

APPLIED ANIMAL SCIENCE (AAS)

AAS 402 - Introduction to Livestock and Poultry Management

Credits: 2

Students are introduced to the management of livestock and poultry in small-to-medium sized operations. Students learn basic animal feeding, selection, handling, housing, management and health practices necessary to manage livestock and poultry. Through readings, multi-media presentations, writing and field assignments, students gain insight into the work, commitment and skills necessary to raise domestic farm animals for food and profit.

AAS 421 - Large Animal Behavior and Handling Techniques

Credits: 2

Introduction to domestic large animal behavior and handling techniques. Cattle, horses, swine, and sheep are used in this course. Students perform routine health-related procedures and gain valuable hands-on skills and safe animal handling techniques which can be applied to the fields of veterinary medicine, animal research, commercial agriculture, and animal control. 1 lec/1 lab.

AAS 422 - Small Animal Grooming I

Credits: 2

Introduction to pet grooming. Course covers the techniques and styles of brushing, grooming, clipping, trimming, and bathing common breeds of dogs and cats. Students perform basic grooming in lab period. Special fee for non-TSAS students. May be repeated to a maximum of 4 credits. 1 lec/1 lab.

AAS 423 - Dairy Selection

Credits: 2

Selection techniques used in cattle for purchase, breeding, and genetic improvement through the use of visual evaluation, pedigrees, production, and progeny information. 1 lec/1 lab.

AAS 424 - Animal Law and Regulations

Credits: 3

This course covers the practical application and understanding of animal law and regulations. Designed for applied animal science majors the material is relevant for any learner interested in animal protection and welfare. Select current bills, court rulings or animal-related legal movements are reviewed. Practical application topics include: due process, contract law, evidence collection, and courtroom procedures. Focus is on domestic species with limited review of regulations and liability regarding exotic pet keeping.

AAS 425 - Introduction to Dairy Herd Management

Credits: 4

The course explores economic, scientific and practical aspects of dairy herd management. The topics covered include history, cattle selection, nutrition, housing, milking, and disease prevention strategies. There are a number of field trips and weekly labs emphasizing management and hands-on experience.

AAS 426 - Equine Conformation and Lameness

Credits: 4

The study of conformation as it relates to soundness and performance. Topics include basic unsoundness related to faulty conformation and type evaluation. Special fee.

AAS 428 - Anatomy and Physiology of Domestic Animals

Credits: 3

An overview lecture course describing the anatomy (structure) and physiology (function) of domestic animals, focusing on canine, feline, equine, and bovine species. Anatomic and physiologic topics are intertwined as the course progresses through each body system. Relevant species differences are stressed. Focus is on applied concepts appropriate for animal-related careers. Course is designed to be taken along with AAS 428A or AAS 428B for AAS and VTEC majors respectively.

AAS 428A - Anatomy and Physiology of Domestic Animals Lab for AAS majors

Credits: 1

Reinforces material presented in AAS 428 lecture and introduces students to the animal body by hands-on study of anatomy. Anatomical relationships and concepts that are important for the care of animals are presented. Comparative anatomy of bovine, equine, feline, and canine species is covered. Some dissection of specimens is required. Course is required of Applied Animal Science majors and is designed to be taken along with AAS 428 lecture.

AAS 428B - Anatomy and Physiology of Domestic Animals Lab for VTEC majors

Credits: 1

Reinforces material presented in AAS 428 lecture and introduces students to the animal body by hands-on study of anatomy. Anatomical relationships and concepts that are important for the medical care of animals are presented. The feline species will be the primary anatomical model used. Comparative anatomy of bovine, equine, and avian species will also be covered. Course is required of Veterinary Technology majors and is designed to be taken along with AAS 428 lecture.

AAS 430 - Small Animal Breeds and Behavior

Credits: 4

Overview of the development, selection, genetics, and function of specific breeds of companion animals. General dog and cat, as well as breed-specific, behavior is included. 2 lec/1 lab.

AAS 431 - Introduction to Animal Science

Credits: 4

Survey of the dairy, equine, livestock, and small animal industries; current issues and related occupational opportunities are presented. Included is assistance in gaining or improving the skills needed to be successful in college. Lecture/Lab or Recitation.

