

Animal Science Courses

ANS 1119 - Introduction to Animal Science Laboratory

Hours: 1

(AGRI 1119) Laboratory in the preliminary study of the selection, reproduction, nutrition and management of beef and dairy cattle, swine, small ruminants, horses and poultry.

ANS 1319 - Introduction to Animal Science

Hours: 3

(AGRI 1319) Study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, small ruminants, swine, horses and poultry.

ANS 2319 - Livestock Handling and Presentation

Hours: 3

Students will be engaged in active experiential learning in all aspects of handling, training, fitting and presenting livestock in meat animal production systems. Included in the content will be selection, feeding, clipping, and stock show preparation.

ANS 2321 - Livestock Selection & Evaluation

Hours: 3

(AGRI 2321) Three semester hours (1 lec / 4 lab) Selection and evaluation of breeding and market animals, breed characteristics, and carcass evaluation as it relates to live animal evaluation. Prerequisites: ANS 1319 or concurrent enrollment and ANS 1119 or concurrent enrollment.

ANS 297 - Special Topics

Hours: 1-4

Organized class. May be repeated when topics vary.

ANS 300 - Pre-Junior Livestock Judging Team

Hours: 2

Beginning livestock judging training, including evaluation, selection, and oral reasons, for students that will compete on the Texas A&M University-Commerce Livestock Judging Team the following Spring. Class will also meet outside of the scheduled time. Prerequisites: ANS 2321 (Livestock Evaluation and Selection) with a minimum grade of C.

ANS 301 - Junior Livestock Judging Team

Hours: 2

Competitive Livestock Judging Team representing Texas A&M University-Commerce at intercollegiate livestock judging contests in the Spring Semester. Students will receive extensive training in livestock evaluation, selection, and oral reasons. Team practices, travel, and contests will also occur outside of regularly scheduled class periods. Prerequisites: ANS 300 (Pre-Junior Livestock Judging Team), with a minimum grade of C.

ANS 307 - Animal Feeds and Feeding

Hours: 3

Three semester hours (2 lec / 2 lab) Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisites: ANS 1319, ANS 308, and MATH 1314.

ANS 308 - Animal Nutrition

Hours: 3

Functions of carbohydrates, proteins, vitamins, lipids, minerals and water. Chemistry and physiology of digestion, absorption, and metabolism of nutrients and their metabolites in animals. Prerequisites: ANS 1319, CHEM 1305 or CHEM 1311, and BSC 1406.

ANS 309 - Animal Breeding

Hours: 3

Genetic evaluation and estimation of breeding values. Selection and the use mating systems including the use of inbreeding, crossbreeding, and other mating plans. Prerequisites: MATH 1314 and ANS 1319.

ANS 310 - Animal Genetics

Hours: 3

An introduction to molecular genetics including Mendelian and population genetics, replication, transcription, and translation. Gene expression and regulation. Use of current genomic methodologies including genotyping and transgenics in animal agriculture. Prerequisites: ANS 1319 or BSC 1407 and CHEM 1311.

ANS 311 - Reproductive Physiology of Domestic Animals

Hours: 3

Three semester hours (2 lec / 2 lab) Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisites: ANS 1319, BSC 1406, CHEM 1311.

ANS 312 - Artificial Breeding of Domestic Animals

Hours: 3

Three semester hours (2 lec / 2 lab) Principles of artificial breeding of farm animals. Semen collection and evaluation, gamete freezing and storage, reproduction management techniques and pregnancy diagnosis. Prerequisites: ANS 311.

ANS 313 - Dairy Cattle Management

Hours: 3

Dairy breeds and their selection, milk secretion, composition and handling, milking equipment and facilities. Prerequisites: ANS 1319.

ANS 314 - Comparative Vertebrate Physiology

Hours: 3

The course is a comparative study of basic physiological principles and functional organization with emphasis on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The course evaluates i) the mechanisms by which animals perform their life-sustaining functions, ii) the ways in which diverse phylogenetic groups of animals both resemble each other and differ, iii) the ways in which physiology and ecology interact, and iv) the importance of all levels of organization, from genes to proteins and tissues to organs, for the full understanding of physiological systems. Cross listed with BSC 314

ANS 317 - Livestock Management Techniques

Hours: 3

Three semester hours (2 lec / 2 lab) Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisites: ANS 1319 and ANS 1119.

ANS 319 - Anatomy and Physiology of Domestic Animals

Hours: 3

Structure and function of organ systems with special reference to domestic animals. Prerequisites: ANS 1319 and BSC 1406.

ANS 320 - Anatomy and Physiology of Domestic Animals Laboratory

Hours: 1

Laboratory systematic study of the gross and microscopic anatomy and physiology of domestic animals. NOTE: Dissection of animal cadavers will be required of all students. Prerequisites: ANS 1319.

ANS 389 - Independent Study

Hours: 0-4

Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ANS 397 - Special Topics

Hours: 0-4

Organized class. May be repeated when topics vary.

ANS 401 - Senior Livestock Judging Team

Hours: 2

Students will represent Texas A&M University-Commerce in intercollegiate livestock judging contests in the Fall Semester (finishing their collegiate livestock judging eligibility). Students will receive advanced training in livestock evaluation, selection, and oral reasons. Team practice, travel, and contests will also occur outside of scheduled class times. Prerequisites: ANS 301 (Junior Livestock Judging Team), with a minimum grade of B.

ANS 409 - Ultrasound Techniques

Hours: 3

Three semester hours (2 lec / 2 lab) Ultrasound Techniques for Body Composition in Livestock. Basic knowledge and techniques of real-time ultrasound to measure body composition in livestock. Prerequisites: ANS 1319.

ANS 411 - Sheep and Goat Management

Hours: 3

Three semester hours (2 lec / 2 lab) Types, breeds and usefulness of sheep and goats in the U.S. Management systems, production schemes, and general husbandry. Prerequisites: ANS 1319.

ANS 412 - Beef Cattle Management

Hours: 3

Three semester hours (2 lec / 2 lab) Concepts and principles of breeding, feeding and management of beef cattle in the U.S. A survey of the past, present and future ideas of the beef cattle industry. Prerequisites: ANS 1319.

ANS 413 - Swine Management

Hours: 3

Three semester hours (2 lec / 2 lab) Commercial and purebred swine operations. Feeding, breeding, and management practices, production efficiency and waste management facilities. Prerequisites: ANS 1319.

ANS 415 - Companion Animal Management

Hours: 3

Anatomy, physiology, nutrition, genetics and health of companion animals including cats, dogs, rabbits, rats, mice, reptiles, amphibians and fish. Problem solving and enterprise management. Prerequisites: ANS 1319 and junior standing.

ANS 417 - Domestic Animal Behavior and Welfare

Hours: 3

Investigation into the evolution and etiology of common and uncommon domestic animal behaviors. In conjunction to common behaviors and production practices the ethical treatment and management of domestic animals from the welfare perspective will be covered; including evolution, regulations, legislation on a global scale. Prerequisites: ANS 219 or ANS 319. Crosslisted with: ANS 517.

ANS 419 - Diseases and Parasites of Livestock

Hours: 3

A study of the control and prevention of common infectious and non-infectious diseases of livestock. The common parasites, their prevention, and control. Prerequisites: ANS 1319 and BSC 1406.

ANS 489 - Independent Study

Hours: 1-4

Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ANS 490 - H Honors Thesis

Hours: 3

Honors Thesis - Three semester hours

ANS 491 - H Honor Reading

Hours: 3

Honors Readings in Animal Science. Three semester hours.

ANS 497 - Special Topics

Hours: 0-4

Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.