

# Animal Sciences

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## Program and Application Information

<b>Department Head:</b>	Dr. Greg Lardy
<b>Department Location:</b>	102 Hultz Hall
<b>Department Phone:</b>	(701) 231-7641
<b>Department Web Site:</b>	<a href="http://www.ag.ndsu.edu/ansc/">www.ag.ndsu.edu/ansc/</a>
<b>Application Deadline:</b>	Applications are accepted for fall, spring and summer semester admits.
<b>Degrees Offered:</b>	Ph.D., M.S.
<b>Test Requirement:</b>	TOEFL iBT 71, IELTS 6

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## 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, physiology of reproduction, nutritional physiology, and meat science.

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

## Admission Requirements

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.

### **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

### **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

**Neil Dyer, DVM, M.S., Diplomate ACVP**

Iowa State University, 1991

Research Interests: Infectious Diseases of Domestic Animals; Public Health

**Lauren Hanna, Ph.D.**

Texas A & M University, 2013

Research Interest: Animal Genetics; Genomics

**Anna T. Grazul-Bilska, Ph.D.**

University of Agriculture and Technology, Olsztyn, Poland, 1983

Research Interests: Applied and Basic Aspects of Embryology and Ovarian Function in Livestock Species

**Carolyn Hammer, DVM, Ph.D.**

Iowa State University, 2003

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

**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

**David Newman, Ph.D.**

North Dakota State University, 2009

Research Interest: Swine Production with an Emphasis in Meat Sciences, Animal Handling/Welfare, Consumer Acceptance, and Meat Animal Production

**Chung S. Park, Ph.D.**

Virginia Polytechnic Institute and State University, 1975

Research Interests: Nutritional Regulation of Animal Growth, Mammary Development and Lactation

**Dale A. Redmer, Ph.D.**

University of Missouri, 1983

Research Interests: Regulation of Ovarian and Uterine Function, Including Angiogenesis and Endocrine Control of Follicular and Placental Development in Farm Animals

**Lawrence P. Reynolds, Ph.D.**

Iowa State University, 1983

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

**Jerome W. Schroeder, Ph.D.**

North Dakota State University, 1999

Research Interests: Metabolic and Nutritional Relationships of Dairy Cattle Related to Milk Quality and Composition

**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

**Kimberly Vonnahme, Ph.D.**

University of Wyoming, 2003  
Research Interests: Nutritional Impacts on Placental Function in Livestock

**Sarah A. Wagner, DVM, Ph.D.**

Iowa State University, 2003  
Research Interests: Food Animal Pharmacology and Therapeutics, Dairy Cattle Health

**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.