

University of Missouri - Columbia
SCHOOL OF VETERINARY MEDICINE



BULLETIN
1969-70

UNIVERSITY CALENDAR FOR 1969-70 (For the Divisions at Columbia)

1969

Summer Session

June 9—Monday, Registration and Orientation

June 10—Tuesday, Classwork begins, 7:40 a.m.

July 4—Friday, Independence Day

August 1—Friday, Summer Session closes 5:00 p.m.

Summer Commencement, evening

First Semester

September 14—Sunday, New Student Orientation

September 15—Monday, New Student Orientation

September 16—Tuesday, Registration

September 17—Wednesday, Registration

September 18—Thursday, Classwork begins, 7:40 a.m.

November 26—Wednesday, Thanksgiving Vacation begins, 12:30 p.m.

December 1—Monday, Classwork resumed, 7:40 a.m.

December 20—Saturday, Christmas Vacation begins, 12:30 p.m.

1970

January 5—Monday, Classwork resumed, 7:40 a.m.

January 17—Saturday, Classwork First Semester ends, 12:30 p.m.

January 19—Monday, Examinations begin

January 26—Monday, First Semester closes, 5:30 p.m.

Second Semester

January 29—Thursday, Registration and New Student Orientation

January 30—Friday, Registration

February 2—Monday, Classwork begins, 7:40 a.m.

March 28—Saturday, Spring Recess begins, 12:30 p.m.

April 6—Monday, Classwork resumed, 7:40 a.m.

May 23—Saturday, Classwork Second Semester ends, 12:30 p.m.

May 25—Monday, Final Examinations begin

June 1—Monday, Second Semester closes, 5:30 p.m.

June 2—Tuesday, Annual Commencement

Summer Session

June 15—Monday, Registration and Orientation

June 16—Tuesday, Classwork begins, 7:40 a.m.

July 4—Saturday, Independence Day, Holiday

August 7—Friday, Summer Session closes, 5:00 p.m.

Summer Commencement evening

BULLETIN

UNIVERSITY OF MISSOURI - COLUMBIA

Volume 70

Number 7

March 25, 1969

General 1969 Series

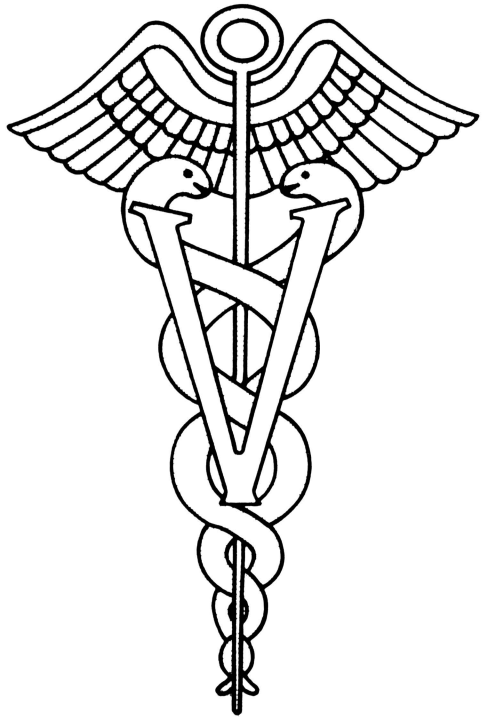
Number 6

Sam B. Shirky, *Consultant*, Technical Education Services
Louise H. Stephens, *Editor*

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Announcement of the
School of Veterinary Medicine

1969 -70



University of Missouri - Columbia

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COMPILED IN THE OFFICE OF THE DEAN, SCHOOL OF VETERINARY
MEDICINE.



Officers of Administration

JOHN SCHWADA, Ph.D., Chancellor

BURNELL W. KINGREY, D.V.M., Dean, School of Veterinary Medicine

AARON H. GROTH, D.V.M., Dean Emeritus, School of Veterinary Medicine

GEORGE C. SHELTON, D.V.M., Associate Dean for Academic Affairs, School
of Veterinary Medicine

LESLIE C. MURPHY, D.V.M., Associate Dean for Research Development, School
of Veterinary Medicine

School of Veterinary Medicine

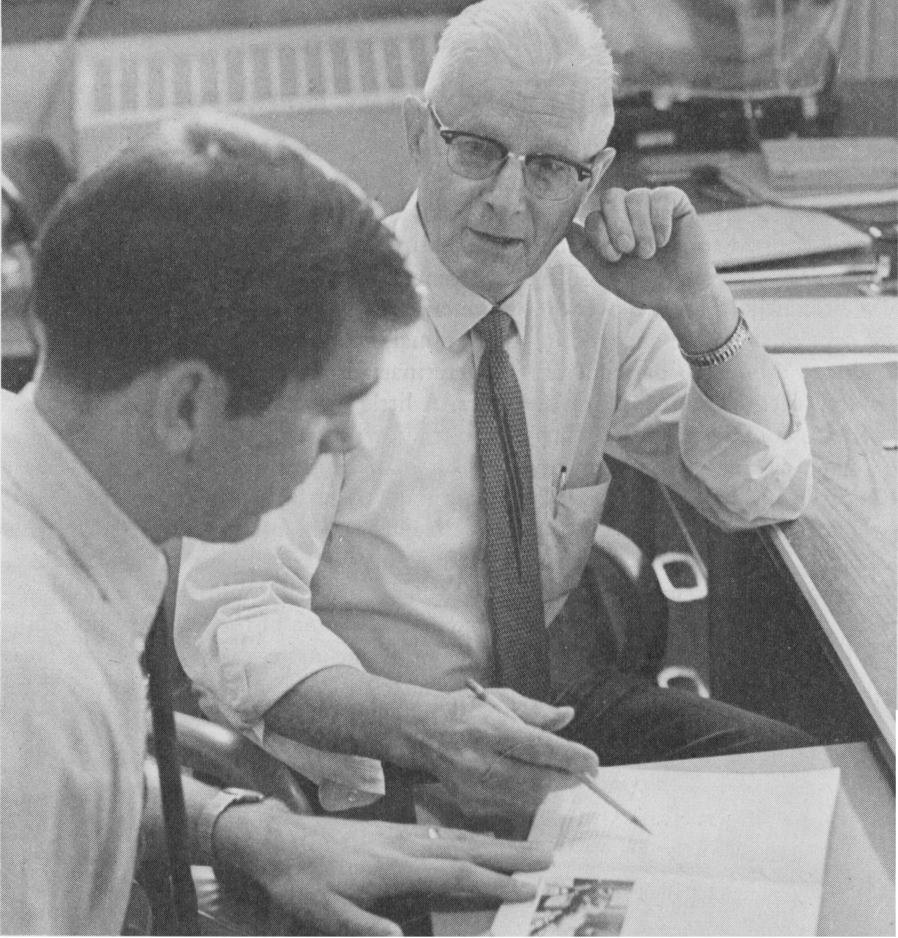
ADMINISTRATIVE STAFF

DR. BURNELL W. KINGREY, Dean of the School of Veterinary Medicine, is also a Professor in the Department of Veterinary Medicine and Surgery. His office is the nucleus for the teaching, research, and administrative functions of the School. He coordinates all of the Departments' activities and works with other Schools on the campus as well as professional groups in the state. Dean Kingrey represents the School in national and international programs affecting veterinary medical education.

DR. GEORGE C. SHELTON is Associate Dean for Academic Affairs of the School of Veterinary Medicine. He also serves as Professor and Chairman of the Department of Veterinary Microbiology. Dr. Shelton handles student policies and procedures and assists Dean Kingrey in administrative affairs. He is chairman of the Admissions Committee which is responsible for the admission of students into the School of Veterinary Medicine, maintaining records and assessing the progress of veterinary students, and assisting students in obtaining financial aid.

DR. LESLIE C. MURPHY as Associate Dean for Research Development and Professor of Veterinary Microbiology coordinates all research programs within the School of Veterinary Medicine and assists the Dean in this area. Research projects are supported by federal grants, state funds, foundation awards and grants or contracts from industries, livestock producer associations, and other groups. His office maintains records of the budgets used for individual research projects.





Regular meetings are held by a group designated as the "Cabinet of the School of Veterinary Medicine." This group consists of the Dean, Associate Deans, Director of Continuing Education, and the Department Chairmen. This policy-making group discusses such topics as facilities, budget, University functions, renovations, recruiting, and anything else pertaining to the School and its faculty. Opinions expressed in the meetings are carried back and forth to the individual faculty members by each department representative.

Pre-Professional Advisor

Dr. H. C. McDougle, Professor of Veterinary Microbiology, serves as advisor for pre-professional students at the University of Missouri - Columbia. His office is located in Room 105, Connaway Hall.

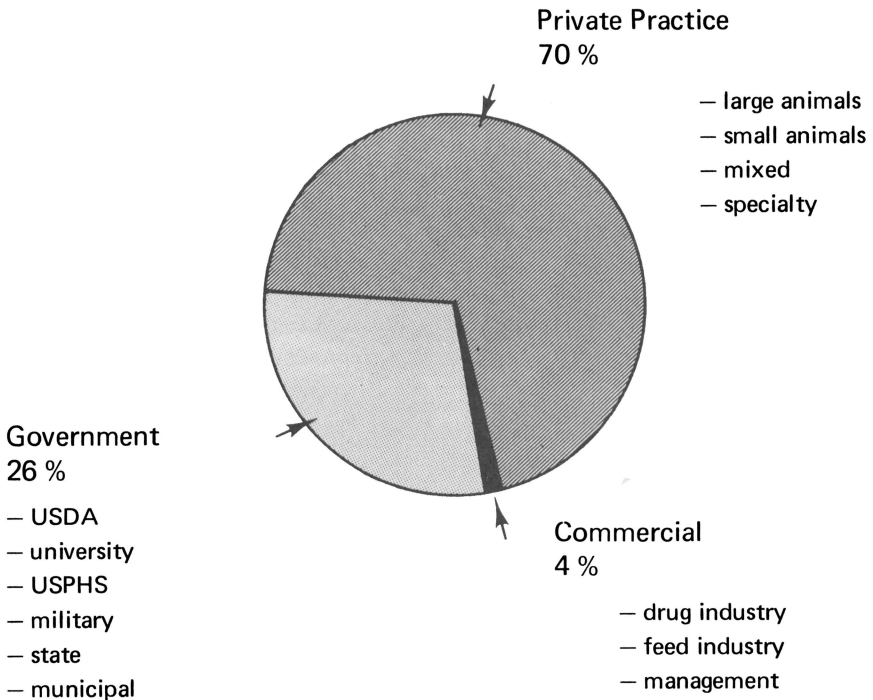
This experienced educator advises and counsels students concerning the veterinary medical profession and courses required for admission to the School of Veterinary Medicine. He helps students select a curriculum which will best fulfill their educational needs and be compatible with their program in the College of Agriculture, the College of Arts and Science, or off-campus institutions in which they are enrolled.

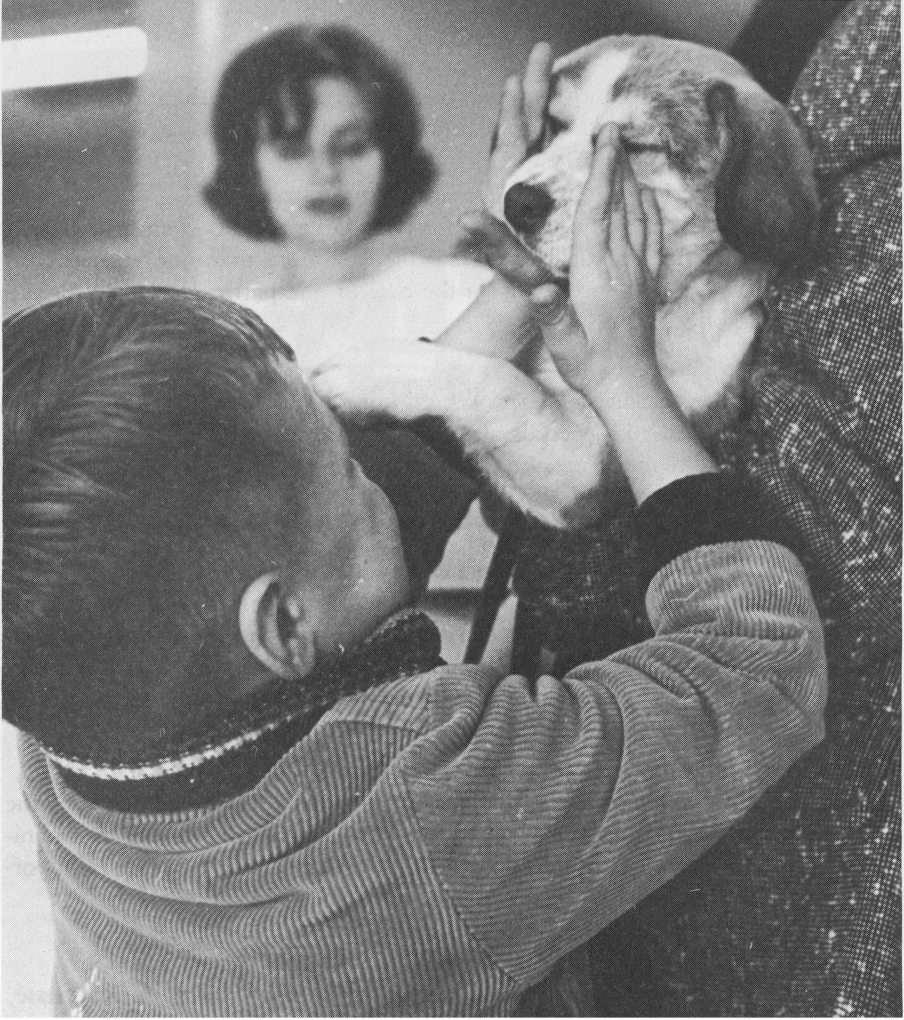
CAREERS IN VETERINARY MEDICINE

The veterinarian is finding more and more jobs available because of the varied subject areas included in his professional training. The number of fascinating fields open to a veterinarian is increasing continually and the specialty he chooses depends mainly upon his preferences.

Presently, there are over 20,000 veterinarians in the United States. Seventy per cent of them are engaged in large animal, small animal, mixed, or specialty practices. About 26 per cent of the veterinarians are involved in government service, teaching, and research activities. A little over four per cent devote their efforts to commercial fields, such as the feed or drug industries.