AAS 432 - Introduction to Forage and Grassland Management

Credits: 3

Introduction to grasslands of the world and their management. Special emphasis on the identification, production, and utilization of New England forage crops for feeding domestic farm animals. The course includes the selection of local plant species and varieties, including their management and recommended harvesting practices. The course also includes a basic introduction to soils, as well as nutrient and fertility management.

AAS 433 - Small Animal Grooming II

Credits: 2

Continuation of AAS 422 Small Animal Grooming I with the addition of on-line canine dermatology and topical therapy basics. Student is assigned more complex breeds to groom and develops more proficiency in scissoring, hand stripping and clipping. Must have taken AAS 422. Special fee for non-TSAS students. 2 lab.

AAS 434 - Equipment and Facilities Management

Credits: 3

Operation of agricultural equipment and maintenance of agricultural facilities as found in New England. Development of the essential skills and technical information needed to manage and supervise agricultural facilities and equipment. 2 lec/1 lab.

AAS 436 - Equine Show Preparation and Competition

Credits: 1

Course addresses the safe handling and appropriate grooming and clipping of horses as they are prepared for competition. Students will demonstrate horse-handling proficiency while showing their assigned horse in hand. May be repeated to a maximum of 4 credits. Lec/Lab.

AAS 437 - Equine Handling and Care Techniques

Credits: 4

Course familiarizes students with different aspects of equine management through a practical and hands-on approach. Topics include selection, fit and care of English tack, bits, grooming, clipping, wound care, safe bandaging techniques, equine behavior, farm layout, basic health care and monitoring, parasite control, and equine transportation. Students will have hands-on experience in the UNH stable. Responsibilities include feeding, cleaning, turnout, and basic care of the University herd.

AAS 439 - Fundamentals of Animal Health

Credits: 2

Covers the principles of maintaining animal health by preventing and managing disease via husbandry, immunization, diagnostic testing and treatment. Focus is on domestic species; primarily dogs, cats, horses and cows. Topics include external and internal parasitology, microbiology, immunology including vaccination, and disease treatment. Course is designed to be taken along with the appropriate lab section: AAS 439A for Applied Animal Science majors or AAS 439B for VTEC majors, respectively. No credit earned if credit was received for VTEC 439.

AAS 439A - Fundamentals of Animal Health Lab for Applied Animal Science Majors

Credits: 1

Laboratory course to complement lecture course AAS 439. Topics include: 1) laboratory diagnostic testing: internal parasites, external parasites, urine and fecal testing, immunologic testing; 2) preventive care; integrated pest control, vaccinations (including syringe and vaccine handling and administration), and husbandry; 3) safety: zoonotic disease and control of disease transmissions. This lab course is required of Applied Animal Science majors along with AAS 439 lecture.

AAS 439B - Fundamentals of Animal Health Lab for Veterinary Technology Majors

Credits: 2

Laboratory course to complement lecture course AAS 439. Common veterinary diagnostic laboratory tests are covered, such as fecal flotation, urinalysis, complete blood count and blood chemistry, bacterial culture and sensitivity testing, gram staining, and immunologic testing such as ELISAs. Topics include laboratory safety, identification of internal and external parasites, and blood cells, examination of urine sediment, and principles of sample collection. This lab course is required of Veterinary Technology majors along with AAS 439 lecture.

AAS 445 - Veterinary Assisting Techniques

Credits: 4

Course is designed to prepare students to enter veterinary practice as a veterinary assistant. Topics include veterinary pharmaceuticals; animal nursing including record keeping, patient observation, husbandry, and disease control; surgical preparation and assisting including surgical instrumentation, sterilization and patient management; laboratory sample collection and handling; and diagnostic imaging including radiography safety, patient positioning, radiographic film processing and filing, and ultrasound. Required for completion of the veterinary assisting certificate.

AAS 449 - Clinical Animal Nursing Techniques I

Credits: 3

Essential skills and basic background knowledge for the care of small animals, focusing on dogs and cats. Animal handling and restraint, basic nursing skills including physical examination, medicating, bandaging and wellness protocols. 1 lec/1 lab.

