ANIMAL SCIENCE (ANSC)

ANSC 1001. Introduction to Animal Science. (3 Credits)

The biological, physical, and social factors that influence animal production and utilization.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%201001)

ANSC 1111. Principles of Animal Nutrition and Feeding. (3 Credits)

Digestive anatomy of various species and the classes of nutrients including their digestion, metabolism and sources. Nutrient requirements and feeding standards for livestock, companion animals, exotics and aquatics for purposes of reproduction, lactation, growth, work and maintenance. Classes of feedstuffs, their characteristics, proper utilization, formulating rations and nutritional programs for animal enterprise. Taught with SAAS 113.

May not be taken out of sequence after passing ANSC 4311. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%201111)

ANSC 1602. Behavior and Training of Domestic Animals. (3 Credits)

Application of behavior of cattle, horses, sheep, goats, swine, poultry, and companion animals to their management, training, and welfare. Basic principles of genetics and physiology of behavior, perception, training, learning, motivation, and stress with consideration of integrated behavioral management and animal welfare. Students are required to have access to an animal that they will train throughout the semester; the Department of Animal Science will not necessarily provide animals for training. Taught concurrently with SAAS 202.

Open to Animal Science, Pathobiology and Veterinary Science, Agriculture, Health and Natural Resources majors; others by consent. Recommended preparation: ANSC 1001.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%201602)

ANSC 1645. The Science of Food. (3 Credits)

(Also offered as NUSC 1645.) An introductory level course for students interested in the application of science to food. Nutritional and functional attributes of various food constituents are discussed. Issues concerning food processing and food safety are covered. CA 3.

Content Areas: CA3: Science & Technology

Topics of Inquiry: TOI6: Science & Empirical Inq View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%201645)

ANSC 1676. Introduction to Companion Animals. (3 Credits)

Basic concepts of the nutrition, physiology, health and management of companion animals. Taught with SAAS 276. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%201676)

ANSC 1693. Foreign Studies in Animal Science. (1-15 Credits)

Variable topics. May be repeated for credit View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%201693)

ANSC 1695. Special Topics. (1-3 Credits)

Credits, prerequisites and hours as determined by the Senate Curricula and Course Committee. May be repeated for credit with a change in topic. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%201695)

ANSC 2251. Horse Science. (3 Credits)

Valuable to animal science majors and includes horse types and breeds and their nutrition, breeding, evaluation, behavior, care and management with attention given to detailed studies of the problems and practices of horse production and use. Taught with SAAS 251.

May not be taken out of sequence after passing ANSC 3456. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%202251)

ANSC 2271. Principles of Poultry Science. (3 Credits)

The application of the basic scientific principles to the management of poultry, egg and meat production systems. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%202271)

ANSC 2690. Animal Science Field Excursions. (1 Credit)

A multiple day field trip format. Students in this course will travel with the instructor to visit and tour agri-businesses that represent commercial aspects of different animal science activities. Students will interview agri-business personnel and gain an understanding of how agricultural principles are applied in the field. Each student must submit a formal written report for evaluation and meet all other course requirements as specified by the instructor. Field trip is required. Students taking this course will be assigned a final grade of S (satisfactory) or U (unsatisfactory). May be repeated for credit with a change in topic. May be repeated for credit

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%202690)

ANSC 2695. Special Topics. (1-6 Credits)

Contact Department Main Office for list of current topics and instructors. May be repeated for credit with a change of topic. May be repeated for credit

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%202695)

ANSC 2699. Independent Study. (1-6 Credits)

May be repeated for credit. Students taking this course will be assigned a final grade of S (satisfactory) or U (unsatisfactory). May be repeated for credit View Classes (https://catalog.uconn.edu/course-search/?

details&code=ANSC%202699)

ANSC 3121. Principles of Animal Genetics. (3 Credits)

Principles of Mendelian and molecular genetics. Biosynthesis and function of DNA, RNA, and protein. This course also includes introductions to population and quantitative genetics. Information on molecular methods of genetic analysis and examples of genetics in animals of agricultural significance are also provided.

