

# BIOLOGICAL SCIENCES

## BIOLOGY PROGRAM - BIOMEDICAL OPTION

The Biomedical Option is designed for students wishing to study medicine, dentistry, physical therapy, and related fields of specialization. Thus, graduates typically apply to a medical school of some type or a graduate program such as physical therapy.

However, while the specified curriculum is well-suited to these studies, professional schools do not specify that entering students have particular majors or options. Graduates who complete the degree option yet do not enter a medical or graduate school program should be prepared for a variety of employment opportunities especially in biomedical or biotechnology-related laboratories.

### 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
MATH 1113 College Algebra or MATH 1914 Precalculus	3-4
CHEM 2124 General Chemistry I and CHEM 2120 General Chemistry I Lab	4
BIOL 1011 Orientation to the Biological Sciences	1
BIOL 1114 Principles of Biology	4
<b>Total Hours</b>	<b>15-16</b>

Spring	Credits
ENGL 1023 Composition II <sup>1</sup>	3
CHEM 2134 General Chemistry II	4
BIOL 2124 Principles of Zoology and CHEM 2130 General Chemistry II Lab	4
MATH 2914 Calculus I or MATH higher than MATH 1113 College Algebra	3-4
<b>Total Hours</b>	<b>14-15</b>

#### Sophomore

Fall	Credits
SOC 1003 Introductory Sociology or PSY 2003 General Psychology	3
CHEM 3254 Fundamentals of Organic Chemistry	4
BIOL 2134 Principles of Botany	4
BIOL 3033 Bioinformatics or COMS 2003 Microcomputer Applications	3
Major Support Course Elective	3
<b>Total Hours</b>	<b>17</b>

Spring	Credits
COMM 2003 Public Speaking or COMM 2173 Business and Professional Speaking	3
SS 1XXX Social Science Courses <sup>1</sup>	3
CHEM 3264 Mechanistic Organic Chemistry	4
BIOL 2014 Human Anatomy	4
Statistics	3
<b>Total Hours</b>	<b>17</b>

**Junior**

Fall	Credits
FAH 1XXX Fine Arts and Humanities Courses <sup>1</sup>	3
PHYS 2014 Algebra-Based Physics I and PHYS 2000 Physics Laboratory I	4
BIOL 3074 Human Physiology	4
BIOL 3054 Microbiology	4
<b>Total Hours</b>	<b>15</b>

Spring	Credits
FAH 1XXX Fine Arts and Humanities Courses <sup>1</sup>	3
USHG 1XXX U.S. History and Government <sup>1</sup>	3
PHYS 2024 Algebra-Based Physics II and PHYS 2010 Physics Laboratory II	4
BIOL 3034 Genetics	4
BioMed Elective	3-4
<b>Total Hours</b>	<b>17-18</b>

**Senior**

Fall	Credits
BIOL 3114 Principles of Ecology or BIOL 4094 Coastal Ecology	4
BioMed Elective	6-8
Electives (as needed to reach a total of 120 hours for graduation)	3
<b>Total Hours</b>	<b>13-15</b>

Spring	Credits
BIOL 4891 Seminar in Biology	1
BioMed Elective	3-4
Electives (as needed to reach a total of 120 hours for graduation)	8
<b>Total Hours</b>	<b>12-15</b>

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

<sup>2</sup>Major.Support Course Elective courses include: AHS 2013 Medical Terminology, BIOL 4064 Evolutionary Biology, CHEM 3344 Principles of Biochemistry, CHEM 3363 Metabolic Biochemistry, PE 2513 First Aid, PHIL 3103 Logic, PSY 2033 Psychology of Adjustment, PSY 3003 Abnormal Psychology, PSY 3013 Psychosocial Aspects of Death and Dying/SOC 3013 Psychosocial Aspects of Death and Dying, PSY 3053 Behavioral Neuroscience, PSY 3063 Developmental Psychology: Childhood, PSY 3163 Developmental Psychology: Adulthood, PSY 3813 Lifespan Development, PSY 4133 Psychopharmacology, SOC 4013 Drugs in Society, SOC 4053 Sociology of Health and Illness, or SOC 4183 Social Gerontology.

<sup>3</sup>See advisor for alternatives.

<sup>4</sup>See catalog to assure pre-requisites are met. See advisor to select twelve - sixteen hours (four courses) from: BIOL 3064 Parasitology, BIOL 3803 Applied Pathophysiology, BIOL 4023 Immunology, BIOL 4033 Cell Biology, BIOL 4054 Vertebrate Histology, BIOL 4074 Molecular Genetics, BIOL 4083 Cancer Biology, BIOL 4951 Undergraduate Research in Biology-4 (limited to 4 total hours).

<sup>5</sup> At least 40 of the total hours required for graduation must be 3000-4000 level courses.