

## Molecular, Cellular, and Integrative Biology (13.5 units)

### 8.5 units of Biology

1 unit of Introductory Biology chosen from

\_\_\_\_\_ **BIOL 110**: Human Biology, **BIOL 111**: Zoology, **BIOL 121**: Botany, **BIOL 141**: Microbiology,  
\_\_\_\_\_ **BIOL 151**: Marine Biology, **BIOL 161**: Aquatic Biology

4 core courses

\_\_\_\_\_ **BIOL 217**: Evolution  
\_\_\_\_\_ **BIOL 247**: Biometrics  
\_\_\_\_\_ **BIOL 289**: Genetics  
\_\_\_\_\_ **BIOL 385**: Biology Capstone: Advanced Topics or **BIOL 387**: Biology Capstone: Senior Manuscript

1 unit of Ecology, Evolution, and Behavioral Biology chosen from

\_\_\_\_\_ **BIOL 206**: Environmental Biology, **BIOL 210**: Paleobiology<sup>1</sup>, **BIOL 274**: Topics in Ecology, Evolution, and Behavioral Biology, **BIOL 337**: Population Biology, **BIOL 343**: Animal Behavior, **BIOL 372**: Ecology, **BIOL 374**: Advanced Topics in Ecology, Evolution, and Behavioral Biology, **BIOL 385**: Biology Capstone: Advanced Topics<sup>2</sup>

3 units of Molecular, Cellular, and Integrative Biology, at least 1 unit of BIOL at the 300 level, chosen from

\_\_\_\_\_ **BIOL 215**: Emerging Diseases, **BIOL 237**: Cell Biology, **BIOL 256**: Anatomy, **BIOL 260**: Nutrition and Metabolism: Biochemical Mechanisms<sup>3</sup>, **BIOL 273**: Topics in Molecular, Cellular, and Integrative Biology, **BIOL 300**: DNA and Protein Biochemistry<sup>4</sup>, **BIOL 340**: Neuroscience, **BIOL 345**: Molecular Biology, **BIOL 357**: Human Physiology, **BIOL 373**: Advanced Topics in Molecular, Cellular, and Integrative Biology, **BIOL 385**: Biology Capstone: Advanced Topics<sup>2</sup>

### 5 units of Chemistry, Mathematics, and Physics

2 units of Chemistry<sup>5</sup>

\_\_\_\_\_ 1 unit chosen from **CHEM 117**: Chemistry, **CHEM 150**: Nanochemistry  
\_\_\_\_\_ 1 unit chosen from **CHEM 230**: Organic Chemistry I, **CHEM 235**: Organic Chemistry II

1 unit of Mathematics

\_\_\_\_\_ **MATH 110**: Calculus I, **MATH 113**: Calculus as Applied Mathematics

1 unit of Physics

\_\_\_\_\_ **PHYS 101**: General Physics I

1 additional unit of Chemistry, Mathematics, or Physics chosen from

\_\_\_\_\_ **CHEM 220**: Environmental, Analytical and Geochemistry, **CHEM 230**: Organic Chemistry I, **CHEM 235**: Organic Chemistry II, **CHEM 240**: Thermodynamics and Kinetics, **CHEM 245**: Molecular Modeling, Visualization, and Computational Chemistry, **CHEM 260**: Nutrition and Metabolism: Biochemical Mechanisms, **CHEM 300**: DNA and Protein Biochemistry, **MATH 115**: Calculus II, **PHYS 102**: General Physics II, **PHYS 210**: Modern Physics

<sup>1</sup> Must be taken as **BIOL 210**.

<sup>2</sup> With approval of advisor (topic must be appropriate). May not also fulfill capstone requirement.

<sup>3</sup> Must be taken as **BIOL 260**.

<sup>4</sup> Must be taken as **BIOL 300**.

<sup>5</sup> A student with a strong high school background in chemistry should consult with a member of the Chemistry Department about beginning coursework in **CHEM 150**, **220**, or **230**.

Other: Students intending to apply to graduate school in biology should complete **MATH 110**, **115**; **CHEM 220**, **230**, **235**; **PHYS 101**, **102**. Students anticipating careers in the health professions should complete 2 units of literature and composition; **SOCI 275**: Health, Medical Care, and Society and/or **PHIL 221**: Biomedical Ethics. International study, a research experience, or an internship is strongly recommended.

Other requirements:

Liberal arts in practice experience (research, internship, field course, or other activity plus reflection):

Expectations:

International experience:

Interdisciplinary, synthetic, connection experience (HEAL, ENVS, CRIS, IDST, etc.):