

# College of Veterinary Medicine

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## General Information

The College of Veterinary Medicine was established in 1974 by an act of the Mississippi Legislature. The first class was admitted during the 1977-78 academic year and graduated in May of 1981.

The permanent College facilities, completed in the fall of 1981, include the learning resources center, the animal health center, and the research facility. College programs, faculty, students, and staff are located in these facilities.

The primary objective of the College is to serve the needs of Mississippi. In quest of this objective, the College will provide training in the sciences required for a career in veterinary medicine and veterinary medical technology. The Doctor of Veterinary Medicine curriculum focuses on the skills of the veterinary practitioner who will serve the animal-owning public of Mississippi while the veterinary medical technology curriculum focuses on the skills necessary to facilitate the work of veterinarians.

Students seeking a degree in either veterinary medicine or veterinary technology should acquire a sound foundation in the biological and physical sciences and a general knowledge of the humanities in high school and college. Because of the increasing use of information technology in veterinary medicine, students are strongly encouraged to acquire familiarity with computers. They must have a demonstrated aptitude for scientific study, and, in addition, experience with animals. An awareness of the requirements and characteristics of the practice of veterinary medicine is desirable in reaching a mature decision to pursue a career in either veterinary medicine or veterinary technology.

## Early Entry Program for the College of Veterinary Medicine

The Early Entry Program is offered on a competitive basis to high school seniors who have demonstrated exceptional academic achievement. Applications are available by October 1st of each year and are due for return by January 5th. Online applications are available at [www.cvm.msstate.edu](http://www.cvm.msstate.edu). Questions should be addressed to the Office of Student Admissions, College of Veterinary Medicine at (662) 325-9065 or [hadaway@cvm.msstate.edu](mailto:hadaway@cvm.msstate.edu).

The Program is designed so an individual has the opportunity to obtain both a B.S. degree and a D.V.M. degree in seven to eight years. Those accepted into the Early Entry Program are pre-accepted into the professional program at the College of Veterinary Medicine contingent upon their maintaining predetermined qualifications throughout their college career and providing documentation of no less than 480 hours veterinary experience.

## Traditional Entrance Requirements

A Test of English as a Foreign Language (TOEFL®) score of 213 is required for applicants whose primary language is not English, also due September 15. Three (3) completed LOR (Letter of Recommendation) forms are required with the completed VMCAS application. At least one evaluator must be a veterinarian. To apply, applicants must have a minimum overall grade point average of 2.80. Minimum GPAs must be maintained throughout the application process. No grade lower than a C- is acceptable in any required course. Remediated and repeated courses must be completed before the application is submitted. Prerequisite courses for entrance into the college must include specific courses:

English composition	6
Speech or Technical Writing	3
Mathematics (college algebra or higher)	6
Biological science with lab	8
Microbiology with lab	4
Inorganic chemistry with lab	8
Organic chemistry with lab	8
Biochemistry	3
Physics (can be Trig-based)	6
Advanced Upper-level Science electives	12
Humanities/fine arts/social and Behavioral sciences	15
<b>Total Hours</b>	<b>79</b>

Science and mathematics courses must be completed or *updated* within six calendar years prior to the anticipated date of enrollment.

## Admission Procedure

Applications are accepted through September 15 each year for the upcoming academic year. Admissions, interviews, and decisions take place in the spring, with new students beginning classes around July 1. All applicants apply electronically through the Veterinary Medical College Application Service (VMCAS) at [www.aavmc.org](http://www.aavmc.org) (<http://www.aavmc.org>). Applications are available online from May 15 to September 15 each year.

Further information may be obtained from:

Office of Student Admissions  
College of Veterinary Medicine  
Mississippi State University  
Box 6100, Mississippi State, MS 39762-6100  
662-325-9065; [msu-cvmadmissions@cvm.msstate.edu](mailto:msu-cvmadmissions@cvm.msstate.edu)

## DVM Curriculum

The professional curriculum is divided into two phases - Phase 1 (DVM 1 and DVM 2 years) and Phase 2 (DVM 3 and DVM 4 years).

Phase 1 is conducted in a lecture/lab based format.

