#### **Veterinary Medical Science**

#### Graduate Coordinator: Dr. Larry Hanson

R 2002 Wise Center Box 6100 Mississippi State, MS 39762-6100 Telephone: 662-325-1417 E-mail: tia.perkins@msstate.edu

#### **Admission Criteria**

To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00 for undergraduate work; GPA of 3.00 for graduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered.

#### **Provisional Admission**

In special circumstances a student who does not meet admission criteria may be admitted provisionally if approved by the Graduate Program Advisory Committee. See Provisional Admission under Admission In this publication for provisional requirements.

#### **Academic Performance**

If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's graduate committee. This committee may recommend a change in the student's program or recommend that the student be dismissed from the degree program in the College of Veterinary Medical Science program. Students must follow all guidelines outlined in the Graduate Catalog.

#### Master of Science in Veterinary Medical Science (VMS) - Population Medicine Non-Thesis Concentration (PMNT)

Graduate-level coursework credits (at least 15 hours of all coursework credits must be 8000-level or above) <sup>1</sup>		31
Statistics course <sup>1,2</sup>		3
CVM 8011	Seminar <sup>1</sup>	1
or CVM 8091	Current Topics in Production Animal Medicine	
Total Hours		35

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Transfer of credit for any previously taken courses is subject to the policy found in the *Graduate Catalog*.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

#### Master of Science in Veterinary Medical Science (VMS) - Veterinary Medical Research Concentration (VMRC)

Graduate-level coursework (at least 12 hours of all coursework credits must be 8000-level or above) <sup>1</sup>		20
One statistics course <sup>1, 2</sup>		3
One seminar course (CVM 8011 or equivalent) <sup>1</sup>		1
CVM 8000	Thesis Research/ Thesis in Veterinary Medicine	6
Total Hours		30

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

## Master of Science in Veterinary Medical Science (VMS) - Computational Biology Concentration (VCBC)

Graduate-level courses (at lea	ast 12 hours of all coursework credits must be 8000-level or higher) <sup>1</sup>	11
BCH 8653	Genomes and Genomics	3
or PSS 8653	Genomes and Genomics	
CSE 6613	Bio-computing	3
CSE 6623	Computational Biology	3
One statistics course 1, 2		3
One seminar course (CVM 80	11 or equivalent) <sup>1</sup>	1
CVM 8000	Thesis Research/ Thesis in Veterinary Medicine	6
Total Hours		30

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

#### Master of Science in Veterinary Medical Science (VMS) - Infectious Diseases Concentration (VIDC)

CVM 8303	Advanced Immunology	3
BCH 6013	Principles of Biochemistry	3
or BCH 6713	Molecular Biology	
One statistics course 1, 2		3
One seminar course (CVM 801	1 or equivalent) <sup>1</sup>	1
Graduate-level courses (at leas	st 12 hours of all coursework must be at 8000 level or higher) <sup>1</sup>	14
CVM 8000	Thesis Research/ Thesis in Veterinary Medicine	6
Total Hours		30

1 \_

Equivalency of seminars and coursework is determined by the student's graduate committee.

Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

### Master of Science in Veterinary Medical Science (VMS) - Toxicology Concentration (TOXI)

CVM 8543	Mechanisms of Toxic Action	3
or CVM 8523	Organ Systems Toxicology I	
or CVM 8533	Organ Systems Toxicology II	
CVM 6513	Environmental Toxicology	3
One statistics course 1, 2		3
On seminar course (CVM 801	11, 8091, or equivalent) <sup>1</sup>	1
Graduate-level courses (at lea	ast 12 credits of all coursework must be 8000-level or higher)	14
CVM 8000	Thesis Research/ Thesis in Veterinary Medicine	6
Total Hours		30

- <sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.
- <sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

### Master of Science in Veterinary Medical Science (VMS) - Population Medicine Thesis concentration (POPM)

CVM 8333	Food Safety and Security in Public Health	3
CVM 8513	Applied Veterinary Epidemiology	3
CVM 8503	Epidemiology/Biostatistics	3
ST 8114	Statistical Methods <sup>1,2</sup>	4
One seminar course (CVM 8011, CVM 8091	or equivalent) <sup>1</sup>	1
Additional graduate-level courses (at least 1	2 hours of all coursework credits must be 8000-level or higher) <sup>1</sup>	10
CVM 8000	Thesis Research/ Thesis in Veterinary Medicine	6
Total Hours		30

<sup>1</sup>Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup>Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

#### Doctor of Philosophy in Veterinary Medical Science (VMS) - Veterinary Medical Research Concentration (VMRC) (for students with a master's degree)

Total Hours		60
CVM 9000	Dissertation Research/ Dissertation in Veterinary Medicine	20
Graduate-level courses (at least 12 hours of all coursework at 8000-level or higher) or additional CVM 9000 credits <sup>1</sup>		31
Three seminar courses (CVM	1 8011 or equivalent)	3
Two statistics courses <sup>1,2</sup>		6

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Transfer of credit for any previously taken courses is subject to the policy found in the *Graduate Catalog*.

# Doctor of Philosophy in Veterinary Medical Science (VMS) - Veterinary Medical Research Concentration (VMRC) (for students with a bachelor's but no master's degree)

 Two statistics courses <sup>1, 2</sup>
 6

 Three seminar courses (CVM 8011 or equivalent) <sup>1</sup>
 3

 Graduate-level courses (at least 12 hours of all coursework at 8000 level or higher)
 15

 CVM 9000
 Dissertation Research/Dissertation in Veterinary Medicine
 20

 Additional graduate-level coursework and/or CVM 9000 credits <sup>3</sup>
 46

 Total Hours
 90

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

<sup>3</sup> Students must have 24 hours of graduate coursework to graduate with a Ph.D. in VMS.

