

Descriptions for Aquaculture Courses

Introduction to Aquaculture (BIO203) -- Students explore the biological, sociological and economical constraints to the culture of finfish and shellfish. Procedures used to culture finfish and shellfish commercially in the United States are emphasized, although globally important species and procedures are covered. Where appropriate, locally important species are used to illustrate important concepts and effective techniques. Instruction is through lectures, discussions, and occasional required weekend field trips. Three lecture hours per week.

Aquaculture Methods (BIO205) -- Students learn how to sample and process fish and to monitor their culture environment. Water quality, proper nutrition, and prevention and control of parasites/pathogens are examined. Proper use and storage of equipment and supplies are practiced; importance of good record keeping and use of computers in aquaculture are emphasized. One or two weekend field trips may be required. One lecture hour and one three hour laboratory per week.

Fish Biology (BIO323) -- Students will explore the structure, systematics and function of fishes. The biology of locally important species is emphasized, but the global diversity of freshwater and marine fishes is examined. Instruction is through lectures, discussions, and hands-on experiences that include dissection, use of dichotomous keys, and developing/conducting an experiment examining in-depth the physiological function of at least one organ system. Required weekend field trips may be scheduled. Three hours lecture and one three hour laboratory per week.

Advanced Aquaculture (BIO403) -- Lecture course that examines specific requisites to developing and operating a commercial aquaculture facility in Massachusetts or elsewhere in New England. Finfish and shellfish culture techniques, permit requirements, and marketing considerations are detailed. New developments and networking opportunities with academic, industry and agency resources are described. Guest lectures by practicing aquaculturists and representatives from support industries and regulatory agencies may be anticipated. One or two field trips to commercial operations and/or prospective sites may be required. Three lecture hours per week.

Aquaculture Internship (BIO422) -- An opportunity for students to gain practical or technical training in the husbandry of aquatic animals and plants at facilities such as commercial operations, state/provincial/federal hatcheries, zoos or aquariums, and research stations. The student makes necessary arrangements with the chosen facility, in consultation with an appropriate faculty member. Open only to Junior or Senior Biology Majors.