

Marine Biology, Laboratory (BIOL 32L)

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Schedule: Monday 5:10-8pm (in **STEAM 303**), field trip dates on Fridays and are noted in the course outline

Learning Outcomes:

In this course, we will expand on the topics covered in BIOL 32 through hands-on exploration in the laboratory, museums and in the field. We will take a survey and experimental approach to these topics. Upon completion of this course, a student will be able to:

1. Recognize the differences between information gained through scientific inquiry versus non-scientific inquiry.
2. Apply an understanding of science and natural principles to modern life so students may critically analyze and understand information affecting their surroundings.
3. Dissect and identify the external and internal anatomy of common marine organisms.
4. Form hypotheses about marine-related scientific questions, design & execute experiments to test hypotheses.

Required Material:

- This course does not have a required text or manual.
- Canvas account for our tech-enhanced course. Material supplementing laboratory exercises and field trips will be posted on the course CANVAS site. There are several computer labs with printers and internet access on campus. Check out these [computer lab locations](#) if they will help you!

Attendance:

Attendance is mandatory for each laboratory. You are required to attend all five field trips. Be prepared for variable weather and wear sturdy footwear. Because of the geography of the natural areas that we will be visiting, however, not all will be fully accessible or ADA compliant. Please arrive on time, as laboratories and field trips start promptly, and complete the assigned reading **before** attending a class meeting. If you have a conflict with a field trip date, please let the instructors know ahead of time to arrange alternative arrangements. Please note, that you can attend any of the "self-guided" field trips whenever it fits your schedule, it does not have to be on the date noted in the schedule.

Exams:

All testing accommodations will follow pre-approved DSPS guidelines and regulations. No makeup exams will be given. NO electronic devices or dictionaries are permitted. No talking or engaging with other students is allowed during exams. All questions should be directed to the instructor. No bathroom breaks will be permitted. Anyone observed cheating or looking at a peer's exam during that exam will be allowed to complete the exercise but will receive zero points for that entire exam. You will be able to use your laboratory notebook while taking the exams.

Laboratory Notebook:

Each student will keep a laboratory notebook. This notebook will serve as a record of laboratory exercises and field trips in addition to serving as a study guide for the exams. The notebook will consist of a collection of your lab exercises, observations and any other useful notes. The notebook format may consist of any hardcopy collection (binder, folder...), but digital notebooks will not be allowed in the examinations.

Grading Criteria:

Your final letter grade will be determined by the following course components (percentage breakdown for final grade):

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|--------------------|-----|
| • Midterm 1 | 30% |
| • Field Trip Final | 70% |

Final grades are based on points accumulated and the following criteria: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = <60%.

CANVAS

In this tech-enhanced class, announcements, assignments and other important information will only be available through CANVAS (the course can be located in the "Courses" tab located in the left sidebar). To access the course:

- Go to <https://ccsf.instructure.com>
- Username: CCSF ID, examples: W12345678 or @12345678
- Password: your RAM ID password ([claim your RAM ID here](#))

Course Outline

The outline below is tentative and may change. Do not rely solely on this outline when studying for exams. Modifications to this outline will be noted in class. You will participate in the lab through in-person lab activities and in-person field trips.

You are required to attend all of the 5 field trips (shown in italicized bold, if unable to attend contact instructors for a possible alternative).

Date	Topics (see CANVAS for lab/field handouts)
Jan 12	Introduction
Jan 19	Holiday
Jan 26	Ocean Physics
Feb 02	Microorganisms & Primary Producers
Feb 06 (Friday)	<i>Año Nuevo State Park Field Trip</i> (9am-12:30pm)
Feb 09	Invertebrates
Feb 16	Holiday, No Class
Feb 23	Vertebrates
Mar 02 (5:10-7pm, in-person)	Exam 1 (Ocean Physics, Diversity & Taxonomy, <i>doesn't include Año FT, Lauritzen</i>)
Mar 09 (self-guided*)	<i>Marine Mammal Center Field Trip</i> (self-guided*)
Mar 16	No Class (field trip make-up time)
Mar 23 (self-guided*)	<i>California Academy of Sciences Field Trip</i> (self-guided*)
Mar 30	No Class—Spring Break
Apr 06	No Class (field trip make-up time)
Apr 13	No Class (field trip make-up time)
Apr 24 (Friday)	<i>Pillar Point Field Trip</i> (10am-1:30pm, -0.3 ft at 11:55am)
April 27	No Class (field trip make-up time)
May 08 (Friday)	<i>Monterey Bay Field Trip</i> (10am-3pm)
May 04	No Class (field trip make-up time)
May 11	Optional Review 5-5:30pm (via zoom, find link in Canvas)
May 18 (5-11PM, online)	Exam 2 (all field trips—online; 120 min. to complete the exam)

** attend "self-guided" field trips when you can, you do not have to attend on the date noted on schedule.*

Student Conduct

You are expected to know and observe all rules of student conduct (refer to the CCSF catalog). Students found cheating will be penalized and may be given a failing grade. Plagiarism will not be tolerated and student work that is plagiarized will not be accepted. In class, we will discuss plagiarism and your responsibility in preparing reports that avoid this unethical behavior. The use of any telephone or electronic devices is not allowed. It is the responsibility of each student to come to class ready to learn and participate. Please let us know promptly if there are constraints to your participation in this course (attendance, trouble with assignments, personal matters) during the semester. Students at City College of San Francisco have the right to an environment in which there is freedom to learn. The College believes that each student has an earnest purpose and that he/she will adhere to acceptable standards of personal conduct. We believe students deserve a safe, civil and respectful environment that will enable them to reach their full potential. To this end, we expect students to assist us in this mission. Promptly report any concerns or observations you have to your instructor or appropriate authorities. We value your assistance and take your concerns seriously. We will treat such matters as confidential to the fullest possible extent. As a college student, it is your responsibility to maintain the highest standards of academic integrity. Representing work generated by artificial intelligence as one's own work is considered to be academically dishonest. This includes (a) ensuring that all work submitted for grades is your own original work, and (b) properly citing any sources that you use.

Academic Environment

Students at City College of San Francisco have the right to a safe, civil, and respectful environment in which there is freedom to learn. Please assist the faculty, staff and your fellow students in maintaining this environment.