Twin Cities Campus

Marine Biology Minor

College of Biological Sciences - Adm

College of Biological Sciences

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2023
- Required credits in this minor: 23 to 28

Marine biology aims to understand all aspects of organisms that live in the seas, from their molecular composition and biochemistry, to how they comprise ecosystems. Consistent with this breadth, the proposed marine biology minor is an interdisciplinary curriculum through which students learn foundational concepts of marine biology, and gain perspectives about current issues that affect marine environments. Given that 71% of our planet is covered by oceans, and 95% of the readily available water is present in oceans, understanding marine chemistry, organisms, and ecosystems is an important, interdisciplinary goal. Through a combination of courses, laboratories, field-trips, internships, and study abroad experiences, students who complete the minor will gain knowledge and skills that will enrich their lives, as well as provide a base for subsequent study in marine biology.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Admission Requirements

Students must complete 3 courses before admission to the program.

Students who have at least a 2.0 average in their math and science courses, and who have completed the following courses, will be eligible for admission to the minor.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Prerequisites

Biology course

BIOL 1001 - Introductory Biology: Evolutionary and Ecological Perspectives [BIOL] (4.0 cr)
or BIOL 1003 - Evolution and Biology of Sex [BIOL] (4.0 cr)
or BIOL 1009 - General Biology [BIOL] (4.0 cr)
or BIOL 1012 - Human Biology: Concepts and Current Ethical Issues [BIOL, CIV] (4.0 cr)
or BIOL 1055 - Environmental Biology: Science and Solutions with Laboratory [BIOL, ENV] (4.0 cr)
BIOL 1951 - Foundations of Biology Lecture I for Biological Sciences Majors [BIOL] (4.0 cr)
or BIOL 1951H - Foundations of Biology Lecture I for Biological Sciences Majors [BIOL] (4.0 cr)
BIOL 1961 - Foundations of Biology Lab I for Biological Sciences Majors [BIOL] (2.0 cr)

Chemistry

CHEM 1081 - Chemistry for the Life Sciences I [PHYS] (3.0 cr)
CHEM 1065 - Chemical Principles I Laboratory [PHYS] (1.0 cr)
or CHEM 1061 - Chemical Principles I [PHYS] (3.0 cr)
CHEM 1065 - Chemical Principles I Laboratory [PHYS] (1.0 cr)
or CHEM 1071H - Honors Chemistry I [PHYS] (3.0 cr)
CHEM 1075H - Honors Chemistry I Laboratory [PHYS] (1.0 cr)

Minor Requirements

The marine biology minor is available to to students in the College of Biological Sciences pursuing another major in the college as well as to non-CBS students. Students must take at least one 4xxx or 5xxx course.

Students who wish to declare a minor in marine biology can do so online at the College of Biological Sciences website.

Directed research and internship credits earned for experiences that are directly marine biology related may be considered for inclusion in the elective category by petition.

Marine Biology Core

The marine biology core courses provide an overview of the chemistry and biology of marine organisms and marine environments.

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ESCI 1006 is recommended to fulfill the Oceanography requirement.
Note that BIOL 2007 has a pre or co-requisite of BIOL 2005 or BIOL 3012.
FW 2003 - Introduction to Marine Biology (3.0 cr)
BIOL 2007 - Marine Animal Diversity Laboratory (1.0 cr)
BIOL 2005 - Animal Diversity Laboratory (2.0 cr)
or BIOL 3012 - Animal Diversity and Evolution (4.0 cr)
ESCI 1006 - Oceanography [PHYS, ENV] (4.0 cr)
or ESCI 1106 - Oceanography [ENV] (3.0 cr)

Marine Biology Elective Courses

Students will select marine biology-related courses such as the ones listed below. Approval of elective courses will be at the discretion of the Director of Undergraduate Studies.
Take 6 or more credit(s) from the following:
- BIOL 4590 - Coral Reef Ecology (2.0 cr)
- CFAN 3502 - Bahamas--Tropical Marine Biology and Shark Ecology (2.0 cr)
- CFAN 3529 - From Rainforest to Reef: Wildlife Medicine and Conservation in Belize [GP, ENV] (3.0 cr)
- CFAN 3522 - Sustainable Akumal: Turtles, tourists, cenotes and coral reefs [GP, ENV] (3.0 cr)
- EEB 4611 - Biogeochemical Processes (3.0 cr)
- ESCI 4402 - Biogeochemical Cycles in the Ocean (3.0 cr)
- ESCI 4801 - Geomicrobiology (3.0 cr)
- FW 4107 - Principles of Fisheries Science and Management (3.0 cr)
- FW 4136 - Ichthyology (4.0 cr)
- FW 4401 - Fish Physiology and Behavior (3.0 cr)
- GCC 3038 - Human Threats to Ocean Health [ENV] (3.0 cr)
- Take 0 - 1 course(s) from the following:
  - EEB 5601 - Limnology (3.0 cr)
  - ESPM 4061W - Water Quality and Natural Resources [ENV, WI] (3.0 cr)

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