BIOL 1108; open to sophomores or higher. Recommended preparation: BIOL 1107.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203121)

ANSC 3122. Reproductive Physiology. (4 Credits)

A study of the reproductive anatomy and physiology of domestic animals. Laboratory will include macro and micro anatomy, hormone action, and techniques used in reproductive management of domestic animals. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203122)

ANSC 3194. Career Paths in Animal Science. (1 Credit)

A discussion of current employment opportunities in animal sciences. In addition, students will prepare resumes and make oral presentations. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203194)

ANSC 3261. Dairy Cattle Management. (3 Credits)

Management of dairy cattle including milking procedures, sanitation, selection, nutrition, reproduction, physiology and anatomy of milk secretion and record keeping. Field trips required. Taught with SAAS 261. Open to juniors or higher.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203261)

ANSC 3272. Laboratory Animal Science. (3 Credits)

Principles and practices of laboratory animal care and management in relation to animal characteristics, handling and restraint, animal house design, reproduction and nutrition and legal regulations. Various laboratory animal techniques will be covered.

BIOL 1107. Recommended preparation: BIOL 1108 or equivalent. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203272)

ANSC 3273. Livestock Management. (4 Credits)

The production and management of beef cattle, sheep, and swine. Laboratories involve theory and practice in livestock management, skills, and techniques. Taught with SAAS 273.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203273)

ANSC 3311. Comparative Exercise Physiology. (3 Credits)

A comparative study of the effects of exercise on the body, focusing on the three primary athletic species (canine, equine, human). Particular emphasis will be placed on the physiological mechanisms which allow for adaptation to exercise and inactivity.

PATH 2100 or PNB 2265 or 2275; open to juniors or higher. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203311)

ANSC 3312W. Scientific Writing in Comparative Exercise Physiology. (1 Credit)

A writing intensive class integrated with course content in ANSC 3311. ANSC 3311, which must be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011 or 3800; open to juniors and higher.

Skill Codes: COMP. Writing Competency View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203312W)

ANSC 3313. Growth Biology and Metabolism in Domestic Livestock. (3 Credits)

Focuses on the embryonic and postnatal growth and development of domestic livestock with emphasis on metabolic and hormonal regulation of processes that influence growth and development. Discussion period will focus on methods used to measure growth and metabolism. Open to juniors or higher. Recommended preparation: PATH 2100. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203313)

ANSC 3314W. Scientific Writing in Growth Biology and Metabolism of Domestic Livestock. (1 Credit)

A writing intensive class integrated with course content in ANSC 3313. ANSC 3313 or 5613, which must be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011; open to juniors or higher.

Skill Codes: COMP. Writing Competency

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203314W)

ANSC 3316. Endocrinology of Farm Animals. (3 Credits)

Focuses on endocrine systems and endocrine function in farm animals with emphasis on hormones involved in metabolism, growth, lactation, feed intake and digestion in cattle, pigs, horses and poultry.

Open to juniors or higher. Recommended preparation: PATH 2100 or equivalent.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203316)

ANSC 3317W. Scientific Writing in Endocrinology of Farm Animals. (1 Credit)

A writing intensive class integrated with course content in ANSC 3316, Endocrinology of Farm Animals.

ANSC 3316, which must be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011; open to juniors or higher.

Skill Codes: COMP. Writing Competency

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203317W)

ANSC 3318. Probiotics and Prebiotics. (3 Credits)

Biology, uses, effectiveness and safety of probiotics and prebiotics. Molecular mechanisms underlying the health benefits attributed to the consumption of pre and probiotics. Application of pre- and probiotics to promote human and animal health, including safety and regulation. Recommended preparation: MCB 2610 or equivalent (can be taken concurrently).

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203318)

ANSC 3323. Animal Embryology and Biotechnology. (3 Credits)

Introduction to recent research in animal embryology and related reproductive biotechnologies. Basic principles, methodology and state of the technology for numerous established and emerging animal biotechnologies such as transgenesis and cloning.

