

**ACCELERATED PROGRAM - B. S. IN BIOLOGY: INTEGRATIVE BIOLOGY
+ M. S. IN BIOLOGY**
Fall 2022 – Spring 2023

I. ACADEMIC FOUNDATIONS & DEGREE REQUIREMENTS

<i>Requirement</i>	<i>Course</i>	<i>Credits</i>	<i>Term</i>	<i>Year</i>	<i>Grade</i>
First Year Experience	FYE 100	4	_____	_____	_____
Effective Writing I	WRT 120	3	_____	_____	_____
Effective Writing II	WRT 2__ [▲]	3	_____	_____	_____
Mathematics: Statistics	MAT 121 ⁺ or 125 ⁺	3	_____	_____	_____
Interdisciplinary (“I”)	_____	3	_____	_____	_____
Diverse Communities (“J”)	_____♥	3	_____	_____	_____
Ethics (“ET”)	_____♥	3	_____	_____	_____

Writing Emphasis (“W”) *Nine credits[▲], integrated across General Education & Major courses.*

BIO 211

One at 300/400-level:

Speaking Emphasis (“SE”) *Nine credits[▲], integrated across General Education & Major courses.*

One at 300/400-level:

II. GENERAL EDUCATION DISTRIBUTIVE REQUIREMENTS

- *Courses must be selected from the approved General Education list (see the [catalog](#)).*
- *Interdisciplinary (“I”) courses cannot also be a General Education distributive course.*
- *Biology majors fulfill their science requirements with CHE 103 and PHY 130/170.*
- *Distributive requirements can be simultaneously satisfied with other degree requirements, see some examples[▲].*

A. Humanities (6 credits): E.g., Literature (LIT/CLS), History (HIS), Philosophy (PHI)
Courses must be selected from two different subject areas.

_____	3	_____	_____	_____
_____	3	_____	_____	_____

B. Behavioral and Social Sciences (6 credits): E.g., Psychology (PSY), Sociology (SOC), Anthropology (ANT), Political Science (PSC), Geography (GEO), Economics (ECO)
Courses must be selected from two different subject areas.

Note: Students taking the MCAT should take PSY 100 and SOC 100.

_____	3	_____	_____	_____
_____	3	_____	_____	_____

C. Arts (3 credits): E.g., Art (ART), Art History (ARH), Dance (DAN), Film (FLM), Music (MHL, MTC), Theater (THA)

_____	3	_____	_____	_____
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III. DIRECTED ELECTIVES – 15 credits (to reach 120 total credits for the B.S. degree)

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

IV. SUPPORTING COURSES (28 credits)

Calculus ⁺ *	MAT 145	3	_____	_____	_____
General Chemistry I	CHE 103	3	_____	_____	_____
General Chemistry I Lab	CRL 103	1	_____	_____	_____
General Chemistry II	CHE 104	3	_____	_____	_____
General Chemistry II Lab	CRL 104	1	_____	_____	_____
Organic Chemistry I	CHE 231	4	_____	_____	_____
Organic Chemistry I Lab	CRL 231	2	_____	_____	_____
Organic Chemistry II	CHE 232	3	_____	_____	_____
General Physics I **	PHY 130	4	_____	_____	_____
General Physics II	PHY 140	4	_____	_____	_____

V. 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 Core Courses (16 credits)

General Biology I ***	BIO 110	4	_____	_____	_____
General Biology II ***	BIO 111	4	_____	_____	_____
Genetics ***	BIO 210	3	_____	_____	_____
Genetics Lab ***	BIO 210L	1	_____	_____	_____
Cell Biology ***	BIO 211	4	_____	_____	_____

B. Other Required Courses (3 credits)

General Ecology ***	BIO 270	3	_____	_____	_____
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C. Biology Electives ^Ω (11 credits)

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

D. Graduate Biology Core Courses (12 graduate credits, see below)

VI. GRADUATE COURSES

A. Core courses (12 credits)

BIO 510: Graduate Seminar in Biology	3	_____	_____	_____
BIO 511: Experimental Design and Analysis	3	_____	_____	_____
BIO 520: Topics & Methods in Cellular, Microbial, and Molecular Biology	3	_____	_____	_____
BIO 521: Topics & Methods in Ecology, Evolution, and Organismal Biology	3	_____	_____	_____

B. Electives ^ξ (15 credits)

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

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 complete BIO 591 successfully, the student must present the results of the project in an open seminar. In addition, the student must pass a written comprehensive examination prepared by the student's advisory committee. Students who fail this examination will not receive a grade for this capstone course.

ξ – Any other 500-level BIO course except BIO 591. 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.

Suggested Sequence for Accelerated B.S. + M.S. Biology Majors
Integrative Biology Concentration
 Fall 2021 – Spring 2022

_____	Semester #1 (15 credits) FYE 100 (4) WRT 120 (3) BIO 110 (4) CHE 103 (3) & CRL 103 (1)	_____	Semester #2 (17 credits) WRT 2____ (3) BIO 111 (4) CHE 104 (3) & CRL 104 (1) MAT 125 or MAT 121 (3) Gen Ed Distributive: Behavioral & Social Science (3)
_____	Semester #3 (16 credits) BIO 210 (3) & BIO 210L (1) CHE 231 (4) & CRL 231 (2) Gen Ed Distributive: Humanities & Ethics Course (ET) (3) Diverse Communities Course (J) (3)	_____	Semester #4 (16-17 credits) BIO 211 (4) CHE 232 (3) Gen Ed Distributive: Arts (3) Gen Ed Distributive: Behavioral & Social Science (3) MAT 145 (3) or MAT 143 (3) /161 (4)
_____	Semester #5 (16 credits) BIO 270 (3) BIO Elective (3) PHY 130 (4) Gen Ed Distributive: Humanities (3) Directed Elective (W) (3)	_____	Semester #6 (16 credits) BIO Elective (3) BIO Elective (3) PHY 140 (4) Interdisciplinary Course (I) (3) Speaking Emphasis Course (SE) (3)
_____	Semester #7 ^Δ (14 credits) BIO 510 (3) BIO 520 (3) Upper-level Directed Elective (W) (3) Directed Elective (2) BIO Elective (3) (Graduate)	_____	Semester #8 (12 credits) BIO 511 (3) BIO 521 (3) Directed Elective (3) Directed Elective (3)
_____	Semester #9 (9 credits) BIO Elective (3) BIO Elective (3) (Graduate) BIO Elective (3) (Graduate)	_____	Semester #10 (9 credits) BIO Elective (3) (Graduate) BIO Elective (3) (Graduate) BIO 591 ^Δ (3)

All required 200 level Biology courses should be completed by the end of Semester #5.

Students should take Statistics (MAT 121 or 125) in the first year.

All students must take at least 9 credits of Writing Emphasis courses and 9 credits of Speaking Emphasis courses. Students who enter WCU with 40-70 transfer credits only need 6 credits of each; students who enter with >70 transfer credits only need 3 credits of each. **All students must take at least 3 credits of Writing Emphasis and 3 credits of Speaking Emphasis at the 300-400 level.**