Effective 2023-24

Pre-Veterinary Program

A pre-veterinary program is offered to students who plan to apply for the degree Doctor of Veterinary Medicine. Pre-veterinary students whose academic standing is acceptable can apply to the Western College of Veterinary Medicine (WCVM), University of Saskatchewan. Acceptance into the Western College of Veterinary Medicine from the pre-veterinary program at the University of Manitoba is normally restricted to residents of Manitoba. Students from outside Manitoba may be accepted as residents of their own province or country. Students entering the pre-veterinary program are responsible for establishing their residence status.

Western College of Veterinary Medicine, University of Saskatchewan

Two full years (a minimum of 60 credit hours) of university training is required for admission. Refer to the University of Saskatchewan's website to review the admission requirements: https://admissions.usask.ca/veterinary-medicine.php#Admissionrequirements. **NOTE:** CHEM 1120 is required for admission to WCVM, however, it is not included in the 60 credit hours required by the WCVM. Therefore, students must take a total of 63 UM credit hours to meet admission requirements. If a student wishes to take CHEM 1120 during a Regular Session, they must take a minimum of 27 credit hours total to meet the requirement for a full year of university courses.

The following program is designed to meet the course requirements to apply to the Western College of Veterinary Medicine in **Fall 2025**.

Year 1

Course No.	Course Name	Credit Hours
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1100	Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics	3
CHEM 1120*	Introduction to Chemical Techniques	3
CHEM 1130[1]	Introduction to Organic Chemistry	3
PHYS 1020	Physics 1	3
INDG 1220 or INDG 1240 or INDG 1200[2]	Indigenous Peoples in Canada, Part 1 or Indigenous Peoples in Canada, Part 2 or Indigenous Peoples in Canada	3
Free Electives		12
Total Credit Hours		33*

*Consider taking CHEM 1120 during the Summer Term, as this course is not included in the 24-credit hour requirement in a Regular Session (i.e., September-April) for admission purposes to WCVM.

Year 2

Course No.	Course Name	Credit Hours
AGRI 2030[3] or ENGL 1340[3] or ENGL 1400[3]	Technical Communications or Introduction to Literary Analysis or Thematic Approaches to the Study of Literature	3
AGRI 2400[4]	Experimental Methods in Agricultural and Food Sciences	3
CHEM 1110	Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties	3

Note: Any discrepancies between this document and the Academic Calendar, the Academic Calendar takes precedent.

CHEM 2730/MBIO 2730[5]	Elements of Biochemistry 1	3
MBIO 1010	Microbiology 1	3
PLNT 2520/BIOL 2500	Genetics	3
Free Electives		12
Total Credit Hours		30

Recommended Courses

We recommend the following courses to be taken as Free Electives for those planning to complete Pre-Vet in parallel with the Animal Systems degree program. If you are doing Animal Systems in addition to Pre-Vet please see pages 3-5 for the 4-year Recommended Progression.

Course No.	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 1600	Introduction to Agrifood Systems	3
ECON 1010	Introduction to Microeconomic Principles	3
HNSC 1200 or HNSC 1210	Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles	3
MATH 1300[6] or MATH 1210[6] or MATH 1500[6] or MATH 1510[6] or MATH 1524[6]	Vector Geometry and Linear Algebra or Techniques of Classical and Linear Algebra or Introduction to Calculus or Applied Calculus 1 or Mathematics for Management and Social Sciences	3
ANSC 2500	Animal Production	3
ANSC 2510	Anatomy and Physiology 1	3
ANSC 2520	Anatomy and Physiology 2	3

Notes:

1. CHEM 2100 (Organic Chemistry 1: Foundations of Organic Chemistry) can be substituted for CHEM 1130 (Introduction to Organic Chemistry).

2. If INDG 1200 is selected (6 credit hours) then the additional 3 credit may be used towards free electives.

3. AGRI 2030 or ENGL 1340 or ENGL 1400 meet the English/Communications requirements of 3 credit hours. Students may elect to take ENGL 1200 (6 credit hours) instead. The additional 3 credit hours may be used towards free electives.

4. Students must ensure they meet the pre-requisites for all courses they intend to register for. Most pre-requisites are built into the Pre-Vet program, but this may not be the case for all. For example, AGRI 2400 has a pre-requisite that are listed as recommended courses. Another option to meet the 3 credit Statistics requirement for WCVM admission is STAT 1000. Note that AGRI 2400 is required for Animal Systems degree for those doing parallel programs and if STAT 1000 is taken it would be a free elective for Animal Systems.

5. Under required courses, students can take either CHEM 2730/MBIO 2730 (Elements of Biochemistry 1) or CHEM 2700/MBIO 2700 (Biochemistry I: Biomolecules and an Introduction to Metabolic Energy).

6. Students are recommended to take one of the MATH courses listed in the recommendations above however may also use either MATH 1220 or MATH 1230 to meet the degree requirement.

