

College of Veterinary Medicine

Joseph W. Alexander, D.V.M., M.S.,
Dean

Billy E. Hooper, D.V.M., Ph.D.,
*Associate Dean for Academic
Affairs*

Richard W. Eberle, Ph.D., *Associate
Dean for Research*

Thomas R. Thedford, D.V.M.,
Assistant Dean for Outreach

James E. Creed, D.V.M., M.S.,
*Assistant Dean for Service and
Director of the Boren Veterinary
Medical Teaching Hospital*

The primary objective of the College of Veterinary Medicine is to educate veterinarians for private practice. However, the professional curriculum provides an excellent basic medical education in addition to training in diagnosis, disease prevention, medical treatment, and surgery. Graduates are qualified to pursue careers in many facets of veterinary medicine and health-related professions.

Accreditation

The College has full academic accreditation status approved by the Council on Education of the American Veterinary Medical Association. Accreditation is based on an assessment of 11 essential factors, namely, the college's organization, its finances, physical facilities and equipment, clinical resources, library and learning resources, enrollment, admissions, faculty, curriculum, continuing and post-graduate education, and research.

Preparatory Requirements

Attainment of the degree of Doctor of Veterinary Medicine requires, at a minimum, six academic years of collegiate training. In preparation for the professional training the student must complete both prescribed and elective collegiate courses. The minimum prescribed preparatory studies, totaling 60 semester hours of course work, can be completed in two calendar years. Most of the entering veterinary medical students in recent years have had three to four years of preparatory training or a bachelor's degree. It is recommended that the student undertake an appropriate regular bachelor's degree program in the sci-

ences, in the course of which he or she will complete the prerequisites for entry into the College of Veterinary Medicine by the end of at least the third year of preparatory training.

Admission Requirements

Collegiate course requirements for entry into veterinary medical college may be completed at any accredited university or college. Special pre-veterinary curricula are available at Oklahoma State University through the College of Agricultural Sciences and Natural Resources and the College of Arts and Sciences. Both colleges offer programs of study in pre-veterinary medical sciences which provide for the award of a bachelor's degree after the first or second year of veterinary medical studies to those persons who gain early entry into a veterinary medical college.

Requests for information on pre-veterinary medical study programs and applications for admission to such programs should be addressed to the dean of either the College of Agricultural Sciences and Natural Resources or the College of Arts and Sciences.

Listed below are the *minimum* course prerequisites for consideration for admission to the College of Veterinary Medicine.

English composition and technical/professional report writing—eight semester credit hours. An English elective may be substituted for the technical writing.



Chemistry-17 semester credit hours including five semester credit hours of organic chemistry designed for pre-veterinary, premedical and pre-dental students which must include both the aliphatic and aromatic series of organic compounds. Additionally three semester credit hours of biochemistry are required.

Physics—eight semester credit hours. Physics courses must include laboratory work and the following topics: mechanics, heat, sound, electricity, magnetism, light and modern physics.

Mathematics—three semester credit hours. Mathematics courses must include the fundamental operations of algebra, exponents and radicals, simple equations, graphs, simultaneous equations, quadratic equations and logarithms.

Biological science—15 semester credit hours. Courses in zoology, microbiology and genetics are required. These courses must include laboratory work. Comprehensive courses in biology will be considered but must be evaluated before credit is accepted.

Humanities and social science—six semester credit hours.

This information was current at the time of publication but is subject to change. The admission requirements are under annual review and changes may be made at any time.

Scholarships

The College has several scholarships which are available to veterinary medicine students, based on academic achievement and financial need. Special scholarships and awards are available for disadvantaged and minority students enrolled in veterinary medicine or in the pre-veterinary medicine program.

Veterinary Medical Studies

Enrollment in veterinary medicine is restricted. Applications for admission must be submitted by October 1, and a new class enters the College each year at the beginning of the fall semester.

Applicants who are legal residents of Oklahoma will be given first priority. However, a limited number of the first-year students may be selected from a pool of nonresident applicants. Questions about

residency should be directed to the Office of Admissions, Oklahoma State University. Requests for application materials should be directed to the coordinator of veterinary medicine admissions, College of Veterinary Medicine.

