

OCEAN STUDIES INSTITUTE

College of Natural Sciences and Mathematics

Director

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Location

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View the CSU, Long Beach *Catalog* on-line at www.csulb.edu by clicking on "Academics" and then "CSULB Catalog."

The Ocean Studies Institute was created in 1972 to coordinate teaching, research and community service in ocean studies on member campuses. Members include Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, and San Marcos. The Institute does not offer degrees, but it serves as an administrative liaison to facilitate degree programs offered on member campuses.

The Institute operates a 76-foot research vessel for teaching and research purposes, obtains research grants and contracts, performs research, and is responsible for curriculum planning and facilities acquisition. Presently the Institute serves over 35 departments across eight campuses.

The courses and research in which the Institute is active reflect the broad applied approach of interdisciplinary, mission-oriented projects in harbors and the coastal zone.

Courses (OSI)

Upper Division

313. Marine Invertebrate Zoology (4)

Prerequisite: BIOL 211A, B. Basic taxonomy, morphology, ecology, and distribution of invertebrates, excluding insects; emphasis on local marine forms. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

353. Marine Biological Processes (4)

Prerequisite: BIOL 211A, B. Study of pelagic and benthic marine ecosystems, including human influences. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

417./517. Marine Benthic Invertebrates of Santa Catalina Island (4)

Prerequisite: OSI 313 or 353. (Undergraduates register in OSI 417; graduates register in OSI 517.) Topics include benthic community structure and function, benthic-pelagic coupling, animal-sediment relationships, animal interactions, and marine pollution ecology. Laboratory emphasis will be on identification of local forms. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

419./519. Marine Ichthyology (4)

Prerequisite: OSI 353. (Undergraduates register in OSI 419; graduates register in OSI 519.) Taxonomy, morphology, physiology, and ecology of fishes. Emphasis on local marine fishes. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

420./520. Ecology of Marine Fishes (4)

Prerequisite: OSI 419/519. (Undergraduates register in OSI 420; graduates register in OSI 520.) Fish species assemblages, general ecology, adaptations, and behavioral ecology of marine fishes. Emphasis on local marine fishes (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

425./525. Marine Phycology (4)

Prerequisite: BIOL 211A, B. (Undergraduates register in OSI 425; graduates register in OSI 525.) Taxonomy, phylogeny, ecology, and physiology of marine algae; emphasis on local marine forms. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

455./555. Marine Ecological Processes (4)

Prerequisite: OSI 353 or BIOL 350; statistics recommended. (Undergraduates register in OSI 455; graduates register in OSI 555.) Discussion of field studies on ecological principles related to marine communities. Includes an individual field research project and class projects. (Lecture 2 hrs., field 6 hrs.) Course fee may be required.

458./558. Ecology of Southern California Marine Plankton (4)
Prerequisite: OSI 353. (Undergraduates register in OSI 458; graduates in OSI 558.) Physiological ecology of marine phytoplankton and zooplankton as a basis for study of structure, dynamics, and modeling of plankton communities. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

345. Physiology of Marine Animals (4)
Prerequisite: BIOL 211A, B. Comparison of the fundamental physiological processes of the major marine phyla, both invertebrate and vertebrate. Laboratory and field investigations will be directed toward marine animals living in the local waters. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

460./560. Oceanographic Techniques (4)
Prerequisite: Consent of instructor. (Undergraduates register in OSI 460; graduates register in OSI 560.) An interdisciplinary survey of techniques and procedures used in collection of oceanographic data in the fields of biology, chemistry, geology, and physics. Students become familiar with oceanographic equipment and methodologies that emphasize on-the-job training aboard ship and in the laboratory. (Lecture 2 hrs.; laboratory and field 6 hrs.) Course fee may be required.

490./590. Special Topics in Ocean Studies (1-3)
Prerequisite: Consent of instructor. (Undergraduates register in OSI 490; graduates register in OSI 590.) Topics from selected areas of Ocean Studies. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for OSI 490/590 and/or 490L/590L limited to six units. Topics to be announced in the *Schedule of Classes*. (Lecture 1-3 hrs.) Course fee may be required.

