

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_  
Date Admitted Into Major: \_\_\_\_\_

## BACHELOR OF ARTS BIOLOGY

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"/>
<b>Foreign Language (0-12 Credits total)</b>				
<b>▶ † Free Electives/Minor (15 credits minimum)</b>				
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 (57-61 credits total)				
<b>Required (35-37 credits)</b>				
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	402	Genetics	4	
BIO	415	Biology Seminar	3	
†BIO		Plant Biology or Animal Biology elective	3-4	
BIO		Cell/Molecular Biology elective	4	
†BIO		Structure/Function or Ecology/Evolution elective	3-4	
<b>Electives (3-4 credits)</b>				
†BIO		Biology Elective	3-4	
<b>▼ Required Support Courses (6-7 credits total)</b>				
MAT	110 or 220	Pre-calculus or Calculus I	3-4	
<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.

† At least two of the following must have a lab: the Plant or Animal elective, the Structure/Function elective or Ecology/Evolution elective, or the BIO elective.

† Electives within the major are to be chosen from 300 to 400 level courses, exclusive of BIO 304, 324, and 328. A maximum 4 credits from BIO 407, 416, 418, 420, or 422 may be used to fulfill one BIO Elective; additional credits will count as Free Electives. Secondary Education minors must select BIO320, and one course in Geological Sciences.

▶ B.A. Biology majors are strongly urged to elect a Computer Science course and one year of Physics.

◆ 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: 9/2016

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_  
Date Admitted Into Major: \_\_\_\_\_

## BACHELOR OF SCIENCE BIOLOGY

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 (1 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 (72-77 credits total)				
<b>Required (42 – 45 credits)</b>				
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	402	Genetics	4	
BIO	415	Biology Seminar	3	
BIO	406 or 409	Microbiology or Biochemistry	4	
† BIO		Plant Biology Elective	4	
† BIO		Animal Biology Elective	3-4	
† BIO		Structure/Function Elective	3-4	
† BIO		Ecology/Evolution Elective	3-4	
<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 or Calculus I	3-4	
◊ PHS	211A or 221	College Physics I or General Physics I	4	
◊ PHS	212A or 222	College Physics II or General Physics II	4	
<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.

† Electives within the major are to be chosen from 300 to 400 level courses, exclusive of BIO 304, 324 and 328. A maximum 4 credits from BIO 407, 408N, 416, 418, 420 or 422 may be used to fulfill one Biology Elective; additional credits will count as Free Electives. Secondary Education minors must select BIO 320, and one course in Geological Sciences.

† Two of the three group electives MUST have a lab.  
◊ 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: 9/2016**

## BACHELOR OF SCIENCE BIOLOGY AQUACULTURE CONCENTRATION

### GENERAL EDUCATION REQUIREMENTS

#### Competencies

- |                          |                         |
|--------------------------|-------------------------|
| <input type="checkbox"/> | ◆ Basic College Math    |
| <input type="checkbox"/> | ◆ Reading Comprehension |

#### ◆ General Education Categories (34-35 credits total)

◆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

#### ‡ Written Communication (Level II and Level III)

W-II	Written Communication - Level II			<input type="checkbox"/>
W-III	Written Communication - Level III			<input type="checkbox"/>

#### Free Electives (2 credits 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 (75-78 credits total)

#### Required (48 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	310	Invertebrate Zoology	4
BIO	320 or 322	General Ecology or Biological Oceanography	4
BIO	323	Fish Biology	4
BIO	326	Marine Botany	4
BIO	345	Introduction to Aquaculture	4
BIO	402	Genetics	4
BIO	403	Advanced Aquaculture	3
BIO	415	Biology Seminar	3

#### ▼ Required Support Courses (11-13 credits total)

MAT	110 or 220	Precalculus or Calculus I	3-4
PHS	211A or 221	College Physics I or General Physics I	4
CHE	321	Quantitative Analysis	4

#### Required Minor: Chemistry (16 credits total)

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.
- ¶ Electives within the major are to be chosen from 300 to 400 level courses, exclusive of BIO 304, 324 and 328. A maximum 4 credits from BIO 407, 408N, 416, 418, 420 or 422 may be used to fulfill one Biology Elective; additional credits will count as Free Electives. Secondary Education minors must select BIO 320, and one course in Geological Science.

