DEPARTMENT OF ANIMAL AND VETERINARY SCIENCES
http://asci.uvm.edu/

Domestic animals play a major role in our lives through agriculture, recreation, biomedical science, and companionship. The mission of the Department of Animal and Veterinary Sciences is to provide a high quality, broad-based education emphasizing domestic animals and their interactions with humans.

Graduates enter veterinary or other professional schools, pursue careers in biomedical science, agribusiness, companion animal care and breeding, zoos and aquaria, or education. To provide the necessary flexibility to achieve this diversity, students work closely with faculty advisors to individualize their programs.

To advance the pre-veterinary program, the Department of Animal and Veterinary Sciences has established, with Tufts University School of Veterinary Medicine in Massachusetts, Ontario Veterinary College in Guelph, Ontario and the Royal Dick School of Veterinary Studies in Edinburgh, Scotland, highly competitive programs for early acceptance/guaranteed admission to these veterinary colleges. For further information on these options contact the Department of Animal Science directly at (802) 656-0155.

The Department of Animal and Veterinary Sciences actively encourages participation in undergraduate research, internships, and study abroad. By combining classroom, laboratory, and practical experience, students maximize their performance in a friendly environment and develop responsibility for and control over their education.

MAJORS
ANIMAL AND VETERINARY SCIENCES MAJOR
Animal and Veterinary Sciences B.S.

MINORS
ANIMAL AND VETERINARY SCIENCES MINOR
Animal and Veterinary Sciences

GRADUATE
Animal and Veterinary Sciences M.S.

Animal, Nutrition and Food Sciences Ph.D.

Cellular, Molecular, and Biomedical Sciences Ph.D.

See the online Graduate Catalogue for more information

Courses
ASCI 001. Introductory Animal Sciences. 0 or 4 Credits.
An overview of the genetics, nutrition, reproduction, and management of livestock and recreation species; introduction to animal behavior, animal disease, and biotechnology. Prerequisite: Animal Science major or instructor permission.

ASCI 006. Companion Animal Care & Mgmt. 3 Credits.
Scientific principles of nutrition, breeding selection, health, management practices, pet therapy, and animal bonding. Primary emphasis on cat and dog.

ASCI 097. Introductory Special Topics. 0.5-15 Credits.
See Schedule of Courses for specific titles.

ASCI 098. Introductory Special Topics. 0.5-15 Credits.
See Schedule of Courses for specific titles.

ASCI 108. Equine Enterprise Management. 3 Credits.
Provides guidelines for understanding risks, liabilities and other pertinent topics necessary for running a successful equine-related business. Prerequisite: ASCI 001.

ASCI 110. Animal Nutrit, Metab & Feeding. 0 or 4 Credits.
Principles of meeting the nutrient requirements of animals, especially as they relate to the practical problems of formulation and production systems. Prerequisite: Sophomore standing or above.

ASCI 115. Introduction to Equine Studies. 4 Credits.
Overview of the scientific and practical application of equine management and selection principles. Housing, nutrition, herd health, reproduction, and career opportunities.

ASCI 117. Horse Health and Disease. 3 Credits.
Discusses the basic anatomy and physiology of the horse, common equine diseases and problems, their diagnoses, prevention, and treatment.

ASCI 118. Appl Animal Health. 0 or 3 Credits.
A study of small and large domestic animal diseases. Natural response to disease, methods of diagnosis, control, and treatment. Prerequisite: ASCI 001, a Biology course, or Instructor permission.

ASCI 121. Equus. 2-4 Credits.
A hands-on equine management experience. Students perform horse duties, recordkeeping, and make financial and management decisions on a horse boarding operation. Prerequisites: Sophomore standing; Instructor permission.

ASCI 122. Animals in Soc/Animal Welfare. 3 Credits.
Designed to heighten awareness and understanding of human-animal relationships in society, agriculture, and science. Prerequisites: Animal Science major; Sophomore standing.

