what we're learning and doing.

*If reliable access to the internet and/or an internet-enabled device might be problematic for you, please let me know and we will work together to find solutions.*

Suggested resource (optional): *Whelks to Whales: Coastal Marine Life of the Pacific Northwest*. Harbo, R., 2nd Ed. 2011. A good field guide to PNW coast.

**Grading:** There are **100 points** available for you to earn in this course. **1 point = 1 % of your course grade**. Final letter grades will be assigned as follows: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 59% or less.

**Lab (25 pts):** You'll earn points in lab for **lab reports (15 pts)**, **peer reviews (6 pts)**, and your **lab notebook (4 pts)**. You will work collaboratively to collect data, write [Lab Reports](#), and design your own lab as part of the Term Project (see below). You will also offer constructive feedback on each others' lab reports via anonymous peer reviews (see [Bi357 PeerReview.xlsx](#) ). Lab notebooks will be evaluated at the midpoint and end of the term.

**Participation (20 pts):** You'll earn participation points for **in-class work + homework (18 pts)** and **flashcards (2 pts)**. In-class work and short homework assignments will be announced as we go. Flashcards are an ongoing assignment to help with recall after each lecture; see [Flashcards](#) for further detail.

**Midterms (20 pts):** There are **two written midterm exams** (10 pts each), to be given after weeks 4 and 9.

**Quizzes (16 pts):** Starting at the end of week 1, there will be a **weekly online quiz**, open in **Canvas** from **Friday 5 pm to Monday 10 am**. Quizzes will include material covered in lecture, readings, and pre-lab questions.

**Term Project (15 pts):** You will work with your lab team to design and carry out Lab 6. You will submit an **abstract** three weeks before the lab, revise if necessary, **collect data** during lab, and create a **scientific poster** showcasing your results to present at our Bi357 Poster Symposium (during the scheduled final exam period). See [Term project](#) for further detail.

**Field trip (4 pts):** Please attend **one** of the two field trips to OIMB and complete an individual write-up as well as a co-authored field trip report (same requirements as a lab report). We will tour the campus and Charleston Marine Life Center, and we will conduct field work in the rocky intertidal zone. Field trips are all day on Saturdays and are scheduled for 16-February or 02-March. Please sign up using the Canvas Appointment Scheduler.

### **Due Dates:**

Unless otherwise specified, weekly and ongoing due dates are as follows:

- Monday at 10 am: **Lab Reports** based on previous week's lab and **Quizzes**
- Wed and Fri at 5 pm: **Flashcards** based on previous day's lecture
- Sunday at 10 am: **Peer Reviews** (of lab reports)
- Tues or Thurs before class: any short assignments from lecture one week ago

### **Extensions/Late Work:**

You may request **ONE** extension or late submission (of up to 3 days) on any single **individual** assignment or work from a single missed class. **This does not apply to lab reports or the term project**—these **\*must\*** be submitted on time. If you feel you have further extenuating circumstances, please contact me.

**Inclusive and accessible classroom:** I strive to make this class inclusive and accessible for all learners. I encourage you to let me know if there are aspects of the instruction or course design that result in barriers to your participation, and I/we will work to find solutions. I also encourage you to explore the resources at the University of Oregon's [Accessible Education Center](#). They are located in 164 Oregon Hall, tel. 541-346-1155, email [uoaec@uoregon.edu](mailto:uoaec@uoregon.edu).

### **Learning Objectives (LOs):**

These are the skills and abilities that we will develop in class and lab, and that you will be asked to demonstrate on **assignments** and **exams**. LOs are further broken down within the [Modules](#), but in general they fall into three categories:

**Domain knowledge** – in which we build up core knowledge of content and concepts within marine biology and related disciplines.

- Identify marine organisms to major taxon (e.g. Phylum or below); and/or given the taxon, provide representative examples of organisms
- Construct phylogenies and map characteristic features of major groups
- 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

**Scientific skills** – in which we hone our abilities to carry out all steps of the scientific process and tasks that scientists do on the job.

