

ACADEMIC ROADMAP

Biology BA Integrative Concentration

Spring 2026

Freshman Year (30 credits)

FIRST SEMESTER

Course Title	Catalog Number	Prerequisite(s)
College Writing I	CWP 101	
Foundations of Biology	BIO 111 ("C" or better)	
Functions & Modeling	MAT 114 ("C" or better)	
GE 23	recommended CHE 100 or other GE 23 Nat Sci	
GE 23	recommended COM 100 or a course toward a minor or certificate	

SECOND SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Argumentation and Research	CWP 102	CWP 101
200-level Bio Major's Course	BIO211 or BIO213	BIO 111 ("C" or better)
Chemistry I	CHE 111 + CHE 113 (lab)	MAT 114 ("C" or better)
Biology Seminar	BIO361 (1 cr)	
GE23	recommended EXE 100 or a course toward a minor or certificate	

Notes and recommendations:

Attend at least one faculty office hour, visit Academic Excellence Center (math, writing, and general tutoring), and view degree audit sheet in Degree Works this year.

Adding a Minor or Certificate does not require extra time or coursework beyond the 120 credits required to graduate. Elective credits are focused in an area of interest helping define student strengths, allowing in-depth learning and contributing more credits of upper division coursework. Common minors and certificates for students in the Biology BA include Anthropology, Technical Writing, Chemistry, Geology, Environmental Science & Society, and Psychology. Students also minor in Africana Studies, Astronomy, Design, Philosophy, Spanish and other fields.

Sophomore Year (60 credits)

THIRD SEMESTER

Course Title	Catalog Number	Prerequisite(s)
200-level Bio Major's Course	BIO 211 or BIO 213	BIO 111 ("C" or better)
Chemistry II	CHE 112 + CHE 114 (lab)	CHE111/113
Biology Seminar	BIO 361	
GE23	Recommended PSY 101 or a course toward a minor or certificate	
All College Elective or course in the minor or certificate		

FOURTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Upper Division Biology (3-4 cr)	BIO Majors Course at 300 or 400 level	BIO111 and BIO211 and BIO213 Some require chemistry*
Upper Division Biology (3-4 cr)	BIO Majors Course at 300 or 400 level	BIO111 and BIO211 and BIO213 Some require chemistry*
GE23 (3 cr)	Recommended PHI 111	
All College Elective or course in a minor or certificate (3-4 cr)		
Project, Research, Internship (flexible credit options to bring to 15 credits)		

Notes and recommendations:

If students haven't selected a minor or certificate program in Year 1, they should consider doing so in Year 2.

Consult Degree Works or seek advisement to select upper division courses appropriate for Biology majors. Some but not all 300 level courses with BIO prefix count toward the major.

Information about projects, research and internships obtained through advisement, or by visiting the Biology Department Office SAMC166 (716 878 5203)

A few upper division biology courses list CHE201/202 as prerequisites.

Junior Year (90 credits)

FIFTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Biol Form and Function	BIO 333 (fall only)	BIO111 and BIO211 and BIO213
Writing-infused Biology elective Select one of four	BIO 314 Adv Cell Bio (Spring) BIO 315 Ecology (Fall) BIO 405 Evolution (Fall) BIO 440 Applic Biotech (Fall)	BIO211, BIO213, CHE111/113, CHE112/114 (<i>plus CHE 201 for Adv Cell Bio</i>)
Upper Division Biology (3-4 cr)	BIO Majors Course at 300 or 400 level	BIO111 and BIO211 and BIO213 Some require chemistry*
GE 23		
GE 23		

SIXTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Writing-infused Biology elective Select one of four	BIO 314 Adv Cell Bio (Spring) BIO 315 Ecology (Fall) BIO 405 Evolution (Fall) BIO 440 Applic Biotech (Fall)	BIO 211, BIO 213, CHE 111/113, CHE112/114 (<i>plus CHE 201 for Adv Cell Bio</i>)
Upper Division Biology (3-4 cr)	BIO Majors Course at 300 or 400 level	BIO111 and BIO211 and BIO213 Some require chemistry*
All College Elective or course in the minor or certificate		
GE23		
Project, Research, Internship (flexible credit options to bring to 15 credits)		

Notes and recommendations:

*Consult Degree Works or seek advisement to select upper division courses appropriate for Biology majors and for which prerequisite courses are in place. Many 300 level BIO courses can be used as Biology electives, but not all. All 400 level Bio courses can be used as Biology electives. Some require chemistry prerequisites (CHE111/113 , CHE112/114, or CHE201) in addition to the requirement for BIO111 and BIO211 and BIO213.

Information about projects, research and internships obtained through advisement, or by visiting the Biology Department Office SAMC166 (716 878 5203)

To meet the requirement for 45 upper division credits, 5 of the courses designated GE 23, all college electives or courses within a Minor, must be upper division (300-400 level).

Visit the Career & Professional Education Center (<https://cape.buffalostate.edu/>) to discuss appropriate career options.

Senior Year (120 credits)

SEVENTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Upper Division Biology (3-4 cr)	BIO Majors Course at 300 or 400 level	BIO111 and BIO211 and BIO213 Some require chemistry*
GE23 (3 cr)		
Upper division course in the minor (3-4 cr)		
All college elective or course in a minor or certificate (3-4 cr)		
Project, Research, Internship (flexible credit options to bring to 15 credits)		

EIGHTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Upper Division Biology (3-4 cr)	BIO Majors Course at 300 or 400 level	BIO111 and BIO211 and BIO213 Some require chemistry*
GE23 (3 cr)		
GE23 (3 cr)		
Upper division course in a minor or certificate (3-4 cr)		
Project, Research, Internship (flexible credit options to bring to 15 credits)		

Notes and recommendations:

*Consult Degree Works or seek advisement to select upper division courses appropriate for Biology majors and for which prerequisite courses are in place. Many 300 level BIO courses can be used as Biology electives, but not all. All 400 level Bio courses can be used as Biology electives. Some require chemistry prerequisites (CHE111/113 , CHE112/114, or CHE201) in addition to the requirement for BIO111 and BIO211 and BIO213.

Information about projects, research and internships obtained through advisement, or by visiting the Biology Department Office SAMC166 (716 878 5203)

To meet the requirement for 45 upper division credits, 5 of the courses designated GE 23, all college electives or courses within a Minor, must be upper division (300-400 level).

Apply for graduation; apply to graduate school, if applicable; visit the Career & Professional Education Center (<https://cape.buffalostate.edu/>) to have your resume reviewed.