

MARINE BIOLOGY (M.S.)

<https://colsa.unh.edu/biological-sciences/program/ms/marine-biology>

Description

The Marine Biology (MB) option is intended for students interested in marine, coastal, and estuarine ecosystems, and the organisms that inhabit them, at all levels of inquiry. Some UNH faculty use marine organisms as model systems for molecular phylogeny, cellular metabolism, and neurobiology, while others study the structure and function of marine ecosystems. Some faculty members focus primarily on basic research# others work in applied areas such as aquaculture and fisheries# many combine the two. Students who have earned advanced degrees at UNH lead agencies involved in managing valuable marine resources, teach marine biology in academic and public settings, own aquaculture companies, or earn a living as researchers. In addition to on-campus facilities, UNH owns the [Coastal Marine Laboratory](#) and the [Jackson Estuarine Laboratory](#), and a range of research vessels. UNH has an excellent SCUBA diving program for students interested in becoming certified to dive as part of their research. The Marine Biology option is also affiliated with UNH's [School of Marine Sciences and Ocean Engineering](#).

Requirements

M.S. Degree Requirements

Students plan a program of study in conjunction with their advisor and Master's Thesis Committee, including the required core courses and competencies. Completion of at least **30 credits**, including research credits, is required. A thesis proposal is developed within the first year. Students complete thesis research for 6 to 10 credits# the degree is completed when results are acceptable, a formal thesis presentation and defense has occurred, and the thesis is approved by the Master's Thesis Committee and accepted by the Graduate School.

Number of Credits Required

The M.S. degree requires completion of a minimum of **30 credits**, 6-10 of which may be earned for thesis research (BIOL 899 Master's Thesis). The Marine Biology Graduate Program specifies the following requirements: (BIOL 901 Introductory Graduate Seminar); 2 courses in contemporary techniques competency - one course must be quantitatively-based; 1 course in writing/communication; 1 marine-based course; and a field experience requirement that can be fulfilled either via coursework or by work related to the thesis.

Up to 8 credits of graduate credit from another institution may be transferred, provided the credits were not counted toward another degree, and the course grade was a B or higher. Petitions requesting transfer credit must be supported by the advisor and graduate committee, and approved by the UNH Graduate School.

Students admitted via the Accelerated Master's (AM) process may apply up to 12 credits of prior upper-level UNH coursework in accordance with AM policies.

Required Courses, Competencies, and Electives

All students in the Marine Biology Graduate Program are required to take:

1. Core Course: Introductory Graduate Seminar (BIOL 901), this first-semester course focuses on key information and skills for a successful transition into the graduate program, familiarizing students with program requirements and faculty and providing an opportunity to meet others in their cohort.
2. Two courses in contemporary techniques: Students must take two courses in this competency category, with one course needing to be quantitative. Students should consult with their advisor or the graduate program coordinator to determine the courses that fulfill this category.
3. One course in writing/communication: This may be fulfilled by previous graduate coursework (as determined by the student's advisor and committee), or by taking one graduate-level course. Recommendations often include coursework in professional writing and communication: Scientific Writing - Writing and Publishing Science (BIOL 902 Writing and Publishing Science) is taught fall semester, and open to students at any stage of the program. Scientific Communication edited Course (BIOL 950 Scientific Communication) is usually taught in spring.
4. One marine-based course: This may be fulfilled by previous graduate coursework (as determined by the student's advisor and committee), or by taking one graduate-level course that has a marine focus.
5. Field requirement: This requirement may be fulfilled by either taking a graduate-level course that has a significant field component as part of the course, or by conducting field research in support of the student's thesis research.

Additional Information/Requirements

All students in the Biological Sciences Program are expected to present their research in public seminars (including the UNH Graduate Research Conference), and acquire teaching and/or mentoring experience.

Accelerated Master's

This graduate program is approved to be taken on an accelerated basis in articulation with certain undergraduate degree programs.

[General Accelerated Master's policy](#), note that some programs have additional requirements (e.g. higher grade expectations) compared to the policy.

Please see the [Graduate School website](#) and contact the department directly for more information.

Student Learning Outcomes

- Core Knowledge: Demonstrate advanced knowledge of the subdiscipline relevant to their research project and general knowledge of the broader discipline of marine biology.
- Critical Thinking: Critique and evaluate qualitative and quantitative biological research and methods to develop novel hypotheses.
- Research: Apply knowledge of research methods and data analysis techniques to conduct a research project that addresses a gap in the field.

- Communication: Effectively communicate scientific information, concepts, theories, and methods to professional colleagues (specialists), invested parties, and the general public.
- Professionalism: Conduct research ethically and responsibly and intellectually engage with the broader scientific community.