The virtual explosion in numbers of small animal practitioners in the past 10 years shows that veterinary medicine today is no longer a profession exclusively oriented toward agriculture, but that it has become firmly rooted in metropolitan life. The great increase of veterinarians working in special fields reflects the profession's strength and versatility in new areas requiring the highest degree of specialized knowledge and sophisticated skills. Some of the newer responsibilities have placed the veterinary profession in the mainstream of scientific progress with the veterinarian serving on biomedical teams to develop and support space explorations.





Veterinary Practice

The largest percentage of veterinarians in the United States is in private practice. Along with the growth of the entire profession, various kinds of practice have evolved. Veterinary practices are now owned by individuals, partnerships, or groups of veterinarians and may range from mixed general practices to highly selective specialty practices.

1. Large Animal Practice

This form of practice appeals mainly to graduates having a rural background and experience with livestock. They apply their scientific training to the disease problems, nutrition, and management of horses, cattle, sheep, swine, and goats.

2. Small Animal Practice

Small animal practitioners are concerned with the health, care, and management of dogs, cats, birds, and other small pets. The modern small

animal clinic or hospital is well equipped with surgical units and laboratories necessary for the diagnosis and treatment of diseases in household pets.

3. **Mixed Practice**

Veterinarians providing services for both large and small animals have a mixed practice. In such practices staffed by more than one veterinarian, individuals may concentrate on the care of one particular species or the practice of one specialty.

4. **Specialty Practice**

A practice concentrating services on one species of animal or discipline of study is called a specialty practice. The number of specialty practices in the veterinary profession is increasing continually. Some of these include equine, dairy, zoo, poultry, and small bird practices.

5. **Laboratory Animal Medicine**

Veterinarians working in laboratory animal medicine direct their efforts toward the management of laboratory animal colonies for biomedical teaching and research. The veterinarians are responsible for the health of animal species varying from pigeons to miniature swine. The laboratory animals are used experimentally in testing various drugs, studying diseases, and investigating basic biologic phenomena.

6. **Space and Oceanographic Medicine**

The number of veterinarians employed in these fields is limited at the present time. However, as space travel and the use of sea plants and animals as food sources increase, the veterinarian will become more important in these areas.

Government

Increasing numbers of veterinarians are being employed by municipal, state, national, and international governments. The federal government employs more veterinarians than any other organization.

The percentage of veterinarians in teaching is quite low; however, this is one of the most important areas of the profession. Qualified educators are in constant demand to accept the responsibility of training future veterinarians. Individuals in this area frequently obtain graduate degrees in addition to the Doctor of Veterinary Medicine degree in order to gain more knowledge in a particular discipline and to get experience in teaching.

Most veterinarians employed by universities are active in research as well as teaching. Scientific experiments are conducted and the results are published for use by other interested investigators. Knowledge accumulated through such research increases understanding of basic biologic processes in normal and diseased animals. It also aids in the development of improved surgical and therapeutic techniques.

1. **Municipal Government**

Municipal health departments of many cities and towns employ veterinarians either full time or part time. Veterinarians render services in food



inspection, communicable disease prevention and control, epidemiologic studies, laboratory diagnosis, and research.

2. State Employment

The state veterinarian or livestock sanitary official enforces laws and regulations in each state to safeguard the health of animals and humans. Many state health departments have one or more veterinarians on their staffs to help control animal diseases significant in human health and to investigate outbreaks of such diseases. Practically every state college or university has a department employing one to several veterinarians. In addition, extension veterinarians usually are located at state universities.

3. National Agencies

a) *U. S. Department of Agriculture*

Veterinarians employed by the Department of Agriculture are primarily concerned with the production of healthy livestock and poultry. They are responsible for assuring wholesome and accurately labeled food products of animal origin for the nation's consumers. Certain branches within the Department of Agriculture contribute to the health and economy of the nation by protecting the nation's livestock from foreign diseases and eradicating or controlling diseases within the country.

b) *Food and Drug Administration*

The Food and Drug Administration has a veterinary medical branch which supervises the production, manufacture, and marketing of veterinary drugs and animal feed additives.

c) *U. S. Public Health Service*

Veterinarians pursuing a career in the public health services are usually commissioned officers. They work with other members of the health professions to protect the health of animals and men. Many of these veterinarians conduct epidemiological studies to investigate diseases of animals that can be transmitted to man. Others conduct basic research on the effects of air pollution on men and animals.

4. **Armed Forces**

Veterinarians in the military service may be commissioned officers or career personnel in the U. S. Army or U. S. Air Force. Military veterinarians serve mainly in the areas of public health, research, laboratory animal medicine, and canine medicine. Those concerned with public health are responsible for the general sanitation and cleanliness of U. S. military bases. They are the principal inspectors of all food supplies consumed by military personnel. Those serving in a research capacity may be involved in projects related to biological warfare, aerospace exploration, nuclear medicine, laboratory animal medicine, or oceanographic medicine. Many veterinarians are also needed to supervise the health of dogs used for military purposes.

5. **International Agencies**

Veterinarians have helped improve the food supplied in many underdeveloped countries, thus raising the standard of living in these countries. Many opportunities for foreign service are based on one- or two-year contracts. Appointments are available through universities, foundations, or specialized agencies of the United Nations such as the Food and Agriculture Organization and the World Health Organization. A few veterinarians also are employed directly by foreign countries, private firms, or individuals on a consultant basis.

Commercial

The veterinarian's role in industry has expanded to include practically all of the knowledge, skill, and special talents within the profession. As the industries serving the medical field and livestock industry expand, the need for veterinarians also increases.

1. **Veterinary Drug Industry**

Varied services are performed by veterinarians in the drug industry. They serve as integral parts of a team whose responsibilities are essential in developing, manufacturing, and marketing drugs and diagnostic products. The industrial veterinarian may participate in research and development, production and quality control, preventive medicine, technical services, or marketing.

2. **Feed Industry**

As the inter-relationship of nutrition and disease is more clearly understood, more veterinarians will be needed to work with nutritionists in formulating satisfactory diets. Many veterinarians are currently working with feed companies to provide better nutrition for the livestock of the country through balanced rations.

3. **Feedlot Veterinarians**

Some veterinarians are now employed by large commercial feedlots. These individuals help improve the nutrition and health of the thousands of cattle and swine produced commercially.

HISTORY OF VETERINARY MEDICINE AT THE UNIVERSITY OF MISSOURI

Veterinary medicine at the University of Missouri began in 1884 and by 1960 had progressed through four stages—a course in veterinary science, a department of veterinary science, a School of Veterinary Medicine in the Division of Agricultural Sciences, and finally, a School of Veterinary Medicine as a separate division of the University.

In 1885, the first vaccine-virus laboratory in the United States was established at the University under the supervision of the Veterinary Science Department. A veterinary laboratory building was erected in 1887. During these early years the staff veterinarians taught some courses to medical and agricultural students, conducted research on tick fever, and investigated livestock losses from disease in various parts of the state.

Connaway Hall was built in 1910-11 to help house the expanding teaching program. In 1912, faculty members of the Department of Veterinary Science taught courses to agricultural students, investigated animal and poultry diseases, and performed diagnostic and extension work. Hog cholera virus and anti-hog cholera serum were produced from 1915 to 1936.

Classes in the School of Veterinary Medicine had been limited to 30 students from the opening of the School in 1946. Those admitted were residents of Missouri. However, in 1965 the number was doubled with some out-of-state residents being accepted to meet the increased demand for veterinarians. This increased enrollment was made possible with additional faculty members and improved facilities. In 1964, the Hospital-Clinic building was completed, providing an excellent facility for teaching, service, and research. Coupled with the increased size of the student body has been a balanced expansion of graduate training and research programs.

Five hundred and twenty-six veterinarians have been graduated from the Veterinary School since 1946. Presently the student body numbers 220 for the four classes.

ADMISSION PROCEDURES AND REQUIREMENTS

The School of Veterinary Medicine sets no high school requirements as preparation for the pre-veterinary medical curriculum. A strong background in mathematics and science is desirable. Two years of high school mathematics along with a balanced program of biology, chemistry, and physics are recommended.

Studies leading to the Doctor of Veterinary Medicine (D.V.M.) degree require four years of training in the School of Veterinary Medicine preceded by at least two years of pre-professional study. The professional studies are taken

at the University of Missouri - Columbia School of Veterinary Medicine. Pre-veterinary medical requirements may be completed at any accredited college or university where the course work is offered.

Students interested in *pre-professional* work at the University of Missouri - Columbia should address inquiries to the Office of Admissions, University of Missouri - Columbia, 130 Jesse Hall, Columbia, Missouri 65201. Inquiries to 130 Jesse Hall and instructions for admission sent from that office are **ONLY** for those students seeking pre-professional information.

Admittance into the professional curriculum depends upon approval by the Committee on Admissions for the School of Veterinary Medicine. At least 64 semester hours of college work, excluding ROTC and Physical Education, must be completed by students prior to admission into the professional program. Applicants must have attained an accumulative average of grade C or better during pre-professional work. The minimum requirements for admission may be completed in two years of study. However, students admitted with only two years of pre-professional work are usually those with exceptionally good scholastic achievement records and aptitude scores.

No specific pre-veterinary curriculum is arranged by the School of Veterinary Medicine, but each student's program must include 47 hours of college credit in the following subject areas:

<i>Subject</i>	<i>Hours</i>
English	6
College Algebra (or more advanced mathematics)	3
Inorganic Chemistry	8
Organic Chemistry	5
Physics	5
Biological Science (Zoology strongly recommended)	10
Social Science and/or Humanistic Studies	10

Only 60 students can be admitted into the veterinary curriculum each year due to limitations of laboratory space. Since it is not possible to accept all eligible applicants, students are strongly encouraged to incorporate the pre-veterinary requirements into an academic program which can lead to a B.S. degree if they are not admitted to the School of Veterinary Medicine.

Application Procedure

Dr. H. C. McDougle, 105 Connaway Hall, serves as a School of Veterinary Medicine Advisor for pre-professional students. It is recommended that all students on the Columbia Campus who are interested in veterinary medicine contact Dr. McDougle during the fall semester preceding the year of application.

Entrance into the School of Veterinary Medicine occurs only in September of each year. Application forms must be requested, completed, and submitted not later than *March 1* of the year in which admission is sought. Students seeking admission should adhere to the following recommended procedure:

1. Request admission forms from the Office of the Dean, 104 Connaway Hall, University of Missouri - Columbia, School of Veterinary Medicine, Colum-

bia, Missouri 65201. Application materials usually are available November through February prior to the March 1 deadline of the year in which application is made.

2. Return the completed forms to the Office of the Dean by March 1, including a list of courses presently being taken. Transcript copies of credits earned must also be submitted to the Office of the Dean, 104 Connaway Hall.

3. Applicants must take the Veterinary Medical Aptitude Test. Information concerning this test and a list of dates and places where the test is given will be sent with other admission forms. The test usually is given in early February at the University of Missouri - Columbia.

4. Do not apply for admission to the University of Missouri - Columbia until accepted by the School of Veterinary Medicine. No fees are to be paid until after you are accepted for admission to the School, and instructions will be sent to you at that time.

All applications are considered by the Committee on Admissions for the School of Veterinary Medicine to determine if the students meet the required standards. After initial screening, the remaining applicants are evaluated on the basis of their academic records, veterinary aptitude test scores, personal interviews (when practical), and personal references. The committee selects students with as many of the following characteristics as possible: good scholastic ability, reasonable judgment and common sense, moderately wide range of interests, some evidence of leadership ability, pleasing and alert personality, willingness to work hard for a worthwhile objective, and at least a fair understanding of the scope of veterinary medicine.



Admissions Committee Interview

Each student entering the School of Veterinary Medicine must furnish his own microscope adequate to meet his needs and the School's requirements. The microscope must be inspected and approved by the appropriate committee. Estimated cost of the microscope is \$300-\$500 and a detailed list of specifications is sent from the Office of the Dean upon acceptance to the School or by request.

The following fees may be expected by veterinary medical students *each semester*.

<i>Resident Student</i>	<i>Non-Resident Student</i>
Incidental Fee \$165.00	Incidental Fee \$165.00
Supplementary Fee, Vet. Med 32.50	Supplemental Fee, Vet. Med. 32.50
Student Activities Fee 20.00	Student Activities Fee 20.00
	Non-Resident Tuition 250.00
<u>\$217.50</u>	<u>\$467.50</u>

THE PROFESSIONAL PROGRAM

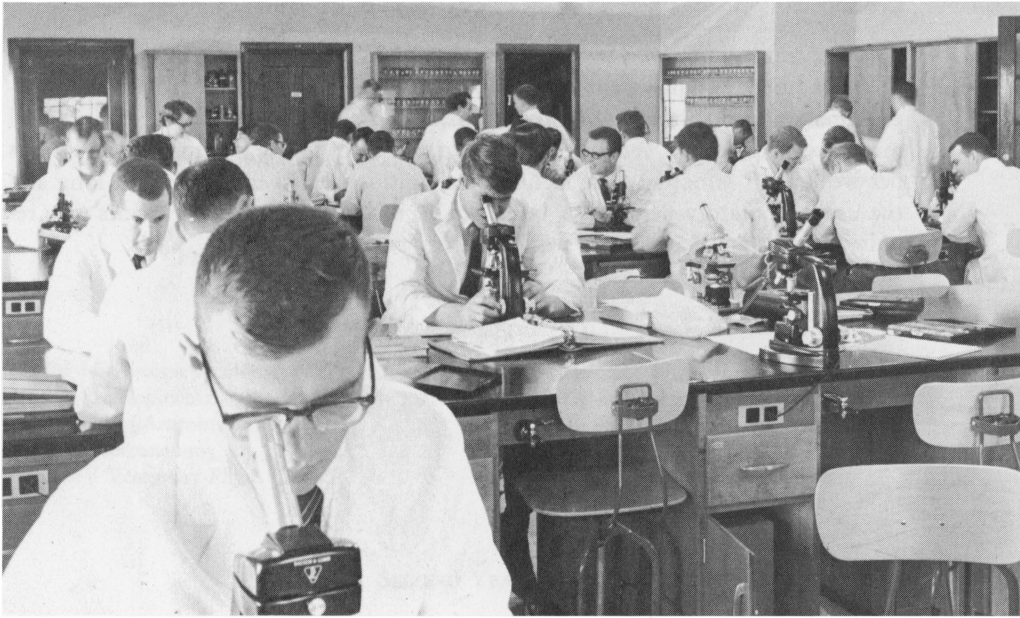
During the first two years of the professional curriculum, a student is instructed in courses that will provide a solid foundation in such subjects as anatomy (gross and microscopic), biochemistry, physiology, bacteriology, virology, parasitology, pathology, and pharmacology. These courses form the base for applied work during the final two years.

