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# Oceanography and Marine Studies

Administered by the Dean of the College of Sciences

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## Faculty Committee for Marine Studies

Richard M. Gersberg, Ph.D., Professor of Public Health,  
Interim Director of Coastal and Marine Institute  
Clive E. Dorman, Ph.D., Professor of Geological Sciences  
Todd W. Anderson, Ph.D., Assistant Professor of Biology

## General Information

San Diego State University provides preparation for ocean-oriented careers by offering marine-related coursework, research opportunities and oceanographic experience within regular degree programs in the Departments of Biology, Chemistry, Economics, Civil and Environmental Engineering, Mechanical Engineering, Geography, Geological Sciences, and the Graduate School of Public Health. Degrees in general oceanography or marine studies are not offered by the University. However, a Master of Arts or Master of Science degree may be earned as an Interdisciplinary Studies major (see the appropriate section in this bulletin).

Specific courses in oceanography (listed below) are offered with the cooperation of faculty from the participating departments. Advanced coursework and research in geological and physical oceanography are conducted in the Geological Sciences Department. Advanced courses and research in biological oceanography, marine biology, marine botany, and marine zoology are in the Department of Biology. The major areas of research under the joint doctoral program in ecology include coastal marine ecology, estuarine ecology and aquaculture. The Graduate School of Public Health also offers a Master of Science degree with a concentration in Environmental Health Science and a concentration in Toxicology with focus on water and soil contamination and management of hazardous wastes. Marine-related coursework and research are offered in the Departments of Economics, Geography and in the College of Engineering. Students who require advising in these areas should inquire at the Coastal and Marine Institute or the appropriate department.

The Coastal and Marine Institute coordinates work in the area of marine studies and provides special supporting services to the faculty, staff, and students which includes student advising, assistance in research and publication, and a boat operations and research diving program. The Director of the Coastal and Marine Institute reports to the Dean of the College of Sciences. The University also operates the Pacific Estuarine Research Laboratory for the study of estuarine and wetland ecology. (See the General Information section of this bulletin.)

### UPPER DIVISION COURSES

#### Oceanography Courses (OCEAN)

##### 541. Oceanography (3)

Prerequisites: Biology 201A, 201B; Mathematics 121 and 122 or 150; Physics 180A or 195.

Multidisciplinary examination of physical, chemical, biological and geological aspects of marine environment and relationship of humans with the sea.

##### 561. Deep Sea Oceanography (3)

Prerequisites: Biology 515 and Chemistry 365.

Concepts of deep sea oceanography including abyssal biology, physics and chemistry, instruments and methods of deep sea research, biogeochemistry of oceanic ridges, and high-pressure biochemistry.

#### Biology Courses (BIOL)

Adviser: Anderson

- 515. Marine Invertebrate Biology (4)
- 517. Marine Ecology (4)
- 519. Aquaculture (3)
- 520. Ichthyology (4)

#### Economics Courses (ECON)

Adviser: Adler

- 696. Experimental Topics (3)\*

#### Civil Engineering Courses (CIV E)

Adviser: Noorany

- 632. Computational Hydraulics and Hydrology (3)
- 641. Advanced Foundation Engineering (3)

#### Geography Courses (GEOG)

Adviser: Stow

- 504. Coastal and Submarine Physiography (3)
- 508. Environmental Climatology (3)
- 588. Intermediate Remote Sensing of Environment (4)
- 670. Environmental and Resource Conservation Theory (3)
- 770. Seminar in Environmental and Resource Conservation (3)

#### Geological Sciences Courses (GEOL)

Adviser: Dorman

- 540. Marine Geology (3)
- 545. Descriptive Physical Oceanography (3)
- 615. Geology of Clays (3)
- 625. Paleocology (3)
- 640. Geotectonics (3)

#### Public Health Courses (P H)

Adviser: Gersberg

- 634. Environmental Protection (3)
- 637. Biological Mechanisms of Environmental Toxicants (3)
- 639. Water Quality Investigation (3)

\* Acceptable when of relevant content.