The College of Veterinary Medicine, established in 1974, offers a professional curriculum leading to the Doctor of Veterinary Medicine (DVM) degree. Residency training programs in the various clinical specialties are also offered.

The primary objective of the college is to enable students to attain essential information, skills, attitudes and behaviors to meet the varied needs of society and the veterinary profession. The professional curriculum provides an excellent basic science education in addition to training in diagnosis, disease prevention, medical treatment, and surgery. Graduates are qualified to pursue careers in the many facets of veterinary medicine and related health professions.

About two-thirds of the veterinarians in the United States are engaged exclusively in pet or companion animal practice. A growing number are concerned with the health problems of zoo animals, laboratory animals, wildlife, and aquatic species. A number of veterinarians are involved in the health care of food and fiber animals ensuring the supply of safe and healthy food.

Veterinarians also find rewarding careers in the U.S. Public Health Service, the Armed Forces, and in state, county, or local health agencies. A number of veterinarians are employed by the U.S. Department of Agriculture for important work in livestock disease control, meat and poultry inspection, serum and vaccine production, and the protection of our country against the importation of foreign animal diseases. With the events of September 11, 2001, veterinarians are making significant contributions to biosecurity and homeland defense.

Excellent research opportunities exist for veterinarians—research directly benefiting animals and research conducted with animals which benefits humans. Such opportunities are available at colleges and universities and with governmental agencies, private research institutions and biological and pharmaceutical companies.

The college jointly administers a graduate program leading to the Master of Science and the Doctor of Philosophy degrees with a major in comparative and experimental medicine. This program provides a wide spectrum of interdisciplinary training that prepares graduates for teaching and/or research careers in the health sciences. The majority of the graduate students and graduate faculty of the College of Veterinary Medicine are involved in the comparative and experimental medicine program. (See Comparative and Experimental Medicine in the Intercollegiate section of this catalog.)

Because of the interdisciplinary departmental administration of the college, the faculty also have opportunities in the graduate programs of other instructional units, including Animal Science (nutrition, physiology, genetics and animal management), Microbiology (bacteriology, virology and immunology), Ecology and Evolutionary Biology (environmental toxicology), Public Health. (Refer to other sections of this catalog for a full description of these programs.)
DOCTOR OF VETERINARY MEDICINE

ADMISSION

To qualify for admission to the professional program of the College of Veterinary Medicine, a candidate must have completed at least the minimum pre-veterinary course requirements listed below. These may be completed at any accredited college or university that offers courses equivalent to those at the University of Tennessee, Knoxville. Pre-veterinary course requirements must be completed by the end of spring term of the year in which the applicant intends to enroll. Biochemistry requirements must have been satisfactorily completed within five years of the time the applicant wishes to enter the program.

**Subject Area** | **Semester Hours**
--- | ---
English | 18
Humanities and Social Sciences | 6
Physics | 8
General Chemistry | 8
Organic Chemistry | 8
Biochemistry | 4
General Biology | 8
Genetics | 3
Cellular Biology | 3

Total 66

1 May include, for example, courses in English literature, speech, music; art, philosophy, religion, language, history, economics, anthropology, political science, psychology, sociology and geography.
2 Exclusive of laboratory.
3 It is expected that this requirement will be fulfilled by a course in cellular or molecular biology.

**Admission Procedures**

Admission of new students is for the fall semester, with first priority given to residents of Tennessee.

The College of Veterinary Medicine utilizes the Veterinary Medical College Application Service (VMCAS) for all applicants. Forms and instructions for making application for admission may be obtained beginning June 1, 2002, from the Office of the Associate Dean, the University of Tennessee, College of Veterinary Medicine, 2407 River Drive, Room A102, Knoxville, Tennessee 37996-4550.

The deadline for receipt of the completed application materials is November 1. Non-Tennessee applicants must have a minimum cumulative grade-point average of 3.2 on a 4.0 scale for application to be considered.

Applications are accepted only from U.S. citizens or permanent residents of the U.S.

