

Name:	l
Student ID:	l
Date Admitted Into Major:	

		BACHE!	<u>IOLO</u> GY	<u> </u>			
	GENERAL EDUCATION REQUIR	EMENTS			COU	RSES IN MAJOR (38-41 credits to	otal)
	Competencies					Freshman Year	
□ ♠Ba	asic College Math			BIO	131	Introduction to Organisms	4
	eading Comprehension			BIO	132	Introduction to Cells	4
					1	Sophomore Year	
<u></u> → C(	omputer Literacy			BIO	208	Environmental Problems	3
				BIO	212	Cell Biology	4
	♣General Education Categories (34-35)	5 credits total)		BIO	220	Evolutionary Morphology	3
<b>♦FYS</b>	First Year Seminar	3		1010	1	Junior/Senior Year	1
♦W-I	Written Communication - Level I	3		†BIO		Plant Biology or Animal Biology elective	3-4
◆OC	Oral Communication	3		BIO		Cell/Molecular Biology elective	4
PGR	Personal Growth & Responsibility	3		+BIO		Structure/Function or	7
CEA	Creative Expression & Appreciation	3		IBIO		Ecology/Evolution elective	3-4
WC	World Cultures	3		BIO	402	Genetics	4
HP	The Human Past	3	<b></b>	BIO	415	Biology Seminar	3
CS	Contemporary Society	3 3-4	<u> </u>	<u> </u>			
SR	Scientific # Any SR course Reasoning: # SR Lab course	3-4					
QR	Quantitative Reasoning	3				Major Elective	
QIV	· • • • • • • • • • • • • • • • • • • •			¶ BIO		Biology Elective	3-4
	‡ Written Communication (Level II a	ina Levei III)					
W-II	Written Communication - Level II						
W-III	Written Communication - Level III				Reaui	red Support Courses (6-7 credits	total)
				MAT	110	Pre-calculus	
	Foreign Language ( 0-12 Credits	total)			or	or	3-4
			$\neg$		220	Calculus I	
			_		147	Statistics	3
				MAT	147	Ctationio	3
				MAT	147	Cidionos	3
							- 1
					Requir	ed Minor: Chemistry (16 credits	total)
	►¶ Free Electives/Minor (9 credits	minimum)		CHE	Requir 130	ed Minor: Chemistry (16 credits General Chemistry I	total)
May be	► ¶ Free Electives/Minor (9 credits necessary to take additional credits to attain		lits	CHE CHE	<b>Requir</b> 130 131	ed Minor: Chemistry (16 credits General Chemistry I General Chemistry II	total) 4   4
	necessary to take additional credits to attain and for graduation depending on choices made	the minimum 120 cred		CHE CHE	Requir 130 131 212	ed Minor: Chemistry (16 credits General Chemistry I General Chemistry II Organic Chemistry I	total) 4 4 4 4
	necessary to take additional credits to attain	the minimum 120 cred		CHE CHE	<b>Requir</b> 130 131	ed Minor: Chemistry (16 credits General Chemistry I General Chemistry II	total) 4   4
	necessary to take additional credits to attain and for graduation depending on choices made	the minimum 120 cred		CHE CHE	Requir 130 131 212	ed Minor: Chemistry (16 credits General Chemistry I General Chemistry II Organic Chemistry I	total) 4 4 4 4
	necessary to take additional credits to attain and for graduation depending on choices made	the minimum 120 cred		CHE CHE	Requir 130 131 212	ed Minor: Chemistry (16 credits General Chemistry I General Chemistry II Organic Chemistry I	total) 4 4 4 4
	necessary to take additional credits to attain and for graduation depending on choices made	the minimum 120 cred		CHE CHE	Requir 130 131 212	ed Minor: Chemistry (16 credits General Chemistry I General Chemistry II Organic Chemistry I	total) 4 4 4 4
	necessary to take additional credits to attain and for graduation depending on choices made	the minimum 120 cred		CHE CHE	Requir 130 131 212	ed Minor: Chemistry (16 credits General Chemistry I General Chemistry II Organic Chemistry I	total) 4 4 4 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

Total credits for graduation: 120

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

Effective: 9/2014



Name:
Student ID:
Date Admitted Into Major:

### **BACHELOR OF SCIENCE** GY

CONCENTRATION

			RI	OMEDI		OLU			
BIOMEDICAL SCIENCES GENERAL EDUCATION REQUIREMENTS									
Compatancia									
□ . Pa	Competencies								
	sic College M								
	eading Compre								
☐ + Cc	mputer Litera	су							
•	General Edι	ucation Categories (	34-35 cr	edits to	otal)				
<b>♦FYS</b>	First Year Ser	minar			3				
♦W-I	Written Comr	nunication - Level I			3				
♦OC	Oral Commun	nication			3				
PGR	Personal Gro	wth & Responsibility			3				
CEA	Creative Expr	ession & Appreciation			3				
WC	World Culture	es .			3				
HP	The Human F	ast			3				
CS	Contemporar	y Society			3				
SR	Scientific	# Any SR course			3-4				
Reasoning: # SR Lab course					4				
QR			3						
‡ Written Communication (Level II and Level III)						<del>_</del>			
W-II	II Written Communication - Level II								
W-III	Written Comm	nunication - Level III							

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 (50-53 credits total) Required (37 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	210	Basic Nutrition	3	
BIO	212	Cell Biology	4	
BIO	402	Genetics	4	
BIO	406	Microbiology		
	or		4	
BIO	409	Biochemistry		
BIO	415	Biology Seminar	3	

### ∞ Electives (13-16 credits)

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

### ▼ Required Support Courses (14-15 credits total)

ſ	MAT	110	Pre-calculus		
		or	or	3-4	
		220	Calculus I		
	MAT	147	Statistics	3	
ſ	◊ PHS	211A	College Physics I		
		or	or	4	
		221	General Physics I		
ſ	♦ PHS	212A	College Physics II		
		or	or	4	
		222	General Physics II		

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

CHE	130	General Chemistry I		
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.
- Biology 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.
- 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



Name:
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### ENVIRONMENTAL BIOLOGY CONCENTRATION

BIO

BIO

402

415

					Е				
			ENV	RONMI	ENTAL				
GENERAL EDUCATION REQUIREMENTS									
		Competencies	3						
□ +Ba	sic College M	ath							
□ ◆Re	ading Compre	ehension							
□ + Co	mputer Litera	cv							
	•	•							
4	General Edu	ıcation Categories (	34-35 cr	edits to	tal)				
<b>♦FYS</b>	First Year Sei	minar			3				
♦W-I	Written Comn	nunication - Level I			3				
+OC	Oral Commun	nication			3				
PGR	Personal Gro			3					
CEA	Creative Expr			3					
WC	World Culture			3					
HP	The Human Past				3				
CS	Contemporary Society				3				
CD	Scientific	# Any SR course			3-4				
SR	Reasoning:	♯ SR Lab course			4				
QR	Quantitative F	Reasoning			3				

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

W-II	Written Communication - Level II		
W-III	Written Communication - Level III		

### 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.

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### COURSES IN MAJOR (46-49 credits total) Required (40-41 credits)

#### BIO Introduction to Organisms 131 4 BIO 132 Introduction to Cells 4 BIO 208 **Environmental Problems** 3 BIO 212 Cell Biology 4 BIO 220 **Evolutionary Morphology** 3 Plant Biology Elective 4 BIO BIO Animal Biology Elective 3-4 BIO 320 General Ecology 4 BIO Microbiology 4 406 BIO 409 Biochemistry

### Electives (6-8 credits)

4

3

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

### † Required Support Courses (19-22 credits total)

Genetics

Biology Seminar

MAT	110	Pre-calculus		
	or	or	3-4	
	220	Calculus I		
MAT	147	Statistics	3	
PHS	211A	College Physics I		
	or	or	4	
	221	General Physics I		
		ELECTIVE (GROUP A)	3-4	
		ELECTIVE (GROUP A)	3-4	
		ELECTIVE (GROUP A or B)	3	Ī

#### 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, 408N, 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 (minimum of 2 courses from Group A and a third course from either Group A or Group B):
  Group A GLS210, GLS212, GLS330, GLS334, GLS342, GLS362, GPH222, GPH245, GPH264, GPH282P, GPH285P, GPH301, GPH314, GPH371, GPH376P, GPH383P.

Group B - ECO319, IDS220, IDS325, PHL224, PHL314, POL304, POL319.