Lectures and laboratories during the final two years relate to surgery, obstetrics, radiology, public health, and diseases of small animals, large animals, poultry, and laboratory animals. The third year represents a transitional stage in the training of the professional student. Courses that year form a bridge between the fundamental work of the first two years and the clinical work of the fourth year.

The major portion of instruction in the fourth year takes place in the clinic or laboratories. Students are divided into small groups and work closely with the staff in various clinical and diagnostic areas. In addition to inpatient diagnosis and treatment, fourth-year students are assigned periodically to the ambulatory clinic for practical experience under rural conditions. Experience is gained in herd health, nutrition and breeding programs, testing and eradication programs, and regulatory procedures. Field trips are arranged during the final two years to commercial pharmaceutical and biological laboratories, meat and poultry packing plants, and livestock markets.

Requirements for Graduation

To earn the Doctor of Veterinary Medicine degree, a student must complete the courses in the order listed in the curriculum. Courses must be completed in sequence because they are offered only once a year.



Basic Sciences Instruction

The student is expected to achieve at least a 1.5 grade point average at the end of his first year in the School of Veterinary Medicine. He is required to have a cumulative average of 2.00 (C) or better in the first two years of the curriculum before he can advance to the third year.

Course Numbers

The designation of the courses indicates the department offering the courses and generally the level of instruction.

1 to 99 courses are for students outside the School of Veterinary Medicine. These courses are for freshman and sophomore students in other divisions of the University of Missouri - Columbia.

100 to 199 courses are primarily for junior and senior students in divisions other than the School of Veterinary Medicine. They carry no graduate credit.

200 to 299 include all courses in the veterinary medical curriculum. They may be taken by graduate students whose graduate major is not in the same department in which the course is given. Courses with the V-designation, as 271V, may not be taken for graduate credit.

300 to 399 courses are for undergraduate and graduate students without restriction as to a student's graduate major.

400 to 499 courses are primarily for graduate students.

Credit

The credit unit given by the University of Missouri - Columbia, the semester or credit hour, is equivalent to a subject pursued one period per week for approximately one 16-week semester. Thus, a course valued at 2 credit hours will meet two periods per week for a semester; a 5-hour course will meet five periods per week for a semester. The lecture or recitation period is 50 minutes long and the usual laboratory period is 1 hour and 50 minutes. Some departments may require 2 hours and 50 minutes per laboratory period.



Clinical Training

Professional Curriculum

VA—Veterinary Anatomy
 VMS—Veterinary Medicine and Surgery
 VM—Veterinary Microbiology
 VP—Veterinary Pathology
 VPP—Veterinary Physiology and Pharmacology

Fall

Winter

FIRST YEAR

	<i>Hours</i>
VA203 Microscopic Anatomy	2
VA207 Developmental Anatomy	2
VA211 Gross Anatomy	6
VA218 Neuroanatomy	2
VPP224V Veterinary Physi. Chem.	5
	17
VA204 Microscopic Anatomy	4
VA212 Gross Anatomy	5
VPP220V Physiology	5
VM241V General Microbiology	3
	17

SECOND YEAR

VPP221V Physiology	5	VPP226V Pharmacology	5
VP231V Pathology	5	VMS277V Physical Diagnosis	2
VM242 Path. Microbiology	4	VP232V Pathology	5
VM245 Parasitology	4	VP234V Clinical Pathology	3
	18	VM243 Veterinary Virology	3
		VM246V Parasitology	3
			21

THIRD YEAR

VA215V Applied Anatomy	1	VA216V Applied Anatomy	1
VM240 Avian Diseases	3	VP236V Meat Hygiene	3
VMS251V General Surgery	3	VMS252V Sm. An. Surgery	3
VMS255V Radiology	2	VMS262V Sp. Lg. An. Med.	5
VMS261V Gen. Lg. An. Med.	5	VMS264V Sm. An. Med.	3
VMS263V Sm. An. Med.	3	VMS266V Obstetrics	3
VMS271V Clinics	3	VMS272V Clinics	3
	20		21

FOURTH YEAR

VPP223V Veterinary Nutrition	3	VMS256 Toxicology & Pois. Plants	3
VM249 Vet. Publ. Health	3	VMS274V Clinics	8
VMS253V Lg. An. Surg.	3	VMS276 Clinical Conf.	1
VMS267V Reproductive Diseases	5	VMS278V Practical Application of Clin. Med. & Surg. Procedures	3
VMS273V Clinics	7	VMS282V Jurisprudence & Eth.	1
	21	VMS286V Business Methods	2
			18

FACILITIES

The School of Veterinary Medicine is divided into the Administrative Offices, five departments, and a diagnostic laboratory primarily housed within four buildings in the southeast section of the Columbia Campus.

Connaway Hall

This structure houses the Administrative Offices along with the teaching and research areas for the Departments of Veterinary Anatomy, Veterinary Microbiology, and Veterinary Pathology.

The Administrative Offices include those of the Dean and Associate Deans. Associated facilities in Connaway Hall include Offices of the Director of Continuing Education for Veterinary Medicine, Assistant to the Dean, Editorial Assistant and Medical Illustrator, offices for secretaries, and a conference room.

General teaching facilities in Connaway Hall include a large well-lighted lecture room and three large laboratories equipped for instruction of students in basic sciences. The main lecture room is designed for the use of visual aids such as slide, movie, and overhead projectors. Teaching laboratories are designed to facilitate the use of visual aids and demonstration materials in addition to providing work and storage space for each student. A locker room with individual student lockers provides additional space for coats, books, microscopes, and laboratory supplies.

The *Department of Veterinary Anatomy* teaches gross anatomy in a large laboratory equipped with specimen dissection tables and laboratory stools. Another student laboratory is equipped for studying the microscopic anatomy of structures. Preparation laboratories include special tissue processing rooms, specimen preparation and cold storage rooms, a photo-developing darkroom, and a surgical suite. Undergraduate teaching in the department is strengthened by integrating related fields of anatomy and using special visual aids.

The *Department of Veterinary Microbiology* has a newly furnished teaching laboratory which accommodates 60 students. This laboratory is designed and equipped to teach courses in parasitology, bacteriology, mycology, and virology. Adjoining the main laboratory is a room for preparing microbiological culture media, an isolation room for inoculating media with microorganisms, and a room containing incubators and refrigerators.

The *Department of Veterinary Pathology* is located in Connaway Hall and the Veterinary Hospital-Clinic building. Teaching facilities in Connaway Hall include a large laboratory with storage and study space for 64 students.

A stainless steel demonstration table within the large laboratory provides space for conducting necropsies and showing fresh tissue specimens. A histopathology preparation laboratory provides tissue sections for students to examine and study.



Annexes

The School has expanded facility space in two houses on Virginia Street and a wing of the Missouri Conservation Building. The Miniature Swine project at the School utilizes offices and laboratories at 823 Virginia St. The house at 817 Virginia St. is divided into the Bioengineering Section of Veterinary Physiology and Pharmacology, offices for Veterinary Pathology and the Photo/Publications unit of the School.

The Connaway Hall Annex located in the Missouri Conservation Building offers office and conference space for the Virology Section of Veterinary Microbiology and some members of the Department of Veterinary Medicine and Surgery. It also houses the staff room of the *Missouri Veterinarian* and the School Yearbook.

Veterinary Science Building

This building includes lecture rooms, laboratories, and laboratory animal facilities for teaching and research in the Department of Veterinary Physiology and Pharmacology. It also houses the Veterinary Medical Library.

The *Department of Veterinary Physiology and Pharmacology* utilizes a lecture room and a teaching laboratory which have modern electronic recording instruments for undergraduate teaching. These instruments include transducers, amplifiers, and multichannel recorders for use by students in small study groups. In-

structors are available throughout the laboratory periods for assistance, guidance, and direction.

The Veterinary Medical Library, consisting of more than 12,000 volumes and 425 periodicals, provides facilities for veterinary medical students. It is open seven days a week for reading, studying and research. The Medical Center Library also is available for veterinary student use. Since it is a branch of the main library, inter-library loans are available from other branches or other libraries.

Veterinary Medical Hospital-Clinic

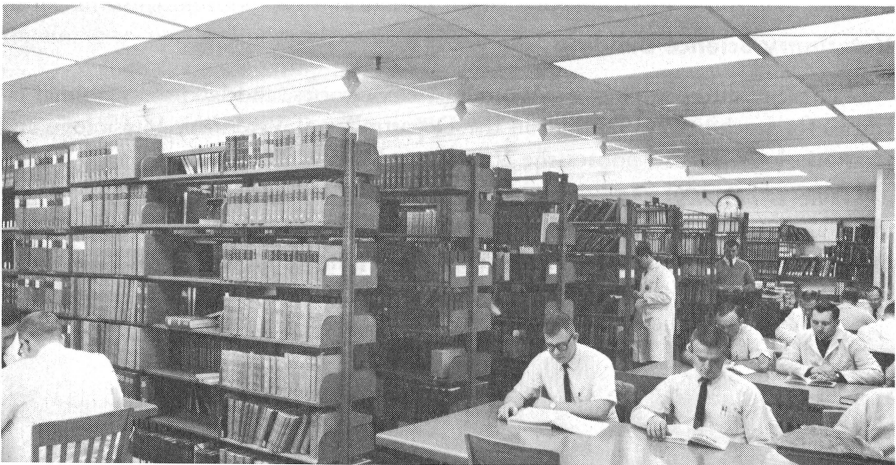
The modern Veterinary Medical Hospital-Clinic provides excellent teaching facilities, used primarily by the *Department of Veterinary Medicine and Surgery*. The *Department of Veterinary Pathology* operates the Clinical Pathology and Diagnostic Laboratories within the Hospital-Clinic. Much of the formal instruction utilizes a large amphitheater where large and small animal cases may be observed and discussed by the student body and faculty. Other facilities include a lecture room, study rooms, a record retrieval system, a necropsy room, and specialized areas in the clinics.

The *Small Animal Clinic* can accommodate more than 100 hospitalized patients in four wards, including one isolation ward. Also among the facilities within this clinic are two examining rooms, two surgery rooms, a surgery preparation area, a pharmacy, a large treatment center, bathing areas, and covered outdoor exercise runs.

The *Large Animal Clinic* provides health care facilities for commercial livestock and horses and can house more than 60 large animals at one time. This clinic utilizes large stalls which can be subdivided for smaller animals. Also included in this area are two operating rooms, one of which is equipped with a hydraulic operating table, a padded recovery room, a pharmacy, and a large general treatment area.

The *Ambulatory Clinic* includes three radio-dispatched vehicles equipped with instruments and medicine for treating large animals on farm visits. A group of students and a clinician travel in each vehicle to answer ambulatory calls.

Veterinary Medical Library





Veterinary Medical Research Farm

This 90-acre farm, owned by the School of Veterinary Medicine, is located within a 10-minute drive from the Columbia Campus. It has a large barn with three wings for housing large animals, a central research laboratory building, a laboratory for germ-free animal experiments, a building for housing small laboratory animals and many new buildings, large and small, used for various Veterinary Medical research projects.

Veterinary Medical Diagnostic Laboratory

The Diagnostic Laboratory for Veterinary Medicine operates from three locations. The administrative offices, avian necropsy laboratory, research animal necropsy laboratory, and supporting bacteriology and virology laboratories are located in a compact, three-trailer unit southeast of the Veterinary Hospital-Clinic.

Large animal necropsy services are performed in the necropsy laboratory and clinical pathology services are performed in the clinical pathology laboratory, both in the Veterinary Hospital-Clinic.

RELATED FACILITIES

The University of Missouri - Columbia is unique in being one of the few universities in which the School of Veterinary Medicine and the School of Medicine are located on the same campus with the Colleges of Agriculture, Arts and Science, and Engineering. A number of interdisciplinary programs within the University permit the sharing of additional facilities by the School of Veterinary Medicine.

Sinclair Research Farm

This 560-acre farm is officially designated by the University of Missouri as the "Charles and Josie Sinclair Research Farm for Studies in Aging and Chronic Diseases." It is located about four miles southwest of the Columbia Campus. Several species of animals, including miniature swine, primates and epileptic cattle, are maintained at the Farm as research subjects. Projects to investigate chronic disease or aging may utilize laboratories and/or animals at the facility.



Sinclair Farm Primates

Nuclear Reactor Research Facility

One of the most powerful university nuclear reactors in the United States was recently completed in Research Park near Memorial Stadium. The School of Veterinary Medicine maintains laboratories in this facility for conducting radiobiological experiments.

Low-Level Radiation Laboratory

This laboratory contains a low-level, whole-body radiation counter. It is designed to measure natural and induced radioactivity in animals and humans by using a large liquid scintillation detector. Several research projects in the School of Veterinary Medicine are utilizing this facility.

Space Sciences Research Center

This facility provides 60,000 square feet of general laboratories, shops, offices, and a special library. Projects to increase our knowledge of outer space will be coordinated by the Center.

Library

The University of Missouri - Columbia Library, one of the largest university libraries in the United States, houses more than 1,400,000 volumes and 18,000 current periodicals in the main and branch libraries. The School of Veterinary Medicine has its own branch and students may also use the library at the Medical Center.

Missouri Agricultural Experiment Station

This organization coordinates certain research activities in the School of Forestry, School of Home Economics, and School of Veterinary Medicine, as well as the College of Agriculture.

