

# BIOLOGICAL SCIENCE BS

## College of Natural Science

### 110 Organisms and Populations

Fall, Spring. 4(3-3) Not open to students with credit in LBS 144 or LBS 148H.

Biological diversity and organismal biology. Principles of evolution, population biology, and community structure.

### 111 Cells and Molecules

Fall, Spring, Summer. 3(3-0) P:M: CEM 141 or CEM 151 or LBS 171 or CEM 181H Not open to students with credit in LBS 145 or LBS 149H.

Macromolecular synthesis; energy metabolism; molecular aspects of development; principles of genetics.

### 111L Cell and Molecular Biology Laboratory

Fall, Spring, Summer. 2(1-3) Interdepartmental with Microbiology and Molecular Genetics and Plant Biology and Zoology. Administered by Biological Science. P:M: BS111 or concurrently Not open to students with credit in LBS 159H.

Principles and applications of common techniques used in cell and molecular biology.

### 148H Honors Organismal Biology

Fall. 3(3-0) Interdepartmental with Lyman Briggs School. Administered by Biological Science. Not open to students with credit in BS 110 or LBS 144.

Diversity and basic properties of organisms, with emphasis on genetic principles, ecological interactions, and the evolutionary process. Historical approach to knowledge discovery.

### 149H Honors Cell and Molecular Biology

Spring. 3(3-0) Interdepartmental with Lyman Briggs School. Administered by Biological Science. P:M: (CEM 141 or concurrently) or (CEM 151 or concurrently) or (CEM 181H or concurrently) or (LBS 171 or concurrently) Not open to students with credit in BS 111 or LBS 145.

Exploration of the physicochemical and molecular organization of cells as the unifying framework for genetics, evolution, and the social relevance of biology.

### 158H Honors Organismal Biology Laboratory

Fall. 2(1-3) Interdepartmental with Lyman Briggs School. Administered by Biological Science. Not open to students with credit in BS 110 or LBS 144. C: BS 148H concurrently.

Basic procedures used by organismal biologists, including experimental design and statistical methods. Development and implementation of research projects to test hypotheses in genetics, ecology, and evolution.

### 159H Honors Cell and Molecular Biology Laboratory

Spring. 2(1-3) Interdepartmental with Lyman Briggs School. Administered by Biological Science. Not open to students with credit in BS 111L or LBS 145. C: BS 149H concurrently.

Basic techniques of cellular and molecular biology including experimental design and hypothesis formulation. Student-initiated projects to test hypothesis-driven projects in biochemistry, molecular biology or genetics.