

BS - Applied Biotechnology

The applied biotechnology major requires 122 semester hours of course work, including 41 semester hours of the university core curriculum. All courses and related activities required for the major cover general biological and chemical sciences, theory and methodology of biotechnology, bioinformatics, microbiology, molecular biology, genetics/genomics, general plant pathology and physiology, general entomology and insect/plant physiology, pesticide toxicology, genetics, medical entomology, and cell biology. The minimum number of hours required for an undergraduate major is 30 hours of course work in the discipline or a closely allied field. Of these hours, a minimum of 16 must be taken in upper-division (numbered 3000 or above) courses in the major area. The curriculum is the combination of laboratory skills, applied coursework and the biotechnology internship experience which complete an approved academic program for earning a B.S. degree in Applied Biotechnology.

Freshman

Fall	Hours	Spring	Hours
MATH 1130 Pre-Calculus Trigonometry	3	BIOL 1020 Principles of Biology & BIOL 1021 Principles of Biology Laboratory	4
CHEM 1030 Fundamentals Chemistry I	3	CHEM 1040 Fundamental Chemistry II	3
CHEM 1031 Fundamental Chemistry I Laboratory	1	CHEM 1041 Fundamental Chemistry II Laboratory	1
ENGL 1100 English Composition I	3	ENGL 1120 English Composition II	3
APBT 1000 Introduction to Applied Biotechnology	1	Core Fine Arts	3
COMM 1000 Public Speaking	3		
	14		14

Sophomore

Fall	Hours	Spring	Hours
BIOL 1030 Organismal Biology & BIOL 1031 Organismal Biology Laboratory	4	CHEM 2030 Survey of Organic Chemistry	3
STAT 2510 Statistics for Biological and Health Sciences	3	CSES 2040 Basic Soil Science <i>or</i> 2040 Insects: An Introduction to Entomology	4
ECON 2020 Principles of Microeconomics	3	PHYS 1000 Foundations of Physics	4
Core Literature	3	Core History I	3
Free Electives	2	Free Electives	2
		CHEM 2070 Organic Chemistry I <i>or</i> 2030 Survey of Organic Chemistry	3
	15		18

Junior

Fall	Hours	Spring	Hours	Summer	Hours
Select 4 credits of the following:	4	PLPA 3000 General Plant Pathology, 3040 General Entomology, <i>or</i> 3120 Principles of Weed Science	4	APBT 4920 Internship	3

BIOL 3020 Genomic Biology	ANSC 3400 Animal Nutrition	4	
BIOL 3100 Plant Biology*	APBT 3100 Applied Biotechnology I	4	
BIOL 3200 General Microbiology & BIOL 3201 General Microbiology Laboratory	Core Humanities	3	
AGRI 3000 Agricultural Genetics		4	
BCHE 3200 Principles of Biochemistry or 5180 Biochemistry I		3	
Core History II		3	
Free Electives		2	
		16	15
			3
Senior			
Fall	Hours	Spring	Hours
APBT 4100 Applied Biotechnology II	4	Professional Science core electives¹	10
Professional Science core electives¹	11	Core Social Science	3
		UNIV 4AA0 Creed to Succeed	0
		APBT 4950 Professional Development	1
	15		14

Total Hours: 124

Six credits of advanced ROTC can be substituted for free electives.

CHEM 1110/CHEM 1111 and CHEM 1120/CHEM 1121 sequence can substitute for CHEM 1030/CHEM 1031 and CHEM 1040/CHEM 1041.

* CSES 5100 and BIOL 3020 may not both be taken for credit.

¹ See advisor or DegreeWorks for approved list