Animal Science

Department Information

- **Department Location:**
  100 Hultz Hall
- **Department Phone:**
  701-231-7641
- **Department Email:**
  ndsu.ansc@ndsu.edu
- **Department Web Site:**
  www.ndsu.edu/agriculture/academics/academic-units/animal-sciences (http://www.ndsu.edu/agriculture/academics/academic-units/animal-sciences/)
- **Credential Offered:**
  B.S.
- **Sample Program Guide:**
  catalog.ndsu.edu/programs-study/undergraduate/animal-science/#planofstudytext (http://catalog.ndsu.edu/programs-study/undergraduate/animal-science/#planofstudytext)

Major Requirements

Major: Animal Science

Degree Type: B.S.
Minimum Degree Credits to Graduate: 120

University Degree Requirements

1. Satisfactory completion of all requirements of the curriculum in which one is enrolled.
2. Earn a minimum total of 120 credits in approved coursework. Some academic programs exceed this minimum.
3. Satisfactory completion of the general education requirements as specified by the university.
4. A minimum institutional GPA of 2.00 based on work taken at NDSU.
5. At least 36 credits presented for graduation must be in courses numbered 300 or higher.
6. Transfer Students: Must earn a minimum of 60 credits from a baccalaureate-degree granting or professional institution.
   a. Of these 60, at least 36 must be NDSU resident credits as defined in #7.
   b. Within the 36 resident credits, a minimum of 15 must be in courses numbered 300 or higher and 15 credits in the major field of study.
7. At least 36 credits must be NDSU resident credits. Resident credits include credits registered and paid for at NDSU.

For complete information, please refer to the Degree and Graduation Requirements (http://catalog.ndsu.edu/past-bulletin-archive/2022-23/academic-policies/undergraduate-policies/degree-and-graduation/) section of this Bulletin.

University General Education Requirements

Code	Title	Credits
Communication (C)		**12**
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing †		
Quantitative Reasoning (R) †		**3**
Science and Technology (S) †		**10**
Humanities and Fine Arts (A) †		**6**
Social and Behavioral Sciences (B) †		**6**
Wellness (W) †		**2**
Cultural Diversity (D) *†		
Global Perspectives (G) *†		
Total Credits		**39**

* May be satisfied by completing courses in another General Education category.

† General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review major requirements to determine if specific courses can also satisfy these general education categories.

- A list of university approved general education courses and administrative policies are available here (http://catalog.ndsu.edu/past-bulletin-archive/2022-23/academic-policies/undergraduate-policies/general-education/#genedcoursestext).

Major Requirements

Code	Title	Credits
Required Core Courses for Animal Science		
ANSC 114	Introduction to Animal Sciences	3
ECON 201	Principles of Microeconomics (May satisfy general education category B and G)	3
MATH 103	College Algebra	3
or MATH 105	Trigonometry	
or MATH 107	Precalculus	
or MATH 146	Applied Calculus I	
STAT 330	Introductory Statistics (May satisfy general education category R)	3
ANSC 218	Anatomy and Physiology of Domestic Animals	3
Select one of the following:		1
ANSC 101	Student Success Techniques - Animal and Equine Science	
ANSC 102	Student Success Techniques - Animal Sciences with Pre-Veterinary Medicine Emphasis	
ANSC 201	Student Success Techniques - Nontraditional & Transfer Students	
VETS 101	Student Success Techniques: Veterinary Technology	
ANSC 240	Meat Animal Evaluation and Marketing	3
ANSC 300	Domestic Animal Behavior and Management	3
ANSC 323	Fundamentals of Nutrition	3
ANSC 324	Applied Animal Nutrition	3
ANSC 463 & 463L	Physiology of Reproduction and Physiology of Reproduction Laboratory	4
ANSC 478	Research and Issues in Animal Agriculture	3
Select one of the following:		2
ANSC 379	Study Tour Abroad	
ANSC 393	Undergraduate Research (research experience)	
ANSC 396	Field Experience (internship experience)	
Select one of the following:		3
ANSC 480	Equine Industry and Production Systems	
ANSC 482	Sheep Industry and Production Systems	
ANSC 484	Swine Production/Pork Industry Systems	
ANSC 485	Poultry Industry and Production Systems	
ANSC 486	Beef Industry and Production Systems	
ANSC 488	Dairy Industry and Production Systems	
Options: Select one of the five options listed below.		**44-48**
Students must select one option of interest. The standard option for this major is the Animal Production, Management and Husbandry. Students who wish to declare an option other than the standard option must officially declare that option with the Office of Registration and Records.		
Total Credits		**84-88**