AAS 451 - Human/Animal Bond

Credits: 4

Students explore various aspects and perceptions of the human-animal bond through multidisciplinary approaches over time and across cultures. They will critically evaluate the meanings humans ascribe to companion animals. Through movies, video clips, readings, and discussions, students are exposed to historical and contemporary utilization and exploitation of companion animals they may encounter in their professional lives. Class concentrates on "pet" animals (dogs, cat, and to a much lesser extent the horse.)

AAS 525 - Canine Learning Theory and Application

Credits: 4

Canine behavior problems are a major cause of abandonment and euthanasia in dogs. Effective application of canine learning theory can prevent and solve behavior problems and save lives. Student gain a working knowledge of animal learning theory with a focus on training basic obedience commands, prevention and modification of common canine behaviors, effective human communication within a practical canine training session, canine ethology, the business and ethics of dog training, and more. Prereq: AAS 430 or equivalent.

AAS 527 - Companion Animal Diseases

Credits: 2

Common diseases in companion animals discussed system by system; emphasis on canine, feline, equine, and ruminant species. Other species covered based on class interest. Disease pathogenesis, diagnosis, and treatment are covered. Care-based learning includes developing differential diagnosis lists and technician evaluations and interventions. AAS 428 or another Anatomy and Physiology course is strongly suggested as a pre-requisite.

AAS 535 - Animal Nutrition

Credits: 3

The food nutrients, their digestion and absorption, factors affecting value of feeds, feed additives, and nutrient requirements for maintenance and productive functions.

AAS 538 - Equine Handling/Longeing

Credits: 1

This seven-week intensive course provides students with the opportunity to learn to longe a variety of University horses in an enclosed arena under private instruction. The emphasis is on safety and welfare of the horse and handler. Proper equipment and fit are addressed along with different training techniques used to improve the horse's quality of movement. Prereq: AAS 436. Applied Animal Science majors given first priority.

AAS 540 - Animal Breeding**Credits:** 3

Principles and practices, including the physiology of reproduction, fertility and sterility, artificial insemination, breeding systems, and selection.

AAS 546 - Animal Business Applications**Credits:** 4

Survey of the various elements of managing an animal and/or agricultural operation regardless of commodity. Topics include: financial statements, credit and interest, insurance considerations, labor management, marketing, promotions, advertising, and sales. 4 lec. Prereq: AAS 242 or ECON 401.

AAS 547 - Applied Equine Management**Credits:** 3

The application of farm and horse management techniques, including stable routine, planning, and design; nutrition; business considerations; and legal responsibilities. Pre- or Coreq: AAS 546.

AAS 548 - Applied Animal Business: Concepts and Practices**Credits:** 4

Course provides students an opportunity to focus on animal industry relative to specific operational concepts: small business start-up, creating a business plan, enterprise development including opportunity analysis and marketing of ideas, branding and advertising, employee hiring and management, payroll management, inventory management and industry-specific software review for maintaining and analyzing financial statements. Course involves lecture and field study allowing students to examine similar animal business operations in order to enhance practical understanding of topics covered. Prereq: AAS 546.

AAS 550 - Clinical Animal Nursing Techniques II**Credits:** 4

Builds on materials presented in AAS 249, Clinical Animal Nursing Techniques I. Covers veterinary imaging modalities including radiographic and ultrasonographic techniques and safety, nursing care of hospitalized patients including fluid therapy, laboratory and exotic animal medicine. Prereq: AAS 449.

AAS 552 - Equine Health Management**Credits:** 4

Systems of the horse as they relate to common diseases and lameness. Applied approach to conditioning, care of the sick or lame horse, and preventive care. Prereq: AAS 426 or AAS 437.

AAS 553 - Equine Competition Management**Credits:** 2

Students organize and run a combined test competition to be held in April. The class is responsible for mailing entries, handling publicity and ad sales, compiling the program, setting the course and dressage ring, and dealing with the public. Proceeds fund seminars available to students and class field trips. May be repeated once. Prereq: AAS 426 or AAS 546.

AAS 558 - Animal Population Medicine and Management**Credits:** 2

This course applies material from animal health and disease classes to populations of animals rather than individual animals. Topics include stress and disease management, behavior and ethical problems in animal populations, evaluation of scientific research, and decision analysis. Concepts in epidemiology and statistics are covered. Students design and carry out a statistical analysis on data from a chosen animal population. Prereq: AAS 428, AAS 439, MTH 202.