◆ 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: 9/2016**

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_  
Date Admitted Into Major: \_\_\_\_\_

## BACHELOR OF SCIENCE BIOLOGY

### BIOMEDICAL SCIENCES 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 (1 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 (74-77 credits total)				
<b>Required (37 credits)</b>				
BIO	131	Introduction to Organisms	4	
BIO	132	Introduction to Cells	4	
BIO	200	Anatomy and Physiology I	4	
BIO	201	Anatomy and Physiology II	4	
BIO	208	Environmental Problems	3	
BIO	210	Basic Nutrition	3	
BIO	212	Cell Biology	4	
BIO	402	Genetics	4	
BIO	406	Microbiology	4	
BIO	409	Biochemistry	4	
BIO	415	Biology Seminar	3	
<b>∞ Electives (10-12 credits)</b>				
† BIO		Biology elective	4	
† BIO		Biology elective	3-4	
† BIO		Biology elective	3-4	
<b>♥ Required Support Courses (11-12 credits total)</b>				
MAT	110 or 220	Pre-calculus or Calculus I	3-4	
2 semester Physics sequence				
♦ PHS	211A or 221	College Physics I or General Physics I	4	
♦ PHS	212A or 222	College Physics II or General Physics II	4	
<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.
- ∞ Two electives must be chosen from the following courses: BIO 311, 312, 313, 316, 340, 400, 406, 407, 408, 409, 411, 412, and 416. At least one of these must be a 400 level course, one elective is to be a general elective (any 300-400 course not otherwise restricted)
- † This elective within the major is to be chosen from 300 to 400 level courses, exclusive of BIO 304, 324, and 328.
- ∞ A maximum of 4 credits from BIO 407, 408, 416, 418, or 422 may be used to fulfill one Biology elective; additional credits will count as Free Electives.
- ♦ 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: 9/2016**

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_  
Date Admitted Into Major: \_\_\_\_\_

## 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 (1 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 (75-77 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 or Calculus I		3-4	
♦ PHS	211A or 221	College Physics I or General Physics I		4	
♦ PHS	212A or 222	Physics II or General Physics II		4	
<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: 9/2016**

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_  
Date Admitted Into Major: \_\_\_\_\_

## BACHELOR OF SCIENCE BIOLOGY ENVIRONMENTAL BIOLOGY CONCENTRATION

### GENERAL EDUCATION REQUIREMENTS

#### Competencies

<input type="checkbox"/>	◆ Basic College Math
<input type="checkbox"/>	◆ Reading Comprehension

#### ◆ General Education Categories (34-35 credits total)

◆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

#### ‡ Written Communication (Level II and Level III)

W-II	Written Communication - Level II			<input type="checkbox"/>
W-III	Written Communication - Level III			<input type="checkbox"/>

#### Free Electives (0 credits 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 72-76 credits total)

#### Required (40-41 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		Plant Biology Elective	4	
BIO		Animal Biology Elective	3-4	
BIO	320	General Ecology	4	
BIO	406	Microbiology or	4	
BIO	409	Biochemistry		
BIO	402	Genetics	4	
BIO	415	Biology Seminar	3	

#### Electives (3-4 credits)

*BIO	Biology elective	3-4	
------	------------------	-----	--

#### † Required Support Courses (13-15 credits total)

MAT	110 or 220	Pre-calculus or Calculus I	3-4	
PHS	211A or 221	College Physics I or General Physics I	4	
		Elective (GROUP A)	3-4	
		Elective (GROUP B)	3	

#### Required Minor: Chemistry (16 credits total)

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.

+ The Biology Elective must be chosen from 300 to 400 level courses, exclusive of BIO 304, 324 and 328. 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.

† Electives within the major are to be chosen from the following (One course from Group A and a second course from either Group A or Group B):  
Group A - GLS210, GLS212, GLS221, GLS330, GLS334, GLS342, GLS362, GPH222, GPH245, GPH264, GPH282P, GPH285P, GPH301, GPH314, GPH371, GPH376P, GPH383P.  
Group B - ECO319, IDS220, IDS325, PHL224, PHL314, POL304, POL319.

◆ 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:** 120-122

**Effective:9/2016**

## BACHELOR OF SCIENCE BIOLOGY MARINE BIOLOGY CONCENTRATION

### GENERAL EDUCATION REQUIREMENTS

#### Competencies

- |                          |                         |
|--------------------------|-------------------------|
| <input type="checkbox"/> | ◆ Basic College Math    |
| <input type="checkbox"/> | ◆ Reading Comprehension |

#### ◆ General Education Categories (34-35 credits total)

◆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

#### ‡ Written Communication (Level II and Level III)

W-II	Written Communication - Level II				<input type="checkbox"/>
W-III	Written Communication - Level III				<input type="checkbox"/>

#### Free Electives (1 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 (74-77 credits total)

#### Required (44-45 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	310	Invertebrate Zoology	4	
BIO	322	Biological Oceanography	4	
BIO	326	Marine Botany	4	
BIO	323 or 341	Fish Biology or Biology of Marine Mammals	3-4	
† BIO		Cell/Molecular or Structure/Function elective	4	
BIO	402	Genetics	4	
BIO	415	Biology Seminar	3	

#### Electives (3-4 credits)

‡ BIO	Biology elective			3-4
-------	------------------	--	--	-----

#### ▽◆ Required Support Courses (11-12 credits total)

MAT	110 or 220	Pre-calculus or Calculus I	3-4	
◆ PHS	211A or 221	College Physics I or General Physics I	4	
◆ PHS	212A or 222	College Physics II or General Physics II	4	

#### Required Minor: Chemistry (16 credits total)

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.