Students are admitted as candidates for the Doctor of Veterinary Medicine degree on the basis of records of academic performance in preparatory studies, standard achievement tests, and references to determine personal characteristics and career motivation.

The Oklahoma State Regents for Higher Education (OSRHE) permit the College of Veterinary Medicine (CVM) to accept a limited number of students who do not meet the usual admission requirements. The College will consider applications from persons who are educationally or economically disadvantaged and/or who show promise of being able to succeed in the professional curriculum. Special consideration will be given to the diversity of students admitted to the CVM program in an attempt to fulfill OSRHE goals in the realm of social justice.

The veterinary curriculum extends over four calendar years. The first two academic years conform to the normal semester system of the University. The last two academic years are continuous, with the fourth starting shortly after the third. The fourth year is clinical in nature and classes are primarily in the Boren Veterinary Teaching Hospital. The fourth year is organized into three-week rotations to provide for lower faculty-student ratio and more efficient use of clinical facilities and resources.

Graduate Programs

Graduate Coordinator Charles W. Qualls, Jr., D.V.M., Ph.D.

During 1996-97 the graduate programs of all departments in the College were undergoing review with the intention of providing a single College of Veterinary Medicine graduate program. In 1997-98 the graduate program in the College will relate to a wide variety of veterinary and biomedical sciences. M.S. and Ph.D. programs will be offered in clinical pathology, epidemiology, immunology, microbiology, morphology, parasitology, pathobiology, pharmacology, physiology, public health, toxicology and virology. Faculty, courses and discipline-based plans of study will be managed through three separate departments cooperating to provide a single graduate program.

Internship and Residency Programs

Internships and residency programs in clinical medicine and surgery will be

offered through the Department of Veterinary Medicine and Surgery. Residency programs in pathology will be offered through the Department of Veterinary Anatomy, Pathology and Pharmacology. Details of these programs appear in each of these departmental sections.

For a description of the graduate programs, internships and residencies as they were structured in 1996-97, see the sections for the departments of Veterinary Anatomy, Pathology and Pharmacology; Veterinary Infectious Diseases and Physiology; and Veterinary Medicine and Surgery. A description of the new graduate program to be implemented for the 1997-98 academic year may be obtained by writing to the graduate coordinator.

Departmental Clubs and Honor Societies

American Veterinary Medical Association, Student Chapter

Society of Phi Zeta Nu Chapter (academics and research)

Veterinary Anatomy, Pathology and Pharmacology

Food Animal Research Chair and Head
Anthony W. Confer, D.V.M., Ph.D.

Graduate Programs

The department offers programs of research and study leading to the degrees of Master of Science and Doctor of Philosophy with specialization in the areas of morphology, pharmacology, toxicology, pathology and pathobiology.

The research programs in pathology are focused on elucidation of mechanisms of disease, utilizing the disciplines of microbiology, immunology, toxicology, histology, immunocytochemistry, electron microscopy and molecular biology. Current research includes tick-transmitted diseases, pathogenesis and immunity of bovine infectious diseases, ehrlichiosis, hepatozoonosis, and toxic hepatology/environmental toxicology.

The research programs in morphology, pharmacology and toxicology include antimicrobial activity and disposition, soft tissue infections and phagocytosis, axial skeletal development, marine

mammal morphology, snake/spider venom and antivenom characterization, cellular and molecular biology of tendon and ligament repair, regulation of sperm function and effects of poisonous plant ingestion.

The Master of Science Degree. The M.S. in pathology may be earned with 30 credit hours beyond a bachelor's degree including not more than six credit hours for the thesis. The plan of study will be designed to meet the student's needs and interests. Requirements include one credit of seminar, one course in biochemistry and one course in statistics. The student must also pass a final oral examination covering the thesis and related course work. The M.S. in morphology, pharmacology or toxicology may be earned by either completion of 30 credit hours including six hours related to a thesis or by completion of 32 credit hours including two hours in research and thesis. Two credit hours of seminar are required, the thesis must be presented in a seminar, and the individual must pass an oral examination covering the thesis and related course work. The plan of study will be designed to meet the student's needs and interests.

