

Academic Preparation

Admission to the School of Veterinary Medicine requires a minimum of two years of preparation in a college or university accredited by an agency approved by the U.S. Department of Education and must include certain upper-division science requirements. Students may apply to veterinary school after 75 percent of required courses have been completed. Remaining prerequisites must be completed before entering the school.

Potential applicants should enroll at undergraduate institutions offering the prerequisite courses as part of an accredited baccalaureate program. Students may select majors and schools on the basis of interest and aptitude as long as prerequisites are fulfilled. Students accepted to the school without a baccalaureate degree will be granted a BS degree in veterinary science at the end of the second year of the veterinary program.

A minimum of 180 hours of practical experience in veterinary or biomedical science is required, although admitted students have an average of 2,500 to 3,000 hours. More information on this requirement is found in the "Criteria for Selection" section of this booklet.

The school does not offer a program for veterinary assistants or animal health technicians.

Required Preveterinary Medical Courses

ALL PREREQUISITE COURSES MUST BE COMPLETED PRIOR TO AUGUST OF THE YEAR THE DVM PROGRAM BEGINS. VISIT THE WEB SITE FOR CURRENT REQUIREMENTS.

A. LOWER DIVISION REQUIRED SCIENCES

Quarter Units (Course units may vary on the semester system.)

CHEMISTRY (General Chemistry 2A) 5
Lecture 3 hours; laboratory/discussion 4 hours. Prerequisite: high school chemistry and physics strongly recommended; satisfactory score on diagnostic examinations. Periodic table, stoichiometry, chemical equations, physical properties and kinetic theory of gases, atomic and molecular structure and chemical bonding. Laboratory experiments in stoichiometric relations, properties and collection of gases, atomic spectroscopy, and introductory quantitative analysis. *(On the Davis campus, Chemistry 2AH may satisfy this requirement.)*

CHEMISTRY (General Chemistry 2B). 5
Lecture 3 hours; laboratory/discussion 4 hours. Prerequisite: course 2A or 2AH. Continuation of course 2A. Condensed phases and intermolecular forces, chemical thermodynamics, chemical equilibria, acids and bases, solubility. Laboratory experiments in thermochemistry, equilibria, and quantitative analysis using volumetric methods. *(On the Davis campus, Chemistry 2BH may satisfy this requirement.)*

CHEMISTRY (General Chemistry 2C). 5
Lecture 3 hours; laboratory/discussion 4 hours. Prerequisite: course 2B or 2BH. Continuation of course 2B. Kinetics, electrochemistry, spectroscopy, structure and bonding in transition metal compounds, application of principles to chemical reactions. Laboratory experiments in selected analytical methods and syntheses. *(On the Davis campus, Chemistry 2CH may satisfy this requirement.)*

ORGANIC CHEMISTRY (Organic Chemistry 8A) Brief Course 2
Lecture 2 hours. Prerequisite: course 2B with a grade of C- or higher. With course 8B, an introduction to the nomenclature, structure, chemistry, and reaction mechanisms of organic compounds. Intended for students majoring in areas other than organic chemistry. *(On the Davis campus, course Chemistry 118A may satisfy this requirement.)*

ORGANIC CHEMISTRY (Organic Chemistry 8B) Brief Course. 4
Lecture 3 hours. Laboratory 3 hours. Prerequisite: course 8A or 118A. Continuation of course 8A. Laboratory concerned primarily with organic laboratory techniques and the chemistry of the common classes of organic compounds. *(On the Davis campus, Chemistry 128ABC together with 129A or 118ABC may also be used to meet the Organic Chemistry requirement. A laboratory is required.)*

PHYSICS (Principles of Physics 1A). 3
Lecture 3 hours. Prerequisite: trigonometry or consent of instructor. Mechanics. Introduction to general principles and analytical methods used in physics with emphasis on applications in applied agricultural and biological sciences and in physical education. Not open for credit to students who have received credit for course 7B or 9A on the Davis campus. *(A laboratory is not required.)*

Tips

- Preparation for veterinary school must begin early. Be sure to keep your grades up throughout your academic career. The good habit of keeping your grade average as high as possible in high school will increase your chances of doing well in college.
- High school students should take appropriate science, mathematics and English preparatory courses to build a strong background for college study.
- Since academic factors count for 50 to 60 percent of an application, it is important that your first priority be in that area. It is relatively easy to acquire more work experience, if necessary, but it is very difficult to improve a poor grade point average.
- Avoid the Pass/No Pass evaluation option to make sure that scholastic achievement in the required science courses, an important criterion for admission, can be effectively judged.
- Preveterinary course work can be completed at many colleges and universities. For a list of California colleges that offer equivalent courses for the science prerequisites visit the Assist Web site (www.assist.org).
- When you begin your college studies, consult your college adviser about your plans to meet the requirements for admission to the School of Veterinary Medicine.
- Get as much experience with veterinarians as possible, preferably in a variety of practices. These experiences help you obtain a good understanding of the nature, duties and responsibilities of veterinary medicine. Working with different types of animals and in different settings helps you to grasp the broad scope of animal care.
- Students are urged to work toward an alternative career goal while preparing for admission. Many qualified applicants are not admitted due to the limited number of available positions in each entering class.

