

# BIOL& 223 : Organismal Biology with Lab

**Credits** 5

**Quarter Offered** Spring

Third course in the three-quarter sequence of introductory biology for science students. Introduction to the study of the structure and function of plants and animals and how they cope with varying environmental conditions. This class may include students from multiple sections. (Natural Sciences with Lab, Elective)

**Prerequisites**

[BIOL& 222](#) (minimum 2.0)

**Course Outcomes**

Read, correctly interpret, and critically evaluate biological information in books, journals, online resources, and the popular media.

Explain and give examples of the basic themes and concepts of plant form and function including structure, growth and development, resource acquisition and transport, soil and nutrition, reproduction and related technology, and responses to internal and external signals.

Explain and give examples of the basic themes and concepts of the basic principles of animal form and function including comparative anatomy and physiology related to nutrition, circulation and gas exchange, immunity, osmoregulation and excretion, endocrine function, and reproduction and development.

Explain and give examples of the basic themes and concepts of comparative anatomy and physiology of animal nervous systems, sensory and motor mechanisms, and the fundamentals of animal behavior.

Explain and give examples of the evolution and diversity of plants and fungi.

Apply quantitative analysis to solve problems in hypothetical and real situations.

Demonstrate ability to process information and experiences in the form of laboratory write-ups and project presentations to convey findings of library research and/or scientific inquiry using appropriate language, format, and graphical methods.

As a group (3-6 students) design and conduct a scientific exploration, interpret results, and explain findings in a logical and appropriate manner using critical thinking and problem solving skills.

Describe connections of the covered concepts of biology to their local environments possible future careers, and daily lives.