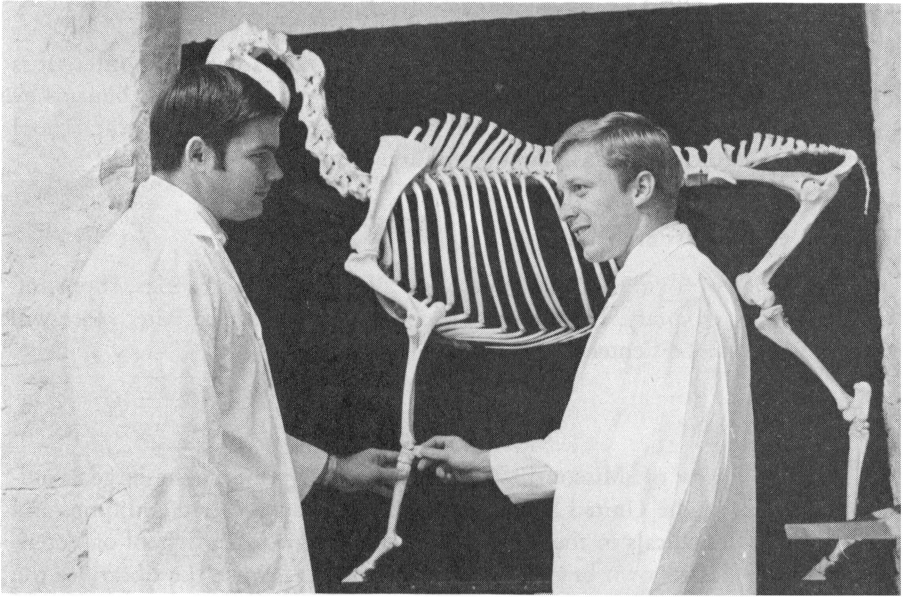
Computer Research Center

This facility has developed necessary computing facilities to assist both the educational and research programs of all divisions of the University of Missouri - Columbia.

Other Related Research Facilities

Members of the Ecology Field and Training Station of the U. S. Public Health Service, some of whom hold joint appointments to the School of Veterinary Medicine, are studying the incidence of coronary heart diseases and "strokes" and means for the prevention of these diseases in man.

The Missouri Regional Medical Program is one of the pioneer operational programs in the U. S. authorized by the Heart Disease, Cancer and Stroke Amendments of 1965. Its major operation is located in Lewis Hall in Columbia.



Department of Veterinary Anatomy

One of the primary goals of the Department of Veterinary Anatomy is to teach students of veterinary medicine the gross and microscopic aspects of anatomical structures. This knowledge is necessary to understand the function of the various organ systems in the animal body and to recognize disease conditions. Veterinary medical students have laboratory exercises in gross anatomical dissection and study microscopic, developmental, and neuroanatomical specimens.

Veterinary Anatomy—Faculty

ROBERT C. MCCLURE, D.V.M., Ph.D.; Chairman, Professor
RICHARD A. ARNOLD, B.S., D.V.M., M.S.; Instructor
WARREN S. BIVIN, B.S., D.V.M.; Instructor
JAMES E. BREAZILE, B.S., D.V.M., Ph.D.; Professor
VICTOR S. COX, JR., D.V.M.; Research Associate
HORST-DIETER DELLMANN, Docteur-Vétérinaire, Dr. med. vet., Habil. (Ph.D.); Professor, Research Associate in Space Sciences Research Center
DONALD D. DRAPER, D.V.M.; Instructor
DENNIS W. DUFFIELD, B.S., D.V.M.; Instructor
PHILLIP D. GARRETT, B.S., D.V.M., M.S.; Assistant Professor, Medical Illustrator
NEWELL H. MCARTHUR, D.V.M., M.S.; Instructor
ARVLE E. MARSHALL, B.S., D.V.M.; Research Associate
ESTEBAN M. RODRIGUEZ, M.D., Ph.D.; Visiting Research Scientist
JOSEPH E. WEINMAN, D.V.M.; Professor Emeritus

- 200 Problems (cr. arr.) f,w,s.**
Assignment of special problems for training in research in gross or microscopic anatomy or history. STAFF.
- 203 Microscopic Anatomy (4) f. (Formerly 105.)**
Prerequisite: registration in School Vet. Med. or dept. consent. Study of the cytology and histology of domestic animals. DELLMANN, STAFF.
- 204 Microscopic Anatomy (4) w. (Formerly 115.)**
Prerequisites: 203 & 207. Detailed, systematic microscopic study of organology of domestic animals. DELLMANN, STAFF.
- 207 Developmental Anatomy (2) f.**
Prerequisite: registration in School Vet. Med. or dept. consent. Developmental anatomy of domestic animals based primarily on study of chick and pig embryos. MCCLURE, STAFF.
- 211 Gross Anatomy (5) w. (Formerly 100.)**
Prerequisite: registration in School Vet. Med. or dept. consent. Systematic, detailed study of canine anatomy by means of lecture, discussion, and dissection of the dog. STAFF.
- 212 Gross Anatomy (5) w. Formerly 110.)**
Prerequisite: 211. Comparative anatomy with dissection of the horse, ox, sheep, goat, pig, cat, and chicken. STAFF.
- 215V Applied Anatomy (1) f. (Formerly 172.)**
Prerequisites: 204 & 212 & third yr. standing in School of Vet. Med., or dept. consent. Topographical, comparative and clinical consideration of the anatomical features requisite for diagnostic, surgical, obstetrical, and autopsy procedures in veterinary medicine. Radiographs, dissection, models, and prepared specimens supplement study of live animals. STAFF.
- 216V Applied Anatomy (1) w.**
Continuation of 215V.
- 218 Veterinary Neuroanatomy (2) f.**
Prerequisite: registration in School of Vet. Med. or dept. consent. Study of functional gross and microscopic anatomy of the central nervous system and its peripheral connections including organs of the special senses. This course is correlated with courses 203, 207, 211. BREAZILE, STAFF.
- 219 Elements of Veterinary Anatomy (3) f. (Formerly 101.)**
Prerequisite: 5 hrs. of gen. zoology or equiv. For agricultural and other students desiring a basic knowledge of anatomical terminology and the comparative functional anatomy (developmental, microscopic and gross) of domestic animals. GARRETT.
- 300 Problems (cr. ar.) f,w,s.**
Assignment of special problems or topics for training in research in gross and microscopic anatomy. STAFF.

Courses 303, 304, 307, 311, and 312 open only to graduate students who have requisite background in biological science and approval of the department.

- 303 Cytology and Histology of Domestic Animals (2) f.**
Detailed study of cytology and histology of domestic animals through lecture and lab. study. Special written report and/or review required. DELLMANN, STAFF.
- 304 Microscopic Organology of Domestic Animals (4) w.**
Prerequisite: 308. Detailed study of microscopic anatomy of the organ systems of domestic animals. Special written report and/or review required. DELLMANN, STAFF.
- 305 Histological and Anatomical Techniques (cr. arr.) f,w,s.**
Prerequisites: background in chem. & anatomy; consent of instr. Detailed study and practice of techniques used in preparation of specimens for microscopic and macroscopic study. STAFF.
- 307 Embryology and Development of Domestic Animals (2) f.**
Study of developmental anatomy of domestic animals. Special written report and/or review required. MCCLURE, STAFF.
- 311 Canine Dissection (6) f.**
Study of gross anatomy of the dog by lecture, dissection, and discussion. Special written report and/or review required. STAFF.

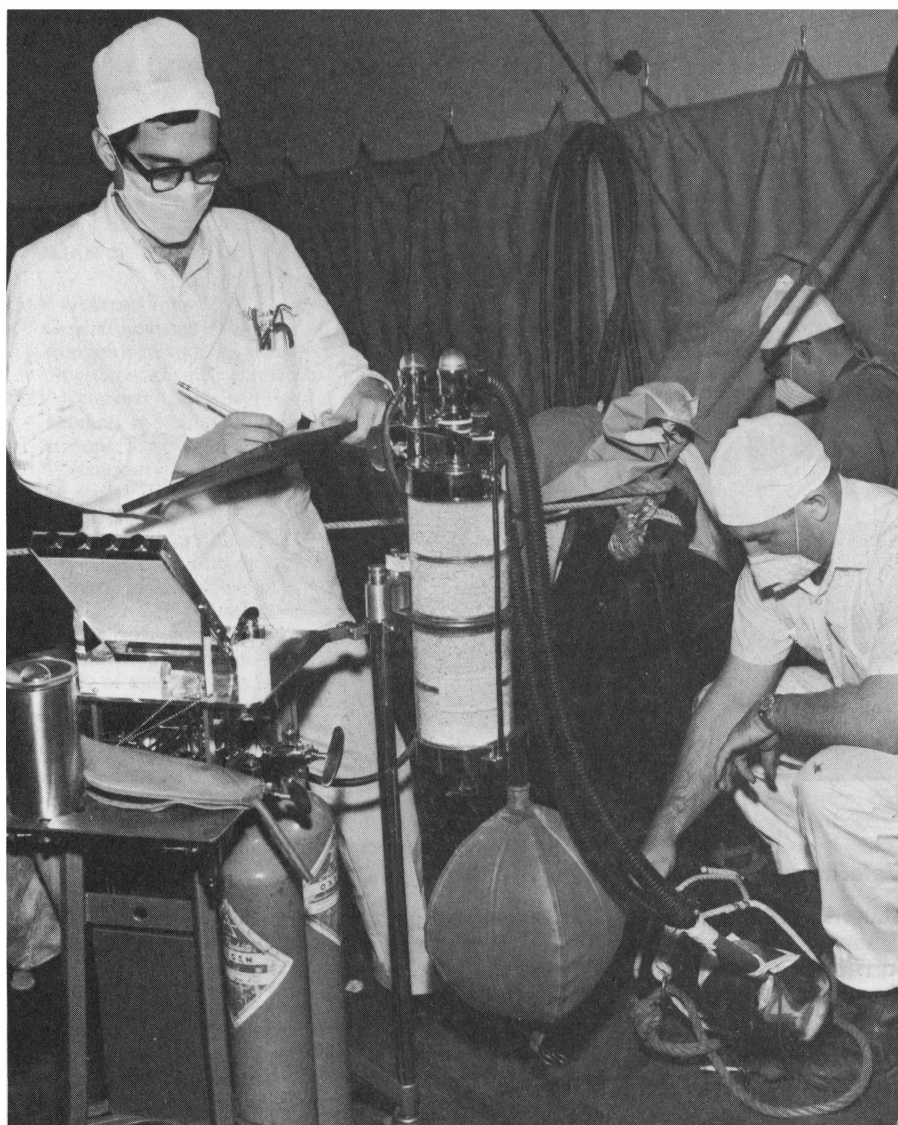
- 312 **Anatomy of Common Domestic Animals (5) w.**
Prerequisite: 311 or equiv. Study of gross anatomy of horse, ox, sheep, pig, cat, and chicken, particular attention to areas of veterinary medical importance. Special written report and/or review required. STAFF.
- 400 **Problems (cr. arr.) f,w,s.**
Selected problems and/or topics for advanced study in special areas to meet needs of individual students. STAFF.
- 409 **Advanced Veterinary Microscopic Anatomy (cr. arr.) f,w,s.**
Prerequisite: dept. consent. Advanced microscopic study of animal tissue preparations. DELL-MANN, STAFF.
- 410 **Seminar (1) f,w.**
Prerequisite: dept. consent. Presentation and discussion of investigations and topics in Veterinary Anatomy or related fields, by qualified students, instructors, and guests. STAFF.
- 413 **Systematic Anatomy (5) w. (Formerly 319.)**
Prerequisites: consent of instr. and Veterinary Anatomy 219 and/or 5 hrs. zoological science. For graduate and approved advanced upperclass undergraduate students in the biological sciences. Systematic study of gross anatomy of domestic and laboratory animals with dissection of dog, pig, sheep, and goat, and small common laboratory animals, and demonstration specimens of other domestic animals. MCCLURE, STAFF.
- 418 **Correlative Neuroanatomy (4) w. 1968 & alt. w.**
Prerequisites: grad. standing and/or consent of instr. A comprehensive study of the neuroanatomy of common domestic and laboratory animals. BREAZILE.
- 419 **Advanced Veterinary Gross Anatomy (cr. arr.) f,w,s.**
Prerequisite: dept. consent. Topographical and systematic dissection and study of areas as related to Veterinary Medicine and Surgery, and Veterinary Medical Research. MCCLURE, STAFF.
- 450 **Research (cr. arr.) f,w,s.**
Open to graduate students with requisite preparation. Research in veterinary anatomy not expected to terminate in thesis. STAFF.
- 490 **Research (cr. arr.) f,w,s.**
Open to graduate students with requisite preparation. Research expected to be presented as a thesis. Reading knowledge of German and French desirable. STAFF.

Department of Veterinary Medicine and Surgery

Teaching in this department develops proficiency in the diagnosis, prevention, and treatment of diseases of all species of animals. The student is guided in the clinical study of diseases to apply the knowledge gained from courses in the basic professional subjects. Course work includes formal lectures, formal laboratories, and clinical experience in the diagnosis and treatment of diseases of large and small animals.

Clinical patients belong to owners from the Columbia area or may be referred by veterinarians throughout the state. Experience in treating animals on the farm is provided by the ambulatory clinic, which offers veterinary service for animal owners around Columbia and for the UMC herds and flocks.

Students are rotated through the various clinical areas in small groups and are assigned to a clinician in the area. This permits the student to participate in all phases of clinical veterinary medicine and provides an opportunity for thorough



discussion of clinical cases with the assigned clinician. Clinical assignments include small animal clinic, large animal clinic, ambulatory clinic, anesthesiology, radiology, and obstetrics.

Important information on the diseases of animals is obtained through the veterinary medical data program. This program involves the development of 1) a standard nomenclature of veterinary diseases and operations, 2) a functional, institutional medical record system, and 3) an automated data processing procedure for summarizing and retrieving information recorded during the examination and treatment of clinic patients.