PHYSICS (Principles of Physics 1B) 3
 Lecture 3 hours. Prerequisite: course 1A or 9A. Continuation of course 1A. Heat, optics, electricity, modern physics. Not open for credit to students who have received credit for course 7A, 7B, 7C, 9B, 9C or 9D on the Davis campus. **(A laboratory is not required.)**

BIOLOGICAL SCIENCES (Introduction to Biology 2A: Essentials of Life on Earth) 4
 Lecture 3 hours; discussion 1 hour. Essentials of life including sources and use of energy, information storage, responsiveness to natural selection and cellularity. Origin of life and influence of living things on the chemistry of Earth. Not open for credit to students who have completed Biological Sciences 1A with a grade of C- or better.

BIOLOGICAL SCIENCES (Introduction to Biology 2B: Principles of Ecology and Evolution) 5
 Lecture 3 hours; laboratory 3 hours; discussion 1 hour. Prerequisite: course 1A or 2A. Introduction to basic principles of ecology and evolutionary biology, focusing on the fundamental mechanisms that generate and maintain biological diversity across scales ranging from molecules and genes to global processes and patterns. Not open for credit to students who have completed Biological Sciences 1B with a grade of C- or better. **(A laboratory is required.)**

BIOLOGICAL SCIENCES (Introduction to Biology 2C: Biodiversity and the Tree of Life). 5
 Lecture 4 hours; laboratory 3 hours. Prerequisite: course 1B or 2B. Introduction to organismal diversity, using the phylogenetic tree of life as an organizing theme. Methods of phylogenetic reconstruction, current knowledge of the tree of life, and the evolution of life's most important and interesting innovations. Not open for credit to students who have completed Biological Sciences 1C with a grade of C- or better. **(A laboratory is required.)**

B. UPPER DIVISION REQUIRED SCIENCES

(Must be completed at a four-year college; may not be completed at a community college.)

GENETICS (Biological Sciences 101) Genes and Gene Expression 4
 Lecture 4 hours. Prerequisite: Biological Sciences 1A and 1B or 2A, 2B and 2C (which may be taken concurrently), and Chemistry 8B or 118B or 128B. Nucleic acid structure and function; gene expression and its regulation; replication; transcription and translation; transmission genetics; molecular evolution. **(A laboratory is not required.)**

BIOCHEMISTRY (Animal Biology 102) Animal Biochemistry & Metabolism 5
 Lecture 4 hours; discussion 1 hour. Prerequisite: Chemistry 2A–2B, 8A–8B. Water and biological buffers; thermodynamics of metabolism; structure and function of biomolecules; enzyme kinetics and function; membrane biology; digestion and absorption; carbohydrate metabolism. **(Biological Sciences 103, Bioenergetics & Metabolism, will meet this requirement. A laboratory is not required.)**

PHYSIOLOGY (NPB 101) Systemic Physiology 5
 Lecture 5 hours. Prerequisite: Biological Sciences 1A or 2A, and Chemistry 2B; Physics 1B or 7C are strongly recommended. Systemic physiology with emphasis on aspects of human physiology. Functions of major organ systems, with the structure of those systems described as a basis for understanding the functions. **(A laboratory is not required.)**

C. ADDITIONAL REQUIRED COURSES (Lower or Upper Division Courses)

ENGLISH 12
 A total of 12 quarter units (or 8 semester units) must be taken to meet this requirement. One course must be in English composition. The composition requirement may also be met by the English Advanced Placement Exam, if your score is three or higher. Other courses may include lower- or upper-division composition, linguistics, communication, classics, English, rhetoric, speech or literature. Subject A may not be used to satisfy this requirement.

HUMANITIES AND SOCIAL SCIENCES 12
 This requirement may be met by selecting courses in a variety of areas. Some examples are history, sociology, languages, music, art, psychology, American and ethnic studies, anthropology and philosophy.

STATISTICS (Elementary Statistics). 4
 Statistics 13 or 100, or other acceptable UC Davis statistics courses in agricultural business, psychology, biology, etc., may be used to meet this requirement.



A student engaged in the Students Training in Advanced Research (STAR) program carries out a feline drug trial. Under the guidance of faculty mentors, veterinary students receive formal training and complete research studies in areas such as virology, molecular imaging or diagnostics.