- Interpret and synthesize scientific literature
- Formulate a research question and design a feasible study to investigate it
- Use proper lab or field equipment & techniques
- Collect data & observations in an organized, meticulous, repeatable fashion
- Analyze data using appropriate quantitative methods
- Create clear and informative graphs, tables, and other data products
- Write scientific articles suitable for publication in a peer-reviewed journal
- Evaluate the work of your peers and provide constructive feedback

**Transferable skills** –in which we develop essential career skills such as collaboration, project management, and problem solving, which will serve you in any field.

- Cultivate an inclusive, safe, and motivational work environment
- Work as a team to manage a project from start to finish—brainstorm ideas, set goals and timelines, solve problems, and produce deliverables you are proud of
- Facilitate productive discussions and meetings
- Synergize the unique skill sets, interests, and perspectives of each person
- Embrace the “negatives” (mistakes, constructive criticism, etc.) as well as the positives—they are all our teachers
- Exercise metacognition—reflect on your own learning and thinking process

**What to expect in this class:**

**Lecture:** Please complete the *readings, videos, and other research* on your own (see [Modules](#)) and be ready to discuss these in lecture. **Lecture slides** will be posted in Canvas prior to class. They are designed to be prompts, not complete information sources, so it is **important for you to attend class** to fill in the gaps. You will also be asked to turn in some **in-class work** for **Participation points**, which may include brief written assignments, problem-solving on whiteboards, clicker poll questions, screen shots from laptops/tablets, etc.

**Lab:** Please read the **lab guide BEFORE** coming to lab on Monday. As a reminder, the weekly **Quiz**, due by 10 am each Monday, will include **pre-lab** questions. In lab, you will usually be working in teams of 2 or 4 to collect data. The labs are full to capacity; please

be respectful of the equipment and those around you. If you finish early, we **highly recommend** that you use the remaining time to **meet with your team** to **collaborate** on lab reports and the **term project/lab 6 design**.

**Homework:** In addition to flashcards, there may be **short homework assignments** that will earn you **Participation points**--these might include brief presentations, media article critiques, questionnaires, etc. Specific instructions TBA.

**Code of Conduct:** We will work together to set course expectations and create an environment that fosters scholarship and integrity. In addition, please take the time to learn about the University of Oregon's policies for [Student Conduct](#).

### Lecture Schedule:

Module I: The Container                      08 Jan, 10 Jan, 15 Jan

Module II: Let's Get Small                      17 Jan, 22 Jan, 24 Jan

Module III: Bigger and Benthic                      29 Jan, 31 Jan

#### **05 Feb – Midterm 1**

Module III: B&B cont'd                      07 Feb, 12 Feb, 14 Feb

#### **Sat, 16 Feb—Field Trip 1**

Module IV: The Pelagic Realm                      19 Feb, 21 Feb, 26 Feb

Module V: Marine Megafauna                      28 Feb

#### **Sat, 02 Mar—Field Trip 2**

Module V: MM, cont'd                      05 Mar, 07 Mar

#### **12 Mar- Midterm 2**

Flex Day: 14 Mar

#### **18 Mar - Final Poster Symposium**

**12:30 – 2:30 pm, Knight Lib 41 & 42**

### Lab Schedule:

07 Jan                      No lab

14 Jan                      Lab 1: Intro to Plankton & Bioluminescence

21 Jan                      No lab (holiday)

28 Jan                      Lab 2: Local Plankton

04 Feb                      Lab 3: Macroalgae

*Abstracts due - Lab 6 design*

11 Feb	Lab 4: Sponges, Cnidarians, Tunicates
18 Feb	Lab 5: Mollusca, lab notebook check
25 Feb	Lab 6: Student-Designed Lab
04 Mar	Lab 7: Fish dissection
11 Mar	Lab 8: Marine Mammal Acoustics