AAS 563 - Small Animal Grooming III**Credits:** 1

Individual supervised grooming experience for students who wish to obtain more technical grooming skills. Must have taken AAS 422 twice or AAS 422 and 433. Cr/F.

AAS 572 - Comparative Equine Operations**Credits:** 2

Exploration of national and regional equine farms and related businesses. Using field trips and journals, students will experience and study different farm and business operations. Prereq: AAS 426. 1 lab. May be repeated to a maximum of 2 credits. Cr/F.

AAS 574 - Dairy Cattle Disease Seminar**Credits:** 2

Covers principles of the immune response, immunological basis for disease control, and emphasizes management practices to prevent disease and maintain optimal animal health in dairy cattle. Numerous guest lecturers, field and case studies, and emphasis on current topics of interest to the industry.

AAS 575 - Cooperative for Real Education in Agriculture Management (CREAM)**Credits:** 4

CREAM (Cooperative for Real Education in Agricultural Management) is a 2-semester course in which students perform the work and make the financial and management decisions associated with the CREAM dairy herd. Assumption of complete responsibility for the management and care of this 25-cow herd for the entire academic year. CREAM provides students with a unique experiential learning model that will help them understand how to work together to manage and operate a small business, the decision making skills required in production agriculture, and the application of science to the management of a dairy herd. Two semesters of 4 credits each are required. Prereq: AAS 425 or ANSC 409 and ANSC 410 or permission.

AAS 577 - Functional Canine Analysis Practicum**Credits:** 4

The majority of this course takes place at the Cocheco Valley Humane Society in Dover, New Hampshire. Students facilitate the rehoming of shelter dogs with manageable behavioral issues by assessing, developing and implementing individual plans. A limited amount of time is spent on assisting with incoming temperament assessments and adopter behavioral consultations. Cases commonly involve: social hyper-arousal, obedience, confidence building, enrichment, reactivity, possessive, and barrier counterconditioning and desensitization. Includes one feline functional assessment plan. Prereq: AAS 430, AAS 525.

AAS 579 - Small Animal Care Practicum**Credits:** 2

Provides supervised, hands-on experience at the N.H.S.P.C.A. 4 hours/week. Responsibilities include cleaning, feeding, treatment, grooming, socializing and training of shelter animals. Student must receive or show proof of pre-exposure rabies prophylaxis to take the class. Prereq: AAS 422, AAS 428, AAS 430, AAS 439, AAS 449. Special fee required only for first time the course is taken. Lab coat and/or scrubs required.

AAS 591 - Studies

Credits: 1-3

Students who have the ability and adequate preparation to work independently may propose a contract to design a course or research project on a topic not available through existing course offerings. The purpose of this research is to explore new areas in the student's field of study or to pursue course material in greater depth. Work is supervised by an appropriate faculty/staff member and credit varies depending on the proposed project/research. Areas may include dairy, light horses, livestock, poultry, meats, forages, management, small animals, or general animal science. Permission required. Course may be repeated up to a maximum of 6 credits.

AAS 592 - Studies

Credits: 1-3

Students who have the ability and adequate preparation to work independently may propose a contract to design a course or research project on a topic not available through existing course offerings. The purpose of this research is to explore new areas in the student's field of study or to pursue course material in greater depth. Work is supervised by an appropriate faculty/staff member and credit varies depending on the proposed project/research. Areas may include dairy, light horses, livestock, poultry, meats, forages, management, small animals, or general animal science. Permission required. Course may be repeated up to a maximum of 6 credits.

AAS 593 - Equine Field Operations

Credits: 1-3

Field experience in selected areas of equine care and handling, under supervision of appropriate faculty/staff and outside facilities supervisor. A) Veterinary Clinic; B) Breeding and Foaling; C) areas of student interest. All field operations done on an individual basis. Four or more hours per week. Students must provide their own transportation. Prereq: AAS 426, 437, 547, and/or permission of instructor and adviser.

AAS 597 - Applied Animal Science Work Experience

Credits: 0

Employment (12 weeks, generally in the summer following the first year) in an approved animal-related position. Cr/F.