▽◆ Electives within the major are to be chosen from 300 to 400 level courses, exclusive of BIO 304, 324, and 328. A maximum 4 credits from BIO 407, 408N, 416, 418, 420 or 422 may be used to fulfill one BIO Elective; additional credits will count as Free Electives. Secondary Education minors must select BIO 320, and one course in Geological Sciences.

† The Cell/Molecular or Structure/Function elective must be chosen from 400-level courses AND have a laboratory.

◆ The sequence can be either PHS 211A and 212A, or Physics 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: 9/2016**

Name: \_\_\_\_\_  
 Student ID: \_\_\_\_\_  
 Date Admitted Into Major: \_\_\_\_\_

## BACHELOR OF SCIENCE BIOLOGY

### † MEDICAL TECHNOLOGY CONCENTRATION

**GENERAL EDUCATION REQUIREMENTS**

**Competencies**

<input type="checkbox"/>	♦ Basic College Math
<input type="checkbox"/>	♦ Reading Comprehension

**▲ General Education Categories (34-35 credits total)**

♦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

**‡ Written Communication (Level II and Level III)**

W-II	Written Communication - Level II			<input type="checkbox"/>
W-III	Written Communication - Level III			<input type="checkbox"/>

**Free Electives/minor (0 credits 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 (76-78 credits total)**

**Required (46 credits)**

BIO	131	Introduction to Organisms	4	
BIO	132	Introduction to Cells	4	
BIO	200	Anatomy and Physiology I	4	
BIO	201	Anatomy and Physiology II	4	
BIO	208	Environmental Problems	3	
BIO	212	Cell Biology	4	
BIO	411	Immunology		
BIO	313	OR Molecular Biology	4	
BIO	316	OR Parasitology		
BIO	402	Genetics	4	
BIO	406	Microbiology	4	
BIO	409	Biological Chemistry	4	
BIO	415	Biology Seminar	3	

**¶ Elective (3-4 credits)**

BIO	Biology elective			3-4
-----	------------------	--	--	-----

**▼ Required Support Courses (18-19 credits total)**

MAT	110 or 220	Pre-calculus or Calculus I		3-4
♦ PHS	211A or 221	College Physics I or General Physics I	4	
♦ PHS	212A or 222	College Physics II or General Physics II	4	
CHE	420	Instrumental Analysis	4	

**Required minor Chemistry (16 credits total)**

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.

† It is strongly recommended that students seek medical laboratory experience through entry-level work or an internship in the sophomore or junior year. Internship placements are *not* made by the university. Interested students should speak to their Academic Advisor and Career Services for coaching. Note: some external internships require a GPA minimum for applicants.

¶ Electives within the major are to be chosen from 300 to 400 level courses, exclusive of BIO 304, 324, and 328. A maximum 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. Secondary Education minors must elect BIO 320, and one course in Geological Science.

♦ 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 9/2016**



## BACHELOR OF SCIENCE BIOLOGY NUCLEAR MEDICINE TECHNOLOGY CONCENTRATION

### GENERAL EDUCATION REQUIREMENTS

#### Competencies

- |                          |                         |
|--------------------------|-------------------------|
| <input type="checkbox"/> | ◆ Basic College Math    |
| <input type="checkbox"/> | ◆ Reading Comprehension |

#### ◆ General Education Categories (34-35 credits total)

◆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	

#### ‡ Written Communication (Level II and Level III)

W-II	Written Communication - Level II			<input type="checkbox"/>	
W-III	Written Communication - Level III			<input type="checkbox"/>	

#### Free Electives (0 credits 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 (93-94) credits total)

#### Required (60 credits)

BIO	105	Biological Systems	4	
BIO	200	Anatomy & Physiology 1	4	
BIO	201	Anatomy & Physiology 2	4	
BIO	212	Cell Biology	4	
NMT	200	Introduction To NMT	1	
BIO	340	General Pathology	3	
BIO	402	Genetics	4	
BIO	409	Biological Chemistry	4	
BIO	411	Immunology	4	
NMT	401A	NMT Practicum I	3	
NMT	402	NMT Practicum II	4	
NMT	403	NMT Practicum III	4	
NMT	405	Nuclear Medicine Tech I	4	
NMT	411	Nuclear Medicine Tech II	4	
NMT	415	NMT Seminar	1	
NMT	420	Nuclear Instrumentation	4	
NMT	435	Advanced Imaging & Therapeutics	4	

#### ♥ Required Support Courses (17-18 credits total)

◆PHS	211A	College Physics I	4	
◆PHS	212A	College Physics II	4	
MAT	110 or 220	Pre-calculus or Calculus I	3-4	
PHS	315	Introduction To Radiation Physics	3	
PHL	218	Medical Ethics	3	

#### Required Minor: Chemistry (16 credits total)

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.

◆ The sequence can be chosen from PHS211A and PHS212A, or PHS221 and PHS222.

◆ 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 - 132

Effective: 9/2016