The Doctor of Philosophy Degree. The Ph.D. in pathology requires a total of 90 credit hours beyond the bachelor's degree. The plan of study will be designed to meet the student's needs and interests. Requirements include courses in biochemistry, biochemistry techniques, statistics and seminar. Written and oral qualifying examinations are required. Students must prepare a research proposal and complete a dissertation based on original research. The Ph.D. in morphology, pharmacology and toxicology requires 90 credit hours including a minimum of 30 credit hours for research and dissertation and four credit hours of seminar. The plan of study will be designed to meet the student's needs and interests. Written and oral qualifying examinations are required. Students must also complete a dissertation based on original research.

Application Procedures. Applications for the M.S. or Ph.D. programs are accepted at any time; however, to be considered for assistantships, applications for enrollment in the summer session or fall semester should be received by February 15 and applications for enrollment in the spring semester should be received by September 15.

Residency Programs

A two to three year residency in anatomical or clinical veterinary pathology is offered. Candidates must have the D.V.M. degree or equivalent. The residency

program is designed to prepare individuals for careers in teaching, research and service pathology to fulfill the requirements of academics, animal diagnostic facilities and industry. Pursuit of a graduate degree is encouraged for all residents. The M.S. is possible within the residency training period. The Ph.D. is available to qualified residents who wish to pursue experimental pathology training and requires an additional two to three years in the program. Trainees may omit the M.S. and pursue the Ph.D. directly.

Application Procedure. Applications for the residency program are accepted at any time. Usually one residency training position is available each year. Open positions are listed in the "Educational Opportunities" section of the *Journal of the American Veterinary Medical Association*.

Veterinary Infectious Diseases and Physiology

Professor and Head Robert W. Fulton, D.V.M., Ph.D.

Infectious Diseases

Graduate Coordinator John H. Wyckoff, III

Graduate Programs

The department offers a program of research and study leading to the degrees of Master of Science and Doctor of Philosophy with specialization in the areas of veterinary helminthology, protozoology, bacteriology, virology, immunology, epidemiology and public health. The program is designed to prepare individuals for careers in teaching and research, and is flexible to meet the needs of the student within the capabilities of the department and the University.

Application Procedure. Applications are accepted at any time; however, all documents must be received prior to March 1 for admission to the summer session, July 1 for the fall semester, and November 1 for the spring semester. Applicants are required to submit scores for the Aptitude Test portion of the Graduate Record Examination. (The Advanced Test in Biology is also suggested.) Inter-

national applicants are required to take the English Proficiency Exam (TOEFL: a passing score is 550 or above), as well as the Test of Spoken English (TSE: a passing score is 220 or above), before they can be considered for graduate teaching assistantships unless they are from a country where English is a first language.

Applicants generally select a major professor before they are admitted to the departmental program. They are urged to correspond with a member of the department's graduate faculty whose interests reflect their own before making application. Information about the faculty's research interests is available upon written request to the department. After acceptance to the graduate program, the department head recommends an advisory committee to the dean of the Graduate College to develop a plan of study.

Prerequisites. Candidates for admission must possess a bachelor's degree or equivalent, including 30 semester credit hours in biological and physical sciences. Unqualified admission will be granted only to those applicants with combined verbal and quantitative GRE total scores multiplied by their GPAs (last 60 hours) totaling 3000 or greater. Provisionary status may be awarded to those not having these credentials with specific requirements dependent on recommendations of the departmental graduate faculty.

The Master of Science Degree. The M.S. must be earned by either Plan I, with thesis, 30 credit hours, including not more than six credit hours for the thesis, or Plan II, with report, 32 credit hours, including not more than two credit hours for the report. The plan of study will be tailored to meet the student's needs and interests; however, all students must enroll in the course Current Topics in Veterinary and Biomedical Science (VPARA 5120) and in Seminar (VPARA 6110) for one credit hour each, and must pass three credit hours of biochemistry acceptable for graduate credit, and a course in statistical methods. The student must also pass a final oral examination covering the thesis or report and related course work.

The Doctor of Philosophy Degree. The Ph.D. requires a total of 90 credit hours beyond the B.S. degree. All Ph.D. students must enroll in the course Current Topics in Veterinary and Biomedical Science (VPARA 5120) for one hour of graduate credit and in Seminar (VPARA 6110) for two hours of graduate credit and, if not already complete, must fulfill the requirements for biochemistry and statistical methods detailed above under "Master of Science Degree." A written

and oral qualifying examination is required. Students must prepare a research proposal and complete a dissertation based on original research. The final examination is oral and is based primarily on the dissertation problem, although not limited to this subject.

