## ANIMAL SCIENCE (ANSC)

See Course Description Symbols and Terms for an explanation of course description terminology and symbols, the course numbering system, and course credit units.

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ANSC 271 Principles of Beef Cattle Production 3 Units
Typically Offered: Fall only
An overview of the United States beef industry including an introduction to the segments of the beef production chain and the scope of the industry. The majority of the course focuses on basic principles including genetics and breeding, nutrition, reproduction, herd health, carcass evaluation and marketing. 3 hours lecture. (020992)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division

ANSC 274 Principles of Dairy Production 3 Units
Typically Offered: Fall only
An overview of the United States dairy industry emphasizing the life cycle of the dairy cow. Topics include calf raising, heifer development, dry cow management, and lactation management. Within each stage of production, discussion may include health, nutrition, reproduction, and genetics. Additionally, facilities management and cow comfort are introduced. 3 hours lecture. (021029)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division

ANSC 276 Principles of Meat Science 3 Units
Typically Offered: Spring only
Principles of Meat Science in an introductory course in meat science organized to increase student knowledge of muscle foods-their properties, value, and appropriate handling procedures. Current meat processing technologies are presented and pertinent aspects of the meat industry are also discussed. 3 hours lecture. (021772)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division

ANSC 294 Principles of Rangeland Livestock Management 3 Units
Typically Offered: Spring only
Students examine the ecological principles that cause rangelands, including grasslands, shrublands, woodlands, and deserts, to change or stay the same. How humans use livestock to manage these ecosystems is explored. 3 hours lecture. (022025)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division

ANSC 298 Special Topics 1-3 Units
Typically Offered: Inquire at department
This course is for special topics offered for 1.0 - 3.0 units. Typically the topic is offered on a one-time-only basis and may vary from semester to semester and be different for different sections. See the class schedule for the specific topic being offered. 3 hours seminar. (020968)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Lower Division

ANSC 299 Special Problems 1-3 Units
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is an independent study of a topic or problem and is offered for 1.0-3.0 units. Students must register with a supervising faculty member. A maximum of 6 units of special problems may be applied toward a bachelor’s degree in agriculture. 9 hours supervision. (020959)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Lower Division
ANSC 350  Meat and the Consumer  3 Units
Typically Offered: Fall only
Muscle growth and composition, nutritional and health concerns, meat safety and advances in product development, preparation and storage. 3 hours laboratory, 2 hours lecture. (000447)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 360  Animal Health and Disease  3 Units
Typically Offered: Fall only
A study of disease processes in livestock. Principles of disease organisms and the physiology of infection. Mechanisms in which the body combats infections, i.e., immune response. Herd health considerations for disease prevention and treatment. 3 hours lecture. (000466)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 370  Livestock and Companion Animal Behavior  3 Units
Typically Offered: Fall only
This course promotes an understanding of basic principles of livestock (i.e., food animals and horses) and companion animal (i.e., dogs and cats) behavior and its application of production, shelter, and household setup. This course is structured to help students understand the role of animal behavior on welfare and/or productivity of livestock and companion species. This course focuses on how livestock and companion animals communicate with their surroundings and how we can adjust their housing or management to address their needs in order to improve their well-being and/or productivity. 3 hours lecture. (022076)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 372  Sheep Production  3 Units
Prerequisite: ANSC 101 or equivalent.
Typically Offered: Fall only
A study of approved practices in commercial and purebred sheep production with emphasis on production costs, disease, nutrition, genetic selection, production records, niche marketing, and contributions of sheep to environmental sustainability. 3 hours laboratory, 2 hours lecture. (022454)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 373  Swine Production  3 Units
Prerequisite: ANSC 101 or equivalent.
Typically Offered: Spring only
A study of approved practices in commercial and purebred swine production with emphasis on production costs, disease, reproduction, nutrition, genetic selection, production records and niche marketing. 3 hours laboratory, 2 hours lecture. (022455)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 374  Organic Dairy Production and Management  3 Units
Prerequisite: ANSC 101.
Typically Offered: Spring only
This course covers all scientific aspects of organic dairy production including soil fertility, grazing management, pasture and forage quality, nutritional ration balancing on pasture, enhancing dry matter intake on pasture, holistic herd health (including homeopathy, acupuncture and herbal medicine), organic methods to improve milk quality, organic calf management strategies, and the organic certification process and how to develop your Organic System Plan. The course also covers many new topics of discussion for organic research and development. 3 hours laboratory, 2 hours lecture. (021420)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 378  Poultry Meat and Eggs: Industry, Processing, and Products  3 Units
Prerequisite: ANSC 101.
Typically Offered: Fall and spring
This course covers the scope and importance of the poultry industry with an introduction to the basics of poultry science and modern methods of producing, processing, and marketing of poultry and poultry products. General topics include egg anatomy, production and functionality, poultry slaughter, meat quality, and value-added poultry products. Focus is also given to the science and practice of processing and products of poultry and eggs; physical, chemical, microbiological, and functional characteristics of value-added poultry products as they affect consumer acceptance, efficiency of production, and regulatory approval. 3 hours lecture. (022586)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 389  Internship in Animal Science  1-3 Units
Prerequisite: Prior approval of academic goals by the Internship Coordinator.
Typically Offered: Spring, summer, fall
This course is an internship offered for 1.0-3.0 units. You must register directly with a supervising faculty member. Work experience with selected livestock operations is to be completed and supervised by faculty and staff of cooperating livestock ranch. 0 hours independent study. (000472)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 15 units
Course Attributes: Upper Division