490L./590L. Laboratory in Special Topics in Ocean Studies (1-3)
Prerequisite: Consent of instructor. (Undergraduates register in OSI 490L; graduates register in OSI 590L.) Topics from selected areas of Ocean Studies. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for OSI 490/590 and/or 490L/590L limited to six units. Topics to be announced in the *Schedule of Classes*. (Laboratory 3-9 hrs.) Course fee may be required.

496. Undergraduate Directed Research (1-3)
Prerequisite: Consent of instructor. Not available to graduate students. Independent research to be conducted under the supervision of a Catalina Semester instructor. Students develop their ideas during the first 12 weeks of the semester, prepare a research proposal, complete their studies, and present their findings in a mini-symposium and a report.

Graduate Level

517./417. Marine Benthic Invertebrates of Santa Catalina Island (4)
Prerequisite: OSI 313 or 353. (Undergraduates register in OSI 417; graduates register in OSI 517.) Topics include benthic community structure and function, benthic-pelagic coupling, animal-sediment relationships, animal interactions, and marine pollution ecology. Laboratory emphasis will be on identification of local forms. (Lecture 2 hrs, laboratory and field 6 hrs.) Course fee may be required.

519./419. Marine Ichthyology (4)
Prerequisite: OSI 353. (Undergraduates register in OSI 419; graduates register in OSI 519.) Taxonomy, morphology, physiology, and ecology of fishes. Emphasis on local marine fishes. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

520./420. Ecology of Marine Fishes (4)
Prerequisite: OSI 519/419. (Undergraduates register in OSI 420; graduates register in OSI 520.) Fish species assemblages, general ecology, adaptations, and behavioral ecology of marine fishes. Emphasis on local marine fishes. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

525./425. Marine Phycology (4)
Prerequisite: BIOL 211A, B. (Undergraduates register in OSI 425; graduates register in OSI 525.) Taxonomy, phylogeny, ecology, and physiology of marine algae; emphasis on local marine forms. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

555./455. Marine Ecological Processes (4)
Prerequisite: OSI 353 or BIOL 350; statistics recommended. (Undergraduates register in OSI 455; graduates register in OSI 555.) Discussion of field studies on ecological principles related to marine communities. Includes an individual field research project and class projects. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

558./458. Ecology of Southern California Marine Plankton (4)
Prerequisite: OSI 353. (Undergraduates register in OSI 458; graduates register in OSI 558.) Physiological ecology of marine phytoplankton and zooplankton as a basis for study of structure, dynamics, and modeling of plankton communities. (Lecture 2 hrs., laboratory and field 6 hrs.) Course fee may be required.

560./460. Oceanographic Techniques (4)
Prerequisite: Consent of instructor. (Undergraduates register in OSI 460; graduates register in OSI 560.) An interdisciplinary survey of techniques and procedures used in collection of oceanographic data in the fields of biology, chemistry, geology, and physics. Students become familiar with oceanographic equipment and methodologies that emphasize on-the-job training aboard ship and in the laboratory. (Lecture 2 hrs.; laboratory and field 6 hrs.) Course fee may be required.

590./490. Special Topics in Ocean Studies (1-3)
Prerequisite: Consent of instructor. (Undergraduates register in OSI 490; graduates register in OSI 590.) Topics from selected areas of Ocean Studies. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for OSI 490/590 and/or 490L/590L limited to six units. Topics to be announced in the *Schedule of Classes*. (Lecture 1-3 hrs.) Course fee may be required.

590L./490L. Laboratory in Special Topics in Ocean Studies (1-3)
Prerequisite: Consent of instructor. (Undergraduates register in OSI 490L; graduates register in OSI 590L.) Topics from selected areas of Ocean Studies. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for OSI 490/590 and/or 490L/590L limited to six units. Topics to be announced in the *Schedule of Classes*. (Laboratory 3-9 hrs.) Course fee may be required.

697. Directed Research (1-3)
Prerequisite: Consent of instructor and graduate standing. Independent research to be conducted under the supervision of a Catalina Semester instructor. Students develop their ideas during the first 12 weeks of the semester, prepare a research proposal, complete their studies, and present their findings in a mini-symposium and a report.