

# Animal Science 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 (<http://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 residence 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 (<http://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 Animal 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 114	Introduction to Animal Sciences	3
ANSC 115	Introduction to Livestock Health Management and Welfare	3
ANSC 130 or ANSC 235	Foundations of Livestock and Product Evaluation Equine Evaluation	2
ANSC 218	Anatomy and Physiology of Domestic Animals	3
ANSC 220	Livestock Production	3
ANSC 223	Introduction to Animal Nutrition	3
ANSC 240	Meat Animal Evaluation and Marketing	3
ANSC 300	Domestic Animal Behavior and Management	3
ANSC 324	Applied Animal Nutrition	3
ANSC 357	Animal Genetics	3

ANSC 463 & 463L	Physiology of Reproduction and Physiology of Reproduction Laboratory	4
ANSC 379 or ANSC 393 or ANSC 396	Global Seminar Undergraduate Research Field Experience	2
ANSC 478	Research and Issues in Animal Agriculture	3
ANSC 480 or ANSC 482 or ANSC 484 or ANSC 486 or ANSC 488	Equine Industry and Production Systems Sheep Industry and Production Systems Swine Production/Pork Industry Systems Beef Industry and Production Systems Dairy 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 or MATH 105 or MATH 107 or MATH 146	College Algebra Trigonometry Precalculus Applied Calculus I	3
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 Animal 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.

**Total Credits** **90-95**

**Option 1: Animal Production, Management, & Husbandry Option (Standard)**

Code	Title	Credits
AGEC 242	Introduction to Agricultural Management	3
AGEC 244	Agricultural Marketing	3
MICR 202 & 202L	Introductory Microbiology and Introductory Microbiology Lab	3
CHEM 117 & 117L	Chemical Concepts and Applications and Chem Concepts and Applications Lab	4
ANSC 340	Principles of Meat Science	3
ANSC 370	Fundamentals/Animal Disease	3
ANSC 380	Livestock Sales and Marketing	2
Select one of the following (must be different from major requirements):		3
ANSC 480	Equine Industry and Production Systems	
ANSC 482	Sheep Industry and Production Systems	
ANSC 484	Swine Production/Pork Industry Systems	
ANSC 486	Beef Industry and Production Systems	
ANSC 488	Dairy Industry and Production Systems	
Animal Production, Management, and Husbandry Elective (choose from any level ANSC, NRM, RNG, PLSC, or SOIL)		6

**Total Credits** **30**

**Option 2: Biomedical Science Option <sup>1</sup>**

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 370	Fundamentals/Animal Disease	3
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 or CHEM 341	Survey of Organic Chemistry Organic Chemistry I	3
MICR 350 & 350L	General Microbiology and General Microbiology Lab	5
Select one lecture/lab from the following: <sup>2</sup>		4
PHYS 120 & 120L	Fundamentals of Physics and Fundamentals of Physics Laboratory	
PHYS 211 & 211L	College Physics I and College Physics I Laboratory	
PLSC 315	Genetics	3
Biomedical Science Elective (choose from 300+ level ANSC, BIOG, BIOL, CHEM, MICR, or VETS)		3
<b>Total Credits</b>		<b>32</b>

### Option 3: Animal Agribusiness Option

Code	Title	Credits
ACCT 102	Fundamentals of Accounting	3
AGEC 242	Introduction to Agricultural Management	3
AGEC 244 or AGECE 246	Agricultural Marketing Introduction to Agricultural Finance	3
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
ANSC 380	Livestock Sales and Marketing	2
Animal Agribusiness Electives (choose from any level ANSC, AGECE, ECON, NRM, RNG, PLSC or SOIL)		6
<b>Total Credits</b>		<b>27</b>

#### <sup>1</sup> Accelerated Undergraduate Animal Science Biomedical Sciences option to Master of Public Health Degree

- Students enrolled in the Biomedical Sciences option may participate in an accelerated undergraduate to graduate program (B.S. Animal Science degree to Master of Public Health degree).
- Students will complete and submit a required *Accelerated Degree Program Declaration* form identifying no more than 15 credits of graduate coursework to be counted towards their B.S. degree.
- A minimum 3.00 cumulative GPA must be maintained by students in the accelerated degree program.

<sup>2</sup> 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 a minimum 2.00 cumulative GPA for courses that satisfy major requirements
- Transfer grades must be 'C' or higher to count toward major requirements