BIOLOGY CONCENTRATION IN ECOLOGY, BACHELOR OF SCIENCE

Requirements

General Requirements

Code	Title	Credits
Core Curriculum		42
Required Support Courses		22
Major (Required) Courses		37-39
Concentration Required Courses		18-19
Electives (As needed to complete 120 credit hours required)		
Total Credits		**120**

- 36 upper-division credit hours required for degree
- 25% of courses must be taken at A&M-SA for degree
- CIP Code: 26.0101

All students must complete the University's Core Curriculum (https://catalog.tamusa.edu/undergraduate/academic-policies-procedures/core-curriculum/) and the specific requirements of the major. In some cases, a course that is required for a major may also be counted towards the Core Curriculum.

Code	Title	Credits
Core Curriculum		
ENGL 1301	Composition I	3
ENGL 1302	Composition II [5]	3
or ENGL 2311	Technical Writing	
MATH 2313	Calculus I	3
BIOL 1306	Gen Biology I-Attr Living Sys [1]	3
BIOL 1307	Gen Biology II-Biol Organisms [1]	3
Lang/Phil/Culture		3
Creative Arts		3
American History		3
American History		3
Government/Political Science		3
Government/Political Science		3
Social & Behavioral Sciences		3
CHEM 1311	General Chemistry I	3
CHEM 1312	General Chemistry II	3
Subtotals:		42
Required Support Courses		
UNIV 1301	First Year Seminar	3
MATH 2113	Calculus I Lab	1
CHEM 1111	General Chemistry Lab I	1
CHEM 1112	General Chemistry Lab II	1
CHEM 2323 & CHEM 2123	Organic Chemistry I and Organic Chemistry I Lab	4
CHEM 2325 & CHEM 2125	Organic Chemistry II and Organic Chemistry II Lab	4
PHYS 1301 & PHYS 1101	General Physics I and General Physics Lab I	4
PHYS 1302 & PHYS 1102	General Physics II and General Physics Lab II	4
Subtotals:		22
Major (Required) Courses [2]		
BIOL 1106	General Biology I Lab [1]	1
BIOL 1107	General Biology II - Lab [1]	1
BIOL 2415	Statistics in Biology & Medicn	4
BIOL 2411	Genetics [1]	4
BIOL 3402	Evolution	4
BIOL 2421	Introduction to Microbiology	4
BIOL 3407	Ecology	4
BIOL 3408	Animal Physiology	4
or BIOL 4411	Appl Plant Physiology,Grwth/Dv	
Select one of the following: [3]		1
BIOL 4101	Seminar-Integrative Biology	
BIOL 4102	Seminar-Cell/Molecular Biology	
BIOL 4103	Seminar-Zoology	
BIOL 4104	Seminar-Ecology	
BIOL Advanced elective with lab [4]		4
BIOL advanced electives [4]		6-8
Subtotals:		37-39
Concentration Required Courses		
BIOL 2406	Intro to Plant Biology	4
or BIOL 4411	Appl Plant Physiology,Grwth/Dv	
BIOL 4307	Conserv/Restoration Ecology	3
BIOL 4424	Field Biology	4
Select two of the following electives:		7-8
BIOL 3375	Applied Entomology	
BIOL 3403	Plant Taxonomy	
BIOL 3406	Animal Behavior	
BIOL 4409	Biology of Disease Vectors	
BIOL 4423	Wildlife Management	
BIOL 4425	Ornithology	
BIOL 4427	Herpetology	
BIOL 4429	Mammalogy	
BIOL 4430	Parasitology	
BIOL 4431	Ichthyology	
BIOL 4432	Primatology	
Subtotals:		18-19
Electives		
As needed to complete 120 credit hours		
Total Credits		**120**

1. An earned letter grade of C is required for this degree
2. 2.0 overall GPA for major
3. Interdisciplinary, Cell & Molec, Zoology, or Ecology topics respectively
4. Can be fulfilled by any advanced electives
5. A&M-SA students are required to take ENGL 1302 Composition II. Credit for ENGL 2311 Technical Writing will be accepted for transfer students.

Plan of Study

This suggested plan of study is intended to be used as a guide in conjunction with official degree requirements outlined in the catalog. While this plan demonstrates a course of study that covers eight semesters, each student's academic path is unique and your timeline may look different. Students should regularly consult with academic advisors as they plan their course schedules as course offerings may vary. This suggested order of courses assumes the following: 1) students come in TSI compliant for all categories 2) students come in as a freshmen with no previous credits earned 3) students pass all courses the first time. 4) all courses are offered during the semester suggested NOTE: If any of the above assumptions are not met, we encourage students to meet with their advisors. The most important component of this suggested schedule of courses is the order of the BIOL, CHEM, and MATH courses.

First Year		
First Semester		**Credits**
BIOL 1306	Gen Biology I-Attr Living Sys	3
BIOL 1106	General Biology I Lab	1
CHEM 1111	General Chemistry Lab I	1
CHEM 1311	General Chemistry I	3
ENGL 1301	Composition I	3
Language/Philosophy/Cultural Studies		3
UNIV 1301	First Year Seminar	3
	Credits	**17**
Second Semester		
BIOL 1307	Gen Biology II-Biol Organisms	3
BIOL 1107	General Biology II - Lab	1
CHEM 1312	General Chemistry II	3
CHEM 1112	General Chemistry Lab II	1
MATH 2313	Calculus I	3
MATH 2113	Calculus I Lab	1
ENGL 2311	Technical Writing	3
	Credits	**15**
Second Year		
First Semester		
BIOL 2411	Genetics	4
BIOL 2406	Intro to Plant Biology	4
CHEM 2323	Organic Chemistry I	3
CHEM 2123	Organic Chemistry I Lab	1
HIST 1301	US History to 1865	3
	Credits	**15**
Second Semester		
BIOL 2421	Introduction to Microbiology	4
BIOL 2415	Statistics in Biology & Medicn	4
CHEM 2325	Organic Chemistry II	3
CHEM 2125	Organic Chemistry II Lab	1
HIST 1302	US History from 1865	3
	Credits	**15**
Third Year		
First Semester		
BIOL 3407	Ecology	4
BIOL 3408 or BIOL 4411	Animal Physiology or Appl Plant Physiology,Grwth/Dv	4
PHYS 1301	General Physics I	3
PHYS 1101	General Physics Lab I	1
GOVT 2305	Federal Government	3
	Credits	**15**
Second Semester		
BIOL 3402	Evolution	4
BIOL 4307	Conserv/Restoration Ecology	3
PHYS 1302	General Physics II	3
PHYS 1102	General Physics Lab II	1
GOVT 2306	Texas Government	3
	Credits	**14**
Third Semester		
BIOL 4424	Field Biology (Summer course only. Must have taken BIOL 3407.)	4
	Credits	**4**
Fourth Year		
First Semester		
BIOL Advanced Elective w/Lab (Can be fulfilled by any BIOL course)		4
BIOL 4101 or BIOL 4102 or BIOL 4103 or BIOL 4104	Seminar-Integrative Biology or Seminar-Cell/Molecular Biology or Seminar-Zoology or Seminar-Ecology	1
BIOL Advanced Elective (Must be from concentration required list)		4
Social/Behavioral Science		3
	Credits	**12**
Second Semester		
BIOL Advanced Elective (Must be from concentration required list)		4
BIOL Advanced Elective (Can be fulfilled by any BIOL course)		3
BIOL Advanced Elective (Can be fulfilled by any BIOL course)		3
Creative Arts		3
	Credits	**13**
	Total Credits	**120**