**REQUIREMENTS**

The curriculum of the College of Veterinary Medicine is a nine-semester, four-year program. Each class begins in August and graduates four years later in May. The first three years generally follow the traditional fall and spring semesters with the summer break following years one and two. The final year of the professional curriculum begins immediately following semester six and is a continuous clinical rotation experience extending over 54 weeks.

Development of a strong basic science foundation is emphasized in the first year. Courses consist mostly of pre-clinical subjects of anatomy (gross and microscopic), physiology, immunology, bacteriology, virology and parasitology. Also included in the first year are clinical subjects of physical diagnosis and epidemiology. Considerable integration of subject matter is incorporated during this year.

The second and third years include the study of diseases, their causes, diagnosis, treatment and prevention, and courses are team-taught on an organ system basis.

The final year (three semesters) is devoted to intensive education in solving animal disease problems involving extensive clinical experience in the Veterinary Teaching Hospital. Each student will participate exclusively in clinical rotations in the Veterinary Teaching Hospital and in required externships (preferably off-campus).

Innovative features of this curriculum include: six weeks of student centered, small group, applied learning exercises in semesters one through five; three weeks of dedicated clinical experiences in the Veterinary Teaching Hospital in semesters three through five; and elective course opportunities in semesters four, five and six which allow students to focus on individual educational/career goals. Students enrolled in the DVM program may register for up to 10 credit hours of graduate courses and these hours will be credited toward the DVM degree. Elective study offers a unique educational alternative for students in the CVM and is intended to enhance professional growth, concentration in an area of interest and career opportunities.

In addition to education in the science and art of veterinary medicine, students receive instruction in paramedical subjects such as animal behavior, medical communication, professional ethics, jurisprudence, economics, and practice management.

The curriculum requires successful completion of 164 credit hours.

**Veterinary Public Health Concentration**

A veterinary public health concentration is available for students enrolled in the DVM curriculum and graduate veterinarians. This concentration is part of the Master of Public Health (MPH) degree in the College of Education, Health and Human Sciences. For more information, see Public Health in the Graduate Catalog. The College of Veterinary Medicine (CVM) shares governance of the concentration through the Public Health Academic Program Committee and student advisors within this concentration are faculty in the CVM. This concentration requires a separate application to the MPH Program.

**COURSES**

**Veterinary Medicine** (987)

801-802 Application Based Learning Exercise (ABLE) I, II (1, 2) Small group, student-centered learning sessions with faculty facilitator for self discovery of new information. Week-long sessions based on specific clinical case or problem, and integration of basic science and clinical material. Satisfactory/No Credit grading only.

804-805-806 Application Based Learning Exercise (ABLE) and Clinical Exposure I, II, III (2, 2, 2) Week-long small group, student-centered learning sessions with faculty facilitator for self discovery of new information; based on specific clinical case or problem; integration of basic science and clinical material. One week of clinical experience through participation in specific clinical rotations in Veterinary Teaching Hospital. Satisfactory/No Credit grading only.

811 Infection and Immunity II—Bacteriology and Mycology (3) Fundamental aspects of microbiology and cell biology relative to pathogenesis of bacterial and fungal diseases of animals; antimicrobial actions and mechanisms of bacterial resistance. General approaches to diagnosis, treatment and prevention.

813 Infection and Immunity I—Immunology (2) Basic biology and practical aspects of immunology: cells of immune system, immune function and dysfunction, immunophrophylaxis, diagnostic testing and specific diseases involving immune system.
814-816 Clinical Correlations and Ethics I, II (1.2) Correlations between basic science material from concurrent courses and practice of veterinary medicine. Thoughts on wide spectrum of current veterinary ethical issues. 816—Student-led discussions follow faculty presentations.


821-822 Veterinary Anatomy I, II (4,4) Lectures, laboratories, and demonstrations are used in an integrated approach to the study of macroscopic (gross) clinically relevant anatomy, including neuroanatomy, and embryology of common domestic animals. Dissections of embalmed specimens, prosections, plastinated specimens, and radiographs of common domestic species are examined for comparative purposes.

823-824 Physiology I,II (4,4) Introduction to concepts and problems in physiology which form basis for clinical applications and for formal training in pharmacology, medicine, pathology, and surgery. Cellular, neural, cardiovascular, renal, respiratory, digestive, endocrine, and reproductive physiology.

