Biology Major, B.S.

Department of Biology

This program offers preparation for graduate school and a sound basis for professional training in the biological and health sciences. Biology is an unusually broad field, and students can tailor their programs to fit their own needs and interests. To provide flexibility in pursuing personal interests or career preparation, the student chooses 18 credits of upper division biology electives. The Department of Biology encourages students to develop as active scholars and to participate in undergraduate research.

Typical Program of Study:

Fall Semester		*Spring Semester*	
First Year			
Biol 1011 General Biology I [a]	5 cr	Biol 1012 General Biology II	5 cr
Chem 1151 General Chemistry I [a]		Chem 1152 General Chemistry II	
or Chem 1161 Honors Chemistry I	5 cr	or Chem 1162 Honors Chemistry II	5 cr
Comp 1120 College Writing	3 cr	Math 1290 Calculus for the Natural Sciences [b]	
	13 cr	or Math 1296 Calculus I [b]	5 cr
			15 cr
Second Year			
Biol 2801 General Ecology	3 cr	Biol 2101 Cell Biology	3 cr
Biol 2802 Ecology Lab [c]	2 cr	Chem 2522 Organic Chemistry II	4 cr
Chem 2521 Organic Chemistry I	4 cr	Liberal education or minor field courses	8 cr
Math or statistics course [d]	3-5 cr		15 cr
	12-14 cr		
Third Year			
Phys 2011 General Physics I [e]		Phys 2012 General Physics II [e]	
or Phys 1001 Introduction to Physics I	4-5 cr	or Phys 1002 Introduction to Physics II	4-5 cr
Biol 2201 Genetics	3 cr	Bio 4801 Evolution	2 cr
Comp 3150 Advanced Writing: Science	3 cr	Biology upper division electives [f]	4 cr
Liberal education or minor field courses	6 cr	Liberal education or minor field course	4 cr
	16-17 cr		14-15 cr
Fourth Year			
Biol 3997 Seminar I	0.5 cr	Biol 3998 Seminar II	0.5 cr
Biology upper division electives [f]	8 cr	Biology upper division electives [f]	6 cr
Liberal education or minor field courses	7 cr	Liberal education or minor field courses	6-9 cr
	15.5 cr		12-15.5 cr

[a] High school chemistry or Chem 1113 Introduction to General Chemistry is required before Biol 1011 and Chem 1151.
[b] First math course is determined by math placement exam. This schedule presupposes placement into Math 1290/1296.
[c] Biol 2802 is offered fall semester only; it can be taken in the third year if it is not possible to take during the second year.
[d] Math 1297 Calculus II OR Stat 2411 Statistical Methods OR Stat 3611 Probability & Statistics.
[e] Phys 2011-2012 is a calculus-based physics series requiring completion of Math 1297 Calculus II.
[f] Students must complete 18 credits of Biology electives 2xxx level or higher, including at least 2 lab courses or courses with lab components. Two of the following may be used: MicB 5545, MicB 5555, Phsl 5601, or Phsl 5602. Students may also use up to two credits of SSP 3002 towards this requirement.

For further information:

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Biology Major, B.S.

MAJOR COURSE REQUIREMENTS	CREDITS	PREREQUISITES	SEMESTER TO BE COMPLETED	GRADE
YEAR 1				
Biol 1011 General Biology I ^	5	1 yr HS or 1 semester college chemistry		
Biol 1012 General Biology II	5	Biol 1011		
Chem 1151 General Chemistry I ^	5	1 yr HS chemistry and HS algebra		
and Chem 1152 General Chemistry II	5	Chem 1151		
OR				
Chem 1161 Honors General Chemistry I	5	1 yr HS chemistry and HS algebra; placement		
and Chem 1162 Honors General Chemistry II	5	Chem 1161		
Math 1290 Calculus for the Natural Sciences	5	Math placement or Math 1250 with grade of ' C-' or better		
OR				
Math 1296 Calculus I	5	Math placement or Math 1250 with grade of ' C-' or better		
Comp 1120 College Writing	3			
YEAR 2				
Biol 2101 Cell Biology	3	Biol 1012; 4 credits organic chemistry		
Biol 2801 Ecology #	3	Biol 1012		
Biol 2802 Ecology lab #	3	Biol 2801 (or concurrent registration)		
Chem 2521 Organic Chemistry I	4	Chem 1152 or 1162		
Chem 2522 Organic Chemistry II	4	Chem 2521		
Math 1297 Calculus II	5	Math 1296 with grade of ' C-' or better		
OR				
Stat 2411 Statistical Methods	3	Math 1250 with grade of ' C-' or better or math placement		
OR				
Stat 3611 Intro to Probability and Statistics	4	Math 1296 with grade of ' C-' or better		
YEAR 3				
Biol 2201 Genetics	3	Biol 1012; Math 1004 or higher		
Biol 4801 Evolution	2	Biol 2201		
Biol electives*	4			
Comp 3150 Advanced Writing: Science	3	Comp 1120; 60 credits		
Phys 1001 Intro to Physics I	5	Algebra; trigonometry		
and Phys 1002 Intro to Physics II	5	Phys 1001		
OR				
Phys 2011 General Physics I +	4	Math 1290 or 1296		
and Phys 2012 General Physics II +	4	Phys 2011; Math 1297		
YEAR 4				
Biol 3997 Seminar I	0.5	60 credits		
Biol 3998 Seminar II	0.5	Biol 3997		
Biol electives*	14			

^ High school chemistry or Chem 1113 Introduction to General Chemistry is required before Biol 1011 and Chem 1151.
# Biol 2802 is offered fall semester only; it can be taken in the third year if it is not possible to take during the second year.
+ Phys 2011-2012 is a calculus-based physics series requiring completion of Math 1297 Calculus II.
* Students must complete 18 credits of Biology electives 2xxx level or higher, including at least 2 lab courses or courses with lab components. Two of the following may be used: MicB 5545, MicB 5555, Phsl 5601, or Phsl 5602. Students may also use up to two credits of SSP 3002 towards this requirement.

NOTE: In addition to the above requirements, students must complete a minor and the liberal education program to earn a B.S. degree.