

MARINE STUDIES

Along with courses in Marine Biology, Oceanography and Aquaculture, entrepreneurial apprenticeship programs combining science, business and technology are offered through the Marine Studies department. A study with The White Abalone Project enables students to have a hands-on education experience with the endangered white abalone. The study of its larvae, juvenile and early adult stages provides insight into adaptations to physical and biological stresses in the ocean environment.

Learn about the ocean, study at a beautiful location and earn your science credits for CCs, CSU & UC at the new Marine Education Center at the Channel Islands Harbor. Classrooms, laboratories and an aquarium are developed at the Center; including touch tanks, a shark tank and display tanks holding local marine animals and plants.

For more information, contact:
Tom O'Neil, toneil@ycccd.edu
805-986-5800, ext. 1916

Career Opportunities

(Most careers require bachelors or graduate degree)

Environmental Science	Natural Resource Management
Marine Biologist	Oceanographer
Aquaculture	Science Teacher
Fisheries	Marine Geologist
Laboratory Technician	Seafood Industry

Faculty

Full-Time

Lorraine Buckley	Shannon Newby
Thomas O'Neil	

Part-Time

Sara Benjamin	Joe Frantz
Joseph Saenz	Michael Nicholson
Neil Ziegler	

◆ Marine Studies

Certificate of Achievement

A certificate will be awarded to a student of any major who completes an individualized curriculum including at least 18 units in marine studies.

Required Courses:	Units
MST R190	Experiential Education in Marine Studies 1
Complete a minimum of 17 units from the following:	
MST R100/R100L	Marine Biology (formerly MST R116/R116L) 3/1
MST R103/R103L	Introduction to Oceanography 3/1
MST R120/R120L	Basic Scuba Diving 2/1
MST R122	Aquaculture 4
MST R160	Introduction to Research 1
MST R170	Biological Marine Resource Management (corequisite: MST R178) 1
MST R175	Marine Sampling Techniques and Field Studies 3
MST R178	Geological Marine Resource Management (corequisite: MST R170) 1
MST R195	Communicating Ocean Science 3
MST R198	Short Courses in Marine Studies 0.5 - 10
Total Required Units	18

◆ Marine Studies

Certificate of Completion

(Awarded by the Department)

A certificate will be awarded to a student of any major that completes a curriculum including at least sixteen units in marine studies focused on research or entrepreneurship.

Required Courses:	Units
MST R100/R100L	Marine Biology (formerly MST R116/R116L) 4
MST R103/R103L	Introduction to Oceanography 4
MST R122/R122L	Aquaculture 4
MST R160	Introduction to Research 1
MST R175	Marine Sampling Techniques and Field Studies 3
Total Required Units	16

Marine Studies Courses

MST R100—Marine Biology 3 units

3 hours lecture weekly

This survey course includes an introduction to ecology, organism identification, anatomy, physiology, and conservation of marine organisms. Applications of the scientific method in marine biology are emphasized. Field trips may be required. Formerly MST R116. (Same as BIOL R100) (2)

Transfer credit: UC, CSU

MST R100L—Marine Biology Laboratory 1 unit

Prerequisites: MST R100 or concurrent enrollment.

3 hours lab weekly

This survey course includes laboratory and field studies of marine organisms and their environment, the use of the scientific method, and basic biological skills. Optional field trips may be required. Formerly MST R116L. (Same as BIOL R100L) (2)

Transfer credit: UC, CSU

MST R103—Introduction to Oceanography 3 units

3 hours lecture weekly

This course is a broad survey of the field of oceanography. Topics include geology and geography of ocean basins and coastlines, plate tectonics, waves, currents, tides, properties of seawater, methods of oceanographic exploration, and an introduction to Marine Biology. Physical oceanography is for those students who wish to complete a general education physical science course to transfer to a four-year university. Field trips may be required. (Same as GEOL R103) (2)

Transfer credit: UC, CSU

MST R103L—Introduction to Oceanography Lab 1 unit

Prerequisites: MST R103, GEOL R103 or concurrent.

3 hours lab weekly

This course is the laboratory to accompany MST R103. Topics include introduction to ocean/atmosphere relationships, interpretation of bathymetric maps, applied methods of measurement, and descriptive analysis of the physical ocean, including beaches, ocean currents, waves, and water properties. Field trips will be required. (Same as GEOL R103L) (2)

Transfer credit: UC, CSU

MST R120—Basic SCUBA Diving 2 units

2 hours lecture weekly

A basic course in skin and SCUBA diving that will cover the necessary knowledge for safe diving in Southern California. Topics will include the marine environment, equipment selection and maintenance, diving physics and physiology, and accident prevention. PADI SCUBA Diver Certification will be available to students who qualify after successful completion of both MST R120 and MST R120L. Fees will be required. Field trips may be required. Course may be taken four times. (2)

Transfer credit: CSU

MST R120L—Basic SCUBA Diving Laboratory 1 unit

Prerequisites: Ability to pass swim test, including underwater swimming recovering a ten-pound weight; medical history required of all students; parental release if student is under 18 years of age.

