

ANIMAL SYSTEMS, 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
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 1524	Mathematics 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
Animal Systems Core		
ANSC 2510	Anatomy and Physiology 1: Control Systems	3
ANSC 2520	Anatomy and Physiology 2: Nutrient Utilization	3
ANSC 3500	Principles of Animal Genetics	3
ANSC 3510	Feeds and Feeding	3
ANSC 3520	Animal Reproduction	3
ANSC 3530	The Animal and Its Environment	3
CHEM/MBIO 2730	Elements of Biochemistry 1 ³	3
CHEM 2740	Introduction to the Biochemistry Laboratory ^{3,4}	3
Restricted Electives		
3 credit hours from Group 1 - Ruminant Production		3
3 credit hours from Group 2 - Monogastric Production		3
6 credit hours from Group 3 - Advanced Animal Science		6

3 credit hours from Group 4 - Human Resources	3
Free Electives	
27 credit hours ⁵	27
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. Students may use the former MATH 1520 to meet the MATH course 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) and may use CHEM 2720 (Principles and Practices of the Modern Biochemistry Laboratory) in place of CHEM 2740 (Introduction to the Biochemistry Laboratory).

⁴ While CHEM 2740 is the recommended lab course for this program, student who are completing the Pre-Vet requirements may use either CHEM 1120 or CHEM 2740 to complete this requirement for Animal Systems as well. If a student has both courses, one is used towards free electives.

⁵ Students can apply for the Cooperative Education Program. Three 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 - Ruminant Production

Course	Title	Hours
ANSC 4520	Ruminant Production Systems-Meat	3
ANSC 4530	Ruminant Production Systems-Milk	3

Group 2 – Monogastric Production

Course	Title	Hours
ANSC 4550	Avian Production Systems	3
ANSC 4640	Swine Production Systems	3

Group 3 – Advanced Animal Science

Course	Title	Hours
ANSC 2XXX	Any ANSC course at the 2000 level	3
ANSC 3XXX	Any ANSC course at the 3000 level	3
ANSC 4XXX	Any ANSC course at the 4000 level	3
FOOD 3500	Processing of Animal Food Products	3
ENTM 3160	Veterinary and Wildlife Entomology	3

Group 4 – Human Resources

Course	Title	Hours
ABIZ 2620	Agricultural Human Resource Management	3
GMGT 2070	Introduction to Organizational Behaviour	3
HRIR 2440	Human Resource Management	3