Open to juniors or higher. Recommended preparation: ANSC 3122 or MCB 4219.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203323)

ANSC 3324W. Scientific Writing in Embryo Biotechnology. (1 Credit)

Writing intensive class integrated with course content in ANSC 3323 Animal Embryology and Embryo Biotechnology.

ANSC 3323, which must be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011; open to juniors or higher.

Skill Codes: COMP. Writing Competency

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203324W)

ANSC 3343. Animal Food Products. (3 Credits)

A study of the food products derived from animal agriculture, including dairy, meat, poultry and fish. Emphasis will be placed on inspection, grading, processing, biochemistry, nutritive value and food safety concerns of these products. Taught with SAAS 243. Open to juniors or higher. View Classes (https://catalog.uconn.edu/course-search/?

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203343)

ANSC 3344W. Scientific Writing in Animal Food Products. (1 Credit)

A writing-intensive class integrated with course content in ANSC 3343. ANSC 3343, which must be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011; open to juniors or higher.

Skill Codes: COMP. Writing Competency

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203344W)

ANSC 3420. Little I Training Assistant Practicum. (1 Credit)

Develop and effectively communicate livestock animal handling, training, fitting, and showing techniques to Introduction to Animal Science students at weekly practices.

Instructor consent.

May be repeated for a total of 3 credits View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203420)

ANSC 3421. Little I Chair Practicum. (2 Credits)

Oversee and teach Little I Training assistants to ensure appropriate animal handling, training, fitting, and showing instruction to Introduction to Animal Science students. Teach and assist Introduction to Animal Science students at weekly practices, along with Little I Training assistants.

ANSC 3420 or SAAS 420; instructor consent required.

May be repeated for a total of 6 credits

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203421)

ANSC 3452. Horse Breeding Farm Management. (3 Credits)

Designed to develop technical and managerial skills necessary for operating horse breeding farms. Programs for herd health, hoof care, nutrition, breeding, foaling, and record keeping will be included. ANSC 2251. Open to sophomores or higher. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203452)

ANSC 3453. Pleasure Horse Appreciation and Use. (1 Credit)

Open to all University students interested in pleasure horses. The principles of horse management and horsemanship. Not open to students who have passed ANSC 3456. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203453)

ANSC 3454. Horse Selection and Evaluation. (2 Credits)

Comparative evaluation, classification and selection of horses according to conformation, breed characteristics and performance. Judging skills including justification of placings through presentation of oral reasons will be developed. The Intercollegiate Horse Judging Team may be selected from this course. Field trips are required. Taught with SAAS 254. Not open for credit to graduate students. View Classes (https://catalog.uconn.edu/course-search/?

details&code=ANSC%203454)

ANSC 3455. Developing the Driving Horse. (2 Credits)

Techniques related to training the driving horse will be described. Prior working experience with horses is recommended. Open to juniors or higher.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203455)

ANSC 3457. Advanced Broodmare and Foal Management. (2 Credits)

Management of the pregnant mare and neonatal foal, including foaling practices, foal handling, and postpartum care of the mare. ANSC 3452; instructor consent required.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203457)

ANSC 3551. Equine Training I - Foundations. (2 Credits)

Fundamental ground work and techniques used to train young horses. Prior working experience with horses recommended. Instructor consent.

May be repeated for a total of 4 credits

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203551)

ANSC 3552. Equine Training II - Backing. (2 Credits)

Theory, fundamentals and practice of backing a horse, training horse to accept the rider, and the natural aids. Intermediate level riding skills required. May be repeated once for a maximum of four credits. Instructor consent. Recommended preparation: Intermediate level riding skills.

May be repeated for a total of 4 credits

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203552)

ANSC 3553. Equine Training III - Advanced. (2 Credits)

Training horses for riding, showing, and lessons using the Dressage Training Scale. Advanced level riding skills are required. May be repeated once for a maximum of four credits.

Instructor consent. Recommended preparation: Advanced level riding skills.