ASCI 125. Equine Instructing Techniques. 0 or 3 Credits.
Examines philosophies, concepts and teaching-learning strategies needed for the development of sound equine instructing skills. Prerequisite: ASCI 115 or Instructor Permission.
ASC134. CREAM. 4 Credits.
A two-semester course in which students perform the work and make the financial and management decisions associated with the CREAM dairy herd. Prerequisites: Sophomore standing; Instructor permission.

ASC135. CREAM. 4 Credits.
A two-semester course in which students perform the work and make the financial and management decisions associated with the CREAM dairy herd. Prerequisites: Sophomore standing; Instructor permission.

ASC141. Anat&Physiol Domestic Animals. 0 or 4 Credits.
A comprehensive review of the structure and function of domestic animals, emphasizing those of economic importance. Differences between mammalian and avian species are discussed. Prerequisite: ASC101, BIOL101, or BCOR111. BIOL102 or BCOR112 recommended.

ASC143. Forage and Pasture Mgmnt. 4 Credits.
Principles and practices of growing and utilizing forage plants for hay, silage and pasture; introduction to management intensive grazing; understanding forage quality. Pre/co-requisite: PSS101 or one semester Biology or one semester Plant Biology or Instructor permission. Cross-listed with: PSS143.

ASC154. Dog Training and Behavior. 3 Credits.
Canine behavior is thoroughly examined and applied to the training and behavior modifications of dogs. Prerequisite: ASCI Major or Instructor Permission.

ASC156. Dairy Management Seminar. 2 Credits.
Seminar course addresses research, policy, and production topics in the dairy industry and develops leadership roles through guest speakers, field trips and group projects. Prerequisites: Junior/Senior standing or with Instructor permission any student interested in dairy industry.

ASC168. Animal Genetics. 3 Credits.
The discussion of genetic principles and their application in the improvement of farm animals. Student teams develop a breeding plan in a semester project. Prerequisite: Animal Science major or Instructor permission.

ASC171. Zoos, Exotics & Endang Species. 3 Credits.
From gorillas to golden lion tamarinds, how human attitudes, activities, utilization, and management strategies impact wild and captive animal populations. Prerequisite: ASCI101 or Instructor permission.

ASC181. Animal Science Career Seminar. 1 Credit.
Discussion and workshop activities exploring careers in animal and food science. Includes resume preparation and interview training. Prerequisite: Animal Science major.

ASC191. Intermediate Special Topics. 0.5-15 Credits.
See Schedule of Courses for specific titles.

ASC192. Intermediate Special Topics. 0.5-15 Credits.
See Schedule of Courses for specific titles.

ASC195. Field Experience. 0.5-15 Credits.
Professionally-oriented field experience under joint supervision by faculty and business or community representative. Prerequisite: Instructor permission. Total credits towards graduation cannot exceed 15 hours.

ASC196. Field Experience. 0.5-15 Credits.
Professionally-oriented field experience under joint supervision by faculty and business or community representative. Prerequisite: Instructor permission. Total credits towards graduation cannot exceed 15 hours.

ASC197. Undergraduate Research. 0.5-15 Credits.
Research activity under direction of qualified staff member. Must have faculty member approval. Written proposal and report required. Prerequisites: Junior standing; Department Chair permission.

ASC198. Undergraduate Research. 0.5-15 Credits.
Research activity under direction of qualified staff member. Must have faculty member approval. Written proposal and report required. Prerequisites: Junior standing; Department Chair permission.

ASC208. Equine Industry Issues. 3 Credits.
Case-based course enhances students' abilities to integrate information, use logical thought processes, and produce concise, organized solutions to real problems, from individual horses to industry-wide. Prerequisite: ASCI115, ASCI117 or Instructor permission.

ASC211. Summer Farm Management. 4 Credits.
A work-study program on the modern practices associated with farm management. Taught at Miner Institute, Chazy, NY. For students with a strong interest in farm management. Prerequisite: Junior/ Senior/ Graduate standing.

