

# **ACCELERATED PROGRAM - B. S. IN BIOLOGY: INTEGRATIVE BIOLOGY + M. S. IN BIOLOGY**

Fall 2018 – Spring 2019

Requirement	Course	Credits	Term	Year	Grade
<b>I. Academic Foundations (18 credits)</b>					
Effective Writing I	WRT 120	3	_____	_____	_____
Writing II	WRT _____*	3	_____	_____	_____
Statistics	MAT 121	3	_____	_____	_____
Communication	SPK _____*	3	_____	_____	_____
Diverse Communities (“J”)	_____	3	_____	_____	_____
Interdisciplinary (“I”)	_____	3	_____	_____	_____
<b>II. Liberal Arts (Distributive) Requirements ** (15 credits)</b>					
Courses must be selected from the approved list. No Interdisciplinary (“I”) course may be used to fulfill any of these requirements, even if it carries a LIT, GEO, MHL, etc. prefix.					
<b>A. Humanities (6 credits)</b>					
Select courses from at least 2 of the following areas:					
Literature (LIT/CLS)	History (HIS)	Philosophy (PHI)			
_____	_____	3	_____	_____	_____
_____	_____	3	_____	_____	_____
<b>B. Behavioral and Social Sciences (6 credits)</b>					
Select courses from at least 2 of the following areas:					
Anthropology (ANT)	Psychology (PSY)	Sociology (SOC)			
Economics (ECO)	Geography (GEO)	Government (PSC)			
_____	_____	3	_____	_____	_____
_____	_____	3	_____	_____	_____
<b>C. THE ARTS (3 credits)</b>					
Select any course in Art, Cinematography, Dance, Music, Photography, or Theatre.					
_____	_____	3	_____	_____	_____
<b>III. Directed Electives – 17 credits (to reach 120 credits for the B.S. degree)</b>					
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>IV. Writing Emphasis †</b>					
	<u>BIO 220</u>	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
*One at 300/400-level:					
	_____	_____	_____	_____	_____



## V. SUPPORTING COURSES (28 credits)

Calculus <sup>a</sup>	MAT 145	3	_____	_____	_____
General Chemistry I	CHE 103	3	_____	_____	_____
Exp. General Chemistry I	CRL 103	1	_____	_____	_____
General Chemistry II	CHE 104	3	_____	_____	_____
Exp. General Chemistry II	CRL 104	1	_____	_____	_____
Organic Chemistry I	CHE 231	4	_____	_____	_____
Exp. Organic Chemistry I	CRL 231	2	_____	_____	_____
Organic Chemistry II	CHE 232	3	_____	_____	_____
General Physics I <sup>λ</sup>	PHY 130	4	_____	_____	_____
or Physics I	PHY 170	4	_____	_____	_____
General Physics II	PHY 140	4	_____	_____	_____
or Physics II	PHY 180	4	_____	_____	_____

**VI. Biology Courses** (42 credits; 30 credits taken at the undergraduate level, 12 credits taken at graduate level are applied to the B.S.) Must have 3.00 GPA for graduate admission.

### A. Required courses (18 credits)

General Biology <sup>β</sup>	BIO 110	3	_____	_____	_____
Botany <sup>β</sup>	BIO 215	3	_____	_____	_____
Zoology <sup>β</sup>	BIO 217	3	_____	_____	_____
Cell Physiology <sup>β</sup>	BIO 220	3	_____	_____	_____
Genetics <sup>β</sup>	BIO 230	3	_____	_____	_____
Ecology <sup>β</sup>	BIO 270	3	_____	_____	_____

### B. Biology Electives <sup>Ω</sup> (12 credits; 12 additional credits completed at graduate level)

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

## VII. Graduate Classes in Biology <sup>Δ</sup>

### A. Biology Electives <sup>Ξ</sup> (21 credits; 12 are used to finish B.S. degree)

1. Two Research Methods courses (selected from BIO 511, 513, 514, or 515)

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

2. Two Concentration courses (selected from BIO 535, 536, 537, or 590)

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

3. Three other electives selected under advisement

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

### B. Required courses <sup>Σ</sup> (9 credits)

Directed Research I	BIO 608	3	_____	_____	_____
Thesis Research	BIO 609	3	_____	_____	_____
Thesis	BIO 610	3	_____	_____	_____

## Notes and Requirements

The Accelerated B.S. + M.S. program is only open to thesis students (not non-thesis students). Students should begin discussing research topics with prospective faculty advisors during the 2<sup>nd</sup> year in preparation for application to the accelerated program during their 3<sup>rd</sup> year.

Credit requirements: B.S.: 120 credits; M.S.: 30 credits. Twelve credits taken at the graduate level are also applied to the B.S. degree. Therefore the total for both degrees is 138 credits.

\* - The Communications course and the second WRT course must be selected with the approval of the advisor. Approved Communication courses are SPK 208, 230, or 199 (for transfer students only). Approved WRT courses are 200, 204, 205, 206, 208, or 220.