May be repeated for a total of 4 credits

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203553)

ANSC 3554. Equine Sports Rehabilitation Practicum. (2 Credits)

Provides students with an opportunity to apply concepts of equine rehabilitation. May be repeated once with change in specific rehabilitation activity.

ANSC 3551 and instructor consent. May be repeated for a total of 4 credits View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203554)

ANSC 3555. Equine Rehabilitation Seminar. (1 Credit)

Different modes of therapy, business topics, and management skills related to the equine rehabilitation field. Instructor consent.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203555)

ANSC 3621. Animal Biotechnology Laboratory. (2 Credits)

Laboratory techniques used in agricultural biotechnology research, including embryo manipulation, immunofluorescence, real-time PCR, karotyping, SNP analysis, high throughput sequencing, RNA-seq, genome construction and gene database searches.

ANSC 3121 (or equivalent); SPSS 3210 (or equivalent). Recommended preparation: ANSC 3122 or equivalent.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203621)

ANSC 3641. Animal Food Products: Dairy Technology. (3 Credits)

Production and processing of milk and milk-products from a food science perspective including chemical, physical and microbiological components. Technological aspects of the transformation of milk into various food products. Public health regulations, good manufacturing practices, cleaning and sanitizing procedures. Unit operations in dairy food manufacturing, packaging, labeling and quality control procedures. Open to juniors or higher.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203641)

ANSC 3642W. Scientific Writing in Animal Food Products: Dairy Technology. (1 Credit)

A writing intensive course integrated with course content in ANSC 3641. ANSC 3641, which must be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011.

Skill Codes: COMP. Writing Competency

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203642W)

ANSC 3663. Dairy Management Decision-making. (1 Credit)

Participation in all phases of dairy herd management including decisionmaking activities, with particular emphasis on impact of decisions on financial health and stability. Course requires participation beyond specific semester calendars. May be repeated twice for credit. Open to juniors or higher.

May be repeated for a total of 3 credits

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203663)

ANSC 3664. Dairy Cattle Evaluation. (1 Credit)

An introduction to the evaluation of dairy cattle on the basis of conformation. Breed classification and type improvement programs, score card criteria in relation to longevity, physiological efficiency and performance are included. Attention is also given to fitting and showing methods. Field trips may be required.

Open to juniors or higher.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203664)

ANSC 3674. Livestock and Carcass Evaluation. (2 Credits)

Classification, form to function relationships, grades and value differences of livestock are included. Objective and subjective methods of appraisal are used to evaluate beef cattle, horses, sheep and swine. Taught with SAAS 274.

Not open for credit to graduate students.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203674)

ANSC 3675. Advanced Animal and Product Evaluation. (1 Credit)

Intensive training in the evaluation of selected species of farm animals or their products. Type standards and the relation of anatomical features to physiological function are emphasized. Evaluation skills including justification of decisions will be developed. Intercollegiate dairy cattle, horse, livestock, poultry judging teams will be selected from this course. Field trips are required, some of which may occur prior to the start of the semester. Taught with SAAS 275.

Open to juniors or higher. Not open for credit to graduate students. May be repeated for a total of 4 credits

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203675)

ANSC 3681. Summer Internship Experience. (0 Credits)

Practical experience, knowledge, and professional skills in a work environment related to animal science. Based on a contract and learning experience syllabus. Students taking this course will be assigned a final grade of S (satisfactory) or U (unsatisfactory).

Open to students who have earned a minimum of 24 credits and instructor consent.

May be repeated for credit

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203681)

ANSC 3691. Professional Internship. (1-15 Credits)

Students taking this course will be assigned a final grade of S (satisfactory) or U (unsatisfactory). Credits and hours by arrangement. Open to juniors or higher. May be repeated for credit View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203691)

ANSC 3693. Foreign Studies in Animal Science. (1-15 Credits)

Variable topics. May be repeated for credit View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203693)

ANSC 3695. Special Topics. (1-6 Credits)

Credits and hours by arrangement. May be repeated for credit with a change of topic. Contact Department Main Office for list of current topics and instructors.