825-826 Veterinary Microscopic Anatomy I, II (2,2) Lectures, laboratories, and demonstrations are used in the study of the cell, embryology, and microscopic anatomy of organ systems in common domestic animals to relate structure with function.

827 Special Problems in Animal Science (1-8) Extramural and specially designed study for students interested in select topics in anatomy, histology, and physiology.

831 Physical Diagnosis (1) Basic care, feeding, restraint, and handling domestic animals. Introduction to physical examination and diagnostic techniques used by veterinarian.

832 Anesthesiology (2) Principles of anesthesiology: pharmacology of anesthetic agents, and introduction to anesthetist techniques in veterinary medicine.

833 Epidemiology and Evidence Based Medicine (2) Study of distribution and detriments of disease in animal populations. Use of knowledge (evidence) gained from management of clinical patients in past to improve future clinical decision making processes.

834 Hematopoietic System (2) Pathophysiology and diagnosis of disorders involving bone marrow and blood cells, platelets, and blood coagulation in domestic animals; interpretation of laboratory test results using illustrative clinical cases.


836 Toxicology (2) Principles of toxicology, molecular mechanisms, pathologic processes and clinical features of animal diseases caused by common toxic agents.

837 Food Hygiene and Zoonoses (2) Host-agent relationships, public health aspects of veterinary medicine and role of veterinarians in ecology and food hygiene.

840 Integumentary System (3) Pathophysiology, special pathology, medicine and surgery of diseases of integumentary system. Laboratory examination, pathology, diagnosis and treatment.

841 Reproductive System (3) Pathophysiology, special pathology, medicine and surgery of diseases of male and female reproductive systems and mammary glands.

842 Alimentary System (4) Pathophysiology, special pathology, medicine and surgery of diseases of alimentary systems.

843 Musculoskeletal System I (3) Pathophysiology, clinical description and basic treatment modalities of common diseases and conditions of skeletal system of small animals: development of basic diagnostic and treatment skills.

844 Musculoskeletal System II (3) Pathophysiology, special pathology, medicine and surgery of diseases of muscular and skeletal systems. Advanced principles, radiographic interpretation and surgical procedures.

845 Veterinary Nutrition (2) Principles of nutrition, and nutrition of animals in health and disease. Applied nutrition pertaining to individual small or large animal patient or to herd situations.

846 Multispecies Medicine (3) Anatomy, pathophysiology, medicine, and surgery of avian species, laboratory and zoo animals and reptiles. Species and diseases seen by practicing veterinarian. Current topics on foreign animal diseases.

851 Urinary System (3) Pathophysiology, special pathology, medicine and surgery of diseases of urinary system. Urinary system in health and disease.

852 Cardiovascular System (2) Pathophysiology, special pathology, medicine and surgery of diseases of cardiovascular system. Anatomic, physiologic and pharmacologic principles which provide basis for treatment.


854 Respiratory System (3) Pathophysiology, special pathology, medicine and surgery of diseases of respiratory system. Upper and lower respiratory systems: infectious and noninfectious diseases.

855 Radiology (3) Basic, advanced and special techniques in radiology with interpretation and use of radiologic and related techniques in diagnosis and treatment of animal diseases.

856 Special Senses (2) Pathophysiology, special pathology, medicine and surgery of diseases of visual and auditory systems.

857 Nervous System (3) Pathophysiology, special pathology, medicine and surgery of diseases of nervous system: clinical neurology and neuropathology.

858 Neurology/Ophthalmology (4) Clinical training in specialty services: ophthalmology and neurology. Direct responsibility for diagnosis, patient care, and treatment of patients in both Large Animal and Small Animal Clinical Sciences.

861 Pharmacology I (2) Principles of pharmacokinetics and pharmacodynamic properties of veterinary drugs; mode of action and pharmacologic effects including important metabolic aspects, chemical and physical properties, side effects (toxicities) and clinical application.

862 Pharmacology II (2) Continuation of 861: modes of action, pharmacologic effects, and clinical application of drugs to control specific disease conditions.