Option 1: Animal Production, Management, & Husbandry Option

Code	Title	Credits
AGEC 242	Introduction to Agricultural Management	3
AGEC 244	Agricultural Marketing	3
BIOC 260	Elements of Biochemistry	4

MICR 202 & 202L	Introductory Microbiology and Introductory Microbiology Lab (May satisfy general education category S)	3
PLSC 315	Genetics (May satisfy general education category S)	3
Select one from the following:		4
BIOL 111 & BIOL 100L	Concepts of Biology and Non-Majors Biology Lab (May satisfy general education category S)	
BIOL 150 & 150L	General Biology I and General Biology I Laboratory	
Select one from the following:		4
CHEM 117 & 117L	Chemical Concepts and Applications and Chem Concepts and Applications Lab (May satisfy general education category S)	
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory (May satisfy general education category S)	
Select one the following evaluation courses:		2
ANSC 230	Meat Grading and Evaluation	
ANSC 231	Livestock Evaluation	
ANSC 232	Dairy Cattle Evaluation	
ANSC 235	Equine Evaluation	
ANSC 340	Principles of Meat Science	3
ANSC 357	Animal Genetics	3
ANSC 370	Fundamentals/Animal Disease	3
ANSC 380	Livestock Sales and Marketing	2
ANSC 480	Equine Industry and Production Systems	3
or ANSC 482	Sheep Industry and Production Systems	
or ANSC 484	Swine Production/Pork Industry Systems	
or ANSC 485	Poultry Industry and Production Systems	
or ANSC 486	Beef Industry and Production Systems	
or ANSC 488	Dairy Industry and Production Systems	
Animal Production, Management, and Husbandry Elective (choose from any level PLSC, NRM, RNG, or SOIL)		6
Total Credits		**46**

Option 2: Animal Agribusiness Option

Code	Title	Credits
ACCT 102	Fundamentals of Accounting	3
AGEC 242	Introduction to Agricultural Management	3
AGEC 244	Agricultural Marketing	3
AGEC 246	Introduction to Agricultural Finance	3
Select one from the following:		4
BIOL 111 & BIOL 100L	Concepts of Biology and Non-Majors Biology Lab (May satisfy general education category S)	
BIOL 150 & 150L	General Biology I and General Biology I Laboratory	
Select one from the following:		4
CHEM 117 & 117L	Chemical Concepts and Applications and Chem Concepts and Applications Lab (May satisfy general education category S)	
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory (May satisfy general education category S)	
Select one of the following evaluation courses:		2
ANSC 230	Meat Grading and Evaluation	
ANSC 231	Livestock Evaluation	
ANSC 232	Dairy Cattle Evaluation	
ANSC 235	Equine Evaluation	
ANSC 357	Animal Genetics	3
ANSC 380	Livestock Sales and Marketing	2

ECON 202	Principles of Macroeconomics (May satisfy general education category B)	3
PLSC 315	Genetics (May satisfy general education category S)	3
AGEC elective	300-400 level	6
Animal Agribusiness Electives (choose from 300+ level ANSC, AGEC, ECON, PLSC or RNG)		9
Total Credits		**48**

Option 3: Biomedical Science Option

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 357	Animal Genetics	3
ANSC 444	Livestock Muscle Physiology	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
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory (May satisfy general education category S)	4
CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory (May satisfy general education category S)	4
CHEM 240	Survey of Organic Chemistry	3
or CHEM 341	Organic Chemistry I	
MICR 350 & 350L	General Microbiology and General Microbiology Lab	5
PLSC 315	Genetics (May satisfy general education category S)	3
Select one from the following:		4
PHYS 120 & 120L	Fundamentals of Physics and Fundamentals of Physics Laboratory (May satisfy general education category S)	
PHYS 211 & 211L	College Physics I and College Physics I Laboratory (May satisfy general education category S)	
Biomedical Science Elective (choose from 300+ level ANSC, BIOC, BIOL, CHEM, MICR, PHYS OR ZOO)		3
Total Credits		**44**