ASC215. Physiology of Reproduction. 3 Credits.
Fundamental principles of the physiology of reproduction with emphasis on, but not limited to, farm animals. Prerequisite: ASCI141 or equivalent or Instructor permission.

ASC216. Endocrinology. 3 Credits.
Physiology of endocrine and autocrine/paracrine systems and growth factors. Prerequisites: Course in both Biology and Prerequisites: Course in both Biology and physiology; one course in Anatomy desirable.

ASC217. Physiology of Reproduction Lab. 1 Credit.
Laboratory for fundamental principles of the physiology of reproduction with emphasis on, but not limited to, farm animals. Must be taken concurrently with ASCI215. Prerequisites: ASCI141 or Instructor permission. Co-requisite: ASCI215.

ASC220. Lactation Physiology. 3 Credits.
Physiological mechanisms that control and affect lactation in domestic and laboratory animals with emphasis on dairy cattle. Includes mammary anatomy, development and health, and milk synthesis. Prerequisite: One Chemistry course and one course in Anatomy and Physiology, or Instructor permission.
ASCI 221. Lameness in Horses. 0 or 4 Credits.
Focuses on normal equine anatomy related to movement and what happens when horses are injured. Students learn common causes of lameness, as well as how to diagnose, treat, and prevent those causes. Labs are hands-on with horses. Prerequisites: ASCI 115, ASCI 117, or Instructor permission.

ASCI 230. Agricultural Policy & Ethics. 3 Credits.
Examines American agriculture and policies from various perspectives - historical, political, ecological, technological, social, economic, and ethical. Emphasis on contemporary issues, policy options, future developments. Prerequisite: Junior standing or permission.

ASCI 233. Dairy Cattle Breeding. 2 Credits.
Setting breeding goals, making selection and mating decisions; balancing opposing forces to maximize genetic progress, and understanding the underlying genetic principles. Prerequisites: A genetics course; a Statistics course; Instructor permission.

ASCI 234. Advanced Dairy Management. 15 Credits.
An intensive, residential program at the Miner Institute providing an in-depth experiential program in the management of the dairy herd. Prerequisite: Junior standing or Farms 2+2 enrollment.

ASCI 252. FARMS Senior Project. 1-18 Credits.
The students will conduct independent research focused on a project proposal that was developed and approved in previous course work (ASCI 156). Prerequisites: FARMS program enrollment; Senior standing.

ASCI 263. Clin Top: Companion Animal Med. 3 Credits.
The use of case studies in companion animal medicine to develop clinical, analytical, and diagnostic skills. Prerequisites: ASCI 118, ASCI 141; Junior standing.

ASCI 264. Clin Topics: Livestock Medicine. 3 Credits.
An advanced study of diseases in cattle, sheep, goats, and pigs, emphasizing disease detection, pathobiology, treatment and prevention. Prerequisites: ASCI 118, ASCI 141, Junior standing.

ASCI 272. Adv Top: Zoo, Exotic, Endang Spec. 3 Credits.
An exploration of modern zoo philosophy and ethics and the extent of human intervention necessary for the preservation of endangered species. Prerequisites: ASCI 171 and Instructor permission.

ASCI 277. Animal and Human Parasitology. 3 Credits.
This course will emphasize the morphology, life cycles, and pathogenesis of representative taxa from the parasitic protozoa, helminthes, and arthropods of humans and domestic animals. Prerequisite: BIOL 001, BIOL 002 or BCOR 011, BCOR 012, and 100 level ASCI course or equivalent or instructor permission.

ASCI 297. Advanced Special Topics. 0.5-15 Credits.
Written courses, seminars or topics beyond the scope of existing offerings. See Schedule of Courses for specifics. Prerequisite: Department Chair permission. May enroll more than once for maximum of fifteen hours.

ASCI 298. Advanced Special Topics. 0.5-15 Credits.
Written courses, seminars or topics beyond the scope of existing offerings. See Schedule of Courses for specifics. Prerequisite: Department Chair permission. May enroll more than once for maximum of fifteen hours.