

BIOL 302: Molecular and General Genetics

This detailed course description provides information about course topics & content. It is not a course syllabus. Summer 2013 course syllabi are updated in the spring, and may not be available until summer classes begin.

Instructor Information

Instructor	Email	Course Format	Number of Credits
Steven Caruso	scaruso@umbc.edu	Lecture	4

General Information

Delivery Format

In-Person

Prerequisite /Co-requisite:

You must complete BIOL 100 or BIOL 100H or BIOL 141 or BIOL 141H and BIOL 142 or 142H and Pre-or Co-req CHEM 102 or CHEM 102H or CHEM 124 with a "C" or better.

Course Materials

Currently Used Materials

- Genetics: A Conceptual Approach 4th edition, Benjamin A. Pierce

Course Objectives/Learning Outcomes:

By the end of this course, students will be able to:

1. Explain the storage, transmission and expression of genetic information in different types of organisms.
2. Explain how changes in genetic material can lead to changes in phenotypes.
3. Describe the different types of human genetic variation and its consequences.
4. Evaluate the validity of statements made regarding genetic information in the media.
5. Understand the uses of various genetic and molecular technologies in society today.

Potential Topics Covered:

Modern principles of heredity have been established through studies at the molecular, cellular and organismic levels. The course includes fundamental information on the structure of a gene, its expression and organization as deduced from analysis of viral and prokaryotic systems, the transmission of genetic material in eukaryotic systems, the interaction of genes in populations and the application of fundamental genetic principles to problems of human heredity.