



Stony Brook

Program leading
to the M.S. in
Marine Environmental
Studies

State University
of New York
at Stony Brook

Marine Environmental Studies Program

Designed for practicing professionals and recent college graduates with varied academic backgrounds, the Program offers a comprehensive view of the diverse factors affecting our marine environment. By examining that environment alternately through the eyes of marine physicists and biologists, political scientists, lawyers, sociologists and economists, the student develops the flexible and diverse viewpoint so necessary to wise environmental management. From first-hand experience he learns the theoretical concepts and research techniques on which practical decisions about the marine environment should be made. Graduates of the Program will be uniquely qualified for leadership positions in such rapidly emerging marine fields as coastal management, environmental monitoring and protection and resource development.

To encourage professionals in government, industry, secondary education and the health fields to enter the Program, university residency requirements have been waived to allow enrollment on a part-time basis. All Program courses, with the exception of weekend field work, will be given evenings.

Curriculum

The Program's approach is interdisciplinary and problem-oriented, rather than specialized and highly theoretical. Instruction consists of conventional courses, case studies, field work, and preparation of a research paper.

Courses offered by the Marine Sciences Research Center cover such subjects as physical oceanography, marine biological communities, political and legal aspects of marine resource management, marine research instrumentation, socio-economic aspects of the coastal zone, and fisheries research and management. Students may also elect courses given by other departments; as for example, biological sciences, economics, political science, engineering and sociology. Using the case study method, students explore current problems in such areas as the marine environment generally, marine resources management, and the human impact on particular coastal waters. Students help staff scientists of the Marine Sciences Research Center collect field data in their respective investigations. At present these studies include thermal pollution, fish behavior in polluted water, hydrographic characteristics of impacted estuaries, distribution of zooplankton, biological effects of stable pollutants, temperature and salinity effects on fish eggs and larvae, solid

waste disposal in coastal waters, geochemical effects of dumping industrial wastes, and a systems analysis of the waste transport industries. Students base their research papers on aspects of the field work done for these ongoing investigations.

Facilities

Classrooms and laboratories of the Marine Sciences Research Center constitute the primary facilities for the Marine Environmental Studies Program. The Center operates laboratories in marine physics, chemistry, biology and geology. Laboratories in other university departments are used when needed.

Opportunities for field work are numerous and diversified, using facilities of the Center and nearby institutions. Students have access to Flax Pond, a 160-acre salt marsh opening into Long Island Sound, and the use of a 40-foot research vessel that ranges from New York Harbor to Peconic Bay. For off-shore research, time is available on 140- and 185-foot vessels operated for the federal Sea Grant Program by Cape Fear Technical Institute.

Through affiliations with other institutions, the Center offers field work at Cedar Beach Laboratory in Southold — where Suffolk County Community College conducts research into natural marine products and aquaculture — and at New York Ocean Sciences Laboratory in Montauk, which is developing a deep-water oceanographic research program.

To support field and scholarly research, there is a university-wide computer center, a large central library, and a special collection of marine-related literature.

Faculty

Baylor, E. R.; Ph.D., Princeton University. Professor of Biological Sciences. Senior Research Biologist, Marine Sciences Research Center. Behavioral physiology of marine organisms.

Boyce, J. R.; M.A., University of California, Berkeley. Adjunct Assistant Professor of Urban and Regional Planning. Research Planner, Marine Sciences Research Center. Architect and urban planning consultant.

Caplan, R. I.; Ph.D., Oregon State University. Assistant Professor of Oceanography. Research Associate in Biological Oceanography, Marine Sciences Research Center. Descriptive energetic and computer-simulation studies of marine communities; planktonic and benthic.

Gross, M. G.; Ph.D., California Institute of Technology. Professor of Oceanography, Department of Earth and Space Sciences. Senior Research Oceanographer, Marine Sciences Research Center. Sediments, marine geochemistry, waste disposal.

Koppelman, L.; Ph.D. in Public Administration, New York University. Adjunct Professor, Marine Environmental Studies Program. Executive Director, Nassau-Suffolk Regional Planning Board.

McHugh, J. L.; Ph.D., University of California, Los Angeles. Professor of Marine Resources, Marine Sciences Research Center. Fisheries management, fisheries oceanography, domestic and international marine affairs.

Miller, H. C.; LL.B., University of Virginia. Visiting Professor of Marine Law, Marine Environmental Studies Program. Counsel on Oceanography, Committee on Commerce, U.S. Senate.

Squires, D. F.; Ph.D., Cornell University. Professor of Earth and Space Sciences, and Biological Sciences. Director, Marine Sciences Research Center. Zoogeography and systematics of deep-water corals.

Weyl, P. K.; Ph.D., University of Chicago. Professor of Oceanography. Senior Research Oceanographer, Marine Sciences Research Center. Marine geochemistry, physical oceanography.

Williams, G. C.; Ph.D., University of California, Los Angeles. Professor of Biological Sciences. Senior Research Biologist, Marine Sciences Research Center. Planktonic fish ecology and evolution.

Wurster, C. F.; Ph.D., Stanford University. Director of Graduate Studies, Marine Environmental Studies and Marine Biology Programs. Associate Professor of Environmental Sciences. Effects of chlorinated hydrocarbons on non-target organisms, especially algae and birds.

Admission

A bachelors degree is required, with some undergraduate training in the social, natural and physical sciences, calculus and statistics. However, because of its interdisciplinary nature, the Program will accept students with a wide variety of academic backgrounds. Applicants who are exceptionally well qualified because of experience or training but lack certain undergraduate preparation may be admitted on condition that they remedy any deficiency after admission.