

Equine Science Major

Major Requirements

Degree Type: B.S.
Minimum Credits Required: 120

University Degree Requirements

For complete details on these and other university degree requirements, refer to the Degree and Graduation Requirements (<https://catalog.ndsu.edu/academic-policies/undergraduate-policies/degree-and-graduation/>) section in the University Catalog.

1. Minimum of 120 semester credits (some programs may exceed this minimum).
2. Complete the University General Education requirements.
3. Minimum institutional GPA of 2.00 based on work taken at NDSU.
4. Minimum of 30 credits in resident at NDSU.
5. Minimum of 36 upper level credits (courses numbered 300 or higher).
6. Students with transfer credit must meet the NDSU 30 credits in residence (#4). Of these 30 credits in residence, a minimum of 15 credits must be in courses numbered 300 or above, and 15 credits must be in the student's declared major curricula.

University General Education Requirements

A list of university approved general education courses along with the administrative policies governing the requirement and the categories is available here (<https://catalog.ndsu.edu/academic-policies/undergraduate-policies/general-education/>).

Code	Title	Credits
Category C: Communication		12
Category R: Quantitative Reasoning		3
Category S: Science and Technology		10
Category A: Humanities and Fine Arts		6
Category B: Social and Behavioral Sciences		6
Category W: Wellness		2
Category D: Cultural Diversity		
Category G: Global Perspectives		
Category L: Digital Literacy		
Total Credits		39

Major Requirements

Code	Title	Credits
Required Core Courses for Equine Science		
ANSC 101 or ANSC 102 or VETS 101	Student Success Techniques - Animal and Equine Science Student Success Techniques - Animal Sciences with Pre-Veterinary Medicine Emphasis Student Success Techniques: Veterinary Technology	1
ANSC 218	Anatomy and Physiology of Domestic Animals	3
ANSC 223	Introduction to Animal Nutrition	3
ANSC 235	Equine Evaluation	2
ANSC 260	Introduction to Equine Studies	2
ANSC 260L	Equine Care and Management Practicum	1
ANSC 261 or ANSC 361	Basic Equitation & Horsemanship ¹ Intermediate Horsemanship	1
ANSC 300	Domestic Animal Behavior and Management	3
ANSC 357	Animal Genetics	3
ANSC 360	Equine Nutrition	3
ANSC 364	Equine Anatomy and Physiology	3
ANSC 370	Fundamentals/Animal Disease	3
ANSC 379		2

or ANSC 393		
or ANSC 396		
ANSC 463 & 463L	Physiology of Reproduction and Physiology of Reproduction Laboratory	4
ANSC 478	Research and Issues in Animal Agriculture	3
ANSC 480	Equine Industry and Production Systems	3
BIOC 260	Elements of Biochemistry	4
BIOL 150 & 150L	General Biology I and General Biology I Laboratory	4
BIOL 151 & 151L	General Biology II and General Biology II Laboratory	4
ECON 201	Principles of Microeconomics	3
MATH 103	College Algebra	3
or MATH 105	Trigonometry	
or MATH 107	Precalculus	
or MATH 146	Applied Calculus I	
STAT 330	Introductory Statistics	3
Program Option		
Students must select one program option of interest to complete the major. The standard option for this major is the Equine Production, Management and Husbandry. Students who wish to declare an option other than Option One must officially declare that option with the Office of Registration and Records.		27-29
Total Credits		88-90

Option 1: Equine Production, Management, and Husbandry (Standard)

Code	Title	Credits
ANSC 361	Intermediate Horsemanship ¹	1
ANSC 461	Advanced Horsemanship and Equitation	1
AGEC 242	Introduction to Agricultural Management	3
AGEC 244	Agricultural Marketing	3
or AGECE 246	Introduction to Agricultural Finance	
AGEC 342	Farm and Agribusiness Management II	3
AGEC 420	Integrated Farm and Ranch Management	3
CHEM 117 & 117L	Chemical Concepts and Applications and Chem Concepts and Applications Lab	4
MICR 202 & 202L	Introductory Microbiology and Introductory Microbiology Lab	3
Equine Production, Management, and Husbandry Electives (choose any level course from AGECE, ANSC, ECON, NRM, RNG, PLSC, or SOIL).		6
Total Credits		27

Option 2: Biomedical Science

Students interested in veterinary school should consider this option. The option meets most veterinary school prerequisites. Consultation with an adviser is recommended.

Code	Title	Credits
ANSC 444	Livestock Muscle Physiology	3
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	4
CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory	4
CHEM 240	Survey of Organic Chemistry ²	3
or CHEM 341	Organic Chemistry I	
MICR 350 & 350L	General Microbiology and General Microbiology Lab	5
PHYS 120 & 120L	Fundamentals of Physics and Fundamentals of Physics Laboratory ²	4

or PHYS 211 & 211L	College Physics I and College Physics I Laboratory	
PLSC 315	Genetics	3
Biomedical Sciences Electives (choose any 300+ level course from ANSC, BIOC, BIOL, CHEM, MICR, or VETS)		3
Total Credits		29

- ¹ The department's placement procedures will determine which course the student takes for the core requirements. Students that test and qualify for ANSC 361 initially must complete the course with a C or higher. In this case, failure to earn a C or higher in ANSC 361 means the student must take ANSC 261 and retake ANSC 361.
- ² Veterinary Schools generally require CHEM 341 and PHYS 211 and their respective lab, at a minimum. Be sure to consult an academic advisor based on veterinary schools you plan to apply to for additional pre-requisites needed.

Degree Requirements and Notes:

- Students must earn at least a 2.00 GPA that is based on the courses that are used to satisfy major requirements.
- Transfer grades of 'C' or better to count towards major requirements.