Corequisites: MST R120.
3 hours lab weekly

An experimental course that will develop the necessary knowledge and skills for safe skin and SCUBA diving in Southern California. Equipment and transportation for off-campus lab sessions must be furnished by the student. Mask, snorkel, and fins required after third lesson. PADI SCUBA Diver Certification available to students who qualify after the successful completion of both MST R120 and MST R120L. Completion of or concurrent enrolment in MST R120 is required. Fees will be required. Field trips are required. Course may be taken four times. (2)

Transfer credit: CSU

MST R122—Aquaculture 4 units

3 hours lecture, 3 hours lab weekly

The principles of the rearing of organisms in aquatic habitats will be studied through lecture, reading, demonstrations, experimental laboratory exercises, and field trips. Biological and ecological concepts will be applied to the selection, planning, and design of aquaculture systems. Field trips will be required.

Transfer credit: UC, CSU

MST R160—Introduction to Research 1 unit

3 hours lab weekly

Students will learn basic concepts and procedures for scientific research including experimental design, data management, funding, and scientific reporting. Each student will design and conduct a scientific research project and report the results. Field trips may be required. Course may be taken four times. (2)

Transfer credit: CSU

MST R170—Biological Marine Resource Management 1 unit

Corequisites: MST R178.
3 hours lab weekly

Topics in related areas in marine biology related to current resource management issues in this region. Study of requirements and applications of federal, state, and local laws and regulations related to marine resource management. Field trips will be to natural areas where geological, biological, and oceanographic interactions can be observed. Course may be taken four times. (Same as BIOL R170) (2)

Transfer credit: CSU

MST R175—Marine Sampling Techniques and Field Studies 3 units

3 hours lecture weekly

This course is a study of ocean resources in natural settings aboard research vessels or in remote coastal locations. Oceanographic sampling and field techniques will be demonstrated. Travel off-campus is required. Some field trips will be extensive (more than two days). (2)

Transfer credit: CSU

MST R178—Geological Marine Resource Management 1 unit

Corequisites: MST R170.
3 hours lab weekly

Topics in related areas in marine geology related to current resource management issues in this region. Study of requirements and applications of federal, state, and local laws and regulations related to marine resource management. Field trips will be to natural areas where geological, biological, and oceanographic interactions can be observed. Course may be taken four times. (Same as GEOL R178) (2)

Transfer credit: CSU

MST R190—Experiential Education in Marine Studies 1 unit

3 hours lab weekly

Students will learn about specific marine-related topics by working at the Oxnard College Marine Education Center assisting in the care and feeding of marine animals, guiding tours, developing exhibits, and/or maintaining the specimen collections. Field trips may be required. Course may be taken four times. (2)

Transfer credit: CSU

MST R195—Communicating Ocean Science 3 units

3 hours lecture weekly

Students will improve their ability to communicate their scientific knowledge for pre K—8th grade by receiving instruction and by practice teaching. Students will receive instruction in inquiry-based teaching methods and learning pedagogy. The course will end with supervised teaching experience in a local school classroom. Thus, students will practice communicating scientific knowledge and receive mentoring on how to improve their presentations. Field trips will be required. Course may be taken four times. (2)

Transfer credit: CSU

MST R198A-Z—Short Courses in Marine Studies ½-10 units

Lecture and/or lab hours as required by unit formula

This course is composed of classes in selected areas of Marine Studies to meet specific needs of community or college as required or requested by persons whose needs are not met by regular college offerings. Topics may include, but are not limited to: abbreviated introductory marine studies activities for teachers, planning for viewing a natural marine event, or classes on an oceanographic topic of special interest. Field trips may be required. (2)

Transfer credit: CSU

MST R199—Directed Studies in Marine-Related Topics 1-3 units

Prerequisites: A course in the specific field.

Lecture and/or lab hours as required by unit formula

Designed for students interested in furthering their knowledge of the marine environment and ocean resources on an independent study basis. All studies will require laboratory and library research, as well as written reports. Field trips may be required. Course may be taken two times.

Transfer credit: CSU

NOTE: The course listed below has been temporarily suspended. For further information, please contact the Math, Science, Health & Athletics division office.

MST R122L Aquaculture Laboratory