

Appendix Six

MARINE SCIENCE AND TECHNOLOGY IN NEW ENGLAND – EDUCATIONAL PROGRAMS

About 25 colleges and universities in Massachusetts offer marine-related programs, as do another 20 institutions in Maine, Vermont, New Hampshire, Connecticut and Rhode Island. These educational institutes offer a total of 116 marine educational programs in New England, which vary in their focus on marine-related subject matter, degrees offered and institutional administration.

The most frequent degree offered is in Marine Biology, either as its own program or as a concentration within the biology discipline. There are 21 Marine Biology programs in New England, offering an associates, bachelors, masters or doctorate degrees in Biology or Marine Biology. Other popular programs include Marine Science, Oceanography and Earth or Environmental Science with a concentration in Marine Science.

There are also a number of engineering programs, geology programs and chemistry programs related to oceanography or marine science, most of which are a concentration or specialization within a larger department. Aquaculture and Fisheries-related programs are noted, with the majority of them offered in northern New England. Programs related to wetlands and water resources are also more common in northern New England.

In addition to the majority of science-concentrated marine programs, a few institutions offer more interdisciplinary programs related to marine policy and environmental protection, such as the University of Maine's dual degree program in Marine Policy and Marine Science and Brown University's graduate program in Environmental Studies, with a concentration in Marine Science and Policy.

The degrees offered in marine-related programs vary from an associate's degree to a Ph.D. and some of these programs also offer a minor. The majority of the programs offer a science degree, yet there are a few programs that offer degrees in the arts: UMass Boston offers a Master of Arts in Environmental Coastal and Ocean Sciences; Boston University offers a Master of Arts in Earth Sciences, with a specialization in Geological Oceanography; College of the Atlantic in Maine offers a Bachelor of Arts in Human Ecology for its Marine Studies program; Brown University, the University of New Hampshire and Southern Connecticut State also offer degrees in the arts.

Most of the programs are administered exclusively through one institution, but a number of joint programs exist between educational institutions or research institutes. Massachusetts has four joint programs, encompassing sixteen different institutions. MIT and the Woods Hole Oceanographic Institute offer both masters degrees and PhD's in seven different academic areas. The Five College Coastal and Marine Sciences Program

is based in Western Massachusetts and allows students to take interdisciplinary marine-related courses at five different colleges, although it does not offer any degree program. The University of Massachusetts has an Inter-Campus Graduate School of Marine Sciences and Technology, which enables students to utilize the resources and faculty from four of the University of Massachusetts campuses. Finally, the Marine Biological Laboratory in Woods Hole offers a semester in Environmental Science to seven participating Massachusetts colleges and universities, though they do not grant degrees.

Rhode Island offers a joint program between Brown University and the Marine Biological Laboratory at Woods Hole. Ten degrees in seven disciplines are offered through this partnership. Finally, Roger Williams University offers a Marine Biology Camp during the summer months, open to all eligible high school students.

Most of the employees are faculty, with a small percentage in departmental and program staff or research-related positions. While the number of employees may vary depending on the size of the educational institution, marine-related programs offered as a concentration tend to have fewer than ten employees. Independent degree-offering programs, especially graduate degrees, tend to have ten or more employees.