

Scripps Institution of Oceanography

Scripps Institution of Oceanography is one of the oldest, largest, and most important centers for marine science research, graduate training, and public service in the world. Its preeminence in the marine sciences is reflective of its excellent programs, distinguished faculty, and outstanding facilities.

In all, Scripps occupies sixty-seven buildings on 230 acres mostly along the Pacific coastline below the mesa on which UCSD is located. Its staff numbers approximately 1,300, including approximately 190 graduate students. The institution's annual expenditures exceed \$100 million.

Scripps Institution was founded in 1903 as an independent biological research laboratory, which became an integral part of the University of California in 1912. At that time the laboratory was given the Scripps name in recognition of Ellen Browning Scripps and E.W. Scripps.

Research at Scripps encompasses physical, chemical, biological, geological, and geophysical studies of the oceans. Ongoing investigations include the topography and composition of the ocean bottom, waves and currents, and the flow and interchange of matter between seawater and the ocean bottom or the atmosphere. Scripps's research ships are used in these investigations throughout the world's oceans. Among the more than 300 programs that may be under way at any one time are studies of air-sea interaction, climate prediction, earthquakes, the physiology of marine animals, marine chemistry, beach erosion, the marine food chain, the ecology of marine organisms, the geological history of the ocean basins, and the multidisciplinary aspects of global change and the environment.

Scripps operates four ships and one platform for oceanographic research primarily in support of programs by Scripps researchers, although a significant part of their work is for oceanographers from other institutions throughout the world. Cruises range from local, limited-objective trips to far-reaching expeditions in the world's oceans.

Investigations supported by contracts and grants, primarily federal, cover a wide latitude of marine research. The general research effort is conducted by six divisions: Climate Research Division, Geosciences Research Division,

Integrative Oceanography Division, Marine Biology Research Division, Marine Research Division, and Physical Oceanography Research Division. The diversity of Scripps's work is extended by special purpose laboratories and three centers: Marine Physical Laboratory, Center for Marine Biotechnology and Biomedicine, and Center for Atmospheric Sciences. Other specialized groups also are located on campus. A ship operations and marine technical support unit provides essential services and facilities to all research units of the institution.

Scripps's educational program has grown hand in hand with the research programs. Instruction is on the graduate level, and students are admitted as candidates for a Ph.D. degree. Academic work is conducted through an organizational segment of the institution known as the Graduate Department of SIO and its eight curricular groups: biological oceanography, physical oceanography, marine biology, geological sciences, marine chemistry and geochemistry, geophysics, climate sciences, and applied ocean sciences. Approximately ninety professors are complemented by an academic staff of more than 200 research scientists, many of whom have a regularly scheduled role in the instructional program.

The Birch Aquarium at Scripps provides a wide variety of educational courses in the marine sciences for students from primary grades to high school level. UCSD students also may become involved in work-study programs or serve as volunteers or aquarist trainees. A limited number of students can be accommodated for a four-unit course in independent study by arrangement with a faculty member and the aquarium director. The facility's resources include natural habitat groupings of marine life from local and Gulf of California waters; many of these marine groups are on display in the aquarium. The museum exhibits present basic oceanographic concepts and explain research undertaken at Scripps. The aquarium is open from 9:00 a.m. to 5:00 p.m. daily.

The La Jolla Laboratory of the University of California's Institute of Geophysics and Planetary Physics, and UC's California Space Institute, although organizationally separate, are

closely affiliated with Scripps. The California Sea Grant College System, a systemwide program with more than forty projects and approximately forty-five trainees supported on California campuses and in several specialized research units, is headquartered at Scripps. The Southwest Fisheries Science Center (SWFSC), located near the Scripps campus, is one of thirty major laboratories and centers operated by the National Marine Fisheries Service, a component of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce. Also, the Inter-American Tropical Tuna Commission is collocated at SWFSC.

Students enter oceanography with extremely varied interests and backgrounds—naturalists, explorers, engineers, and theorists from the United States and many foreign countries. One thing they have in common, however, is that they come to Scripps with a very strong understanding of science. Most students select positions as research assistants when they enter the program—a practice that not only gives them an early involvement with research, but also provides salaries. The student-faculty ratio at Scripps is about two-to-one; consequently, classes are small, and the student has the opportunity to work closely with his or her thesis adviser. Oceanography is an interdisciplinary field that allows for informal exchange and interaction on a variety of levels.

While at Scripps, students have for their use some of the nation's most sophisticated and complete special laboratories and facilities for oceanographic studies covering a wide range of disciplines from biology and physiology to geophysics and atmospheric sciences. A hydraulics laboratory features a unique ninety-foot stratified wave-and-current channel, and an analytical facility has a host of scanning electron microscopes and other high-precision instruments. Among the many computer resources is access to the San Diego Supercomputer Center. The Scripps Library is the University of California's major collection of marine science materials, with outstanding collections in oceanography, marine biology, and marine technology. It also specializes in atmospheric sciences, fisheries, geology, geophysics,

and zoology. The various marine life and geological specimens housed at Scripps form a vast "library" of oceanographic resources available for investigations. Two underwater research areas that are part of the UC Natural Reserve System are adjacent to the Scripps campus. During a student's tenure at Scripps, he or she will have the opportunity to go to sea on any of Scripps's four research vessels as well as those from other oceanographic institutions.

The combination of the large scientific staff and extensive facilities at Scripps provides an extraordinary opportunity for each student to enjoy close contact with existing oceanographic concepts and active participation in research.

See "Scripps Institution of Oceanography" in "Courses, Curricula, and Programs of Instruction" for further details on study programs, requirements, degrees, and courses.

For additional information, write:
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