\*\* - Biology majors will fulfill their distributive requirements in the Sciences with CHE 103 and PHY 130/170. These courses are listed under Supporting Courses.

Ψ - Students are required to take at least 9 credits of approved Writing Emphasis (W) coursework; students transferring in 40-70 credits need only 6 W credits, students transferring in >70 credits only need 3 W credits. **At least 1 W course must be taken at the 300 level or above.** See the *Undergraduate Catalog* for further details.

α - The Biology Department recommends MAT 145 (Calculus for Life Sciences; 3 credits) or MAT 161 (Calculus I; 4 credits). MAT 143 (Brief Calculus; 3 credits) is also acceptable. You must take the *Math Placement Exam* to enroll in a calculus class. Visit the Math Department website to take the exam. If you receive a score of 3 or lower on the placement exam, you must take MAT 115 (Algebra, Functions, and Trig) as preparation for Calculus (MAT 143 or 145). If you receive a score of 4 or above, you can enroll directly into MAT 143 or 145. You must score a 5 to enroll into MAT 161 or take the pre-requisite of MAT 131.

β - Course must be passed with a "C-" or better.

λ - The recommended Physics sequence is PHY 130 & PHY 140. Students may substitute the PHY 170 & PHY 180 sequence, but PHY 130 may not be used as a prerequisite for PHY 180 and PHY 170 may not be used as a prerequisite for PHY 140.

Ω - Biology electives are selected from BIO 214, 275, 277, or BIO courses at or above the 300 level, except BIO 307 and BIO 469.

Δ - To be considered for the accelerated program and enroll in BIO 608 (Thesis Research I), students must have attained (completed) 75 credits with a minimum of 18 biology credits. Students must have a minimum cumulative GPA of 3.00 including a minimum GPA of 3.00 for biology courses. BIO 608 requires departmental permission to enroll; students must arrange a committee meeting prior to enrolling in BIO 608 (e.g., during their third year). The accelerated program in biology is only open to thesis students. Any student wishing to switch out of the thesis option will be required to complete all requirements of the B.S. degree. Once admitted to the graduate program, graduate policies apply, including minimum GPA (3.00). See the *Graduate Catalog* for further details.

ξ - If a course is offered at both the 400 and 500 levels, the student must take the 500-level course. No more than 6 credits of 400-level courses may be counted toward the M.S. degree. With prior departmental approval, up to 6 credits of graduate course work from another department or university may be applied toward the M.S. degree. BIO 535, 536, and 537 may be repeated for credit provided the topic is different.

Σ - A letter grade must be obtained for BIO 608 before the student can enroll in BIO 609. Likewise, a letter grade must be obtained for BIO 609 before the student can enroll in BIO 610.

# Suggested Sequence for Accelerated B.S. + M.S. Biology Majors

## Integrative Biology Concentration

Fall 2018 – Spring 2019

_____	<b>Semester #1 (16 credits)</b> WRT 120 (3) BIO 110 (3) CHE 103 / CRL 103 (3) / (1) MAT 121 (3) Gen Ed distributive (3)	_____	<b>Semester #2 (16 credits)</b> WRT 2__ (3) BIO 215 or 217 (3) CHE 104 / CRL 104 (3) / (1) MAT 145 (3) Gen Ed distributive (3)
_____	<b>Semester #3 (15 credits)</b> BIO 215 or 217 (3) CHE 231 (4) CRL 231 (2) Gen Ed distributive (3) Diversity (J) elective (3)	_____	<b>Semester #4 (15 credits)</b> BIO 220 (3) BIO 230 (3) CHE 232 (3) SPK 2__ (3) Gen Ed distributive (3)
_____	<b>Semester #5 (16 credits)</b> BIO 270 (3) BIO elective (3) PHY 130/170 (4) Gen Ed distributive (3) Directed elective (3)	_____	<b>Semester #6 (16 credits)</b> BIO elective (3) BIO elective (3) PHY 140/180 (4) Interdisciplinary (I) elective (3) Directed elective (3)
_____	<b>Semester #7 <sup>Δ</sup> (14 credits)</b> BIO elective (3) BIO elective (3) [Graduate] Directed elective (3) Directed elective (2) BIO 608 <sup>Δ</sup> (3)	_____	<b>Semester #8 (12 credits)</b> BIO elective (3) [Graduate] BIO elective (3) (500 level) Directed elective (3) Directed elective (3)
_____	<b>Semester #9 (9 credits)</b> BIO elective (3) (500 level) BIO elective (3) (500 level) BIO 609 (3)	_____	<b>Semester #10 (9 credits)</b> BIO elective (3) (500 level) BIO elective (3) (500 level) BIO 610 (3)

- All required 200 level Biology courses must be completed by the end of Semester #5.
- Students should take MAT 121 (Statistics) in their first year.