DEPARTMENT OF ANIMAL SCIENCE
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 Science 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 Science 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.

An option for the outstanding student with an interest in a graduate degree is the Accelerated Master’s program in which students commence study for their master’s degree in their senior year and have the potential to obtain a B.S. and M.S. in a five-year period.

The Department of Animal Science 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 SCIENCE MAJOR
Animal Science B.S.

MINORS
ANIMAL SCIENCE MINOR
Animal Science

GRADUATE
Animal Science A.M.P.
Animal Science M.S.
Animal, Nutrition and Food Science Ph.D.
Cellular, Molecular, and Biomedical Sciences M.S.
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.

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.

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. Prerequisite: ASCI 001; a Biology course, or Instructor permission.

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. Prerequisite: 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. Prerequisite: 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.
ASC 134. 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. Prerequisite: Sophomore/Junior standing; Instructor
permission.

ASC 135. 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. Prerequisite: Sophomore/Junior standing; Instructor
permission.

ASC 141. 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:
BIOL 001; a chemistry course, or Instructor permission.

ASC 143. 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-requisites: PSS 010
or one semester Biology or one semester Plant Biology or Instructor
permission. Cross-listed with: PSS 143.

ASC 154. 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.

ASC 156. 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: 2 + 2 FARMS
or CREAM or Instructor permission.

ASC 168. 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. Prerequisites: BIOL 001 or BCOR 011 or
Instructor permission.

ASC 171. Zoos, Exotics & Endang Species. 3 Credits.
From gorillas to golden lion tamarins, how human attitudes,
activities, utilization, and management strategies impact wild and
captive animal populations. Prerequisite: ASCI 001 or Instructor
permission.

ASC 181. Animal Science Career Seminar. 1 Credit.
Discussion and workshop activities exploring careers in animal and
food science. Includes resume preparation and interview training.
Prerequisite: Sophomore standing.

ASC 191. Intermediate Special Topics. 0.5-15 Credits.
See Schedule of Courses for specific titles.

ASC 192. Intermediate Special Topics. 0.5-15 Credits.
See Schedule of Courses for specific titles.

ASC 193. Intermediate Special Topics. 0.5-15 Credits.
See Schedule of Courses for specific titles.

ASC 195. 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.

ASC 196. 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.

ASC 197. Undergraduate Research. 0.5-15 Credits.
Research activity under direction of qualified staff member. Must
have faculty member approval. Written proposal and report required.
Prerequisite: Junior standing; Department Chair permission.

ASC 198. Undergraduate Research. 0.5-15 Credits.
Research activity under direction of qualified staff member. Must
have faculty member approval. Written proposal and report required.
Prerequisite: Junior standing; Department Chair permission.

ASC 199. Undergraduate Research. 0.5-15 Credits.
Research activity under direction of qualified staff member. Must
have faculty member approval. Written proposal and report required.
Prerequisite: Junior standing; Department Chair permission.

ASC 208. 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. Prerequisites: ASCI 115 or ASCI 117 or Instructor
permission.

ASC 211. 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 or Graduate standing.

ASC 215. Physiology of Reproduction. 3 Credits.
Fundamental principles of the physiology of reproduction with
emphasis on, but not limited to, farm animals. Prerequisites: ASCI
141 or Instructor permission.

ASC 216. Endocrinology. 3 Credits.
Physiology of endocrine and autocrine/paracrine systems and growth
factors. Prerequisites: Course in both Biology and physiology; one
course in Anatomy desirable.

ASC 217. 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 ASC 215. Prerequisites: ASCI 141
or Instructor permission. Co-requisite: ASC 215.

ASC 220. 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 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. Prerequisites: ASCI 110, ASCI 134 or ASCI 135 or equivalents. Fifteen hours.

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). Prerequisite: FARMS Program enrollment; ASCI 156.

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. Prerequisite: 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. Prerequisite: 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.