

ANIMAL SCIENCE

The animal science major at North Dakota State University encompasses physiology, nutrition, genetics, reproduction, marketing, management and husbandry of livestock and companion animals; the important scientific understanding for the utilization of animal products; and experiences necessary for leadership in, and advocacy for, industries providing animals and animal products that benefit humans.

The Program

The Department of Animal Sciences offers degree programs in animal science, equine science, and veterinary technology. The faculty and staff conduct teaching, research and extension programs to support production and utilization of many types of animals, including beef and dairy cattle, sheep, swine, horses and poultry, as well as those providing other types of food and fiber, companion animals and animals in zoos.

The Curriculum

Five study options are available for the animal science major.

Animal Production, Management and Husbandry – This option is designed for students wanting a background in the principles of animal management and husbandry. It includes broad training in animal husbandry, production and management. Employment opportunities include careers in livestock production, allied and technical support fields, including agricultural positions within Extension.

Animal Biomedical Science – This option offers students a more scientific approach to animal science, preparing them for veterinary medicine, graduate research in animal science, teaching, food technology and the biotechnology industry. Students receive an animal science degree while meeting academic requirements for application to veterinary schools.

Animal Agribusiness – This option is designed for students desiring a background in the business and economic principles as they apply to the livestock industry. It leads to broad training in animal husbandry, production, business and management. Employment opportunities include careers in agribusiness, sales and marketing of livestock and products for the livestock industry, and a variety of public and private institutions which serve the business of animal agriculture.

Livestock Media – This option offers students an opportunity to acquire skills in journalism, advertising and public relations in addition to the fundamentals of animal science. Employment opportunities include working for a variety of media outlets such as print and virtual media, TV, radio, magazines, breed associations, or commodity organizations, as well as positions involved in public relations in the livestock industry.

Meat Science – This option provides the opportunity to emphasize knowledge about the science concerning muscle biology and evaluation and processing of red meat. This option prepares students for a broad variety of career opportunities in the meat industry, including management, sales, meat inspection and meat marketing.

High School Preparation

High school preparation should include course work in biology, chemistry, English and algebra.

Career Opportunities

Animal science students qualify for many varied occupations that involve animal and agriculture business, livestock products and land management. Graduates find employment with colleges and universities, private industry and foreign assignments, as well as federal and state land management agencies. Specific employment opportunities are available in the areas of Extension; financial lending; the promotion, management and sale of livestock and meat; feed sales; and farm, ranch and natural resource management. The need for research in animal science has encouraged many students (14% according to the 2018 NDSU First Destination Survey) to continue their education in graduate school.

Extra-Curricular Activities

Animal science students belong to a variety of clubs including Saddle and Sirloin, Dairy Club, Rodeo Club, Horseman's Association, Collegiate Cattlewomen, Range Club, Anthrozoology Club, and Collegiate FFA. The Saddle and Sirloin club is the largest club on campus, and sponsors events such as the Little International Livestock Show, the Hall of Fame Banquet, and Kiddie Days. In addition to clubs, students participate in intercollegiate contests including livestock, meat, and diary evaluation teams; equestrian event teams; and academic quadrathlon.

Financial Aid and Scholarships

Part-time work and work-study programs in the seven livestock units, as well as the animal science laboratories, are available through the department. Information about scholarships can be found at www.ag.ndsu.edu/academics/scholarships, or by contacting the Office of the Dean, College of Agriculture, Food Systems, and Natural Resources, NDSU, Dept 2200, PO Box 6050, Fargo, ND 58108-6050, (701) 231-8790. All of our students, from incoming freshmen to graduate students, have the opportunity to apply for more than 30 scholarships and awards through the department. Scholarships are generally announced in the spring semester and awarded fall semester.

Animal Science Plans of Study for Animal Biomedical Science, Animal Agribusiness, Livestock Media, or Meat Science Options - see examples at <https://www.ag.ndsu.edu/ansc/undergraduate-programs-1/undergraduate-programs>.

Animal Science Plan of Study - Animal Production, Management, and Husbandry study option (Option 1)

Please note this is a sample plan of study and not an official curriculum. Actual student schedules for each semester will vary depending on start year, education goals, applicable transfer credit, and course availability. Students are encouraged to work with their academic advisor on a regular basis to review degree progress and customize an individual plan of study.

Freshman			
Fall	Credits	Spring	Credits
ANSC 101 Student Success Techniques - Animal and Equine Science	1	ANSC 240 Meat Animal Evaluation and Marketing	3
ANSC 114 Introduction to Animal Sciences	3	BIOL 111 Concepts of Biology or 150 General Biology I	3
ENGL 110 College Composition I	4	BIOL 100L Non-Majors Biology Lab	1
VETS 135 Anatomy and Physiology of Domestic Animals	3	ENGL 120 College Composition II	3
MATH 103 College Algebra	3	Gen Ed Humanities & Fine Arts/Gen Ed Cultural Diversity	3
CHEM 117 Chemical Concepts and Applications or 121 General Chemistry I	3	Electives	3
CHEM 117L Chem Concepts and Applications Lab or 121L General Chemistry I Laboratory	1		
	18		16
Sophomore			
Fall	Credits	Spring	Credits
AGEC 242 Introduction to Agricultural Management	3	AGEC 244 Agricultural Marketing	3
ANSC 230 Meat Grading and Evaluation or 231 Livestock Evaluation or 232 Dairy Cattle Evaluation or 235 Equine Evaluation	2	BIOC 260 Elements of Biochemistry	4
COMM 110 Fundamentals of Public Speaking	3	STAT 330 Introductory Statistics	3
ECON 201 Principles of Microeconomics	3	Gen Ed Humanities & Fine Arts	3
MICR 202 & 202L Introductory Microbiology & Introductory Microbiology Lab	3	Gen Ed Science & Technology	3
	14		16
Junior			
Fall	Credits	Spring	Credits
ANSC 300 Domestic Animal Behavior and Management	3	ANSC 324 Applied Animal Nutrition	3
ANSC 323 Fundamentals of Nutrition	3	ANSC 340 Principles of Meat Science	3
ANSC 357 Animal Genetics	3	ANSC 380 Livestock Sales and Marketing	2
ANSC 370 Fundamentals/Animal Disease	3	Gen Ed Upper-level Writing	3
ANSC 393 Undergraduate Research or 396 Field Experience or 379 Study Tour Abroad	2	ANSC 463 & 463L Physiology of Reproduction & Physiology of Reproduction Laboratory	4
	14		15
Senior			
Fall	Credits	Spring	Credits
ANSC 482 Sheep Industry and Production Systems or 488 Dairy Industry and Production Systems**	3	ANSC 478 Research and Issues in Animal Agriculture	3
Gen Ed Social & Behavioral Sciences	3	ANSC 480 Equine Industry and Production Systems or 484 Swine Production/Pork Industry Systems or 485 Poultry Industry and Production Systems or 486 Beef Industry and Production Systems**	3
Animal Prod, Mgt, & Husbandry Elective	3	Elective	3
Animal Prod, Mgt, & Husbandry Elective	3	Elective	4
Gen Ed Wellness	2		
	14		13
Total Credits: 120			

** Two production courses are required. ANSC 482 and 488 are offered during the fall semester; ANSC 480, 485, and 486 are offered during the spring semester.

View NDSU equivalencies of transfer courses at: www.ndsu.edu/transfer/equivalencies

For Further Information

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