

# Biology

## Requirements for a B.S. Major: 64 units

The Biology department offers four options leading to a Bachelor of Science degree in biology – a general track providing a comprehensive introduction to all areas of Biology, and three more specialized tracks, each emphasizing one of the following: 1) cellular and molecular biology; 2) ecology, evolution and natural history, 3) genomics and bioinformatics. Each track comprises lower-division courses in biology, mathematics and physical sciences, as well as a variety of required and elective upper-division courses.

## Cellular and Molecular Biology Track: 64 units

### Supporting Science Courses: 28 units

CHM 005, 006 General Chemistry I, II (4,4)

CHM 101, 102 Organic Chemistry I, II (4,4)

MA 005 Introduction to Statistics (4)

*Additional Courses:* (8)

CS 010 Design & Implementation of Solutions to Computational Problems (4)

**OR** Additional courses in chemistry, mathematics or physics (*Excluding* CHM 004 & MA 008)

### Required Biology Courses: 30-33 units

BIO 005, 006 General Biology I, II (4,4)

*Upper-division Biology Laboratory Courses* (20)

BIO 113 Biochemistry (4)

BIO 114 Genetics (4)

BIO 130 Cell Biology (4)

BIO 132 Molecular Biology (4)

*One of the following courses:* (4)

BIO 102 Physiology (4)

BIO 110 Microbiology (4)

BIO 117 Genomics & Bioinformatics (4)

BIO 128 Comparative & Environmental Physiology (4)

BIO 131 Evolution (4)

BIO 155 Infectious Disease and Immune Response (4)

*One of the following courses:* (1-4)

BIO 195 Seminar in Biological Literature (1)

BIO 199 Major Honors (4)

*One integrative course from the following:* (1-4)

BIO 124 Biology, Values, and the Developing World (4)

BIO 196 Bioethics Seminar (1)

BIO 197 Biology and Faith (4)

### Additional Courses from the following for a total of 64 units: 3-6 units

Upper-division BIO

Upper-division CHM

MA 009, 010 Calculus I, II

MA 015 Discrete Mathematics (4)

PSY 125 Behavioral Neuroscience (4)

No more than 4 units to be selected from physical sciences or math.

No more than 2 units of Practicum, BIO 190, 191 or 192.

No more than 4 units Research, BIO 098/198