

Program Requirements

M.S. in Veterinary Microbiology (Thesis and Non-Thesis)

Ph.D. in Veterinary Microbiology

Required courses for all MS and PhD students:

GR ST 565 Responsible Conduct of Research Cr. 1

STAT 587 Statistical Methods for Research Workers Cr.4

VMPM 604 Seminar VMPM 604 **OR** Micro 604 **OR** Imbio 604
(1 for MS students and 3 for Ph.D students over the course of their program)

Additionally, MS students are required to take 1 course in 2/4 areas and PhD students are required to take 1 course in 3/4 areas.

Required Areas:

Bacteriology:

VMPM 586 Medical Bacteriology Cr. 4

VMPM 625 Mechanisms of Bacterial Pathogenesis Cr. 3

Micro 552 & 553 & 555 Combined:

552: Bacterial molecular genetics and physiology Cr. 1

553: Pathogenic microorganisms Cr. 1

555: Fungal biology Cr. 1

Virology:

VMPM 587 Animal Virology Cr. 3

VMPM 608 Molecular Virology Cr. 3

Immunology:

VMPM 520 Medical Immunology Cr. 3

OR

VMPM 575 Immunology Cr. 3

Epidemiology:

VMPM 528 Introduction to Epidemiology and Pop Health. Cr. 3

VMPM 527 Applications to Statistics to Pop Studies Cr. 3

VMPM 529 Epidemiological Methods for Population Research Cr. 3

Ph.D. in Veterinary Microbiology (Preventive Medicine Emphasis)

Required Coursework:

VMPM 528	Introduction to Epidemiology and Prev. Med. Cr. 3
VMPM 527	Applications to Statistics to Pop Studies Cr. 3
VMPM 529	Epidemiological Methods for Population Research Cr. 3

A list of additional courses relevant to the VMPM major:

Micro 551	Microbial diversity and phylogeny Cr. 1
Micro 556	Microbial ecology and environmental monitoring Cr. 1
Micro 554	Virology
VMPM 525	Intestinal Microbiology, Cr. 3
PIP 509	Plant Virology Cr. 4
BMS 575	Cell Biology Cr. 3
V Pth 655	Cellular and Molecular Pathology I Cr. 3
BBMB 645	Molecular Endocrinology; Hormones and Growth Factors Cr. 2
STAT 402	Statistical Design and the Analysis of Experiments Cr. 3
STAT 403	Nonparametric Statistical Methods Cr. 2
STAT 407	Methods of Multivariate Analysis Cr. 3
STAT 415	Advanced Statistical Methods for Research Workers Cr. 3
STAT 421	Survey Sampling Techniques Cr. 3

Interdepartmental Programs

The Course requirements for the Interdepartmental Majors can be found at their respective web sites:

[Bioinformatics and Computational Biology \(BCB\)](#)

[Genetics](#)

[Immunobiology](#)

[Microbiology](#)

[Molecular, Cellular and Developmental Biology \(MCDB\)](#)

[Toxicology](#)