Option 4: Livestock Media Option

Code	Title	Credits
AGEC 242	Introduction to Agricultural Management	3
AGEC 244	Agricultural Marketing	3
ANSC 357	Animal Genetics	3
ANSC 380	Livestock Sales and Marketing	2
PLSC 315	Genetics (May satisfy general education category S)	3
Select one of the following evaluation courses:		2
ANSC 230	Meat Grading and Evaluation	
ANSC 231	Livestock Evaluation	
ANSC 232	Dairy Cattle Evaluation	
ANSC 235	Equine Evaluation	
Select one from the following:		4
BIOL 111 & BIOL 100L	Concepts of Biology and Non-Majors Biology Lab (May satisfy general education category S)	
BIOL 150 & 150L	General Biology I and General Biology I Laboratory (May satisfy general education category S)	
Select one from the following:		4
CHEM 117 & 117L	Chemical Concepts and Applications and Chem Concepts and Applications Lab (May satisfy general education category S)	

CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory (May satisfy general education category S)	
Complete any minor offered by the Department of Communications		21
Total Credits		**45**

Option 5: Meat Science Option

Code	Title	Credits
AGEC 244	Agricultural Marketing	3
ANSC 230	Meat Grading and Evaluation	2
ANSC 340	Principles of Meat Science	3
ANSC 344	Fundamentals of Meat Processing	2
ANSC 357	Animal Genetics	3
ANSC 444	Livestock Muscle Physiology	3
BIOC 260	Elements of Biochemistry	4
CFS 210	Introduction to Food Science and Technology	3
MICR 202 & 202L	Introductory Microbiology and Introductory Microbiology Lab (May satisfy general education category S)	3
PLSC 315	Genetics (May satisfy general education category S)	3
CFS elective	300-400 Level	3
Select one from the following:		4
BIOL 111 & BIOL 100L	Concepts of Biology and Non-Majors Biology Lab (May satisfy general education category S)	
BIOL 150 & 150L	General Biology I and General Biology I Laboratory	
Select one from the following:		4
CHEM 117 & 117L	Chemical Concepts and Applications and Chem Concepts and Applications Lab (May satisfy general education category S)	
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory (May satisfy general education category S)	
Meat Science Electives (choose from 300+ level ANSC, BIOC, CFS, CHEM, MICR OR SAFE)		6
Total Credits		**46**

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.

Minor Requirements

Minor: Animal Science

Required Credits: 16

Minor Requirements

Code	Title	Credits
Required Courses		
ANSC 114	Introduction to Animal Sciences	3
ANSC 223	Introduction to Animal Nutrition	2
ANSC 220	Livestock Production	3
ANSC 240	Meat Animal Evaluation and Marketing	3
Elective Courses *		**5**
Must include one of the following courses:		
ANSC 300	Domestic Animal Behavior and Management	
ANSC 314	Animal Biotechnology	
ANSC 323	Fundamentals of Nutrition	
ANSC 324	Applied Animal Nutrition	

ANSC 340	Principles of Meat Science
ANSC 357	Animal Genetics
ANSC 370	Fundamentals/Animal Disease
ANSC 444	Livestock Muscle Physiology
ANSC 463	Physiology of Reproduction
ANSC 487	Growing and Finishing Cattle Management
Remaining credits may come from those listed above or the following courses:	
ANSC 230	Meat Grading and Evaluation
ANSC 231	Livestock Evaluation
ANSC 232	Dairy Cattle Evaluation
ANSC 344	Fundamentals of Meat Processing
ANSC 380	Livestock Sales and Marketing
ANSC 426	Feed Technology
Total Credits	**16**

* Enrolling in two 2-credit courses will not fulfill elective requirements.

Minor Requirements and Notes:

- A minimum of 8 credits must be taken at NDSU.
- Students must earn a minimum 2.00 GPA for the minor requirements.