May be repeated for credit View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203695)

ANSC 3698. Variable Topics. (1-6 Credits)

Contact Department Main Office for list of current topics and instructors. May be repeated with a change of topic.

May be repeated for a total of 6 credits

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203698)

ANSC 3790. Undergraduate Teaching Assistance in Animal Science. (1 Credit)

Practical experience gained in teaching methods and materials preparation and assisting student learning through written and verbal communication.

Instructor consent required. Open only to students with demonstrated competency in target course material.

May be repeated for a total of 3 credits

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%203790)

ANSC 4311. Advanced Animal Nutrition. (3 Credits)

A comparative study of nutritional, physiological, microbiological, immunological and biochemical aspects of digestion and metabolism in the non-ruminant and ruminant animal, particularly livestock and companion animals. Topics include digestive system structures, utilization of nutrients, energy metabolism, control of nutrient metabolism, and experimental techniques used in the study of animal nutrition.

ANSC 1111; open to juniors or higher.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204311)

ANSC 4312W. Scientific Writing in Advanced Animal Nutrition. (1 Credit)

Writing-intensive class integrated with course content in ANSC 4311. ANSC 4311, which must be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011; open to juniors or higher.

Skill Codes: COMP. Writing Competency

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204312W)

ANSC 4341. Food Microbiology and Safety. (3 Credits)

Current topics in food safety will be discussed, with special emphasis on microbial and chemical contamination of food. Specific topics including the safety of natural versus synthetic chemicals, food additives, irradiation and other practices, basic microbiology and toxicology, current regulatory practices and risk assessment will also be included. The Hazard Analysis Critical Control Points (HACCP) approach to food safety will be discussed.

Biology 1107; open to junior or higher. Recommended preparation: A one semester course in organic chemistry.

View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204341)

ANSC 4342W. Scientific Writing in Food Microbiology and Safety. (1 Credit)

A writing-intensive class integrated with course content in ANSC 4341. ANSC 4341, which must be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011 or 3800; open to juniors or higher.

Skill Codes: COMP. Writing Competency View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204342W)

ANSC 4343. Muscle Biology and Muscle Food Chemistry. (3 Credits)

Molecular and cellular basis of muscle food physical features and its related muscle biological events.

Open to Juniors and higher. Recommended preparation: ANCS 3343 or CHEM 2241 or CHEM 2443 or one same-level chemistry class. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204343)

ANSC 4457. Methods of Equitation Instruction. (2 Credits)

The techniques and procedures of teaching equitation including the theories of riding and teaching methods. Practice teaching will be required under the supervision of the instructor. Taught with SAAS 257. Intermediate II or above riding experience required. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204457)

ANSC 4642. Food Microbiology Laboratory. (1 Credit)

An introductory laboratory course in sampling of foods for microbiological analysis, enumeration of microorganisms in foods, and isolation and identification of major foodborne pathogens from foods. Open to juniors or higher. Recommended preparation: MCB 2610. View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204642)

ANSC 4662W. Dairy Herd Management. (3 Credits)

Dairy farm management practices with emphasis on business and economic decision making. The effects of various programs in selection, nutrition, facilities, reproduction and herd health on overall business health will be evaluated. Each student will manage a computer simulated herd during the semester. Field trips are required. Taught with SAAS 262. ENGL 1007 or 1010 or 1011 or 2011; ANSC 3261; open to juniors or higher.

Skill Codes: COMP. Writing Competency View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204662W)

ANSC 4697W. Undergraduate Honors Thesis Writing in Animal Science. (1 Credit)

Writing of a formal thesis based on independent research conducted by the student. Thesis proposal and final thesis must follow guidelines developed by the department.

Three credits of ANSC 2699 or 5692, which may be taken concurrently; ENGL 1007 or 1010 or 1011 or 2011; open to juniors or higher.

Grading Basis: Honors Credit

Skill Codes: COMP. Writing Competency View Classes (https://catalog.uconn.edu/course-search/? details&code=ANSC%204697W)