Veterinary Medicine & Surgery—Faculty

MARK P. RINES, B.S., D.V.M., Ph.D.; Chairman, Professor

CLARENCE J. BIERSCHWAL, D.V.M., M.S.; Professor

ARTHUR A. CASE, B.S., M.S., D.V.M.; Professor

EVERETTE A. CORLEY, B.S., D.V.M., Ph.D.; Professor

LARRY M. CORNELIUS, D.V.M.; Research Associate

LOUIS A. CORWIN, JR., D.V.M., Ph.D.; Assistant Professor

ARTHUR W. DOBSON, D.V.M., M.S.; Assistant Professor

THOMAS M. EAGLE, D.V.M.; Associate Professor

EDGAR F. EBERT, D.V.M.; Professor

JAMES F. ENGLISH, JR., B.S., D.V.M., M.S.; Associate Professor

JOHN P. HICKCOX, B.S., D.V.M., M.D.; Assistant Professor, Resident in Surgery

RICHARD E. HOFFER, D.V.M., M.S.; Associate Professor

HARLAN E. JENSEN, D.V.M.; Research Associate

DONALD W. JOHNSON, B.S., D.V.M., Ph.D.; Professor

WILLIAM T. KERBER, D.V.M.; Research Associate

DARRELL G. KIGER, D.V.M.; Research Associate

BURNELL W. KINGREY, D.V.M., M.S.; Dean of School of Veterinary Medicine, Professor

KEITH L. KRANER, D.V.M.; Director of Laboratory Animal Medicine, Professor

JOSEPH T. MCGINITY, D.V.M., M.S.; Associate Professor

CHARLES E. MARTIN, B.S., D.V.M., M.S.; Assistant Professor

EDWARD C. MATHER, D.V.M., M.S.; Instructor

LOUIS R NELSON, B.S., D.V.M.; Research Associate
 KENNETH H. NIEMEYER, B.S., D.V.M., M.S.; Associate Professor
 JOHN D. RHOADES, B.S., D.V.M., M.S.; Assistant Professor
 REED W. RINGS, B.S., D.V.M.; Research Associate
 CHARLES E. SHORT, D.V.M.; Assistant Professor
 ROBERT A. STUHLMAN, D.V.M.; Research Associate
 WALTER R. THRELFALL, D.V.M.; Research Associate
 JAMES W. TIGER, B.S., D.V.M., M.S., Ph.D.; Associate Professor
 LOUIS G. TRITSCHLER, B.S., D.V.M., M.S.; Assistant Professor
 WILLIAM A. WOLFF, D.V.M., M.S.; Assistant Professor

251V General Veterinary Surgery (3) f.

General fundamentals of surgery as applied to the systems of the body; discussion in inflammation with relation to tissue repair; principles of anesthesia; preoperative evaluation; surgical procedures of small animals and postoperative care. HOFFER, SHORT, WOLFF.

252V Veterinary Surgery (3) w.

Lectures and laboratory exercises covering surgical procedures for selected small animal operations. STAFF.

253V Veterinary Surgery (3) f.

Operative surgery and anesthesia with emphasis on diagnosis, technique, and patient aftercare. In the laboratory, students prepare for, perform and administer postsurgical therapy for several operations. EBERT, STAFF.

255V Veterinary Radiology (2) f.

General fundamentals of radiologic physics, preparation and interpretations of radiographs, consideration of radiant energy as a therapeutic and diagnostic agent and protective measures against radiation hazards. CORLEY.

256V Toxicology and Poisonous Plants (3) w.

Study of toxic substances, e.g., inorganic and organic chemicals, insecticides poisonous to animals and important plants poisonous to animals. Emphasis is on identification, toxicology, diagnosis, prevention, and treatment. CASE.

261V Veterinary Medicine (5) f.

A study of the diseases of large animals by systems. Emphasis is on the respiratory system, digestive system, nervous system, musculoskeletal system, skin, cardiovascular system, and metabolic diseases affecting the body as a whole. Discussion includes the etiology, pathogenesis, symptomatology, differential diagnosis, treatment, prevention, and control of the diseases. MCGINITY, JOHNSON.

262V Veterinary Medicine (5) w.

A study of the bacterial, viral, mycotic, and rickettsial diseases of large animals affecting the body as a whole. Principles of host-parasite relationship, mechanisms of resistance, epizootiology, preventive medicine, and public health aspects are emphasized. MCGINITY, JOHNSON.

263V Veterinary Medicine (3) f.

A study of the diseases of small animals, in particular infectious diseases, nutritional deficiencies, and toxic diseases affecting several systems or the body as a whole. A study of the diseases of skin, musculoskeletal system, respiratory system, and cardiovascular system. HICKCOX, RHOADES.

264V Veterinary Medicine (3) w.

A study of the diseases of small animals, in particular diseases of the hemic and lymphatic systems, digestive system, urogenital system, endocrine system, nervous system and organs of special senses of small animals. HICKCOX, RHOADES.

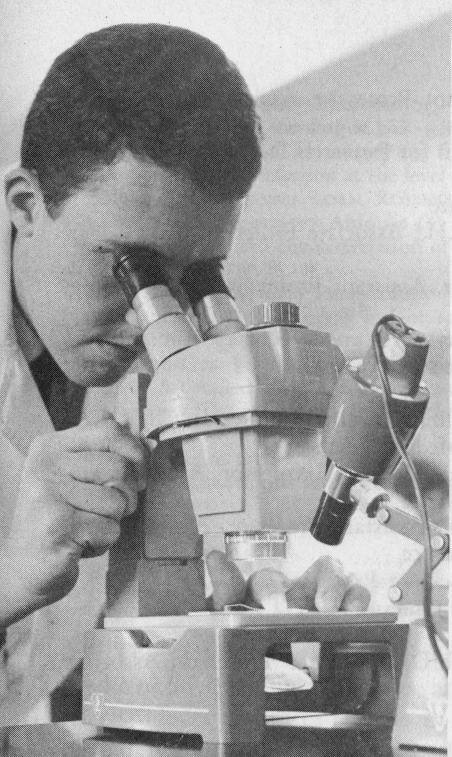
266V Veterinary Obstetrics

Normal and abnormal parturition in large animals with special emphasis directed toward maternal and fetal dystocias and their correction by manipulation and surgery. Students apply practical manipulative techniques in the phantom uteri. An extensive audio visual library is employed to supplement both laboratory and classroom teaching. This course also includes an introduction to the techniques utilized in breeding soundness examination of the male. BIERSCHWAL, MARTIN, MATHER.

267V Reproductive Diseases of Large Animals

A study of diseases of the reproductive tract of the female and the male. Special emphasis is placed on diagnostic techniques, pregnancy examination, and reproductive herd health programs. Extensive student training is accomplished by both laboratory and field application of techniques. BIERSCHWAL, MARTIN, MATHER.

- 271V Veterinary Clinics (3) f.**
Medical, obstetrical, radiological, surgical, and laboratory examination and treatment of diseases of animals. STAFF.
- 272V Veterinary Clinics (3) w.**
Continuation of 271V. STAFF.
- 273V Veterinary Clinics (7) f.**
Continuation of 272V. STAFF.
- 274V Veterinary Clinics (8) w.**
Continuation of 273V. STAFF.
- 276V Clinical Conference (1) w.**
Presentation of clinical case reports by 4th year students, with group discussion by students and staff. STAFF.
- 277V Physical Diagnosis (2) w.**
Fundamentals of clinical veterinary medicine, procedures in physical diagnosis, restraint and treatment of large and small animals. EAGLE, WOLFF.
- 278V Practical Clinical Medicine (3) w.**
Lectures covering advanced surgical procedures on large and small animals. Specialty practice, e.g., ophthalmology, preventive medicine for large animal species, and application of business principles to veterinary practice. STAFF.
- 282V Professional Orientation (1) w.**
Business and legal procedures applicable to veterinary practice. Responsibilities of the veterinarian to the client, and the profession. HEAD.
- 286V Business Methods (2) w.**
Lectures covering basic business methods and accounting. SHARP.
- 351 Advanced Surgical Techniques (cr. arr.) f,s.**
Prerequisite: D.V.M. Special application to large, small animals. HOFFER.
- 355 Advanced Techniques in Radiology (cr. arr.) f,w,s.**
Prerequisite: D.V.M. Special application to domestic animals. CORLEY.
- 356 Advanced Studies of Poisonous Plants and Toxicology (cr. arr.) f,w,s.**
Prerequisite: D.V.M. CASE.
- 400 Problems (cr. arr.) f,w,s.**
Advanced studies to meet the needs of the individual student. STAFF.
- 410 Seminar (1) f,w,s.**
Discussion of current research. STAFF.
- 450 Research (cr. arr.) f,w,s.**
Open to grad. students with requisite preparation.
- 468 Facilitative Surgery (3) w. 1969 & alt. w.**
Prerequisite: dept. consent. Laboratory experience in performance of a wide variety of surgical procedures used in various animals to facilitate experimental studies. HOFFER, KRANER, MID-
DLETON, STAFF.
- 468 Laboratory Animal Biology (3) f. 1967 & alt. f.**
Prerequisite: dept. consent. Reproduction, genetics, nutrition, epidemiology and husbandry of the eight common laboratory animals (cat, dog, guinea pig, hamster, monkey, mouse, rabbit, rat). KRANER, STAFF.
- 469 Laboratory Animal Colony Management (3) f. 1968 & alt. f.**
Prerequisite: dept. consent. Procurement, conditioning, control of use of laboratory animals. Cost accounting and record maintenance. Facility design and construction, environmental requirements and design. KRANER, STAFF.
- 475 Methodology of Animal Experimentation (1) w. 1969 & alt. w.**
Prerequisite: dept. consent. Application of specific species or strains of animals and techniques to various types of medical investigation. KRANER, STAFF.
- 487 Nuclear Medicine (3) f,w.**
Prerequisites: one year college physics, D.V.M. degree, & consent of instr. Degrees equivalent to the D.V.M. will be acceptable. Principles of radiation detection instrumentation, monitoring radiological safety and diagnostic procedures used in veterinary nuclear medicine. TICER.
- 488 Radiation Therapy (3) f,w.**
Prerequisites: one year college physics, D.V.M. degree, & consent of instr. Radiobiological basis for radiation therapy, principles of dosimetry, and radiological safety and treatment. Course is designed for conditions common in veterinary medicine. TICER.
- 490 Research (cr. arr.) f,w,s.**
Open to grad. students with requisite preparation.



Department of Veterinary Microbiology

Professional courses offered in the Department acquaint the student with the morphology and physiology of the causative agents of disease. The techniques of isolation and identification of microorganisms as well as the host response to invading microorganisms also are considered. Specific emphasis is given to basic principles of microbiology with applications to animal diseases, public health, and comparative medicine.

This department includes four sections devoted to teaching and research in various areas of microbiology. The sections include Bacteriology and Mycology, Parasitology, Veterinary Public Health, and Virology. Professional and graduate

courses, offered in each section, provide students with knowledge about infectious agents and their transmission in order to prevent or control diseases in exotic and domestic livestock or pets.

Veterinary Microbiology—Faculty

GEORGE C. SHELTON, D.V.M., M.S., Ph.D.; Associate Dean for Academic Affairs of School of Veterinary Medicine, Chairman, Professor

EDWARD R. AMES, B.S., D.V.M., Ph.D.; Assistant Professor

JOHN N. BERG, D.V.M.; Research Associate

DONALD C. BLENDEEN, B.S., D.V.M., M.S.; Associate Professor, Associate Professor of Community Health and Medical Practice

ROBERT P. BOTTS, A.B., B.S., D.V.M., M.P.H.; Assistant Professor, Assistant Professor of Community Health and Medical Practice

FREDERICK W. CLAYTON, D.V.M., M.P.H., M.S.; Assistant Professor, Assistant Director of Computer Fact Bank, M.R.M.P., Assistant Professor of Community Health and Medical Practice

ARTHUR R. DOMMERT, B.S., D.V.M., M.S., Ph.D.; Associate Professor

C. RICHARD DORN, D.V.M., M.P.H.; Associate Professor, Associate Professor of Community Health and Medical Practice

ADRIAN J. DURANT, B.S., A.M., D.V.M.; Professor Emeritus

RAYMOND W. LOAN, B.S., D.V.M., M.S., Ph.D.; Professor

WILLIAM F. McCULLOCH, D.V.M., M.P.H.; Director of Continuing Education for Veterinary Medicine, Professor, Associate Professor of Community Health and Medical Practice

EMMETT L. McCUNE, B.S., D.V.M., M.S., Ph.D.; Assistant Professor

HAROLD C. McDOUGLE, B.S., A.M., D.V.M.; Professor

ROBERT W. MENGES, D.V.M., M.P.H.; Assistant Professor, Assistant Professor of
Community Health and Medical Practice

LESLIE C. MURPHY, B.S., D.V.M.; Associate Dean for Research Development, Profes-
sor

DWIGHT R. OWENS, B.S., M.S.; Research Associate

HENRY M. PARRISH, B.S., M.D., M.P.H., Dr. P.H.; Associate Professor, Professor of
Community Health and Medical Practice

EDMOND R. PRICE, D.V.M.; Assistant Professor, Assistant Professor of Community
Health and Medical Practice

NORRIS D. ROHDE, B.S., D.V.M.; Research Associate

BRUCE D. ROSENQUIST, D.V.M., M.S., Ph.D.; Assistant Professor

RICHARD R. RYNO, D.V.M.; Research Associate

PAUL R. SCHNURRENBERGER, D.V.M., M.P.H.; Clinical Assistant Professor, Clinical As-
sistant Professor of Community Health and Medical Practice

LLOYD A. SELBY, B.S., D.V.M., M.P.H., Dr. P.H.; Assistant Professor, Assistant Pro-
fessor of Community Health and Medical Practice

STANLEY L. SILBERG, B.A., M.A., M.P.H., Ph.D.; Assistant Professor, Assistant Pro-
fessor of Community Health and Medical Practice

ROBERT F. SOLORZANO, B.S., M.S., Ph.D., Associate Professor

RONALD F. SPROUSE, B.S., M.S., Ph.D.; Assistant Professor

GENE H. SWENSON, D.V.M.; Research Associate

RICHARD B. WESCOTT, B.S., D.V.M., M.S., Ph.D.; Associate Professor, Associate
Professor of Medical Microbiology

200 Problems (cr. arr.) f,w,s.

Studies in special phases of veterinary microbiology and parasitology. STAFF.

240 Avian Diseases (3) f.

Diagnosis and treatment of diseases; parasites of poultry. McDOUGLE.

241V General Veterinary Microbiology (3) w.

Introductory course in fundamentals of microbiology, immunology as applied to veterinary medicine, public health. DOMMERT, McDOUGLE.

242 Veterinary Medicine (4) f.

Pathogenic microorganisms of animals; relationship to public health; considers pathogenesis, immunology of infections. DOMMERT, STAFF.

243 Veterinary Virology (3) w.

Classification and properties of viruses. Considers the etiologic, pathogenetic, and immunologic aspects of viral diseases of animals. LOAN, ROSENQUIST.

245 Veterinary Parasitology (4) f.

Classification, morphology, bionomics of protozoa, helminths, arthropods. Partly devoted to the study of parasitic disease of ruminants. SHELTON, AMES.

