

Animal Science

Department Information

- **Department Location:**
Hultz Hall
- **Department Phone:**
701-231-7641
- **Department Email:**
ndsu.ansc@ndsu.edu
- **Department Web Site:**
www.ag.ndsu.edu/ansc/
- **Credential Offered:**
B.S.
- **Plan Of Study Sample:**
bulletin.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 number 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 residence 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. Residence credits include credits registered and paid for at NDSU.

For complete information, please refer to the Degree and Graduation Requirements (<http://bulletin.ndsu.edu/past-bulletin-archive/2019-20/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://bulletin.ndsu.edu/past-bulletin-archive/2019-20/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 |
| VETS 135 | 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 150 | Introduction to the Veterinary Profession | |
| 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 | (research experience) | |
| ANSC 396 | (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 & 111L | Concepts of Biology and Concepts of 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 & 111L | Concepts of Biology and Concepts of 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, AGECE, ECON, PLSC or RNG) | | 9 |
| <hr/> | | |
| 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 or ANSC 314 | Animal Genetics Animal Biotechnology | 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 or CHEM 341 | Survey of Organic Chemistry Organic Chemistry I | 3 |
| 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 |
| <hr/> | | |
| 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 & 111L | Concepts of Biology and Concepts of 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 | 2 |
| 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 & 111L | Concepts of Biology and Concepts of Biology Lab (May satisfy general education category S) | |
| BIOL 150 & 150L | General Biology I and General Biology I Laboratory | |
| Select 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 | | 45 |

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**Animal Science Minor****Minor Requirements**

Required Credits: 16

| 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.