

# MAJOR IN BIOLOGICAL SCIENCE, BIOLOGICAL SCIENCE CONCENTRATION

## Major Completion Map

### Distinctive Requirements for Degree Program:

TO PREPARE FOR FIRST SEMESTER: The curriculum for the Biological Sciences major -Biological Sciences concentration assumes students

enter college prepared to take calculus. Entering students who are not prepared to take calculus will need to fulfill pre-calculus requirements in the first semester. LIFE 102 requires high school chemistry as a prerequisite; CHEM 111 requires Algebra II as a prerequisite (this prerequisite is met by having Algebra II by test credit, transfer credit, or placement out of MATH 117 and MATH 118 on Math Placement Exam). Earned grade of C or better is required in each of their biological, physical science, and mathematical courses used to meet requirements for the major. It is recommended that you do not take BZ 310 and BZ 350 together.

### Freshman

Semester 1		Critical	Recommended	AUCC	Credits
CO 150	College Composition (GT-CO2)	X		1A	3
LIFE 102	Attributes of Living Systems (GT-SC1)	X		3A	4
Arts and Humanities ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities</a> )			X	3B	6
Diversity, Equity, and Inclusion ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion</a> )			X	1C	3
MATH 117, MATH 118 may be necessary for some students to fulfill pre-calculus requirements.			X		
<b>Total Credits</b>					<b>16</b>
Semester 2		Critical	Recommended	AUCC	Credits
CHEM 111	General Chemistry I (GT-SC2)	X		3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)	X		3A	1
LIFE 103	Biology of Organisms-Animals and Plants (GT-SC1)	X		3A	4
Select one course from the following:		X			4
MATH 155	Calculus for Biological Scientists I (GT-MA1)			1B	
MATH 160	Calculus for Physical Scientists I (GT-MA1)			1B	
CO 150 must be completed by the end of Semester 2.		X			
MATH 124, MATH 125 may be necessary for some students to fulfill pre-calculus requirements.			X		
<b>Total Credits</b>					<b>13</b>

### Sophomore

Semester 3		Critical	Recommended	AUCC	Credits
BZ 220	Introduction to Evolution	X			3
CHEM 113	General Chemistry II	X			3
CHEM 114	General Chemistry Lab II	X			1
Historical Perspectives ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives</a> )			X	3D	3
Social and Behavioral Sciences ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences</a> )			X	3C	3
Elective			X		3
MATH 155 or MATH 160 must be completed by the end of Semester 3.		X			
<b>Total Credits</b>					<b>16</b>
Semester 4		Critical	Recommended	AUCC	Credits
BZ 310	Cell Biology	X			4
CHEM 245	Fundamentals of Organic Chemistry	X			4
CHEM 246	Fundamentals of Organic Chemistry Laboratory	X			1
Select one course from the following:		X			3
STAT 301	Introduction to Applied Statistical Methods				
STAT 307	Introduction to Biostatistics				

Elective		X		3
<b>Total Credits</b>				<b>15</b>
<b>Junior</b>				
<b>Semester 5</b>	<b>Critical</b>	<b>Recommended</b>	<b>AUCC</b>	<b>Credits</b>
Select one group from the following:	X			4-6
Group A:				
BC 351 Principles of Biochemistry				
Group B:				
BC 401 Comprehensive Biochemistry I				
BC 403 Comprehensive Biochemistry II				
Select one course from the following:	X			5
PH 121 General Physics I (GT-SC1)			3A	
PH 141 Physics for Scientists and Engineers I (GT-SC1)			3A	
Elective		X		3
Upper Division Elective (see list on Concentration Requirements tab)		X		3
STAT 301 or STAT 307 must be completed by the end of Semester 5.	X			
<b>Total Credits</b>				<b>15</b>
<b>Semester 6</b>	<b>Critical</b>	<b>Recommended</b>	<b>AUCC</b>	<b>Credits</b>
Select one course from the following:	X			5
PH 122 General Physics II (GT-SC1)			3A	
PH 142 Physics for Scientists and Engineers II (GT-SC1)			3A	
Advanced Writing ( <a href="http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing">http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing</a> )		X	2	3
Electives		X		4
Upper Division Elective (see list on Concentration Requirements tab)		X		3
<b>Total Credits</b>				<b>15</b>
<b>Senior</b>				
<b>Semester 7</b>	<b>Critical</b>	<b>Recommended</b>	<b>AUCC</b>	<b>Credits</b>
BZ 350 Molecular and General Genetics	X		4A,4B	4
Electives		X		7
Upper Division Elective (see list on Concentration Requirements tab)		X		3
PH 121 or PH 141 must be completed by the end of Semester 7.	X			
<b>Total Credits</b>				<b>14</b>
<b>Semester 8</b>	<b>Critical</b>	<b>Recommended</b>	<b>AUCC</b>	<b>Credits</b>
BZ 311 Developmental Biology	X			4
LIFE 320 Ecology	X		4C	3
Upper Division Electives (see list on Concentration Requirements tab)		X		9
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.	X			
<b>Total Credits</b>				<b>16</b>
<b>Program Total Credits:</b>				<b>120</b>