

MAJOR IN BIOLOGICAL SCIENCE, BOTANY CONCENTRATION

science, and mathematical courses used to meet requirements for the major. This applies to courses taken as substitutions for meeting these requirements. The minimum scholastic average acceptable for graduation is 2.000 computed only for courses attempted at CSU.

Requirements Effective Fall 2023

To be qualified for graduation, students in the Biological Science major must have a minimum grade of C- in each of their biological, physical

Freshman

		AUCC	Credits
CHEM 111	General Chemistry I (GT-SC2)	3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)	3A	1
CO 150	College Composition (GT-CO2)	1A	3
LIFE 102	Attributes of Living Systems (GT-SC1)	3A	4
LIFE 103	Biology of Organisms-Animals and Plants (GT-SC1)	3A	4
Select one course from the following:			4
MATH 155	Calculus for Biological Scientists I (GT-MA1)	1B	
MATH 160	Calculus for Physical Scientists I (GT-MA1)	1B	
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)			6
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)			3
Total Credits			29

Sophomore

BZ 220	Introduction to Evolution		3
CHEM 113	General Chemistry II		3
CHEM 114	General Chemistry Lab II		1
CHEM 245 ¹	Fundamentals of Organic Chemistry		4
CHEM 246	Fundamentals of Organic Chemistry Laboratory		1
STAT 301 or 307	Introduction to Applied Statistical Methods Introduction to Biostatistics		3
Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)			3D
Social and Behavioral Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences)			3C
Electives			9
Total Credits			30

Junior

Select one group from the following:			4-6
Group A:			
BC 351	Principles of Biochemistry		
Group B:			
BC 401	Comprehensive Biochemistry I		
BC 403	Comprehensive Biochemistry II		
BZ 325	Plant Systematics		4
BZ 331	Developmental Plant Anatomy		4
BZ 440	Plant Physiology		3

BZ 441	Plant Physiology Laboratory		2
Select one group from the following:			10
Group A:			
PH 121	General Physics I (GT-SC1)	3A	
PH 122	General Physics II (GT-SC1)	3A	
Group B:			
PH 141	Physics for Scientists and Engineers I (GT-SC1)	3A	
PH 142	Physics for Scientists and Engineers II (GT-SC1)	3A	
Upper Division Botany Concentration Elective (see list below)			3
Total Credits			30-32
Senior			
BZ 310	Cell Biology		4
BZ 350	Molecular and General Genetics	4A,4B	4
BZ 450	Plant Ecology	4C	4
Advanced Writing (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)		2	3
Upper Division Botany Concentration Electives (see list below)			9
Electives ²			5-7
Total Credits			29-31
Program Total Credits:			120

Upper Division Botany Concentration Electives

Code	Title	Credits
ATS 350	Introduction to Weather and Climate	2
BSPM 308	Ecology and Management of Weeds	3
BSPM 361	Elements of Plant Pathology	3
BSPM 365	Integrated Tree Health Management	4
BSPM 450	Molecular Plant-Microbe Interaction	3
BZ 333	Introductory Mycology	4
BZ 342	Exploring Range Shifts in a Changing World	3
BZ 360	Bioinformatics and Genomics	4
BZ 415	Marine Biology	4
BZ 460	Genome Evolution	4
BZ 476/BZ 576	Genetics of Model Organisms	3
BZ 477	Genome Editing Laboratory	2
BZ 540	Translocation in Plants	2
BZ 570	Molecular Aspects of Plant Development	3
BZ 572	Phytoremediation	3
F 310/RS 310	Forest and Rangeland Ecogeography	3
F 311	Forest Ecology	3
F 312	Dendrology	2
F 324	Fire Effects and Adaptations	3
F 510	Ecophysiology of Trees	3
GR 348	Biogeography	3
HORT 401	Medicinal and Value-Added Uses of Plants	3
HORT 476	Environmental Plant Stress Physiology	3
RS 331	Wildland Plants and Plant Communities	3
RS 351	Wildland Ecosystems in a Changing World	3
RS 378	Disturbance Ecology	2
RS 420	Grass Taxonomy	3
SOCR 440	Pedology	4

A maximum of 3 credits may be selected from the following courses:

BZ 384	Supervised College Teaching
BZ 487	Internship
BZ 495	Independent Study
BZ 498	Laboratory or Field Research

¹ CHEM 341, CHEM 343, and CHEM 344 may substitute for CHEM 245 and CHEM 246.

² Select enough elective credits to bring the program total to a minimum of 120 credits, of which at least 42 must be upper-division (300- to 400-level).