

## BACHELOR OF SCIENCE BIOLOGY BIOTECHNOLOGY CONCENTRATION

GENERAL EDUCATION REQUIREMENTS				
<b>Competencies</b>				
<input type="checkbox"/> ♦ Basic College Math				
<input type="checkbox"/> ♦ Reading Comprehension				
<b>▲ General Education Categories (34-35 credits total)</b>				
♦FYS	First Year Seminar			3
♦W-I	Written Communication - Level I			3
♦OC	Oral Communication			3
PGR	Personal Growth & Responsibility			3
CEA	Creative Expression & Appreciation			3
WC	World Cultures			3
HP	The Human Past			3
CS	Contemporary Society			3
SR	Scientific Reasoning:	# Any SR course		3-4
		# SR Lab course		4
QR	Quantitative Reasoning			3
<b>‡ Written Communication (Level II and Level III)</b>				
W-II	Written Communication - Level II			<input type="checkbox"/>
W-III	Written Communication - Level III			<input type="checkbox"/>

Free Electives (12 credit minimum total)				
May be necessary to take additional credits to attain the minimum 120 credits required for graduation depending on choices made for general education or minor selection.				

COURSES IN MAJOR (44-45 credits total)				
(Required 41 credits)				
BIO	131	Introduction to Organisms	4	
BIO	132	Introduction to Cells	4	
BIO	208	Environmental Problems	3	
BIO	212	Cell Biology	4	
BIO	220	Evolutionary Morphology	3	
BIO	313	Molecular Biology	4	
BIO	317 OR	Methods in Biotechnology	4	
		Advanced Laboratory Elective		
BIO	402	Genetics	4	
BIO	406	Microbiology	4	
BIO	409	Biological Chemistry	4	
BIO	411	Immunology	4	
BIO	415	Biology Seminar	3	
<b>Electives (3-4 credits)</b>				
† BIO		Biology Elective	3-4	
<b>▼ Required Support Courses (11-12 credits total)</b>				
MAT	110 or 220	Pre-calculus	3-4	
		Calculus I		
◊ PHS	211A or 221	College Physics I	4	
		General Physics I		
◊ PHS	212A or 222	Physics II	4	
		General Physics II		
<b>Required Minor: Chemistry (16 credits total)</b>				
CHE	130	General Chemistry I	4	
CHE	131	General Chemistry II	4	
CHE	212	Organic Chemistry I	4	
CHE	213	Organic Chemistry II	4	

▼ Students may choose to use support courses to satisfy general education categories, but may not be required to do so. **Note:** If a course is used to satisfy two or more requirements (for example, a support course and Scientific Reasoning requirement), the credits are counted in only one place. Using a course to satisfy more than one requirement does **not** reduce the credit total required for graduation.

- ◆ Courses used to satisfy the general education requirements of the university must be taken from a minimum of six different academic disciplines. First Year Seminar and Level I Written Communications courses are exempt from this restriction. Courses may not be used to fulfill both major discipline and general education requirements.
- # These Scientific Reasoning General Education Category courses do not have to be a sequence or be from the same discipline
- ‡ Level II and Level III Written Communications Courses may be used to satisfy requirements anywhere else in a student's program of study where they may apply. The credits are counted only in one area.
- † This elective must be chosen from the following courses: BIO 311, BIO 312, 314, 316, 400, 407, 408, 412, and 416. A maximum of 4 credits from BIO 407, 408, 416, 418, 420, or 422 may be used to fulfill one Biology elective; additional credits will count as Free Electives.
- ¶ For the Advanced Laboratory Elective, students may choose from BIO 416, 312N, CHE 340, CHE 420. Students are strongly encouraged to complete a Biology internship (BIO 416). Internship placements are not made by the University. Interested students should speak with their academic advisor and Career Services for coaching in the internship search process, starting in fall of the sophomore year. Note: some internship programs have a minimum GPA requirement.
- ◊ The sequence can be either PHS 211A and 212A, or PHS 221 and 222.

◆ COMPETENCIES - TO BE COMPLETED WITHIN THE FIRST 30 CREDITS      ◆ GENERAL EDUCATION CATEGORIES - TO BE COMPLETED WITHIN THE FIRST 30 CREDITS

Exceptions in the timing of courses will be made for transfer students

**Total credits for graduation: 120**

**Effective: 9/2017**