246V Veterinary Parasitology (3) w.

Parasities and parasitic diseases of horses, swine, dogs, cats, poultry. WESCOTT, AMES.

247 Poultry Hygiene (2) alt. f.

Prerequisite: Botany 202 & Poultry Farm Mgt. 302. Preventive measures for control of poultry diseases, parasites. McCUNE, McDOUGLE.

249 Veterinary Public Health (3) f.

Epidemiology and transmission of infectious diseases of animals and man; environmental sanitation and comparative medicine. DORN, BLENDEEN, SELBY.

300 Problems (cr. arr.) f,w,s.

341 Advanced Techniques in Veterinary Microbiology (3) w.

Prerequisite: grad. standing in biol. sciences or Vet. Med. STAFF.

345 Techniques in Veterinary Parasitology (3) f,w.

Prerequisites: grad. standing in biol. sciences or Vet. Med. Study & application of methods used in parasitological investigations. WESCOTT, AMES.

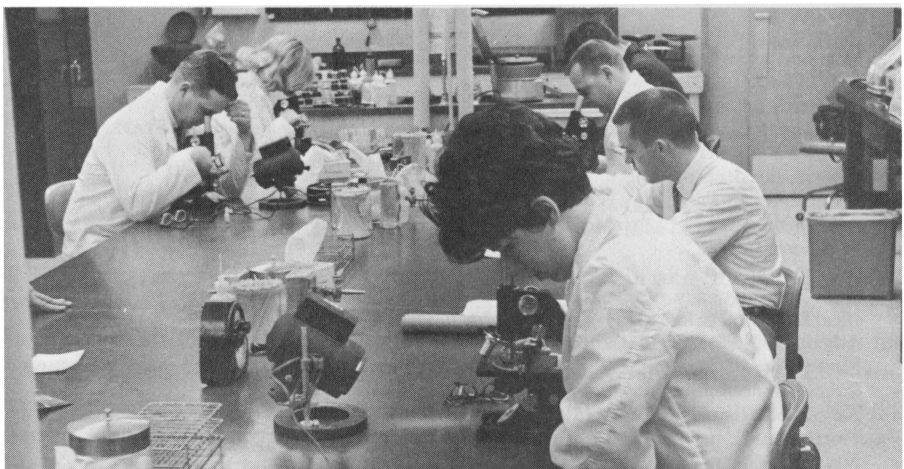
410 Seminar (1) f,w.

Open to grad. students in Vet. Med. and allied biol. sci. Study and discussion of research in animal, poultry diseases. STAFF.

- 442 **Advanced Veterinary Microbiology (3) f.**
Prerequisite: grad. standing in biol. sciences or Vet. Med. STAFF.
- 443 **Viral Infection and Immunity (3) f. 1967 & alt. yrs.**
A study of virus infection at the level of the intact animal with considerations of the epizootiology of viral diseases. LOAN, ROSENQUIST.
- 444 **Diseases of Laboratory Animals (3) w. 1968 & alt. yrs.**
Identification and characterization of the commonly used laboratory animals excluding primates. WESCOTT, STAFF.
- 445 **Advanced Veterinary Parasitology (3) w.**
Prerequisite: grad. standing in biol. sciences or Vet. Med. AMES, SHELTON, WESCOTT.
- 449 **Epidemiology of Zoonoses (3) w.**
Prerequisites: veterinary or medical microbiology & Principles of Epidemiology or consent of instr. A detailed study of the characteristics and the methods involved in the investigation of zoonoses. The course will include the study of recorded and current epidemics. BLENDEN, DORN, SELBY.
- 490 **Research (cr. arr.) f,w,s.**
Nutrition, metabolic activities, pathogenesis of disease producing agents of animals, poultry. STAFF.

Department of Veterinary Pathology

The Department of Veterinary Pathology serves the School of Veterinary Medicine in teaching, diagnosis, and research. The teaching program for veterinary students embraces courses in basic principles of animal pathology, special or systemic pathology, clinical pathology, veterinary meat hygiene, and a course entitled Animal Sanitation and Disease Prevention. Specific instruction also is offered in necropsy procedures and the diagnosis of animal diseases (see Diagnostic Laboratory, page 40).



Veterinary Pathology—Faculty

LAWRENCE G. MOREHOUSE, B.S., D.V.M., M.S., Ph.D.; Acting Chairman, Professor,
Director of Veterinary Medical Diagnostic Laboratory

HARRY H. BERRIER, B.S., D.V.M., M.S.; Associate Professor

RUSSELL V. BROWN, B.S., M.A., Ph.D.; Associate Professor, Associate Professor of
Community Health and Medical Practice, Geneticist at Sinclair Research Farm

CECIL ELDER, D.V.M., M.E.; Professor Emeritus
 RONALD E. FLATT, B.S., D.V.M., M.S., Ph.D.; Associate Professor, Chief of Anatomical Pathology at Sinclair Research Farm
 HARVEY S. GOSSER, D.V.M., M.S.; Research Associate
 AARON H. GROTH, B.S., D.V.M., M.S.; Dean Emeritus, Professor Emeritus
 WILLIAM H. HALLIWELL, B.S., D.V.M.; Research Associate
 BILLY E. HOOPER, B.S., D.V.M., M.S., Ph.D.; Associate Professor
 LOREN D. KINTNER, B.S., D.V.M., M.S.; Professor
 CHARLES C. MIDDLETON, B.S., D.V.M., M.S.; Associate Professor, Director of Sinclair Research Farm
 BONNARD L. MOSELEY, B.S., D.V.M., M.S.; Assistant Professor, Extension Specialist
 STUART L. NELSON, D.V.M., M.S., Ph.D.; Associate Professor
 LEROY D. OLSON, B.S., D.V.M., M.S., Ph.D.; Associate Professor
 NEPHI M. PATTON, B.S., D.V.M., M.S., Ph.D.; Associate Professor
 DONALD E. RODABAUGH, D.V.M., M.S.; Professor, Supervisor of Veterinary Medical Research Farm
 DONALD A. SCHMITZ, D.V.M.; Research Associate
 RONALD L. SCHUELER, D.V.M., M.S.; Research Associate
 H. WAYNE TAYLOR, B.S., D.V.M.; Research Associate
 H. FRED TROUTT, B.S., V.M.D., M.S.; Research Associate

230 Animal Sanitation and Disease Prevention (3) f.

Prerequisite: Animal Science 12. Preventive measures for diseases and parasites of farm animals. RODABAUGH.

231 Veterinary Pathology (5) f.

Basic pathology; detailed study of manifestations of disease producing agents in tissue. MOREHOUSE, KINTNER, NELSON, HOOPER, OLSON, FLATT.

232V Veterinary Pathology (5) w.

Contin. of 231. Systematic pathology. Special attention to specific tissues and organs. MOREHOUSE, KINTNER, NELSON, HOOPER, OLSON, MIDDLETON, FLATT.

234V Veterinary Clinical Pathology (2) w.

Laboratory methods in diagnosis of disease. SCHMIDT, BERRIER.

236V Veterinary Meat Hygiene (3) w.

Meat and meat products in relation to public health. Basic phases of meat and poultry inspection. NELSON.

200 Problems (cr. arr.) f,w,s.

Assignment of special topics for research training in Veterinary Pathology. STAFF.

300 Problems (cr. arr.) f,w,s.

Prerequisite: dept. consent.

335 Techniques in Pathology (cr. arr.) w.

Prerequisite: 10 hrs. chem. Methods and techniques in fixing, preparing, staining pathological specimens. OLSON.

410 Seminar (1) f,w.

Study and discussion of research in animal diseases. Open to grad. students in Vet. Med. and allied biological fields. STAFF.

431 Advanced Veterinary Pathology (3-5) s.

Prerequisite: dept. consent. Specific assignments on diagnostic methods including surgical pathology, necropsies, toxicology. STAFF.

432 Advanced Histo-Pathology (5) w.

Prerequisite: dept. consent. Advanced microscopic study of pathological tissues. KINTNER, NELSON, MOREHOUSE, OLSON, HOOPER, FLATT.

433 Veterinary Oncology (3) f.

Prerequisite: dept. consent. Study of animal neoplasms. NELSON, KINTNER, OLSON.

434 Advanced Clinical Pathology (4) w.

Prerequisite: dept. consent. Laboratory techniques; their application to diagnosis of animal diseases. SCHMIDT, BERRIER.

437 Pathology of Laboratory Animals (3) w. 1968 & alt. w.

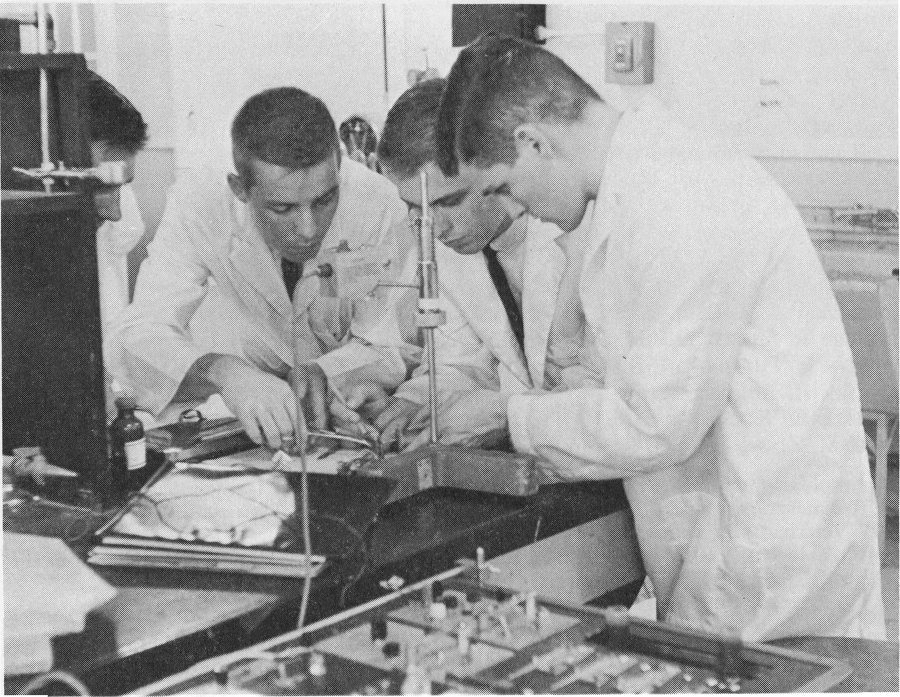
Prerequisite: dept. consent. Gross and microscopic study of spontaneous and natural occurring diseases in laboratory animals. FLATT, MIDDLETON, STAFF.

438 Primatology (3) f. 1968 & alt. f.

Prerequisite: dept. consent. Diseases and pathology of primates. MIDDLETON, FLATT, STAFF.

490 Research (cr. arr.) f,w,s.

Open to grad. students with requisite preparation. Research on specific animal diseases, prevention, and treatment. STAFF.



Department of Veterinary Physiology and Pharmacology

In veterinary physiology, students are instructed in the normal functions, interactions, and responses of tissues, organs, and systems which make up the living animal. Many of these functions and reactions are common to various species of animals, whereas others differ. Veterinary pharmacology teaches students the general and specific actions upon animals of classes and of specific drugs. The differences in response as affected by state of health, age, environment, and species of animal are demonstrated to veterinary students.

Instruction and research in veterinary physiology and pharmacology are supported by biochemists, toxicologists, and bioengineers. It is essential that students of veterinary medicine understand normal functions and be able to predict responses to drugs. This understanding is necessary in order to adequately prepare students for a lifetime of evaluating disease or abnormal conditions and to serve as a basis for disease control and prevention.

Veterinary Physiology & Pharmacology—Faculty

TERRENCE M. CURTIN, B.S., D.V.M., M.S., Ph.D.; Chairman, Professor
BADI M. BOULOS, M.D., M.S., Ph.D.; Assistant Professor, Assistant Professor of Pharmacology
HAROLD J. COOPER, B.S., D.V.M.; Instructor
HOMER E. DALE, D.V.M., M.S., Ph.D.; Professor
LLOYD E. DAVIS, D.V.M., Ph.D.; Associate Professor, Associate Professor of Pharmacology
ROBERT DOAK, D.V.M., M.S.; Research Associate
RICHARD E. DOYLE, B.S., D.V.M., M.S.; Assistant Professor, Assistant Director of Laboratory Animal Medicine
EVENDER E. ELEFSON, D.V.M.; Instructor
LELAND F. HODOVAL, D.V.M., M.S.; Instructor
WILLIAM L. JENKINS, B.V.Sc., M. med. vet.; Graduate Assistant
SAUL D. LARKS, B.S., M.S., Ph.D.; Professor
ROBERT V. MOORE, B.S., M.A., PhD; Professor, Research Associate of Biochemistry
WILLIAM P. PALMORE, D.V.M., M.S., Ph.D.; Assistant Professor
CHARLES R. SHORT, D.V.M., M.S., Ph.D.; Assistant Professor
MYRON E. TUMBLESON, B.S., M.S., Ph.D.; Assistant Professor, Research Associate at Sinclair Research Farm
DONALD E. WEINMAN, D.V.M., Ph.D.; Associate Professor
GENE M. ZINN, D.V.M.; Research Associate

200 Problems (cr. arr.) f,w,s.

Assignment of problems for training in research. DALE.

220V Veterinary Physiology (5) w.

Physiology of muscle, nervous, circulatory, respiratory systems. Lecture, lab, designed to emphasize principles important to practice of veterinary medicine. DALE, STAFF.

221V Veterinary Physiology (5) f.

Continuation of 220V. Digestion, excretion, endocrinology and reproduction. DALE, STAFF.

222 Fundamentals of Animal Physiology (3) w.

For students not in Vet. Med. School. Relationship of structure and function in the common domestic animals. Study of intercellular material, cells, tissues, organs, and systems. Lectures supplemented with slides, movies, and demonstrations. ELEFSON.

223V Veterinary Nutrition (3) f.

Veterinary aspects of nutrition. WEINMAN.

224V Veterinary Physiological Chemistry (5) f.

Chemistry of carbohydrates, lipids, proteins, and other physiologically important chemical systems. Basic intermediary metabolism with special attention to the areas of importance to veterinary medicine. TUMBLESON, WEINMAN.

226V Veterinary Pharmacology (5) w.

