

Animal Sciences

Department Information

- **Interim Department Head:**
Marc Bauer, Ph.D.
- **Graduate Coordinator:**
Kendall Swanson, Ph.D.
- **Department Location:**
102 Hultz Hall
- **Department Phone:**
(701) 231-7641
- **Department Web Site:**
www.ag.ndsu.edu/ansc/ (<http://www.ag.ndsu.edu/ansc/>)
- **Application Deadline:**
Applications are accepted for fall, spring and summer semester admits.
- **Credential Offered:**
Ph.D., M.S.
- **English Proficiency Requirements:**
TOEFL iBT 71, IELTS 6; Duolingo 100

Program Description

The Department of Animal Sciences offers graduate study leading to M.S. and Ph.D. degrees. Advanced work may involve specialized training in the following areas: animal breeding, animal nutrition, animal genetics, animal health and stewardship, physiology of reproduction, meat and muscle science, and nutritional physiology.

Student research and academic programs are tailored to individual student needs and interests. Interdisciplinary approaches to Animal Sciences programs are fostered.

The Department of Animal Sciences graduate program is open to all qualified graduates of universities and colleges of recognized standing. In addition to the Graduate School's requirements, to be admitted with full status to the program, an applicant must have adequate preparation in animal sciences or in a complementary area of life sciences and have a background or interest in agriculture.

Financial Assistance

Research assistantships are available. Applicants are considered on the basis of scholarship and potential to undertake advanced study and research.

The Animal Sciences program has two options for the M.S. degree: the thesis option and the comprehensive study option. The M.S. program requires completion of 30 semester credits of approved graduate and letter-graded course work with an overall GPA of 3.0 or better. The Ph.D. program requires the completion of 90 semester credits (or the equivalent) of graduate approved and letter graded course work with an overall GPA of 3.0 or more.

Each student must choose an adviser, usually based upon area of academic and research interest when starting the program. By the end of the first year of residence, the student must have selected an advisory/supervisory committee and have an approved graduate plan of study, including a research proposal. The advisory/supervisory committee advises the student and administers the graduate exams to the student. Students are referred to the Animal Sciences Graduate Student Handbook for information regarding additional requirements.

Candidates for the M.S. normally complete their degree requirements in two years. Candidates for the Ph.D. generally complete their degree requirements in three to four years.

The M.S. candidates are required to take an oral examination which covers both the research and academic subject matter covered in their program. Candidates for the Ph.D. are required to take a preliminary written and oral examination directed toward the academic subject matter of their chosen discipline and a final defense of a research based thesis.

Code	Title	Credits
Required Courses		
Didactic Course Work (601-689, 691; 700-789, 791; 800-889, 891)		16
Statistical Courses*		6
STAT 661	Applied Regression Models	

PLSC 724	Field Design I	
ANSC 790	Graduate Seminar	2
ANSC 792	Graduate Teaching Experience (**)	2
ANSC 798	Master's Thesis	6-10
Total Credits		30

* Other NDSU statistical courses or equivalents (transfer credit)

** Required for students receiving assistantships. All graduate students are encouraged to obtain teaching experience each semester.

See information in Graduate Bulletin

Marc L. Bauer, Ph.D.

University of Kentucky, 1996

Research Interests: Nutritional Physiology with emphasis on Nutrient Metabolism and Utilization in Ruminants

Eric P. Berg, Ph.D.

Purdue University, 1996

Research Interests: Influence of Environment, Nutrition, and Genetic Factors as They Impact Meat-Animal Production Efficiency, Health, Carcass Composition, and Meat Quality

Erika Berg, Ph.D.

University of Missouri, 2006

Research Interests: The Impact of Therapeutic Horsemanship on Human and Equine Participants. Maternal and Environmental Influence on Equine Neonatal Physiology

David Buchanan, Ph.D.

University of Nebraska

Research Interests: Animal Breeding and Genetics

Chris Byrd, Ph.D.

Purdue University, 2018

Research: Applied Ethology and Stress Physiology

Kasey Maddock Carlin, Ph.D.

Iowa State University, 2005

Research Interests: Meat Science with emphasis on Physiological and Biochemical Changes in Muscle Postmortem on Meat Quality

Joel S. Caton, Ph.D.

New Mexico State University, 1987

Research Interests: Ruminant Nutrition with emphasis on Nutrition and Reproduction interactions, Forage Utilization, Digestive Physiology and Selenium Metabolism

Carl Dahlen, Ph.D.

University of Minnesota, 2009

Research Interests: Beef Cattle Production

Carolyn Hammer, DVM, Ph.D.

Iowa State University, 2003

Research Interests: Equine Preventative Medicine, Growth and Development, Immunology

Lauren Hanna, Ph.D.

Texas A & M University, 2013

Research Interest: Animal Genetics; Genomics

Travis Hoffman, Ph.D.

Colorado State University, 2015

Research Interest: Sheep Production, Lamb Quality, Sheep and Goat Value, Direct Meat Marketing

Greg Lardy, Ph.D.

University of Nebraska, 1997

Research Interests: Cow-Calf Nutrition, By-Product Utilization, Range Nutrition

Rob Maddock, Ph.D.

Texas A&M University, 2000

Research Interests: Factors Affecting Beef Quality and Value, Consumer Acceptance of Meat Products

Miranda Meehan, Ph.D.

North Dakota State University, 2012

Research Interests: Riparian Ecology and Management, Livestock and Wildlife Interactions, Impacts of Energy Development on Livestock Production

Lawrence P. Reynolds, Ph.D.

Iowa State University, 1983

Research Interests: Maternal and Placental Physiology During Pregnancy in Livestock Including Cellular and Molecular Aspects

Gerald Stokka, DVM, M.S.

Iowa State University, 1982

Research Interest: Immunology; Preventive Medicine; Animal Stewardship-well-being

Kendall Swanson, Ph.D.

University of Kentucky, 2001

Research Interests: Ruminant Nutrition

Alison Ward, Ph.D.

University of Saskatchewan, 2011

Research Interests: Nutritional and Genetic Interactions; Epigenetics, Especially In Regards to Maternal Nutrition and Fetal Programming

In addition to the above listed faculty, there are numerous adjunct faculty members who participate in the graduate program.