

**BIOLOGY CORE REQUIREMENTS**

<b>CBEN110</b>	FUNDAMENTALS OF BIOLOGY I	4.0
<b>CBEN120</b>	FUNDAMENTALS OF BIOLOGY II	4.0
<b>CBEN320</b>	CELL BIOLOGY AND PHYSIOLOGY	3.0
<b>BIOL300</b>	INTRO TO QUANTITATIVE BIOLOGY	3.0
<b>BIOL301</b>	INTRO TO QUANTITATIVE BIOLOGY II	3.0
<b>CBEN321</b>	INTRO TO GENETICS	4.0
<b>CHGN428</b>	BIOCHEMISTRY	3.0
<b>CHGN431</b>	INTRODUCTORY BIOCHEMISTRY LABORATORY	2.0
<b>CHGN462</b>	MICROBIOLOGY	3.0
OR		
<b>CEEN460</b>	MOLECULAR MICROBIAL ECOLOGY AND THE ENVIRONMENT	3.0
<b>BIOLXXX</b>	FIELD SESSION	6.0
<b>BIOLXXX</b>	ENTREPRENEURSHIP SEMINAR	1.0
<b>CSCI478</b>	INTRODUCTION TO BIOINFORMATICS	3.0

**FUNDAMENTAL SCIENCE AND GENERAL REQUIREMENTS**

<b>MATH111</b>	CALCULUS FOR SCIENTISTS AND ENGINEERS I	4.0
<b>MATH112</b>	CALCULUS FOR SCIENTISTS AND ENGINEERS II	4.0
<b>MATH213</b>	CALCULUS FOR SCIENTISTS AND ENGINEERS III	4.0
<b>MATH225</b>	DIFFERENTIAL EQUATIONS	3.0
<b>MATH201</b>	INTRODUCTION TO STATISTICS	3.0
<b>CHGN121</b>	PRINCIPLES OF CHEMISTRY I	4.0
<b>CHGN122</b>	PRINCIPLES OF CHEMISTRY II (SC1)	4.0
<b>CHGN221</b>	ORGANIC CHEMISTRY I	3.0
<b>CHGN223</b>	ORGANIC CHEMISTRY LABORATORY	1.0
<b>CHGN222</b>	ORGANIC CHEMISTRY II	3.0
<b>EBGN201</b>	PRINCIPLES OF ECONOMICS	3.0
<b>EDNS151</b>	DESIGN I	3.0
<b>HASS100</b>	NATURE AND HUMAN VALUES	4.0
<b>HASS200</b>	GLOBAL STUDIES	3.0

<b>ELECTIVE</b>	Humanities & Social Sciences (H&SS) mid-level courses	
<b>ELECTIVE</b>	Humanities & Social Sciences (H&SS) 400-level courses	
<b>PHGN100</b>	PHYSICS I – MECHANICS	4.5
<b>PHGN200</b>	PHYSICS II – ELECTROMAGNETISM AND OPTICS	4.5
<b>CSCI101</b>	INTRODUCTION TO COMPUTER SCIENCE	3.0
<b>PAGN</b>	Physical Activity Courses (4 electives)	
<b>CSM101</b>	FRESHMAN SUCCESS SEMINAR	0.5

The core course work totals 95.5 credits.

### **FREE ELECTIVES**

9 credits of free electives. These can be used to cover prerequisites if necessary.

### **TECHNICAL ELECTIVES AVAILABLE**

Technical electives with emphasis on biology-related courses, chosen from the following:

<b>CBEN304</b>	ANATOMY AND PHYSIOLOGY	3.0
<b>CBEN305</b>	ANATOMY AND PHYSIOLOGY LAB	1.0
<b>CBEN310</b>	INTRODUCTION TO BIOMEDICAL ENGINEERING	3.0
<b>CBEN311</b>	INTRODUCTION TO NEUROSCIENCE	3.0
<b>CBEN322</b>	BIOLOGICAL PSYCHOLOGY	3.0
<b>CBEN412</b>	INTRODUCTION TO PHARMACOLOGY	3.0
<b>CBEN413</b>	QUANTITATIVE HUMAN BIOLOGY	3.0
<b>CBEN431</b>	IMMUNOLOGY FOR ENGINEERS AND SCIENTISTS	3.0
<b>CBEN4XX</b>	CAPSTONE	
<b>CHGN429</b>	BIOCHEMISTRY II	3.0
<b>CHGN441</b>	THE CHEMISTRY AND BIOCHEMISTRY OF PHARMACEUTICALS	3.0
<b>MATH431</b>	MATHEMATICAL BIOLOGY	3.0
<b>CHGN445</b>	CHEMICAL BIOLOGY	3.0
<b>CHGN4XX</b>	BIOINORGANIC CHEMISTRY	
<b>CEEN461</b>	FUNDAMENTALS OF ECOLOGY	3.0
<b>PHGN433</b>	BIOPHYSICS	3.0

<b>BIOL499</b>	INDEPENDENT STUDIES (up to 6 credits)	
<b>CSCI303</b>	INTRODUCTION TO DATA SCIENCE	3.0