General principles of pharmacology followed by systematic study of drugs commonly employed in veterinary practice. Particular emphasis on pharmacodynamics. DAVIS, SHORT, BOULOS.

326 Veterinary Pharmacology (5) w.

General principles of pharmacodynamics in domesticated animals. DAVIS, SHORT, BOULOS.

420 Veterinary Physiology (5) w.

Prerequisite: Ag. Chem. 302 or equiv. Systematic physiology for graduate students with primary interest in animals other than man. Function of nerve, muscle, circulatory and respiratory systems. DALE, ELEFSON.

421 Veterinary Physiology (5) w.

Continuation of 420. Digestion, excretion, endocrinology, and reproduction. DALE, ELEFSON.

427 Fate of Drugs in the Animal Body (2) w. 1967 & alt. w. (Same as Pharmacology 427.)

Prerequisites: 10 hrs. physiology, 5 hrs. pharmacology & 5 hrs. biochemistry. Principles concerned with the absorption, distribution, excretion, and biotransformation of drugs. DAVIS, SHORT.

450 Research (cr. arr.) f,w,s.

Physiological investigations not to terminate in thesis. STAFF.

490 Research (cr. arr.) f,w,s.

Physiological investigations with results published as thesis. STAFF.



Laboratory Animal Medicine

Laboratory animal medicine is a branch of veterinary medical science concerned with the identification, control, and characterization of diseases of laboratory animals; the use of laboratory animals in biological research; and the management of laboratory animal colonies. At the University of Missouri - Columbia, a program has been instituted to provide formal training for graduate veterinarians in this field. Persons with such training are currently in great demand and the need will continue to increase as biomedical research expands.

The undergraduate student in the School of Veterinary Medicine will also profit directly and indirectly from the training program. Direct benefits include the insertion of some phases of laboratory animal medicine in existing courses and the opportunity to enter the program upon graduation. Indirect benefits include the increased faculty and research needed to implement the training program and a number of part-time jobs created by the program. Experience gained through such employment will provide students with knowledge that may be of assistance in military service and many other phases of veterinary medicine.

Laboratory Animal Medicine—Participating Faculty

KEITH L. KRANER, B.S., D.V.M.; Chairman of the Laboratory Animal Medicine Committee, Professor of Veterinary Microbiology

RICHARD E. DOYLE, B.S., D.V.M., M.S.; Assistant Director of Laboratory Animal Medicine, Assistant Professor of Veterinary Physiology and Pharmacology

RONALD E. FLATT, B.S., D.V.M., M.S., Ph.D.; Assistant Professor of Veterinary Pathology

RICHARD E. HOFFER, D.V.M., M.S.; Associate Professor of Veterinary Medicine and Surgery

BILLY E. HOOPER, B.S., D.V.M., M.S., Ph.D.; Associate Professor of Veterinary Pathology

WILLIAM T. KERBER, D.V.M.; Assistant Professor of Veterinary Medicine and Surgery

CHARLES C. MIDDLETON, D.V.M., M.S.; Associate Professor of Veterinary Pathology
LOUIS R. NELSON, B.S., D.V.M.; Research Associate of Veterinary Medicine and Surgery

NEPHI M. PATTON, B.S., D.V.M.; Research Associate of Veterinary Pathology

REED W. RINGS, B.S., D.V.M., Research Associate of Veterinary Medicine and Surgery

ROBERT A. STUHLMAN, D.V.M.; Research Associate of Veterinary Medicine and Surgery

RICHARD B. WESCOTT, B.S., D.V.M., M.S., Ph.D.; Associate Professor of Veterinary Microbiology

400 Problems (cr. arr.) f,w,s.

Prerequisite: consent of instr. Advanced studies not expected to terminate in a thesis. STAFF.

410 Seminar (1) f,w,s.

Prerequisite: consent of instr. Discussion of current research in laboratory animal medicine. STAFF.

437 Pathology of Laboratory Animals (3) w. 1968 & alt. w. (Same as Veterinary Pathology 437.)

Prerequisite: consent of instr. Gross and microscopic study of spontaneous and natural occurring diseases of laboratory animals. FLATT, MIDDLETON, STAFF.

438 Primatology (3) f. 1968 & alt. f. (Same as Veterinary Pathology 438.)

Prerequisite: consent of instr. Diseases and pathology of subhuman primates. MIDDLETON, FLATT, STAFF.

444 Diseases of Laboratory Animals (3) w. 1968 & alt. w. (Same as Veterinary Microbiology 444.)

Prerequisite: consent of instr. Identification and characterization of the diseases of commonly used laboratory animals excluding primates. WESCOTT, STAFF.

450 Research (cr. arr.) f,w,s.

Prerequisite: consent of instr. Research not expected to terminate in a thesis. STAFF.

458 Facilitative Surgery (3) w. 1969 & alt. w. (Same as Veterinary Medicine & Surgery 458.)

Prerequisite: consent of instr. Laboratory experience in performance of a wide variety of surgical procedures used in various animals to facilitate experimental studies. HOFFER, KRANER, MIDDLETON, STAFF.

468 Laboratory Animal Biology (3) f. 1967 & alt. f. (Same as Veterinary Medicine & Surgery 468.)

Prerequisite: consent of instr. Reproduction, genetics, nutrition, epidemiology, and husbandry of the eight common laboratory animals (cat, dog, guinea pig, hamster, monkey, mouse, rabbit, rat). KRANER, STAFF.

469 Laboratory Animal Colony Management (3) f. 1968 & alt. f. (Same as Veterinary Medicine & Surgery 469.)

Prerequisite: consent of instr. Procurement, conditioning, and control of use of laboratory animals. Cost accounting and record maintenance. Facility design and construction, environmental requirements and design. KRANER, STAFF.

475 Methodology of Animal Experimentation (1) w. 1969 & alt. w. (Same as Veterinary Medicine & Surgery 475.)

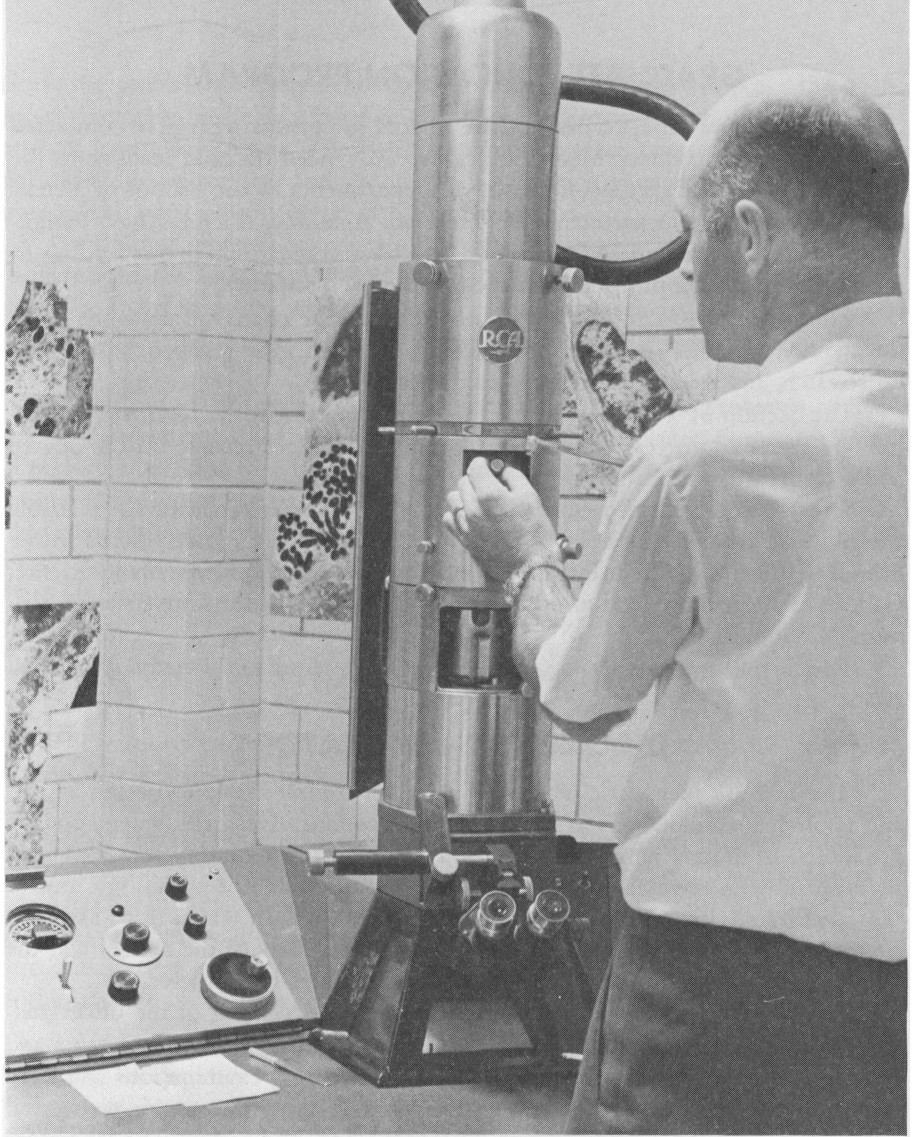
Prerequisite: consent of instr. Application of specific species or strains of animals and techniques to various types of medical investigation. KRANER, STAFF.

490 Research (cr. arr.) f,w,s.

Prerequisite: consent of instr. Research expected to terminate in a thesis. STAFF.

RESEARCH

Advancements in medicine and science are largely the result of continuous research. Research in veterinary medicine provides a clearer understanding of disease processes, thereby making possible improved methods for preventing, treating, and curing diseases of animals and man. The versatility of the veterinary medical profession has permitted its members to work in a wide variety of research areas.



Electron Microscope

Research programs in the School of Veterinary Medicine have greatly expanded in recent years. Much of the success has been due to the efforts of Dr. L. C. Murphy, Associate Dean. Research projects are supported by federal grants, state funds, foundation awards and grants or contracts from industries, livestock producer associations, and other groups.

Some of the research categories being investigated include: infectious and non-infectious diseases of livestock and poultry; zoonoses (diseases transferred from animal to man); reproductive biology; aging; comparative anatomy, physiology, pharmacology, and pathology; neoplasia; laboratory animal medicine; veterinary public health; environmental health; radiation biology; clinical research and drug evaluation; nutritional studies; and germ-free research.

GRADUATE EDUCATION PROGRAM

Opportunities for specialization are offered to persons who have completed the Doctor of Veterinary Medicine degree. Advanced training leading to the Master of Science degree is offered by all departments in the School of Veterinary Medicine. The Departments of Veterinary Anatomy, Microbiology, Pathology, and Physiology and Pharmacology also offer graduate programs leading to the Doctor of Philosophy degree in their respective disciplines.

The graduate programs are designed to meet the changing demands upon the veterinary medical profession in teaching, animal disease research, basic medical research, and research in human health-related areas.

The Section of Veterinary Public Health, Department of Veterinary Microbiology offers a two-year residency program. Candidates receive a M.S. degree and a certificate of residency.

Offices, well-equipped laboratories, and good library facilities are available for graduate student research. Courses for graduate students are offered in the School of Veterinary Medicine, School of Medicine, College of Arts and Science, College of Agriculture, and in other schools or colleges of the University of Missouri - Columbia.

For further information refer to the Bulletin, *Graduate Veterinary Medical Education*.

DIAGNOSTIC LABORATORY

The school's diagnostic laboratory provides complete and thorough animal and poultry disease diagnostic service for veterinarians, livestock owners, poultry producers, laboratory animal colonies, and others. The laboratory is staffed with individuals who have advanced training in the discipline of pathology, microbiology, virology, parasitology, and other disciplines. In addition to assigned personnel, the laboratory may consult with staff members of the School and the University of Missouri - Columbia on disease problems encountered.

Another important function of the laboratory is training of the undergraduate student. Students are assigned to this area during their clinical years and under the supervision of staff members conduct necropsy examinations and learn interpretation of laboratory tests, e.g., bacterial culturing, serologic tests, viral isolation, parasitologic examinations, histopathology, and others. The laboratory also functions as a training area for graduate students in pathology and related disciplines.

CONTINUING EDUCATION

The Extension Division of the University of Missouri is organized to serve the people and institutions of the state. As part of this division, the extension activities in the School of Veterinary Medicine are centered on the activities of the Director of Continuing Education and other full- and part-time staff veterinarians.

The two principle objectives of Veterinary Medical Continuing Education are continuing professional training for veterinarians and cooperative extension activities. These are interrelated and complementary in that the first serves to in-

crease the professional competence of veterinarians and thereby improve the quality of veterinary medicine offered to clients in the prevention and control of diseases of livestock and pets. The latter acquaints livestock owners with the potential of veterinary services and the methods by which veterinary services can be used to the greatest advantage of livestock owners.

Continuing professional education is accomplished by regular mailing of information in the form of ASCAPI (abstracts) and BRIEFS (short items of interest) to more than 800 veterinarians. Conferences, seminars, and short courses also are scheduled for practitioners to participate in intensive learning opportunities.

Several means are used to present information on disease problems to livestock producers and allied interest groups in animal agriculture. Group meetings of persons interested in a general subject are requested by or scheduled through county extension directors. Those in attendance are encouraged to participate in the presentations by asking questions and relating their experiences and problems. Local practicing veterinarians also are invited to attend and participate in these programs.

STUDENT CONDUCT

The veterinary medical curriculum not only prepares students for their profession, but is also designed to instill within them a sense of ethics, honor, and integrity befitting their new role in society. Professionalism must take root during school years. Throughout the veterinary medical program of study, students are expected to acquire an indelible appreciation of ethical professional conduct.

Dress standards set during these years help the individual develop a professional appearance. Professional dress includes white shirts and ties for all lecture classes, neat and clean protective dress during laboratory periods, and white clothing in the clinic areas.

Code of Ethics

Honesty is an essential part of professionalism. The "Code of Ethics" at the University of Missouri - Columbia School of Veterinary Medicine places the responsibility for honor and honesty on the student; therefore, examinations are not supervised by faculty members. The expensive drugs and equipment used in clinics and laboratories are made available for most effective instruction with the understanding that the candidate for the D.V.M. degree will use these materials only for their intended purposes without being policed by faculty members.

