

### Course Description

This challenging course is designed to provide a college-level experience and prepare students for the AP exam in early May. Over two semesters, the students are engaged in a wide variety of activities, with substantial emphasis on interpreting and collecting data in virtual labs, writing analytical essays and mastering Biology concepts and connections. The key themes of the AP Biology course are: the scientific processes, the effects of science on technology and society, the chemistry and make up of living organisms, genetics, diversity, and evolution.

Throughout this course you will be expected to answer questions, reflect on issues and complete lab activities. The primary emphasis is to develop an understanding of concepts rather than memorizing terms and technical details. The course will successfully prepare you for the AP Exam in May.

This is a yearlong course consisting of 15 units. Upon successful completion students will receive 1 credit towards high school graduation.

### Course Prerequisites

Successful completion of one year of Biology and one year of Chemistry, preferably taken at the honors level, with a passing grade of B or above. If Biology and Chemistry are taken at the college preparatory level, a B+ or higher is needed.

### Course Overview

#### Semester 1

- Animal Behavior
- Organic Chemistry and Energy
- Cells and Membranes
- Photosynthesis
- Cell Respiration
- Cell Division/Communication
- Genetics/Heredity
- DNA and Proteins

#### Semester 2

- Ecology
- Molecular Biology
- Evolution
- Animal Structure

- Reproduction
- Plants
- Biological Diversity

## 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.

## Communication

Students will maintain a laboratory notebook and a portfolio throughout the course. In addition to the laboratory notebook, students will communicate to others in formats such as group presentations, PowerPoint presentations, poster sessions, and written reports. Communication tools are not only for the laboratory experiences, but represent examples of the collaboration, reflection, and articulation seen in the course as a whole. Students will use this collection of their work over time and reflect on the changes they can see in the quality or substance of their work through the year as they prepare to move into college courses and research experiences in the future. A key feature in the portfolio will be the requirement for student self-reflection in terms of the science practice skills that they have developed throughout the year. [CR8]

## 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