010up D - L00313, 1D3220, 1D	0020, 1 112224, 1 112014, 1 02004, 1 02013	5.	
♦ COMPETENCIES - TO BE COMP	PLETED WITHIN THE FIRST 30 CREDITS	♦ GENERAL EDUCATION CATEGORIES - TO BE COMPLETED W	ITHIN THE FIRST 30 CREDITS
	Exceptions in the timing of course	es will be made for transfer students	
Total credits for graduation:	120-122		Effective:9/2014



Name:
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## **BACHELOR OF SCIENCE**

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		T MEDICAL	TECH	NOLOGY C	ONCENTR			
	GENERAL EDUCATION REC	UIREMENTS				COU	RSES IN MAJOR (49-50 credits	total)
	Competencies						Required (46 credits)	
	Basic College Math				BIO	131	Introduction to Organisms	
					BIO	132	Introduction to Cells	
	Reading Comprehension				BIO	200	Anatomy and Physiology I	
<b>□</b> •	Computer Literacy				BIO	201	Anatomy and Physiology II	
					BIO	208	Environmental Problems	
	<b>♣</b> General Education Categories (3	34-35 credits to	tal)		BIO	212	Cell Biology	
•FYS	S First Year Seminar		3		BIO	316	Parasitology	
♦W-			3		BIO	411	Immunology	
+OC			3			or		
PGF			3		510	313	Molecular Biology	
CEA			3		BIO	402	Genetics	
WC	World Cultures		3		BIO	406	Microbiology	_
HP	The Human Past		3		BIO	409	Biological Chemistry	_
CS	Contemporary Society		3		BIO	415	Biology Seminar	
SR	Scientific # Any SR course		3-4				¶ Elective (3-4 credits)	
	Reasoning: # SR Lab course		4		BIO		Biology elective	3
QR	Quantitative Reasoning		3		ыо	<u> </u>	blology elective	
	‡ Written Communication (Leve	I II and Level II	I)					
W-II	Written Communication - Level II				<b>♥</b> F	Require	d Support Courses (18-19 credi	ts tot
W-II	Written Communication - Level III				MAT	110	Pre-calculus	
** 11	Whiteh Communication Ecver in			<u>'</u>		or	or	;
						220	Calculus I	
					MAT	147	Statistics	
	Free Electives (0 credits min				♦ PHS	211A	College Physics I	
	be necessary to take additional credits to at					or 221	Or Congred Physics I	
requ	uired for graduation depending on choices m minor selection.	iade for general ed	ucation	OI	♦ PHS	212A	General Physics I	_
	minor selection.				◊٢Πδ	or	College Physics II	
						222	General Physics II	
					CHE	420	Instrumental Analysis	+
					_ O. IL	720	1 Hot afficiliar / Haryon	

# uired (46 credits) tion to Organisms

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	316	Parasitology	4	
BIO	411	Immunology		
	or		4	
	313	Molecular Biology		
BIO	402	Genetics	4	
BIO	406	Microbiology	4	
BIO	409	Biological Chemistry	4	
BIO	415	Biology Seminar	3	

### rt Courses (18-19 credits total)

MAT	110	Pre-calculus		
	or	or	3-4	
	220	Calculus I		
MAT	147	Statistics	3	
♦ PHS	211A	College Physics I		
	or	or	4	
	221	General Physics I		
♦ PHS	212A	College Physics II		
	or	or	4	
	222	General Physics II		
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

Minor (Optional):

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



Name:
Student ID:
Date Admitted Into Major:

## **BACHELOR OF SCIENCE**

NTRATION

			AQUA	ACULTURE
	GENER	AL EDUCATION REQUIR	EMENTS	
		Competencies		
□ +Ba	asic College M	ath		
□ + Re	eading Compre	ehension		
	omputer Litera	cy		
	<b></b> •General Edι	cation Categories (34-3	5 credits to	otal)
<b>♦FYS</b>	First Year Sei	minar		3
♦W-I	Written Communication - Level I			3
♦OC	Oral Communication			3
PGR	Personal Gro	wth & Responsibility		3
CEA	Creative Expr	ession & Appreciation		3
OLA				
WC	World Culture	s		3
	World Culture The Human P	-		3 3
WC		ast		
WC HP CS	The Human P	ast		3
WC HP	The Human P	ast / Society		3 3
WC HP CS	The Human P Contemporary Scientific	# SR Lab course		3 3 3-4
WC HP CS SR	The Human F Contemporary Scientific Reasoning: Quantitative F	# SR Lab course	and Level I	3 3 3-4 4 3
WC HP CS SR	The Human F Contemporary Scientific Reasoning: Quantitative F # Written C	# Any SR course  # SR Lab course Reasoning	and Level I	3 3 3-4 4 3