## Doctor of Philosophy in Veterinary Medical Science (VMS) - Computational Biology Concentration (VCBC) (for students with a master's degree)

BCH 8653	Genomes and Genomics	3
or PSS 8653	Genomes and Genomics	
CSE 6613	Bio-computing	3
CSE 6623	Computational Biology	3
Three seminar courses (CVN	18011 or equivalent) <sup>1</sup>	3
Two graduate-level statistics	courses	6
Graduate-level courses (at le	ast 12 hours of all coursework at 8000-level) or additional CVM 9000 credits	22
CVM 9000		20
Total Hours		60

1

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

### Doctor of Philosophy in Veterinary Medical Science (VMS) - Computational Biology Concentration (VCBC) (for students with a bachelor's but no master's degree)

BCH 8653	Genomes and Genomics	3
or PSS 8653	Genomes and Genomics	
CSE 6613	Bio-computing	3
CSE 6623	Computational Biology	3
Three seminar courses (CVM 8011 or equivalent) <sup>1</sup>		3
Two graduate-level statistics cou	JISES	6
Graduate level courses (at least	12 hours of all coursework at 8000 level or higher)	6
CVM 9000	Dissertation Research/ Dissertation in Veterinary Medicine	20
Graduate-level coursework and/	or additional CVM 9000 credits <sup>3</sup>	46
Total Hours		90

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

<sup>3</sup> Students must have 24 hours of graduate coursework to graduate with a Ph.D. in VMS.

#### Doctor of Philosophy in Veterinary Medical Science (VMS) - Infectious Diseases Concentration (VIDC) (for students with a master's degree)

CVM 8303	Advanced Immunology	3
BCH 6013	Principles of Biochemistry	3
or BCH 6713	Molecular Biology	
Two statistics courses 1, 2		6
Three seminar courses (CVM	18011 or equivalent)	3
Graduate-level courses (at lea	ast 12 hours of all coursework at 8000-level or higher) <sup>3</sup>	25
CVM 9000	Dissertation Research/ Dissertation in Veterinary Medicine	20
Total Hours		60

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

<sup>3</sup> Students must have 24 hours of graduate coursework to graduate with a Ph.D. in VMS.

#### Doctor of Philosophy in Veterinary Medical Science (VMS) - Infectious Diseases Concentration (VIDC) (for students with a bachelor's but no master's degree)

CVM 8303	Advanced Immunology
BCH 6013	Principles of Biochemistry

or BCH 6713	Molecular Biology	
Two statistics courses 1, 2		6
Three seminar courses (CVM	8011 or equivalent) <sup>1</sup>	3
Graduate-level courses (at lea	ast 12 hours of all coursework must be at 8000 level or higher)	9
CVM 9000	Dissertation Research/ Dissertation in Veterinary Medicine	20
Additional graduate-level cour	rsework and/or CVM 9000 credits	46
Total Hours		90

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

### Doctor of Philosophy in Veterinary Medical Science (VMS) - Population Medicine concentration (POPM) (for students with a master's degree)

CVM 8333	Food Safety and Security in Public Health	3	
CVM 8513	Applied Veterinary Epidemiology	3	
CVM 8503	Epidemiology/Biostatistics	3	
ST 8114	Statistical Methods <sup>1,2</sup>	4	
Three seminar courses (CVM 8011, CVM 8091, or equivalent) <sup>1</sup>			
Additional graduate-level courses (at least 12 hours of all coursework must be at 8000-level or higher) or additional 9000-level credit		24	
CVM 9000	Dissertation Research/ Dissertation in Veterinary Medicine	20	
Toal Hours		60	

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics that have counted toward a previous degree can satisfy this policy, but will not be calculated toward the Ph.D. coursework hours.

An examination (oral and/or written) which covers both the major and supportive fields and includes defense of the dissertation is required. Students must present an open seminar of the dissertation research just prior to examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

## Doctor of Philosophy in Veterinary Medical Science (VMS) - Population Medicine concentration (POPM) (for students with a bachelor's but no master's degree)

CVM 8333	Food Safety and Security in Public Health	3	
CVM 8513	Applied Veterinary Epidemiology	3	
CVM 8503	Epidemiology/Biostatistics	3	
ST 8114	Statistical Methods <sup>1,2</sup>	4	
Three seminar courses (CVM 8011, CVM 8091, or equivalent) <sup>1</sup>			
Additional graduate-level courses (at least 12 hours of all coursework must be at 8000-level or higher) or additional 9000-level credit <sup>3</sup>			
CVM 9000	Dissertation Research/ Dissertation in Veterinary Medicine	20	
Toal Hours		90	

<sup>1</sup> Equivalency of seminars and coursework is determined by the student's graduate committee.

<sup>2</sup> Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics that have counted toward a previous degree can satisfy this policy, but will not be calculated toward the Ph.D. coursework hours.

<sup>3</sup> Students must have 24 hours of graduate-level coursework to graduate with a PhD in VMS.

An examination (oral and/or written) which covers both the major and supportive fields and includes defense of the dissertation is required. Students must present an open seminar of the dissertation research just prior to examinations. The student must adhere to the University and College regulations regarding his/her graduate program.