### DVM 1 Courses

#### Freshmen Fall Courses

CVM 5011	Professional Development I	1
CVM 5013	Veterinary Neuroscience	3
CVM 5023	Infectious Agents I	3
CVM 5033	Immunology	3
CVM 5036	Veterinary Physiology	6
CVM 5046	Veterinary Anatomy I	6
CVM 5073	Veterinary Histology	3

#### Freshmen Spring Courses

CVM 5021	Professional Development II	1
CVM 5022	Veterinary Epidemiology	2
CVM 5044	Veterinary Pathology	4
CVM 5072	Veterinary Anatomy II	2
CVM 5163	Veterinary Parasitology	3
CVM 5193	Veterinary Agents of Infectious Disease II	3
CVM 5223	Veterinary Pharmacology I	3

**Total Hours** 43

### DVM 2 Courses

#### Sophomore Fall Courses

CVM 5111	Professional Development III	1
CVM 5123	Veterinary Clinical Pathology	3
CVM 5143	Theriogenology	3
CVM 5153	Equine Medicine & Surgery I	3
CVM 5152	Toxicology	2
CVM 5186	Small Anim Med & Surgery I	6
CVM 5213	Introduction to Veterinary Anesthesiology	3
CVM 5553	Pharmacology II	3

#### Sophomore Spring Courses

CVM 5121	Professional Development IV	1
CVM 5133	Veterinary Preventive Medicine	3
CVM 5173	Equine Medicine & Surgery II	3
CVM 5162	Diagnostic Imaging	2
CVM 5175	Food Animal Medicine and Surgery	5
CVM 5183	Special Species	3

CVM 5196	Small Animal Medicine and Surgery II	6
<b>Total Hours</b>		<b>47</b>

## Clinical and Elective

Phase 2, (DVM3 and DVM4 years) is conducted in a clinical and elective format. Students participate in fourteen required clinical rotations of two to six weeks duration each. In these rotations students actively participate in the clinical diagnosis and management of patients admitted to the Animal Health Center.

During the fourth year (DVM4) students have 7 months of elective options. The options include elective clinical rotations, externship experiences, small group or discussion based courses, and special problems (directed individual study) opportunities. In essence, each student, working closely with a faculty advisor, designs a schedule which most uniquely meets the student's needs and career preferences.

Conducted in an experiential-learning mode, the clinical rotations and many of the electives continue to make the student responsible for his or her own education. The clinical cases or elective courses provide the environment for continued student growth and development. Students must be mature and responsible learners to obtain the maximum benefit from these courses.

### DVM3 Courses

#### Services and Practices

CVM 5214	Laboratory Services	4
CVM 5224	Radiology	4
CVM 5234	Anesthesiology	4
CVM 5246	Community Veterinary Services	6
CVM 5256	Small Animal Surgery	6
CVM 5266	Equine Medicine & Surgery	6
CVM 5273	Population Medicine	3
CVM 5276	Food Animal Practice	6
<b>Total Hours</b>		<b>39</b>

### DVM4 Courses

CVM 5000	Directed Individual Study in CVM	1-6
CVM 5182	Veterinary Disaster Management	2
CVM 5222	Small Animal Clinical Nutrition	2
CVM 5282	Ambulatory/Large Animal Primary Care <sup>1</sup>	2
CVM 5292	Flowood/MVRDL Externship <sup>1</sup>	2
CVM 5301	Clinicopathological Conference <sup>1</sup>	1
CVM 5310	Small Animal Emergency and Critical Care Medicine <sup>1</sup>	4-6
CVM 5364	Veterinary Specialty Center Rotation <sup>1</sup>	4
CVM 5380	Small Animal Internal Medicine	6-8
CVM 5420	Advanced Rotation in Radiology	2-4
CVM 5430	Advanced Rotation in Anesthesiology	2-4
CVM 5452	Small Animal Physical Rehabilitation	2
CVM 5454	Advanced Rotation in Small Animal Surgery	4
CVM 5464	Adv Rot Eq Med & Surg	4
CVM 5474	Advanced Rotation in Food Animal Practice	4
CVM 5510	Veterinary Medicine/Animal Industry Externship 1	2-6
CVM 5520	Veterinary Medicine/Animal Industry Externship 2	2-6
CVM 5530	Veterinary Medicine/Animal Industry Externship 3	2-6
CVM 5540	Veterinary Medicine/Animal Industry Externship 4	2-6
CVM 5550	Veterinary Medicine/Animal Industry Externship 5	2-6
CVM 5560	Advanced Clinical Rotation 1 (ACR 1)	2-6
CVM 5570	Advanced Clinical Rotation 2 (ACR 2)	2-6
CVM 5580	Advanced Clinical Rotation 3 (ACR 3)	2-6
CVM 5602	Comparative Endocrinology	2
CVM 5640	Shelter Medicine Spay Neuter	2-6
CVM 5652	Equine Podiatry	2