### COURSES IN MAJOR (51-52 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	General Ecology		
	or	or	4	
	322	Biological Oceanography		
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	

#### Electives (3-4 credits)

¶ BIO	Biology elective	3-4	

### ▼ Required Support Courses (14-15 credits total)

MAT	110	Precalculus		
	or	or	3-4	
	220	Calculus I		
MAT	147	Statistics	3	
PHS	211A	College Physics I		
	or	or	4	
	221	General Physics I		
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. Ħ
- 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
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♦ GENERAL EDUCATION CATEGORIES - TO BE COMPLETED WITHIN THE FIRST 30 CREDITS



Name:
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**BIOTECHNOLOGY CONCENTRATION** 

Competencies								
☐ + Ba	sic College M	ath						
□ + Re	ading Compr	ehension						
	mputer Litera							
		ucation Categories (	(34-35 cr	edits to				
+FYS	First Year Se				3			
♦W-I		nunication - Level I			3			
+OC	Oral Commun				3			
PGR	Personal Gro	wth & Responsibility			3			
CEA	Creative Exp	ession & Appreciation			3			
WC	World Culture	es .			3			
HP	The Human F	ast			3			
CS	Contemporar	y Society			3			
0.0	Scientific	# Any SR course			3-4			
SR	Reasoning:	# SR Lab course			4			
QR	Quantitative F	Reasoning			3			
	‡ Written C	ommunication (Lev	el II and	Level II	I)			
W-II Written Communication - Level II						]		
W-III	Written Comr	nunication - Level III				]		

Free Electives	(1	credit	t min	imum	total	)
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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.

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### COURSES IN MAJOR (53 credits total) (Required 45 credits)

		(1104411101110)		
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	Methods in Biotechnology	4	
BIO	402	Genetics	4	
BIO	406	Microbiology	4	
BIO	409	Biological Chemistry	4	
BIO	411	Immunology	4	
BIO	415	Biology Seminar	3	

#### Electives (8 credits)

† BIO	Biology Elect	ive 4	
¶ BIO	Advanced La	boratory Elective 4	

♥ Ro	▼ Required Support Courses (14-15 credits total)			
MAT	110	Pre-calculus		
	or	or	3-4	
	220	Calculus I		
MAT	147	Statistics	3	
♦ PHS	211A	College Physics I		
	or	or	4	
	221	General Physics I		
♦ PHS	212A	Physics II		
1	or	or	4	
	222	General Physics II		

### 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	

Effective: 9/20nn

- ▼ 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 312, 314, 316, 340, 400, 406, 407, 408, 409, 411, 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 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



Name:
Student ID:
Date Admitted Into Major:

#### **GENERAL EDUCATION REQUIREMENTS** Competencies ◆ Basic College Math ◆ Reading Comprehension ◆ Computer Literacy **♣General Education Categories (34-35 credits total) +FYS** First Year Seminar Written Communication - Level I ♦W-I 3 Oral Communication **+**OC 3 **PGR** Personal Growth & Responsibility 3 CEA Creative Expression & Appreciation 3 WC World Cultures 3 HP The Human Past 3 CS Contemporary Society 3 # Any SR course 3-4 Scientific SR Reasoning: # SR Lab course 4 3 ΩR Quantitative Reasoning ‡ Written Communication (Level II and Level III) W-II Written Communication - Level II W-III Written Communication - Level III

	Free Electives (1 credit minimum total) essary to take additional credits to attain the minimun graduation depending on choices made for general of minor selection.		
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		-	
		-	

# COURSES IN MAJOR (48-53 credits total) Required (42-45 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	402	Genetics	4	
BIO	415	Biology Seminar	3	
BIO	406	Microbiology		
	or	or	4	
	409	Biochemistry		
† BIO		Plant Biology Elective	4	
† BIO		Animal Biology Elective	3-4	
† BIO		Structure/Function Elective	3-4	
† BIO		Ecology/Evolution Elective	3-4	