This Code applies to all students in the School of Veterinary Medicine and helps promote ethical standards of personal and professional conduct among the students. Reported violations of this Code are carefully investigated by the Honor Council and every precaution is taken to arrive at a just decision. A student found guilty of violating the Code may be dismissed from the School. Anyone unwilling to accept the responsibility for maintaining the Code should not apply for admission to the School of Veterinary Medicine.

Withdrawal and Re-Admission

A student who withdraws from the School of Veterinary Medicine or is eliminated for cause must apply for readmission and be interviewed by the School's Committee on Admissions.

To maintain good standing in the School of Veterinary Medicine, a student must have a 1.5 grade point average or better at the end of the first year and a 2.0 grade point average or better at the end of the second year. A grade of *F* in any of the required professional courses means an automatic withdrawal. A student who has been dropped because of unsatisfactory grades, if re-admitted, may be requested to repeat each course in which he received a grade below *C*.

STUDENT ACTIVITIES

Pre-Veterinary Medicine Club

Students on the Columbia Campus engaged in pre-veterinary medical study qualify to join this club. A faculty member of the School of Veterinary Medicine acts as advisor. Regular meetings are held, with speakers discussing various aspects of the profession. One objective of the club is to bring about a closer fellowship among students who have a common interest in seeking admission to the School of Veterinary Medicine.

Student Chapter of the American Veterinary Medical Association

All veterinary medical students are eligible for membership in the Missouri Student Chapter of AVMA. A guest speaker usually is featured at monthly meetings after the transaction of chapter business. Other activities include a picnic given by the second-year class to welcome the incoming class; a smoker at which new students and faculty members are welcomed by the other three classes; an all-school party and dance; and the annual banquet to honor the graduating class, followed by an all-school dance. The chapter members have financed these activities by earning a sales percentage of refreshments sold at all home varsity football games. Each member contributed time to help with these sales at a designated number of games.

The Student Chapter contributes to the payment of chapter dues and journal subscriptions for its members. It supports the social functions and pays rental costs on caps and gowns for graduating seniors. The Student Chapter publishes its official journal, *The Missouri Veterinarian*, three times a year, maintains loan funds for its members, and finances the trips of its delegates to national meetings.

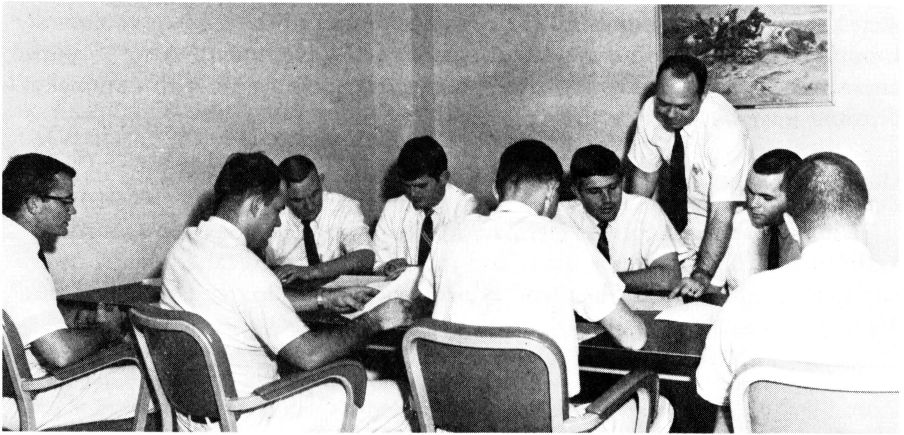
The Missouri Veterinarian

This is a student-published journal, with a state-wide circulation to all veterinarians within Missouri in addition to the School of Veterinary Medicine faculty, students, and alumni. Articles in the journal are directed to the practitioner.

All students interested in assisting with this publication are invited to join the staff to help with reporting, editing, assembling, or circulation. Editors and business, advertising, and circulation managers are selected on their previous experience with the journal, along with their ability and dedication to the profession.

Class Officers

Each class elects its own officers annually—a president, vice president, secretary-treasurer and a class representative. Also, an elected student advisory group on School policy meets with several faculty committees, the deans and School administrators.



Student AVMA Executive Council

Student AVMA Officers

Members of the Student Chapter of the AVMA elect a president, vice president, secretary, and treasurer who, along with several officers of each class, make up the Executive Council. Committees for the AVMA are appointed by the president.

Honor Council

This council consists of a class Administrative Board, an Executive Administrative Board, and a School Administrative Board. Each Class Board consists of five members, chosen by ballot, who are not members of the Executive Board. The Class Board handles the rules as they apply to their class only. The Executive Board has two members from each class, with a senior serving as chairman. The School Board is composed of the Dean and the Department Chairmen of the School. Matters pertaining to the Honor Code are channeled through these boards on a graduated level—Class to Executive to School.

Women's Auxiliary

Wives of students who are members of the Student Chapter of the AVMA are eligible to join this Auxiliary organization. Monthly meetings are held with a variety of programs—guest speakers on subjects related to the veterinary profession, homemaking, fashion, business, and many others. Wives of faculty members serve as sponsors to the group.

Other Campus Activities

Activities available on the Columbia Campus include music, drama, student forums, recreational athletics, publications, and organizational work. Each UMC student is a member of the Missouri Students Association. Through MSA all students have a voice in University of Missouri - Columbia affairs and are offered the opportunity to fulfill their responsibilities to the student community through participation in a system of student self-government. Also, 27 social fraternities, 16 social sororities, and one fraternity colony, all with national affiliations, have chapters on the Columbia Campus.

Alumni Association

Alumni of the School of Veterinary Medicine have formed their own Alumni Association. They provide a loan fund for veterinary medical students, contribute to the Achievement Fund, and present portraits of deceased and retired faculty members to the School.

HONOR SOCIETIES

Phi Eta Sigma. This honorary society recognizes high scholastic attainment of 3.5 or better among freshman students, based on their work in the first semester.

Sigma Rho Sigma. This honorary sophomore society recognizes 50 outstanding freshmen with a grade average of 2.75 or better after two semesters of work.

Alpha Zeta. An honorary agricultural fraternity whose members are chosen according to academic standing and must be active in extracurricular activities related to agriculture.

Gamma Sigma Delta. This national organization recognizes members of the College of Agriculture and Schools of Forestry, Home Economics, and Veterinary Medicine who have shown exceptional ability during undergraduate or graduate work and of those alumni and faculty members who have rendered signal service to the cause of agricultural development.

Phi Zeta. This is a scholastic honorary society to which third- and fourth-year veterinary medical students may be elected. It recognizes outstanding scholarship in the veterinary profession.

Senior Honoraries. Mortar Board, Mystical Seven, Omicron Delta Kappa, and QEBH are senior organizations which recognize leadership and service in addition to scholastic attainment.

FINANCIAL AIDS & AWARDS

The University of Missouri - Columbia has numerous scholarship and loan funds available. These are described in the Bulletin, *Scholarships, Aids and Awards*. Additional information on these funds is also available from the following sources:

Director of Student Financial Aids
123 Jesse Hall
Associate Dean
School of Veterinary Medicine
106 Connaway Hall

Chairman, Aids and Awards Committee
School of Veterinary Medicine
103 Connaway Hall

Scholarships

Curators Scholars in Veterinary Medicine. Awards are made to students entering their first year of veterinary medicine. The awards are made on the basis of scholarship and financial need, and cover the incidental and special fees for Missouri residents during the first year.

Danforth Scholarship. This scholarship offers two weeks of leadership training at the American Youth Foundation Camp near Stoney Lake, Michigan. It is awarded to an outstanding first-year veterinary medical student.

Pfizer Scholarship. A \$400 award for scholarship and leadership is given to a third-year veterinary medical student to defray part of the expenses of the fourth year while completing requirements for the D.V.M. degree.

Fellowships

Morris Animal Foundation Fellowships. Sponsored by the Mark Morris Animal Foundation of Denver, Colorado, these competitive fellowships are awarded to veterinary medical students who show interest in research and who have written an acceptable research proposal. The amount of the stipend varies.

The AVMA Foundation Undergraduate Research Fellowships. These fellowships have been created by the American Veterinary Medical Association to provide financial assistance to students interested in research. Each applicant must have a faculty sponsor and must submit a brief resumé of a research proposal. The fellowship amount is \$600, usually for a summer, plus additional facilities support.

Loans

Students enrolling in the School of Veterinary Medicine should be financially solvent during the first year. This will qualify them as professional students before applying for money from any of the funds available to veterinary medical students.

Health Professions Student Loan Program. This loan was made available through the enactment of the Veterinary Medicine Education Act of 1966. To qualify for this program the applicant must be 1) a citizen of the United States; 2) a full-time student; 3) engaged in pursuing a course of study leading to a D.V.M. degree; and 4) in good standing and capable of maintaining such standing.

The Missouri Student Chapter of the AVMA Memorial Loan Fund. Established in 1954, this fund was formerly called the Boyer-Matthews Memorial Fund in memory of two students who died during their final year in school. Additional contributions to

the fund have been made in memory of Marlyn Rhoades, deceased wife of a student in the School; and by the family and friends of David L. Rosner, deceased son of Dr. and Mrs. L. A. Rosner. Dr. Rosner served as Missouri State Veterinarian for 12 years.

B. B. Roseboom Memorial Student Fund. This fund was established in 1957 by the Student Chapter of the AVMA in memory of the late B.B. Roseboom, professor of veterinary physiology.

Stanley N. Smith Memorial Fund. The family, friends, and associates of Dr. Stanley N. Smith established this fund to commemorate his 58 years of service to the profession, 10 of which were on the faculty of the School.

The School of Veterinary Medical Alumni Association Loan Fund. This fund is maintained by the alumni of the School for third- and fourth-year students.

Women's Auxiliary to the American Veterinary Medical Association. Fourth-year students are given preference for this fund; third-year and graduate students also are considered. The maximum amount of a loan is \$500; the interest rate is two per cent a year, with the principal to be repaid in two years and the remainder due three years from date.

Women's Auxiliary to the Missouri Veterinary Medical Association Loan Fund. Established in 1950, it is the oldest loan fund available to veterinary medical students.

Central Missouri Veterinary Medical Association Loan Fund. This loan is available to third- and fourth-year veterinary medical students.

Awards

Departmental Awards. The Department of Veterinary Anatomy awards a certificate and a gift set to a first-year veterinary medical student based on his performance in veterinary anatomy. The Department of Veterinary Microbiology gives the "Show-me Award in Microbiology," a cash award and plaque presented to the most proficient second-year student in veterinary microbiology. A second-year student showing the most outstanding interest and aptitude in the discipline of veterinary pathology receives a set of pathology reference books from the Department of Veterinary Pathology. The Department of Veterinary Physiology and Pharmacology gives a second-year student a cash award and certificate for his outstanding performance in veterinary physiology.

Financial Aids and Awards

Upjohn Awards. A stipend and a certificate of award plus a fitted leather medical case are awarded to two fourth-year students who show the greatest proficiency in large and small animal clinical skills.

Veterinary Medicine Magazine Awards. Established by the late Dr. Robert L. Anderes, editor of *Veterinary Medicine*, these awards are given to two fourth-year students on the basis of greatest improvement in large animal clinical skills. They consist of a stipend, certificate of award, and a subscription to *Veterinary Medicine*.

The Merck Awards. Personalized copies of the "Merck Veterinary Manual" are presented to a student having the highest scholastic averages in the third-year and fourth-year classes.

The Gamma Sigma Delta Award. The society annually honors a fourth-year student who has demonstrated high academic and extracurricular achievement. The student's name is inscribed on a permanent plaque which hangs in the School's Veterinary Medical Library.

The Missouri Veterinarian Award. For the best article prepared by a Veterinary Medical student, the *Missouri Veterinarian* presents a \$25 cash award, and a \$10 cash award for the runner-up.

Phi Zeta Award. A certificate is awarded to honor the second-year student having the highest scholastic record for the first three semesters of the professional veterinary medical curriculum.

The Pitman-Moore Award. A plaque is presented to an outstanding individual serving on the publications staff of the *Missouri Veterinarian*.

Women's Auxiliary to the American Veterinary Medical Association. A certificate and \$50 are presented to the fourth-year student who does the most to advance the School and the profession on the campus.

Groth Student Research Award. A certificate and cash award sponsored by Diamond Laboratories are awarded to a third-year veterinary medical student in recognition of his interests and achievements in veterinary medical research during the first three years of his professional curriculum.

The West Central VMA Leadership Award. The West Central Veterinary Medical Association of Missouri awards a plaque to a first-year student active in the promotion of organized veterinary medicine.

Student Employment

Many students work part time while attending school. Because of the high number of classroom and laboratory hours required of veterinary medical students, it is recommended that outside work be kept at a minimum, especially during the first year.

Some students are employed on research projects, in laboratories, and in clinics. Other students find employment for board, and room and board. The Student Employment Office, a division of the Office of Student Financial Aids, 123 Jesse Hall, provides information and assistance to students seeking part-time work.

STUDENT HOUSING

Prospective students should contact the Housing Office, 123 Jesse Hall, Columbia, Missouri 65201, either by mail or in person when applying for admission to the University of Missouri - Columbia. Additional information will then be forwarded upon request.



University Housing

1. *Single men and women.* UMC residence halls accommodate men and women students. In addition to providing room and board, the residence hall program offers opportunities for social, recreational, and cultural activities which help provide students with a well-rounded life on campus.

2. *Married students.* Accommodations for married students are available in University-owned married student housing and in privately-owned apartments.

Off-Campus Housing

The Housing Office maintains a list of available rooms and apartments in off-campus housing facilities. The student interested in living off-campus probably should visit Columbia well in advance of the date housing is required to arrange for such accommodations. The local newspapers are good sources for available rooms, apartments, and houses to rent. Since the list of off-campus housing is frequently amended, it is not made available by mail.

Sororities and Fraternities

Sororities and fraternities offer housing to both members and pledges of their organizations. Inquiries concerning these should be addressed to Director, Student Affairs for Women or to Assistant Dean of Students, 100 Read Hall, Columbia, Missouri 65201.

University of Missouri - Columbia

Schools and Colleges:

College of Agriculture

School of Forestry

School of Home Economics

College of Arts and Science

School of Business and Public Administration

College of Education

College of Engineering

Graduate School

School of Journalism

School of Law

School of Library and Informational Science

School of Medicine

School of Nursing

School of Social and Community Services

School of Veterinary Medicine

University Extension Division

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