

# MARINE SCIENCE, DEPARTMENT AWARD (D)

## Overview

The Marine Science Department Award comprises 21 units and signifies that students have a broad background in the physical and biological processes of the world's oceans and the tools and techniques with which they are studied. The curriculum includes courses from Biology, Marine Technology and Earth & Planetary Sciences and is especially suited to students interested in the fields of mariculture, boating and recreation, skin and SCUBA diving, fishing, scientific research and marine science education. It is important that the student pursuing the Marine Science Award consult with the Faculty Adviser early to formulate a program of study and to ensure space in classes.

## Requirements

Complete all department requirements with a "C" or better (or substitution options) in each course.

Code	Title	Units
<b>Department Requirements</b>		
BIOL 124	Biological Oceanography <sup>1</sup>	4
BIOL 125	Marine Biology <sup>1</sup>	4
ERTH 151	Introductory Physical Oceanography	3
ERTH 151L	Introductory Physical Oceanography Laboratory	1
ERTH/GEOG 152	Weather and Climate	3
HE 103	Responding to Medical Emergencies <sup>1</sup>	3
MDT 101	Information and Introduction to Marine Diving Technology	0.3
MDT 108	Rigging	1
MDT 109	Seamanship and Small Boat Handling	1.5
Plus completion of a Basic SCUBA Diving Certification.		
<b>Total Units</b>		<b>20.80</b>

<sup>1</sup> *Substitutions:* The completion of BIOL 142 Marine Science can be substituted for BIOL 124 Biological Oceanography. The combination of BIOL 101 Plant Biology and BIOL 102 Animal Biology can be substituted for BIOL 125 Marine Biology. The completion of EMT 110 Emergency Medical Technician-Basic can be substituted for HE 103 Responding to Medical Emergencies.

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Students interested in a Marine Biology major should take the Biological Sciences majors sequence. Students are encouraged to supplement this sequence with courses in Marine Science.

Students planning on completing the Marine Science curriculum in two semesters can begin in either Fall or Spring.

## Learning Outcomes

1. Describe how and why the ocean varies globally and by depth in salinity, temperature, dissolved gases, and nutrient levels and how these affect marine life.
2. State the difference between weather & climate. State the causes of wind and ocean storms (hurricanes, typhoons, etc) and how these impact surface waters of the ocean.
3. Summarize characteristics of key marine ecosystems, including descriptions of organisms found within, their adaptations to environmental conditions, and their relationships with their environment.
4. List and describe the use of appropriate tools and technologies that are used to study physical and biological aspects of marine ecosystems.