

PLANT BIOTECHNOLOGY, B.SC. - AGRICULTURE

Degree Requirements

Course	Title	Hours
B.Sc. Agriculture Degree Core		
ABIZ 1000	Introduction to Agribusiness Management	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
AGEC 2370/ BIOL 2300	Principles of Ecology	3
AGRI 1600	Introduction to Agrifood Systems	3
AGRI 2030	Technical Communications	3
AGRI 2400	Experimental Methods in Agricultural and Food Sciences	3
AGRI 4100	Current Issues in Agricultural Systems	3
ANSC 2500	Animal Production	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1100	Introductory Chemistry 1: Atomic and Molecular Structure and Energetics	3
CHEM 1130 or CHEM 1110	Introduction to Organic Chemistry ¹ Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties	3
ECON 1010	Introduction to Microeconomic Principles	3
HNSC 1200 or HNSC 1210	Food: Facts and Fallacies Nutrition for Health and Changing Lifestyles	3
Select one of the following: ²		3
MATH 1210	Techniques of Classical and Linear Algebra	
MATH 1300	Vector Geometry and Linear Algebra	
MATH 1500	Introduction to Calculus	
MATH 1510	Applied Calculus 1	
MATH 1520	Introductory Calculus for Management and Social Sciences	
PLNT 2500	Crop Production	3
PLNT 2520 or BIOL 2500	Genetics Genetics 1	3
SOIL 3600	Soils and Landscapes in Our Environment	3
Plant Biotechnology Core		
BIOL 2242	The Flowering Plants	3
BIOL 2520	Cell Biology	3
CHEM/MBIO 2730	Elements of Biochemistry 1 ³	3
CHEM 2740	Introduction to the Biochemistry Laboratory ⁴	3
CHEM/MBIO 2750	Elements of Biochemistry 2 ⁵	3
MBIO 1010	Microbiology I	3
PLNT 2530	Plant Biotechnology	3
PLNT/BIOL 3400	Plant Physiology	3
Restricted Electives		
Select 6 credit hours from Group 1		6
Select 15 credit hours from Group 2		15

Free Electives

Select 21 credit hours ⁶	21
Total Hours	120

- ¹ Students can hold CHEM 2100 (Organic Chemistry 1: Foundations of Organic Chemistry) in place of CHEM 1130 (Introduction to Organic Chemistry).
- ² Students are recommended to take one of the MATH courses listed in the program requirements above however may also use either MATH 1220 or MATH 1230 to meet the requirement.
- ³ Under required courses, students can use either CHEM 2700/MBIO 2700 (Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy) in place of CHEM 2730/MBIO 2730 (Elements of Biochemistry 1).
- ⁴ Under required courses, student can use CHEM 2720 (Principles and Practices of the Modern Biochemistry Laboratory) in place of CHEM 2740 (Introduction to the Biochemistry Laboratory).
- ⁵ Under required courses, students can use CHEM 2710/MBIO 2710 (Biochemistry 2: Catabolism, Synthesis, and Information Pathway) in place of CHEM 2750/MBIO 2750 (Elements of Biochemistry 2).
- ⁶ Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

Restricted Electives

Group 1

Course	Title	Hours
ANSC/PLNT 4410	Grassland Agriculture: Plant, Animal and Environment	3
ENTM 3170	Crop Protection Entomology	3
PLNT 2510	Fundamentals of Horticulture	3
PLNT 3540	Weed Science	3

Group 2

Course	Title	Hours
PLNT 3520	Principles of Plant Improvement	3
PLNT 3570	Fundamentals of Plant Pathology	3
PLNT 4310	Introductory Plant Genomics	3
PLNT 4330	Intermediate Plant Genetics	3
PLNT 4550	Developmental Plant Biology	3
PLNT 4570	Research Methods in Plant Pathology	3
PLNT 4580	Molecular Plant-Microbe Interactions	3
PLNT 4590	Physiology of Crop Plants	3
PLNT 4610	Bioinformatics	3