### Electives (6-8 credits)

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

### ▼ Required Support Courses (14-15 credits total)

MAT	110	Pre-calculus		
	or	or	3-4	
	220	Calculus I		
MAT	147	Statistics	3	
♦ PHS	211A	College Physics I		
	or	or	4	
	221	General Physics I		
♦ PHS	212A	College Physics II		
	or	or	4	
	222	General Physics II		

### 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 Sciences.
- † Three of the four 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

Effective: 9/2014



Name:
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MARINE BIOLOGY CONCENTRATION

### Competencies

- → Basic College Math→ Reading Comprehension

### **♣**General Education Categories (34-35 credits total)

<b>♦FYS</b>	First Year Sei	minar		3	
♦W-I	Written Comn	nunication - Level I		3	
◆OC	Oral Commun	nication		3	
PGR	Personal Gro		3		
CEA	Creative Expr		3		
WC	World Culture		3		
HP	The Human P	ast		3	
CS	Contemporary	Society		3	
SR	Scientific	# Any SR course		3-4	
SK	Reasoning:	# SR Lab course		4	
QR	Quantitative F	Reasoning		3	

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

W-II	Written Communication - Level II		
W-III	Written Communication - Level III		

### 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

Time: Colocuciii							

### COURSES IN MAJOR (50-53 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	Fish Biology		
	or	or	3-4	
	341	Biology of Marine Mammals		
† BIO		Cell/Molecular or	4	
		Structure/Function elective		
BIO	402	Genetics	4	
BIO	415	Biology Seminar	3	

### Electives (6-8 credits)

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

### ∇▼ Required Support Courses (14-15 credits total)

Ν	TAN	110	Pre-calculus		
		or	or	3-4	
		220	Calculus I		
Ν	ΤΑN	147	Statistics	3	
♦ I	PHS	211A	College Physics I		
		or	or	4	
		221	General Physics I		
<b>◊ I</b>	PHS	212A	College Physics II		
		or	or	4	
		222	General Physics II		

### 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	

Effective:9/2014

▼ 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



Name:
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## **BACHELOR OF SCIENCE**

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	GENE	RAL EDUCATION REG		ICINE I	ECHNO	CONCE		JRSES IN MAJOR (60 credits	total)
		Competencies						Required (60 credits)	
	Basic College					BIO	105	Biological Systems	4
						BIO	200	Anatomy & Physiology 1	4
_	Reading Comp	orehension				BIO	201	Anatomy & Physiology 2	4
□ <b>•</b>	Computer Lite	racy				BIO	212	Cell Biology	4
						NMT	200	Introduction To NMT	1
	<b></b> General F	ducation Categories (	34-35 credits to	otal)		BIO	340	General Pathology	3
♦FYS		<u> </u>	l l	3		BIO	402	Genetics	4
♦W-		mmunication - Level I		3		BIO	409	Biological Chemistry	4
+OC				3		BIO	411	Immunology	4
PGF		rowth & Responsibility		3		NMT	401A	NMT Practicum I	3
CEA		pression & Appreciation		3		NMT	402	NMT Practicum II	4
WC		<u> </u>		3		NMT	403	NMT Practicum III	4
HP	The Human			3		NMT	405	Nuclear Medicine Tech I	4
CS	Contempor			3		NMT	411	Nuclear Medicine Tech II	4
	Scientific	# Any SR course		3-4		NMT	415	NMT Seminar	1
SR	Reasoning:			4		NMT	420	Nuclear Instrumentation	4
QR		Reasoning		3		NMT	435	Advanced Imaging &	4
QIV			·	_				Therapeutics	
	‡ Written	Communication (Leve	el II and Level I	II)					
W-II	Written Cor	nmunication - Level II				٧i	Required	Support Courses (20-21 cred	dits total)
W-II	Written Cor	nmunication - Level III				♦PHS	211A	College Physics I	4
						♦PHS	212A	College Physics II	4
						MAT	110	Pre-calculus	
	Eroo I	Electives (0 credits mi	inimum total)				or	or	3-4
May		take additional credits to a		120 cred	lits		220	Calculus I	
		on depending on choices r				MAT	147	Statistics	3
· 		minor selection.				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	
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▼ 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.

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

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

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

Effective: 9/2014 Total credits for graduation: 120 - 132