

# BIOLOGY (INTEGRATIVE BIOLOGY), B.S.

This program is designed for students who desire a strong, diverse background in the biological sciences. It is designed to introduce students to the wholeness of biology through an integrative perspective of the structure and function of biological systems with strong training in information analysis. It is appropriate for students who wish to attend graduate or professional schools.

## Requirements for a Major in Biology (Integrative Biology)

**Code Title Hours**

Thirty-five semester hours including the following: <sup>1</sup>

### Required Courses

BIO 1305 & BIO 1105	Modern Concepts of Bioscience and Modern Concepts of Bioscience Laboratory	4
or BIO 1405	Investigations of Modern Biology Concepts I	
BIO 1306 & BIO 1106	Modern Concepts of Bioscience, continued and Modern Concepts of Bioscience Laboratory	4
or BIO 1406	Investigations of Modern Biology Concepts II	
BIO 2306 & BIO 2106	Genetics and Genetics Laboratory	4
BIO 3303	Ecology	3
BIO 3366	Foundations of Evolutionary Biology	3
BIO 4001	Achievement Test	0

Select one course from each distribution list:

### Cell and Molecular Distribution List 3

BIO 3342	Molecular Cell Biology	
BIO 3350	Genomics and Bioinformatics	
BIO 4301	Immunology	
BIO 4302 & BIO 4102	General Microbiology and General Microbiology Lab	
BIO 4306 & BIO 4106	Molecular Genetics and Genomics and Molecular Genetics and Genomics Laboratory	
BIO 4308 & BIO 4108	Genes and Development and Genes and Development Laboratory	

### Anatomy & Physiology Distribution List 3

BIO 3322	Human Physiology	
BIO 3429	Comparative Chordate Anatomy	
BIO 4317	Plant Physiology	
BIO 4431		
BIO 4432	General Human Anatomy	

### Ecology & Evolution Distribution List 3

BIO 3320	Climate Change Biology	
BIO 4305	Aquatic Ecosystems	
BIO 4365	Topics in Evolution	
BIO 4381	Restoration Ecology	

### Science Communication Distribution List 1

BIO 3100	Seminar in Biology	
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BIO 3103	Ecology Laboratory	
BIO 3300	Advanced Topics in Biology	
BIO 3V9R	Research	
BIO 4199	Scientific Communication	
BIO 4V04	Biology Field Studies	

Seven semester hours of 3000-4000 level BIO courses <sup>3</sup> 7

**Subtotal 35**

### Required Courses in Other Fields <sup>2</sup>

CHE 1301 & CHE 1101	Basic Principles of Modern Chemistry I and General Chemistry Laboratory I	4
CHE 1302 & CHE 1102	Basic Principles of Modern Chemistry II and General Chemistry Laboratory II	4
CHE 3331	Organic Chemistry I	3
CHE 3332	Organic Chemistry II	3
CHE 3238	Organic Chemistry Laboratory	2
MTH 1321	Calculus I	3
MTH 1322 or STA 2381	Calculus II or Introductory Statistical Methods	3

Select one of the following sequences: 8

PHY 1408 & PHY 1409	General Physics for Natural and Behavioral Sciences I and General Physics for Natural and Behavioral Sciences II	
PHY 1420 & PHY 1430	General Physics I and General Physics II	
PHY 1420 & PHY 1409	General Physics I and General Physics for Natural and Behavioral Sciences II	

**Total Hours 65**

<sup>1</sup> A grade of "C" or better in all biology courses used in the major and a GPA of 2.0 or higher on all BIO courses completed.

<sup>2</sup> A grade of "C" or better in all courses required in other fields.

<sup>3</sup> A maximum of 3 hours of 3V9R and a maximum of 3 hours of 4V9R may be used for elective credit.