

# ANIMAL SCIENCE (ANSC)

## **ANSC 101 Introduction to Animal Science Credits: 3**

The purpose of this course is to provide an overview of animal agriculture with a focus on management practices related to the health, husbandry, feeding, breeding, and marketing of beef and dairy cattle, small ruminants, swine, poultry, horses, and alternative agricultural species. This will be accomplished through lectures and hands-on experiences during laboratory sessions. Live animals will be used during laboratories in accordance with federal regulations, and all laboratories will be conducted with respect for the animals.

**Fall:** All Years

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00184577/>)

## **ANSC 111 Introduction to Veterinary Medicine Credits: 2**

This course offers students an orientation to the field of veterinary technology. Students become familiar with veterinary medical terminology, as well as role of the veterinary technician in the field of veterinary medicine. The course additionally provides students the opportunity to examine current and future employment opportunities and essential job duties. The course strongly emphasizes the key roles of professional attitudes and ethical responsibilities.

**Fall:** All Years

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00221515/>)

## **ANSC 131 Beekeeping and Honey Production Credits: 2**

Students in this course learn the life history and habits of the honey bee. The course offers opportunities to examine modern methods of apiary management, honey and wax production, and the utilization and maintenance of beehive equipment. Students also learn about pollination behaviors, and investigate the identity and control of bee diseases.

**Fall:** Odd Years

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00221518/>)

## **ANSC 141 Horsemanship: Lecture and Lab Credits: 2**

This course offers students the opportunity to learn the basic principles of superior horsemanship. The course includes both classroom and hands-on learning experiences. The course covers the practical and theoretical aspects of care, good grooming, safe handling, and healthy feeding practices. Students learn to recognize vital signs and common health problems. Students are also introduced to the equine industry, and become familiar with horse breeds and registry.

**Fall:** Even Years

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00221521/>)

## **ANSC 201 Animal Nutrition Credits: 3**

This course introduces the principles of nutrition and feeding of domestic animals. Students learn about the necessary and science-based characteristics of feeds, and the fundamental nutritional requirements of livestock. The course includes a comparative study of farm animal digestive systems, and also covers the terminology and classification of feedstuffs and nutrient values. Students will learn to analyze and evaluate the importance of alternative feeding formulations for different animal types and classifications. The course will also focus on managing rations that are efficient, balanced and environmentally sound.

**Pre-Requisite :** ANSC 101

**Spring:** All Years

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00221522/>)

## **ANSC 251 Introduction to Meat Science Credits: 3**

This course introduces students to the fundamentals of meat science and provides an overview of the meat industry. Students learn about the nutritional qualities of meat as a food source, and understand the important aspects of fresh and processed meat technology. The course offers students the opportunity to study the structure of muscle, the conversion of muscle to meat, food safety, meat quality, color, cooking, grading, inspection, curing, and processing.

**Spring:** All Years

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00221495/>)

## **ANSC 301 Animal Anatomy and Physiology Credits: 3**

This course trains students to compare and identify anatomical structures and basic physiological body functions of domestic animals. The course includes a thorough review of animal body systems, including: muscular, skeletal, integumentary, histology, and special sense organs. The course also examines the integration of body regulatory systems of domestic animals.

**Pre-Requisite :** ANSC 101 AND BIOL 100 OR BIOL 200

**Fall:** All Years

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00221496/>)

## **ANSC 311 Animal Reproduction Technologies Credits: 3**

Students in this course will examine the technologies employed in manipulating reproduction in farm animals, including beef and dairy cattle, pigs, sheep, goats, horses and poultry. The course also introduces students to the commercial application of in-vitro produced cattle embryos, and familiarizes students with current and future reproductive technologies, such as cloning and the production of transgenic animals. Students will also explore the ethical implications of modern agricultural production methods.

**Pre-Requisite :** ANSC 101 AND BIOL 100 OR BIOL 200

**Spring:** All Years

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00221524/>)

## **ANSC 499 Animal Science Internship Credits: 1-3**

The opportunity to pursue an Animal Science internship is designed to supplement the academic content of SMSUs Animal Science program with actual related work experience. Students are expected to integrate disciplinary knowledge into a real world setting. The student will submit weekly reports on work assignments as well as a report at the conclusion of the internship. The number of credits allowed will depend on the magnitude of the internship.

**Fall:** Department Discretion **Spring:** Department Discretion **Summer** Department Discretion

Course Outline (<https://eservices.minnstate.edu/registration/rest/rcld/0075/curricld/00221537/>)