ANSC 394  Livestock Grazing Ecology and Management  3 Units
Typically Offered: Fall only
This course examines how herbivores interact with their environment and how understanding of these interactions is applied to the management of grazing animals or the environments they inhabit or both. Emphasis is placed on the scientific basis for grazing management decisions and management designed to accomplish a variety of outcomes. 3 hours laboratory, 2 hours lecture. (022006)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division
ANSC 398 Special Topics 1-3 Units
Typically Offered: Inquire at department
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from semester to semester and be different for different sections. See the class schedule for the specific topic being offered. 3 hours seminar. (000473)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Upper Division

ANSC 399 Special Problems 1-3 Units
Prerequisite: Upper-division standing.
Typically Offered: Fall and spring
This course is an independent study of a topic or problem and is offered for 1.0-3.0 units. Students must register with a supervising faculty member. Study/research in animal science under direct supervision of a faculty member. A maximum of 6 units may be applied toward a bachelor's degree in agriculture. 0 hours independent study. (000474)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Upper Division

ANSC 440 Physiology of Domestic Animals 3 Units
Prerequisite: ANSC 101, CHEM 107. Recommended: CHEM 108.
Typically Offered: Fall and spring
Comparative study of the physiology of organ systems, with major emphasis on farm animals. 3 hours laboratory, 2 hours lecture. (000456)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 450 Food Sanitation and Quality Control 3 Units
Prerequisite: ANSC 101; CHEM 107 or CHEM 111.
Typically Offered: Spring only
This course is intended for students involved in producing, selling, and handling food products who are interested in a course on principles of food sanitation and quality control from a management standpoint. 3 hours seminar. (000468)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 470 Animal Welfare 3 Units
Prerequisite: ANSC 360, ANSC 370 or faculty permission.
Typically Offered: Spring only
This course provides an introduction to the scientific approaches for assessing animal welfare. For that, we discuss animal welfare metrics, data collection, and the type of questions that need to be asked for the state of an animal's welfare to be assessed. We also discuss ethical views and the role of different stakeholders in law and policy development. 3 hours lecture. (022276)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 471 Advanced Beef Cattle Management and Production 3 Units
Prerequisite: ANSC 101, ANSC 271 or faculty permission.
Typically Offered: Spring only
Advanced instruction of world and United States beef production systems. Investigation of the segmentation of the beef industry, including seedstock, commercial cow-calf, stocker, feedlot, packer, retailer and consumer. Integrated beef production systems are evaluated based on consideration of genetics, nutrition, health, reproduction, product, forage management and marketing. 3 hours laboratory, 2 hours seminar. (000459)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 474 Dairy Production and Management 3 Units
Prerequisite: ANSC 101.
Typically Offered: Spring only
A comprehensive study of large dairy management with emphasis placed on efficient reproduction and nutrition. Additional studies include evaluation of replacement heifer development scenarios, cow comfort, and record keeping systems. 3 hours laboratory, 2 hours lecture. (000463)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 489 Internship in Animal Science 1-3 Units
Typically Offered: Fall and spring
3 hours lecture. (000480)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 15 units
Course Attributes: Upper Division

ANSC 498 Special Topics 1-3 Units
Prerequisite: Department permission.
Typically Offered: Fall and spring
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 3 hours supervision. (000481)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

ANSC 499 Special Problems 1-3 Units
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is an independent study of special problems offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 0 hours independent study. (000482)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Upper Division

ANSC 499H Honors Research in Animal Science 6 Units
Prerequisite: Faculty permission.
Typically Offered: Inquire at department
An intensive 6-unit, one-year course in agricultural research. See College office for details. Open only to students with at least a 3.0 GPA in the major. The course consists of a faculty-supervised research project, a thesis, and a public presentation. 18 hours independent study. (020208)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Upper Division