

College of Natural Sciences, Forestry & Agriculture

Contact

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Admission Requirements

(In years as established by the college)

A high school diploma with the following specific courses:

- 4 English
- 2 Algebra I & II
- 1 Geometry
- 2 Lab Science (*biology & chemistry or physics*)
- 2 History/Social Studies
- Academic electives (*to equal at least 17 total credits*)

To ensure current mathematical skills, students should take a mathematics course during their senior year of high school.

Major Requirements

Aquaculture

- 27 credits Biology & Marine Biology
- 20 credits Chemistry & Physics
- 6 credits Communications
- 24 credits Aquaculture
- 7 credits Mathematics & Statistics

Marine Biology (minimum)

- 27 credits Biology & Marine Biology
- 20 credits Chemistry & Physics
- 6 credits Communications
- 13 credits Oceanography & Marine Science
- 7 credits Mathematics & Statistics

Physical Science

- 21 credits Chemistry & Physics
- 6 credits Communications
- 11 credits Mathematics & Statistics
- 19 credits Oceanography & Marine Science
- 24 credits Other Sciences (*including disciplines listed above*)

120 Minimum total credit hours required for graduation

Program Description

The University of Maine's Marine Science curriculum is designed to provide students with a fundamental understanding of the world's oceans and marine organisms. Marine Science is a rich and diverse discipline which emphasizes an interdisciplinary approach that includes elements of biology, chemistry, physics, geology, oceanography, mathematics and other sciences. Within the Marine Science degree, students can select the basic degree with no concentration, or they can choose from one of three specialized concentrations: aquaculture, marine biology, or physical science. All four options have a common core, allowing students to wait until their sophomore year before deciding which option to choose.

The basic Marine Science degree (without a concentration) gives an overview of the field of marine science and provides a background in the areas of the biology, chemistry, geology, and physics of the marine environment. This option requires six less credits at the upper level and students are not required to take organic chemistry.

The aquaculture concentration focuses on the biology, nutrition, and production of finfish and shellfish. Students also learn about aquaculture engineering and the economic issues related to aquaculture.

The marine biology concentration provides a rigorous education in biology, equivalent to a B.S. degree in biology. It focuses on the biology of marine organisms such as algae, invertebrates, fish and mammals.

The physical science concentration provides a solid foundation in chemistry, mathematics and physics, and allows the student to specialize in a range of sub-disciplines, including chemical and physical oceanography or marine geology.

Students are assigned a faculty member as an academic advisor who works closely with them to choose courses consistent with their interests and ultimate career goals.

Career Opportunities

Because a flexible, broad-based interdisciplinary education in science will be the key to success in the new millennium, the School of Marine Sciences expects its Marine Science graduates will be in demand by a wide range of employers. The exact opportunities depend upon the degree track chosen, the selection of courses and the extent of post-graduate education.

Marine Science graduates are able to compete for jobs in education at academic institutions ranging from high schools to universities and colleges. Others will find employment in scientific research as consultants, scientists and administrators in government regulatory agencies (e.g., Maine's Department of Marine Resources, National Oceanographic and Atmospheric Administration, and the National Marine Fisheries Service) and in a variety of marine-related industries and services.

Many of these opportunities require post-graduate education at the M.S. or Ph.D. level. MAINE's Marine Science degree provides an excellent preparation for graduate research in oceanography, marine biology and other scientific disciplines. Our graduates are competitive for admission to the best post-graduate programs nationwide.

General Education Requirements*

ENG 101	College Composition
18 credits	Human Values & Social Context area (<i>a single course may satisfy more than 1 sub-category, but a total of 18 credits must be completed</i>) <ul style="list-style-type: none">Western Cultural TraditionSocial Context & InstitutionsCultural Diversity & International PerspectivesPopulation & the EnvironmentArtistic & Creative Expression
2 courses	Designated Writing Intensive (<i>1 must be within the major</i>)
2 courses	Biological or Physical Sciences (<i>must include at least 1 laboratory course</i>)
1 course	Ethics (<i>emphasis on discussion of ethical issues in 1 course or series of courses</i>)
6 credits	Mathematics (<i>including statistics & some computer science, only 3 credits in computer science can count toward this requirement</i>)
1 capstone	An approved experience in which the student integrates the components of his or her undergraduate training to perform at a professional level. The capstone experience is usually completed during the senior year in consultation with the student's academic advisor.

**All UMaine students must complete these general education requirements, which are counted in the total credit hours required for graduation and may be contained in the Major Requirements previously listed.*

Specialized Information

Many School of Marine Sciences courses are offered and opportunities for independent study exist at the University of Maine's Ira C. Darling Marine Center located in Walpole, Maine. Under the New England Regional Student Program, administered through the New England Board of Higher Education, the Bachelor of Science degree in Marine Science is open to applicants who reside in Connecticut or Vermont for reduced tuition (in-state tuition plus 50 percent).

Graduate Study

The School of Marine Sciences offers the Master of Science and the Doctor of Philosophy degrees in Oceanography. The School also offers a Master of Science and a Doctor of Philosophy degree in Marine Biology, a Master of Science degree in Marine Policy and a dual Master of Science degree in Marine Sciences and Policy.

Academic Programs 2008-2009

Please refer to the web site (<http://factsheets.umaine.edu/>) for the most updated version of the fact sheets.
This fact sheet is intended for informational purposes only and is subject to change.