

Marine Biology

College of Fisheries and Ocean Sciences

Marine Biology Department (<https://www.uaf.edu/cfos/academics/departments/marine-biology/>)
907-474-7210

Department Overview

The Marine Biology Department is an academic and research group with faculty who work on the ecology, physiology and biochemistry/molecular biology of marine organisms, and investigate their interaction with the environment. Climate change research is a focus of many of our faculty. We focus primarily on Alaska and high-latitude systems, working from shore-based labs and oceanographic vessels with local community assistance.

B.S., Fisheries and Marine Science

The undergraduate program in the College of Fisheries and Ocean Sciences offers students a broad education and training in fisheries biology, ecology, marine biology, oceanography, and related fields. In addition to rigorous scientific coursework, students engage in internships or research projects with professionals from various organizations, including local, state, federal, tribal, university, and private sectors.

The B.S. degree in fisheries and marine sciences prepares graduates for careers as professionals in fisheries and aquatic management, research, conservation, education, policy, and industry organizations. Typically, graduates secure employment with governmental agencies, nongovernmental organizations, and academic institutions, both in Alaska and throughout North America. The program also provides a solid foundation for pursuing related graduate studies that will enable entry into careers in advanced research, management, administration, and teaching roles.

The undergraduate program is administered through the Fairbanks campus, and all fisheries and marine sciences courses (excluding field courses) are offered via distance education to accommodate students in outlying areas.

Minimum Requirements for Fisheries and Marine Sciences Bachelor's Degrees: 121 credits

Learn more about the bachelor's degree in fisheries and marine sciences (<https://uaf.edu/academics/programs/bachelors/fisheries-marine-sciences.php>), including an overview of the program, career opportunities, and more.

M.S., Ph.D., Marine Biology

The marine biology graduate program focuses on the biology, ecology, physiology and biodiversity of marine organisms. Students may pursue either an M.S. or Ph.D. degree in marine biology. Our graduate students are afforded excellent opportunities for laboratory and field research. Our faculty conduct research in Fairbanks, the Kasitsna Bay Laboratory near Homer, the Juneau College of Fisheries and Ocean Sciences at Lena Point, the Seward Marine Center and the Alaska SeaLife Center. Students may conduct fieldwork in a variety of locations, including but not limited to the Beaufort and Chukchi seas, the Aleutian Islands and other coastal areas around Alaska. Our college also operates the coastal research vessel *Nanuq* and the ice-capable *Sikuliaq*, a University-National Oceanographic Laboratory System vessel.

Students considering graduate study in marine biology should have a strong background in biology, molecular biology, biochemistry, ecology, evolution or a related field. Students are admitted on the basis of their academic qualifications, research experience and the ability of the program to provide mentorship in their particular area of research interest. The Marine Biology Department is an equal-opportunity program, and we encourage students from diverse backgrounds to apply. We review requests for admission throughout the year. Students must contact potential faculty advisors before applying.

Minimum Requirements for Marine Biology Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

M.M.S., Marine Studies

The M.M.S. degree offers a broad degree program, which can include topics such as marine ecology, organismal biology, ecosystem processes and oceanography. Students will select courses offered by the graduate program in marine sciences and limnology and a variety of electives, which can also be from the fisheries program or the statistics or biology and wildlife departments. While the M.M.S. degree is primarily based on a project instead of a research-oriented thesis, M.M.S. graduate students still are afforded excellent opportunities for laboratory and field experiences through the Institute of Marine Science. Laboratory facilities are available in Fairbanks, the Seward Marine Center, the Juneau Center and the Kasitsna Bay Laboratory.

Students considering an M.M.S. degree should have a strong background in the various fields of oceanography, ecology, biology, molecular biology or biochemistry. Students are admitted on the basis of their ability and the capability of the program to meet their particular interests and needs. Faculty review requests for admission throughout the year. There is no financial support for students in this program.

Minimum Requirements for Marine Studies Master's Degree: 30 credits

Minor, Marine Science

The marine science minor is available to students in all degree programs. Students explore concepts in all areas of marine science (biological, chemical, physical and geological) and can obtain practical expertise through elective field courses. The minor is particularly useful to students in disciplines such as earth sciences, biology and wildlife, environmental science, political science, engineering, resource management and education, as these students will benefit from knowledge of the marine system for possible career paths in resource management, the seafood industry, education, instrumentation engineering, policymaking, etc.

Students who complete the minor in marine science will possess a knowledge base and skill set that will make them more competitive for a wide variety of agency and organization positions, particularly within coastal states. The education and training will be applicable to jobs within government management agencies such as the Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service, as well as Alaska Native organizations, nonprofit conservation organizations, the seafood industry, the tourism industry, or in other policy development, fisheries, education or outreach capacities.

The College of Fisheries and Ocean Sciences also offers a B.S. degree in Fisheries and Marine Science (<https://catalog.uaf.edu/bachelors/>)

fisheries-bs/) with optional concentrations in fisheries, marine biology or oceanography.

Programs

Degrees

- B.S., Fisheries and Marine Sciences (<https://catalog.uaf.edu/bachelors/fisheries-bs/>)
- M.M.S., Marine Studies (<https://catalog.uaf.edu/masters/marine-studies/>)
- M.S., Marine Biology (<https://catalog.uaf.edu/masters/marine-biology/>)
- Ph.D., Marine Biology (<https://catalog.uaf.edu/phd/marine-biology/>)

Minor

- Minor, Marine Science (<https://catalog.uaf.edu/minors/marine-science/>)