864 Infectious Diseases (2) Pathogenesis and clinical findings of major viral, bacterial, and fungal infectious diseases of domestic animals: cattle, horses, swine, sheep, goats, dogs and cats; relevant case-based presentations.

865 Clinical Rotation in Comparative Medicine (2) Clinical training in avian medicine, laboratory animal and zoo animal medicine, epidemiology, public health, and other related disciplines.

867 Special Problems in Comparative Medicine (1-8) Extramural and specially designed study for students interested in select topics in avian medicine, laboratory animal medicine, zoo animal medicine, epidemiology, public health, pharmacology or toxicology.

868 Introduction to Animal Behavior (2) Basic principles of normal and abnormal animal behavior in domestic animals; clinical case discussions to illustrate common behavioral problems and current approaches to therapy.

870 Anesthesiology (4) Clinical training in sedation and anesthesia of companion animals, food animals and horses. Direct responsibility for diagnosis, care and treatment of clinical patients.

871 General Pathology (3) Principles of pathobiology: causes of disease, disturbances of cell growth and inflammation.

873 Infection and Immunity IV—Parasitology (3) Principles of parasitology: protozoology, helminthology, and entomology and relationship to diseases in animals.

874 Oncology (2) Fundamental aspects of cell biology and pathology relative to etiology and natural behavior of various neoplasms of animals; general approaches to diagnosis, treatment and prevention of neoplasia.

877 Special Problems in Pathology (1-8) Extramural and specially designed study for students interested in select topics in morphologic pathology, clinical pathology, clinical microbiology and parasitology.

878-879 Elective Clinical Rotation, I, II (2,2) Special rotations in applied clinical education in Small Animal Clinical Sciences, Large Animal Clinical Sciences, Comparative Medicine and Pathology. Novel experience not associated with required clinical rotations may be arranged.

881 Clinical Rotations in Small Animal Clinical Sciences I (4) Clinical training in medicine, surgery and specialty disciplines for companion animals. Direct responsibility for diagnosis, care, and treatment of clinical patients.

882 Clinical Rotations in Small Animal Clinical Sciences II (4) Clinical training in medicine, surgery and specialty disciplines for companion animals. Direct responsibility for diagnosis, care, and treatment of clinical patients.

883 Clinical Rotations in Small Animal Clinical Sciences III (4) Clinical training in medicine, surgery and specialty disciplines for companion animals. Direct responsibility for diagnosis, care, and treatment of clinical patients.
886-889 Clinical Rotation in Radiology and Pathology I, II (4,4) Two weeks in each discipline. Clinical training in radiographic techniques and interpretation, including ultrasonography. Post-mortem examination and laboratory diagnostics: clinical pathology and introductory histopathology of biopsy specimens.

887 Special Problems in Small Animal Clinical Sciences (1-8) Extramural and specially designed study for students interested in select topics in medicine, surgery, anesthesiology, radiology and medical specialties of small (companion) animals.

890 Transition and Accreditation Seminars (2) Discussion of USDA, state, and local animal laws and regulations; preparation of animal movement forms, veterinary ethics, jurisprudence, basic practice management, and other topics involved in practice of veterinary medicine.

891 Clinical Rotations in Large Animal Clinical Sciences I (4) Clinical training in medicine, surgery, specialty disciplines and herd health of food animals and horses. Direct responsibility for diagnosis, care and treatment of clinical patients.

892 Clinical Rotations in Large Animal Clinical Sciences II (4) Clinical training in medicine, surgery, specialty disciplines and herd health of food animals and horses. Direct responsibility for diagnosis, care and treatment of clinical patients.

893 Clinical Rotations in Large Animal Clinical Sciences III (4) Clinical training in medicine, surgery, specialty disciplines and herd health of food animals and horses. Direct responsibility for diagnosis, care and treatment of clinical patients.

897 Special Problems in Large Animal Clinical Sciences (1-8) Extramural and specially designed study for students interested in select topics in medicine, surgery, herd health, reproduction, radiology and medical specialties of large animals.

898-899 Externship I, II (2,2) Educational experiences in private practice, research facility, zoological preserve, aquarium, or other veterinary-related facility outside Veterinary Teaching Hospital; to provide experiences not frequently available in large referral veterinary teaching hospitals.