Free Technical Elective totals 28 credits

**FRESHMAN FALL**

**CREDITS**

<b>CBEN110</b>	FUNDAMENTALS OF BIOLOGY I	4.0
<b>MATH111</b>	CALCULUS FOR SCIENTISTS AND ENGINEERS I	4.0
<b>CHGN121</b>	PRINCIPLES OF CHEMISTRY I	4.0
<b>EDNS151</b>	DESIGN I	3.0
<b>PAGN ELECTIVE</b>	PHYSICAL ACTIVITY COURSE	0.5
<b>CSM101</b>	FRESHMAN SUCCESS SEMINAR	0.5
		Total: 16.0

**FRESHMAN SPRING**

**CREDITS**

<b>MATH112</b>	CALCULUS FOR SCIENTISTS AND ENGINEERS II	4.0
<b>CHGN122</b>	PRINCIPLES OF CHEMISTRY II	4.0
<b>HASS100</b>	NATURE AND HUMAN VALUES	4.0
<b>PAGN ELECTIVE</b>	PHYSICAL ACTIVITY COURSE	0.5
<b>CBEN120</b>	FUNDAMENTALS OF BIOLOGY II	4.0
		Total: 16.5

**SOPHOMORE FALL**

**CREDITS**

<b>CHGN221</b>	ORGANIC CHEMISTRY I	3.0
<b>CHGN223</b>	ORGANIC CHEMISTRY I LABORATORY	1.0
<b>MATH213</b>	CALCULUS FOR SCIENTISTS AND ENGINEERS III	4.0
<b>CSCI101</b>	INTRODUCTION TO COMPUTER SCIENCE	3.0
<b>PHGN100</b>	PHYSICS I – MECHANICS	4.5
<b>PAGN ELECTIVE</b>	PHYSICAL ACTIVITY COURSE	0.5
		Total: 16.0

**SOPHOMORE SPRING**

**CREDITS**

<b>CHGN222</b>	ORGANIC CHEMISTRY II	3.0
<b>MATH225</b>	DIFFERENTIAL EQUATIONS	3.0
<b>BIOL300</b>	INTRO TO QUANTITATIVE BIOLOGY I	3.0
<b>PAGN ELECTIVE</b>	PHYSICAL ACTIVITY COURSE	0.5
<b>PHGN200</b>	PHYSICS II – ELECTROMAGNETISM AND OPTICS	4.5
<b>MATH201</b>	INTRODUCTION TO STATISTICS	3.0
		Total: 17.0

### **JUNIOR FALL**

### **CREDITS**

<b>CHGN428</b>	BIOCHEMISTRY	3.0
<b>CHGN431</b>	INTRODUCTORY BIOCHEMISTRY LABORATORY	2.0
<b>HASS200</b>	GLOBAL STUDIES	3.0
<b>BIOL301</b>	INTRO TO QUANTITATIVE BIOLOGY II	3.0
<b>CBEN320</b>	CELL BIOLOGY AND PHYSIOLOGY	3.0
<b>TECH</b>	TECH ELECTIVE INTERDISCIPLINARY BIO TECHNICAL ELECTIVE I	3.0
		Total: 17.0

### **JUNIOR SPRING**

### **CREDITS**

<b>ELECTIVE</b>	HUMANITIES & SOCIAL SCIENCE (H&SS) RESTRICTED ELECTIVE I	3.0
<b>CBEN321</b>	INTRO TO GENETICS	4.0
<b>TECH</b>	TECH ELECTIVE INTERDISCIPLINARY BIO TECHNICAL ELECTIVE II	3.0
<b>TECH</b>	TECH ELECTIVE INTERDISCIPLINARY BIO TECHNICAL ELECTIVE III	3.0
<b>CHGN462</b>	MICROBIOLOGY	3.0
		Total: 16.0

**SUMMER****CREDITS**

<b>BIOL FIELD SESSION*</b>		3.0
		Total: 3.0

**SENIOR FALL****CREDITS**

<b>ELECTIVE</b>	HUMANITIES & SOCIAL SCIENCE (H&SS) RESTRICTED ELECTIVE II	3.0
<b>FREE</b>	FREE ELECTIVE I	3.0
<b>TECH</b>	TECH ELECTIVE INTERDISCIPLINARY BIO TECHNICAL ELECTIVE IV	3.0
<b>EBGN201</b>	PRINCIPLES OF ECONOMICS	3.0
<b>BIOLXXX</b>	BIOLOGY ENTREPRENEURSHIP AND SEMINAR	1.0
<b>CSCI478</b>	INTRODUCTION TO BIOINFORMATICS	3.0
		Total: 16.0

**SENIOR SPRING****CREDITS**

<b>FREE</b>	FREE ELECTIVE II	3.0
<b>FREE</b>	FREE ELECTIVE III	3.0
<b>ELECTIVE</b>	HUMANITIES & SOCIAL SCIENCE (H&SS) RESTRICTED ELECTIVE III	3.0
<b>TECH</b>	TECH ELECTIVE INTERDISCIPLINARY BIO TECHNICAL ELECTIVE V	3.0
<b>TECH</b>	TECH ELECTIVE INTERDISCIPLINARY BIO TECHNICAL ELECTIVE VI	3.0
		Total: 15.0

**Total Credits: 132.5**

\* Signifies a new course needed for major degree offering.