CVM 5662	Clinical Neurology	2
CVM 5672	Veterinary Dentistry	2
CVM 5682	Veterinary Ophthalmology	2
CVM 5692	Veterinary Art and Business Management	2
CVM 5702	Clin Hematology & Immunology	2
CVM 5722	Small Ruminant Production Medicine	2
CVM 5754	Advanced Small Animal Surgery	4
CVM 5764	Advanced Equine Reproduction	4
CVM 5772	Canine Theriogenology	2
CVM 5802	Practical Small Animal Oncology	2
CVM 5812	Behavior for the Companion Animal Veterinarian	2
CVM 5814	The Feline Patient	4
CVM 5854	Aquarium Health Management	4
CVM 5862	Equine Lameness	2
CVM 5864	Bovine Production Medicine	4
CVM 5874	Bovine Theriogenology	4
CVM 5990	Special Topics in CVM	2-6
<b>Total Hours</b>		<b>81-128</b>

<sup>1</sup> Required

Students must take 26 hours of electives during their senior year. Electives can be selected from the above listed CVM courses or from University courses upon advisor's approval.

## Veterinary Medical Technology (VMT)

The Veterinary Medical Technology program (VMT) prepares students for multiple career opportunities. Upon completion of this program, graduates will positively contribute to the veterinary health care team regardless of the area/specialty graduates wish to pursue. Potential work environments for VMTP graduates include but are not limited to private veterinary practice, biomedical research, pharmaceutical industry, zoological parks, humane societies, nutrition companies, United States Department of Agriculture, U.S. military and academic institutions. Students interested in the Veterinary Medical Technology Program will have the option of selecting Undeclared with a Vet Tech concentration as their major at the time of their admission to Mississippi State University. Once students are admitted into the third year of the program, they will be classified as VMT majors.

During the first two years of the curriculum, students are enrolled as Undeclared with a Vet Tech concentration. The first two years of the curriculum are mainly composed of general education courses. Students can apply as early as the spring semester of their sophomore year for entry into the junior year of the VMTP if not already accepted under the Pre-admission policy. The third year of the curriculum is competitive and enrollment is limited to 30 students. Entry into the third year of the program requires successful completion of either the Pre-admission or Regular Admission application process. Students will be allowed a maximum of two times to apply to the VMTP. At that point, if they are not successful, they will be required to seek another major.

Accepted students will begin classes the fall semester following acceptance. The fourth year mainly consists of clinical experiences and begins the fall semester following successful completion of the third year. Students will be evaluated by exams throughout the curriculum for successful program advancement.

## Pre-admission Policy

Pre-admission to the junior year is offered on a competitive basis to high school seniors and college students who have only resided on a college campus for a semester or less. Applicants must have demonstrated significant academic achievement including an overall GPA of 2.8 (80% or higher) for high school seniors or an overall GPA of 2.8 for college freshmen. There is also an ACT requirement of 21 or an SAT requirement of 1470. Complete admissions requirements and online applications are available at [www.cvm.msstate.edu](http://www.cvm.msstate.edu). Those granted pre-admission into the VMTP are pre-accepted into the junior year of the VMTP contingent upon maintaining predetermined qualifications during their freshman and sophomore years.

## Regular Admission Policy

Applications are available online January 15 - March 1. Admission procedures include a critique of each applicant's academic record, an evaluation of each applicant's references, and a personal interview of selected applicants. Further information may be obtained from Veterinary Medical Technology Program, College of Veterinary Medicine, Mississippi State University, PO Box 6100, Mississippi State, MS, 39762; 662-325-1103; [msvmt@cvm.msstate.edu](mailto:msvmt@cvm.msstate.edu)

## Entrance Requirements to the Junior Year

An applicant to the junior year of the VMTP must successfully complete prerequisite courses by the end of the spring semester prior to beginning the junior year. Three (3) letters of recommendation are required. To apply, applicants must have a minimum grade point average of 2.5 (regular admission) or 2.8 (pre-admission) on a 4.00 scale with no grade less than "C" in any prerequisite course. The minimum GPA must be maintained throughout the application process. Prerequisite courses for entrance into the VMTP must include specific courses:

English Composition		6
Mathematics (college algebra or higher)		6
Inorganic Chemistry		7
Humanities		6
Social/Behavioral Sciences		6
Public Speaking		3
Microbiology with lab		4
Biological Science with lab		8
Fine Arts		3
ADS 1113 & ADS 1121 or VS 3014	Animal Science and Animal Science Laboratory Anatomy and Physiology	4
VS 1012	Introduction to Veterinary Medicine Careers	2
CVM 3101	Veterinary Technology Medical Terminology	1
Total Hours		56

Further information may be obtained from:

Veterinary Medical Technology Program  
College of Veterinary Medicine  
Mississippi State University  
PO Box 6100, Mississippi State, MS 39762-6100  
662-325-1103; [www.msuvmt@cvm.msstate.edu](mailto:www.msuvmt@cvm.msstate.edu)

## Veterinary Medical Technology

### General Education Requirements

English Composition		
EN 1103 or EN 1163	English Composition I Accelerated Composition I	3
EN 1113 or EN 1173	English Composition II Accelerated Composition II	3
<b>Mathematics</b>		
MA 1313	College Algebra	3
MA 1323 or ST 2113	Trigonometry Introduction to Statistics	3
<b>Natural Science</b>		
BIO 1134	Biology I	4
BIO 1144	Biology II	4
<b>Humanities</b>		
See General Education courses		6
<b>Fine Arts</b>		
See General Education courses		3
<b>Social/Behavioral Sciences</b>		
See General Education courses		6
<b>Other courses</b>		
CH 1043	Survey of Chemistry I (or higher)	3
CH 1051	Experimental Chemistry (or higher)	1
CH 1053	Survey of Chemistry II (or higher)	3

BIO 3304	General Microbiology	4
CO 1003 or CO 1013	Fundamentals of Public Speaking Introduction to Communication	3
<b>Major Core</b>		
ADS 1113 & ADS 1121 or VS 3014	Animal Science and Animal Science Laboratory Anatomy and Physiology	4
VS 1012	Introduction to Veterinary Medicine Careers	2
CVM 3112	Animal Handling, Husbandry, and Nutrition	2
CVM 3243	Basics of Practice Procedures and Management	3
CVM 3101	Veterinary Technology Medical Terminology	1
CVM 3014	Applied Anatomy and Physiology for Veterinary Technologists	4
CVM 3013	Small Animal Diseases and Management	3
CVM 3022	Small Animal Technical Skills & Nursing Care	2
CVM 3032	Food Animal Diseases and Management	2
CVM 3031	Food Animal Technical Skills & Nursing Care	1
CVM 3042	Equine Diseases and Management	2
CVM 3041	Equine Technical Skills & Nursing Care	1
CVM 3232	Pharmacology & Toxicology for Veterinary Technologists	2
CVM 3111	Parasitology for Veterinary Technologists	1
CVM 3121	Hematology for Veterinary Technologists	1
CVM 3132	Clinical Pathology Laboratory Techniques	2
CVM 3212	Anesthesiology for Veterinary Technologists	2
CVM 3051	Laboratory Animal Health Management	1
CVM 3061	Laboratory Animal Technical Skills	1
CVM 3201	Dental Principles for Veterinary Technologists	1
CVM 3202	Diagnostic Imaging for Veterinary Technologists	2
CVM 3222	Surgical Skills & Nursing Care for Veterinary Technologists	2
CVM 3221	Surgical Nursing & Anesthetic Management Laboratory	1
CVM 3141	Anatomical Pathology Laboratory Techniques	1
CVM 4103	Large Animal Clinical Experience	3
CVM 4113 or CVM 4223	Large Animal Clinical Elective Small Animal Clinical Elective	3
CVM 4333	Emergency/ICU Clinical Experience	3
CVM 4213	Small Animal Surgery & Anesthesia Clinical Experience	3
CVM 4102	Professional Development for Veterinary Technologists	2
CVM 4701	Application & Process for VTNE	1
CVM 4206	Small Animal Clinical Experience	6
CVM 4003	Internship Experience	3
CVM 4601	Animal Emergency & Referral Center Elective	1
<b>Elective Experiences</b>		
Choose two of the following:		2
CVM 4101	Veterinary Technology Academic Elective	
CVM 4201	Clinical Experience Elective	
CVM 4501	Diagnostic Laboratory Experience	
CVM 4511	Biomedical Research Experience Elective	
<b>Total Hours</b>		<b>120</b>

## Graduate Program

The College of Veterinary Medicine (CVM) at Mississippi State University (MSU) provides the following graduate programs:

### MS – Veterinary Medical Science (MS-VMS) with Concentrations in:

**Population Medicine Non-Thesis (PMNT)**

Requires: 35 hours of coursework

**Population Medicine Thesis (POPM)**

Requires: 24 hours of coursework including 1 seminar, ST 8114 Statistical Methods, CVM 8333 Food Safety, CVM 8513 Applied Veterinary Epidemiology, CVM 8503 Epidemiology and Biostatistics + 6 hours research

**Veterinary Medical Research (VMRC)-default**

Requires: 24 hours of coursework including 1 seminar and 1 statistics + 6 hrs research