Physiological Sciences

Graduate Coordinator George E. Burrows

Graduate Programs

The department offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy. The programs are designed to prepare students for teaching and research positions in universities or colleges; research positions in governmental laboratories, foundations or industry and related positions. Areas of concentration offered are morphology, pharmacology, physiology and toxicology.

Application Procedure. Applications are accepted at any time; however, to be considered for assistantships, applications for enrollment in the summer session or fall semester should be received by February 15, and applications for enrollment in the spring semester should be received by September 15.

Review and formal acceptance or rejection of applications for admission to the graduate program is delegated to the departmental Graduate Education Committee. For admission to the graduate program, the candidate must possess a bachelor's degree or higher in a science-related field with course work in mathematics, chemistry and physics.

Criteria for recommending admission are:

1. For candidates whose highest earned degree is the baccalaureate, the sum of verbal and quantitative scores on the Graduate Record Examination will be multiplied by the grade-point average on a four point scale, for the last 60 hours of undergraduate course work. The product score must be 3000 or greater for M.S. degree candidates or 3150 or greater for Ph.D. degree candidates for admission without qualification. Students who fail to meet these criteria may be considered for admission on a provisional basis.
2. For candidates with advanced degrees, medical degrees or degrees earned outside the United States, admission status will be evaluated on an individual basis.

Applicants are required to select a major professor prior to admission to the departmental program. The department head, in consultation with the adviser and the Graduate Education Committee, will appoint a graduate advisory committee. Two of the committee members must be members of the graduate faculty of the department. This committee will consist of not fewer than three graduate faculty members for students pursuing the master's degree. For students pursuing the doctoral degree, a graduate advisory committee of not less than four graduate faculty members, one of whom must be from outside the departmental graduate faculty, will be appointed by, the dean of the Graduate College upon recommendation of the Graduate Education Committee. Functions of the advisory committee are described in the "Graduate College" section.

The Master of Science Degree. This degree may be earned in one of two ways: (1) completion of a total of 30 semester credit hours including six credit hours related to a thesis; the thesis must be formally submitted to the Graduate College for partial fulfillment of the requirements for the degree; (2) completion of a total of 32 semester credit hours including two credit hours in research and thesis. A report must be submitted to the Graduate College in partial fulfillment of the requirements for the degree. For both pathways, two credits of seminar are required and PHSI 5224 is recommended. The student must present the thesis or report in a seminar to the department and pass a final oral examination at that time. The courses forming the student's program are determined by the student's graduate advisory committee in conference with the student.

The Doctor of Philosophy Degree. Students may enter the doctoral program without first acquiring a master's degree. The course requirement for the Ph.D. is 90 semester credit hours including a minimum of 30 credits for research and dissertation. The courses required are determined by the graduate advisory committee in conference with the student but must include four credits of seminar. The 90 semester credit hours may include all or a part of the work completed for a master's degree. The student must pass written and oral qualifying examinations. A doctoral dissertation based on original research must be accepted by the graduate advisory committee and submitted to the Graduate College. The student must present the dissertation in a seminar to the department and pass a final oral examination at that time.

Minor in Physiological Science. A graduate student working toward a Ph.D. who wishes to declare a minor is ex-

pected to have a member of the department on his or her graduate advisory committee, must meet the Graduate College requirements for a minor, and have a minimum of 14 credit hours in physiological sciences course work.

Veterinary Medicine and Surgery

Professor and Head Grant H.
Turnwald, B.V.Sc., M.S.

Internship and Residency Programs

The department offers graduate professional programs (internships and residencies). Internships are one-year post-D.V.M. clinical programs in small or large animal medicine and surgery.

Internships are designed in part to prepare for residencies or graduate academic programs. Residencies are two- or three-year clinical programs in various disciplines designed in part to prepare for specialty board certification. Graduate academic programs in other departments are offered in association with some residencies.

Application Procedure. Applications are accepted at any time and will be considered as positions become available. Most open positions are listed in the Veterinary Internship/Residency Matching Program directory published each October.