

# BIOLOGICAL SCIENCES

## BIOLOGY PROGRAM - GENERAL OPTION

The biology general option is designed for students who wish to pursue a broadly defined degree program that emphasizes the major areas of biology and provides a solid foundation for further study in any graduate or professional program associated with the life sciences.

With guidance from their academic advisor, the general biology student can create a personalized biology degree tailored for their career goals and interests. The biology general option also encourages undergraduate research and internship opportunities to foster skills needed in a biology-oriented career. Graduates of this option have entered professional programs such as medical and pharmacy school as well as diverse graduate programs.

### Curriculum

The matrix below is a sample plan for all coursework required for this program.

#### Freshman

Fall	Credits
ENGL 1013 Composition I <sup>1</sup>	3
SS 1XXX Social Science Courses <sup>1</sup>	3
MATH 1113 College Algebra	3
BIOL 1011 Orientation to the Biological Sciences	1
BIOL 1114 Principles of Biology	4
<b>Total Hours</b>	<b>14</b>

Spring	Credits
ENGL 1023 Composition II <sup>1</sup>	3
SS 1XXX Social Science Courses <sup>1</sup>	3
Physical Activity	2
BIOL 2124 Principles of Zoology or BIOL 2134 Principles of Botany	4
Math Elective <sup>2</sup>	3
<b>Total Hours</b>	<b>15</b>

#### Sophomore

Fall	Credits
USHG 1XXX U S HISTORY & GOVERNMENT <sup>1</sup>	3
CHEM 2124 General Chemistry I and CHEM 2120 General Chemistry I Lab	4
BIOL 2124 Principles of Zoology or BIOL 2134 Principles of Botany	4
BIOL 3033 Bioinformatics or any COMS	3
Elective <sup>5</sup>	3
<b>Total Hours</b>	<b>17</b>

Spring	Credits
COMM 2003 Public Speaking	3
CHEM 2134 General Chemistry II and CHEM 2130 General Chemistry II Lab	4
BIOL 3034 Genetics	4
Biology Elective	4
<b>Total Hours</b>	<b>15</b>

**Junior**

Fall	Credits
CHEM 3254 Fundamentals of Organic Chemistry	4
PHYS 2014 Algebra-Based Physics I and PHYS 2000 Physics Laboratory I	4
BIOL 3114 Principles of Ecology <sup>3</sup>	4
Math Elective <sup>2</sup>	3
<b>Total Hours</b>	<b>15</b>

Spring	Credits
CHEM 3264 Mechanistic Organic Chemistry	4
PHYS 2024 Algebra-Based Physics II and PHYS 2010 Physics Laboratory II	4
Biology Elective (3000-4000 level)	4
Elective <sup>5</sup>	4
<b>Total Hours</b>	<b>16</b>

**Senior**

Fall	Credits
FAH 1XXX Fine Arts and Humanities Courses	3
Physiology or Cellular Elective <sup>4</sup>	3-4
Biology Elective <sup>4</sup>	3-4
Elective <sup>5</sup>	5
<b>Total Hours</b>	<b>15</b>

Spring	Credits
FAH 1XXX Fine Arts and Humanities Courses <sup>1</sup>	
Physiology or Cellular Elective <sup>4</sup>	3-4
BIOL 4891 Seminar in Biology	1
Biology Elective <sup>4</sup>	3-4
Elective <sup>5</sup>	2
<b>Total Hours</b>	<b>13</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Six hours of mathematics above MATH 1113 College Algebra. Courses in the areas of statistics, biostatistics, and/or calculus are recommended (e.g. STAT 2163 Introduction to Statistical Methods, PSY 2053 Statistics for the Behavioral Sciences/SOC 2053 Statistics for the Behavioral Sciences, FW 3173 Biostatistics, MATH 2243 Calculus for Business and Economics and/or MATH 2914 Calculus I).

<sup>3</sup>BIOL 4094 Coastal Ecology which is offered during the May mini-term can serve as an alternative to BIOL 3114 Principles of Ecology in the Biology major.

<sup>4</sup>The physiology choices include: BIOL 3074 Human Physiology, BIOL 3174 Physiological Ecology; whereas, choices in the area of cell or molecular biology include: BIOL 4033 Cell Biology, BIOL 4074 Molecular Genetics, BIOL 3054 Microbiology, BIOL 4023 Immunology. One in each area is required. Other alternatives must be approved by your advisor and Department Head. Each 3-hour selection in one of these areas must be balanced by 4-hours (rather than 3-hours) of biology electives.

<sup>5</sup>Sufficient courses at 3000-4000 level to constitute a total of 40 hours. At least 2 credit-hours of biology research or internship is recommended (BIOL 4112 Biology Internship-4 or BIOL 4951 Undergraduate Research in Biology-4).