



## **Course Introduction**

The science program at Oaks Christian School provides the necessary background and skills from which students can become scientifically literate in order to make responsible life decisions. The classes actively involve students in problem solving, qualitative and quantitative analysis, and verbal and written communications. The program is structured so that students should develop an appreciation of science as a process to investigate and discover natural relationships in the world.

## **Course Description**

Marine Biology is a third year upper division science course that builds on biological and chemical concepts covered in Biology and Chemistry. Students take an in-depth look at the physical, chemical, and geological characteristics of the world's oceans. They then investigate the structure, functions, behaviors, adaptations, and classification of a variety of plant and animals that live in the marine environment. The different marine ecosystems including the intertidal zone, coral reefs, the deep ocean, and the open ocean are studied in detail. Students learn how energy flows and matter cycles through the Earth's ocean system and they investigate the impact of humans on that system.

This is a yearlong course consisting of 8 units. Upon successful completion students will receive 1 credit towards high school graduation.

## **Purpose of the Course**

This course is designed to be a laboratory-based college preparatory course and to provide an understanding of marine biology concepts. Focus is on active student participation and the development of critical thinking skills. In addition, and perhaps more fundamentally, students will be confronted with the implications of a Biblical worldview and will be challenged to learn how to integrate their faith and learning. It is my hope that all students will come to see the beauty and elegance in God's creation and thus learn more about who He is.

## **Course Overview**

### Semester 1

- Chemical and Physical Oceanography
- Organisms of the Ocean Part 1
- Organisms of the Ocean Part 2
- Organisms of the Ocean Part 3

## Semester 2

- Fish
- Vertebrates Other Than Fish
- Ecosystems of the Ocean Part 1
- Ecosystems of the Ocean Part 2
- Humans and the Sea

### Required Course Materials

Please access the list of course materials from the OC Online book ordering system and order your materials as soon as possible. Oftentimes, course materials are on back order and you may experience a delay in receiving them, causing students to fall behind in their online coursework. When ordering used or rented materials, be careful that online access codes are also current.

### Methods of Instruction

Throughout each unit there are a variety of ways the material that you must learn will be presented to you. The primary way that information is dispersed is through videos that you will be watching. However, you will also be asked to watch animations and do reading in your textbook.

### Methods of Evaluation

Students will demonstrate mastery through the following formative and summative assessments:

- 40% Assignments
- 10% Participation (Discussion Posts, Synchronous Sessions)
- 10% Quizzes
- 25% Final Exam
- 15% Unit Tests