UM | Faculty of Agricultural and Food Sciences

Effective 2023-24

B.Sc. in Agriculture (Animal Systems)

With Pre-Vet requirements built in

Year 1

Course No.	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 1600	Introduction to Agrifood Systems	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1100	Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics	3
*CHEM 1120[1]	Introduction to Chemical Techniques	3
CHEM 1130[2]	Introduction to Organic Chemistry	3
ECON 1010	Introduction to Microeconomic Principles	3
HNSC 1200 or HNSC 1210	Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles	3
PHYS 1020	Physics 1	3
INDG 1220 or INDG 1240 or INDG 1200[6]	Indigenous Peoples in Canada, Part 1 or Indigenous Peoples in Canada, Part 2 or Indigenous Peoples in Canada	3
Total Credit Hours		33*

*Consider taking CHEM 1120 during the Summer Term between year 1 and 2, as this course is not included in the 24-credit hour requirement in a Regular Session (i.e., September-April) for admission purposes to WCWM.

Year 2

Course No.	Course Name	Credit Hours
AGRI 2030[3]	Technical Communications	3
AGRI 2400	Experimental Methods in Agricultural and Food Sciences	3
ANSC 2500	Animal Production	3
ANSC 2510	Anatomy and Physiology 1: Control Systems	3
ANSC 2520	Anatomy and Physiology 2: Nutrient Utilization	3
CHEM 1110	Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties	3
CHEM 2730/MBIO 2730[4]	Elements of Biochemistry 1	3
MATH 1300[5] or MATH 1210[5] or MATH 1500[5] or MATH 1510[5] or MATH 1524[5]	Vector Geometry and Linear Algebra or Techniques of Classical and Linear Algebra or Introduction to Calculus or Applied Calculus 1 or Mathematics for Management and Social Sciences	3
MBIO 1010	Microbiology 1	3
PLNT 2520/BIOL 2500	Genetics	3
Total Credit Hours		30

Note: Any discrepancies between this document and the Academic Calendar, the Academic Calendar takes precedent.

Year 3

Course No.	Course Name	Credit Hours
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
AGEC 2370/BIOL 2300	Principles of Ecology	3
ANSC 3510	Feeds and Feeding	3
ANSC 3520	Animal Reproduction	3
ANSC 3500	Principles of Animal Genetics	3
ANSC 3530	The Animal and Its Environment	3
PLNT 2500	Crop Production	3
SOIL 3600	Soils and Landscapes in Our Environment	3
Restricted[7]/Free Electives[6]/Co-op		6
Total Credit Hours		30

Year 4

Course No.	Course Name	Credit Hours
AGRI 4100	Current Issues in Agricultural Systems	3
Restricted[7]/Free Electives[6]/Co-op		24
Total Credit Hours		27

Notes:

1. While CHEM 2740 (Introduction to the Biochemistry Laboratory) is the recommended lab course for Animal Systems, students who are completing the Pre-Vet requirements must take CHEM 1120 (Introduction to Chemical Techniques) and therefore can use it in place of CHEM 2740 for Animal Systems. If a student has both courses, one is used towards free electives. Students may also take CHEM 2720 (Principles and Practices of the Modern Biochemistry Laboratory) in place of CHEM 2740.

2. CHEM 2100 (Organic Chemistry 1: Foundations of Organic Chemistry) can be substituted for CHEM 1130 (Introduction to Organic Chemistry).

3. Students who are completing the Pre-Vet requirements may use either AGRI 2030 or ENGL 1340 or ENGL 1400 to complete the requirement for WCVM admission. However, ENGL 1340 or ENGL 1400 are considered free electives in the Animal Systems degree program. Students doing Animal Systems must take AGRI 2030 or alternatively may use ENGL 1200 (6 credit hours) in place of AGRI 2030 and a free elective in Animal Systems – ENGL 1200 also meets Pre-Vet WCVM admission requirements.

4. Under required courses, students can take either CHEM 2730/MBIO 2730 (Elements of Biochemistry 1) or CHEM 2700/MBIO 2700 (Biochemistry I: Biomolecules and an Introduction to Metabolic Energy).

5. 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.

6. While 27 credit hours of Free Electives are required for the Animal Systems degree program, students who are completing the Pre-Vet requirements will require 15 credit hours of free elective since PHYS 1020, MBIO 1010, and INDG 1220 or INDG 1240, 1 additional CHEM course (as both CHEM 1110 and 1130) –are counted as free electives. Students who complete INDG 1200 (instead of INDG 1240 or INDG 1220) will require 12 credit hours since this is a 6-credit hour course.

Students may 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.

7. Students must ensure they meet the pre-requisites for all courses they intend to register for, if you are planning to take a non-FAFS course equivalent listed as an option, there may be additional prerequisites. For example, BIOL 2300 requires STAT 1000. BIOL 2300 is considered equivalent to AGEC 2370, the preferred FAFS course that students can complete would have prereqs fulfilled through the recommended progression.

8. There are 15 credit hours of Restricted Electives required in the Animal Systems program. Students must complete:

Restricted Electives		**Credit Hours**
Group 1 - Ruminant Production: choose one course from the following:		3
ANSC 4520	Ruminant Production Systems - Meat	
ANSC 4530	Ruminant Production Systems - Milk	
Group 2 – Monogastric Production: choose one course from the following:		3
ANSC 4550	Avian Production Systems	
ANSC 4640	Swine Production Systems	
Group 3 – Advanced Animal Science: choose two courses from the following:		6
Any ANSC 2000, 3000, or 4000 courses; or FOOD 3500*; or ENTM 3160		
Group 4 – Human Resources: choose one course from the following:		3
ABIZ 2620	Agricultural Human Resource Management	
GMGT 2070	Organizational Behaviour	
HRIR 2440	Human Resource Management	

*This course is usually offered every 2nd year - planning ahead is important.