**Computational Biology (VCBC)**

Requires: 24 hours of coursework including 1 seminar, 1 statistics, BCH/PSS 8653 Genomes and Genomics, CSE 6613 Bio-computing, CSE 6623 Computational Biology + 6 hrs research

**Infectious Diseases (VIDC)**

Requires: 24 hours of coursework including 1 seminar, 1 statistics, CVM 8303 Advanced Immunology, BCH 6013 Principles of Biochemistry or BCH 6713 Molecular Biology + 6 hrs research

**Toxicology (VTOX)**

Requires: 24 hours of coursework including 1 seminar, 1 statistics, CVM 8543 Mechanisms Toxic Action and CVM 6513 Environmental Toxicology + 6 hours research

**PhD – Veterinary Medical Science (PhD-VMS) with Concentrations in:**

**General CVM PhD Requirements:** All PhD programs require 60 hours beyond the M.S. degree or 90 hours beyond the B.S. degree. Students with a M.S. are required to take at least 20 hours of research, 3 seminar courses, and two statistics courses. The remaining 31 hours can be met by a combination of graduate coursework and research/dissertation (CVM 9000) as approved by the student's doctoral committee.

Students with a B.S. degree admitted without a M.S. are required to take a minimum of 24 hours of graduate coursework, at least 20 hours of research, three seminar courses, and two statistics courses. The remaining 46 hours of credit can be met by a combination of graduate coursework and research/dissertation (CVM 9000) as approved by the student's doctoral committee.

**Veterinary Medical Research (VMRC)**

Default concentration. See general requirements above.

**Computational Biology (VCBC)**

See general requirements above. Coursework must include BCH/PSS 8653 Genomes and Genomics, CSE 6613 Biocomputing, and CSE 4623/6623 Computational Biology

**Infectious Diseases (VIDC)**

See general requirements. Coursework must include CVM 8303 Advanced Immunology, BCH 6013 Principles of Biochemistry or BCH 6713 Molecular Biology

**Population Medicine (POPM)**

See general requirements. Coursework must include ST 8114 Statistical Methods, CVM 8333 Food Safety, CVM 8513 Applied Veterinary Epidemiology, CVM 8503 Epidemiology and Biostatistics

These graduate programs provide advanced educational opportunities for students in a broad range of biomedical and veterinary sciences. The goal of the VMS and ENVT programs is to provide training for the next generation of scientists and educators who will be leaders in biomedical and veterinary research and education. Faculty in CVM's Department of Basic Sciences (<http://www.cvm.msstate.edu/index.php/academics/departments-centers/basic-sciences>) Department of Clinical Sciences (<http://www.cvm.msstate.edu/index.php/academics/departments-centers/clinical-sciences>), and Department of Pathobiology & Population Medicine (<http://www.cvm.msstate.edu/index.php/academics/departments-centers/pathology-population-medicine>) lead each student's graduate education. Involvement in ongoing research projects conducted by the faculty is an important part of each degree program.

Students pursuing admission to one of the MS or PhD programs in CVM must complete all admission requirements of the MSU Office of Graduate Studies (<http://www.grad.msstate.edu>) (OGS). From the MSU Office of Graduate Studies page, students should click on "Apply Online Now (<http://www.apply.msstate.edu/grad>)" to be directed to the MSU Graduate Admission Online Application site. In addition to the MSU OGS application, the CVM Graduate Faculty would like to evaluate prospective student's research interests using the CVM Graduate Student – Background and Interest Form (<http://www.cvm.msstate.edu/images/pdfs/backgroundform.pdf>). Students interested in the CVM graduate program should complete the form and submit to the CVM ORGS Office by emailing the form to [lawrence@cvm.msstate.edu](mailto:lawrence@cvm.msstate.edu). The Background and Interest Form will be used to evaluate the student's research interests and place students within the appropriate research program when admitted to the CVM Graduate Program. The form is also used to determine/award available graduate research assistantships/grants.

In addition to the traditional MS and PhD programs in the College, there is a path within the DVM program in which students may pursue a DVM-PhD or DVM-MS Dual Degree. Information concerning the DVM Dual Degree programs can be found at the Combined DVM-Graduate Degree Programs (<http://www.cvm.msstate.edu/index.php/academics/degree-programs-research/combined-dvm-graduate-degree-programs>) site.

If you have additional questions or need assistance concerning CVM graduate education, please call 662-325-1417 or email the ORGS Office at [lawrence@cvm.msstate.edu](mailto:lawrence@cvm.msstate.edu).