

ISU CVM DVM/PHD PROGRAM

Application Process

Students interested in the concurrent DVM/PhD Program will fill out the normal ISU CVM DVM application for admission. They will indicate on the application if they are interested in pursuing a concurrent DVM/PhD. In addition, a new section in the application will require the applicants to write a statement targeted at identifying strong candidates for the DVM/PhD degree. The prompt for the statement will be “Please provide a statement (no more than 1,500 words) describing your interest in pursuing dual DVM/PhD degrees. Include in this statement your personal research interest, commitment to pursuing a DVM/PhD, your past research experience, and how you envision incorporating research into your future veterinary career”.

At this stage, students who are accepted into the DVM portion of their degree will be notified of their qualification (or not) for the PhD portion of their degree. It is important to note that qualification for the PhD portion does not mean acceptance into the PhD program, but qualification is required to be considered for acceptance. Once the student is identified as qualified for the ISU CVM concurrent DVM/PhD program, the student must identify the CVM PhD program(s) for which they would like to be considered (VMPM/BMS/VDPAM/VetPath/Interdepartmental) and apply to the ISU Graduate College for admittance into the PhD program. Students MUST declare they would like to pursue the concurrent DVM/PhD degree by the end of the summer of their second DVM year.

PhD Coursework

Students are encouraged to begin work toward completing their PhD coursework (see PhD Course requirements for DVM/PhD concurrent students in each CVM PhD Program-Appendix) in the first and second DVM years/summers. Within the DVM course framework, there are multiple opportunities to take normally scheduled DVM courses at a higher academic level (eg. 300 level to 500 level) for PhD credit to lessen the overall PhD course load. The student must be accepted into a PhD program through the graduate college for these courses to count towards graduate credit, further emphasizing the importance for the student to be formally admitted into the PhD program of their choice early in their DVM program. In addition, there are several additional required courses within each PhD program within the college that will have to be completed to meet the requirements for receiving a PhD.

PhD Research

Identification of a PhD mentor who has agreed to work with and fund the student PhD research project is required for final acceptance into the concurrent DVM/PhD program. The student will have the opportunity to identify a qualified mentor (funded and accepting new PhD students) in one of two ways:

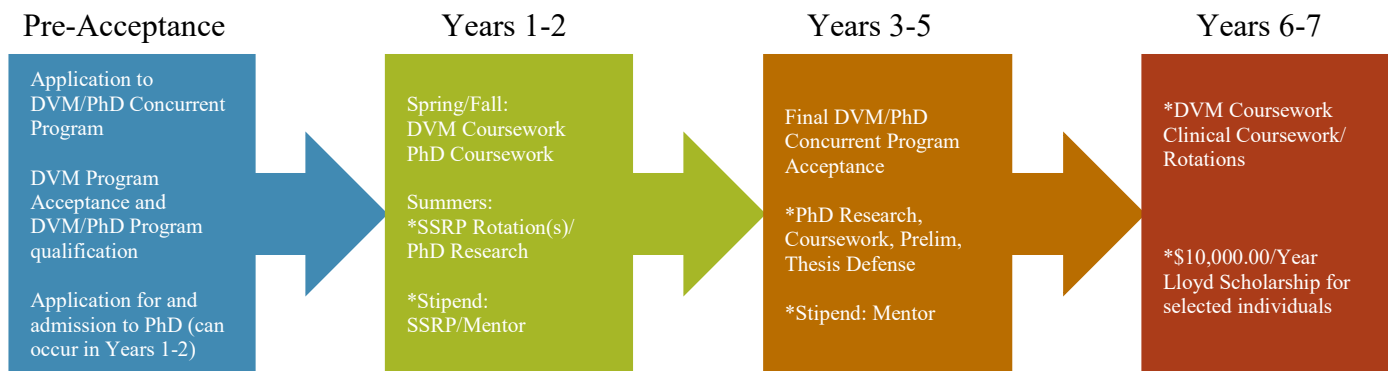
1. By doing rotation(s) in the laboratory of potential mentors: These summer rotations will be funded through the ISU CVM SSRP and the student will participate in this program during the summers of DVM year 1 and, if necessary, year 2. If the student matches with a qualified PhD mentor during the first SSRP year and an agreement is made to do their PhD with that mentor, they can forego the second SSRP program year rotation, and begin their PhD work in the identified mentor's laboratory in the summer of DVM year 2. If a match is not made between the student and the qualified mentor from the first SSRP rotation, the student can do a second rotation, funded through the SSRP, with a new qualified mentor in the summer of the second DVM year. If a match is made during this rotation, the student will continue on in this laboratory to obtain their PhD.
2. Direct admission to a qualified mentor lab: A student may independently identify a qualified mentor and make necessary binding agreements with this mentor for PhD support before the SSRP student

application deadline in the first DVM year, forego SSRP rotations, and begin PhD work with the mentor no later than the summer of their second year.

While all attempts will be made to identify a qualified mentor, if a match is not made through these processes, the student will no longer be qualified for the concurrent DVM/PhD, although this will have no impact on their continuing in the DVM program. The PhD is expected to be completed in years 3-5 of the concurrent program, with defense of the PhD occurring in the summer of year 5.

DVM/PhD Financial Support

Students accepted into the DVM/PhD program will be supported with a stipend set by the CVM Research Office for research rotation(s) within the SSRP or by a mentor who will support the student research identified by the student. Upon matching with a qualified mentor and while working full-time on their PhD project, the student will be supported with a graduate student stipend set by the mentor until their PhD is completed. Concurrent DVM/PhD students may apply for a Lloyd scholarship of \$10,000.00/year for their final 2 DVM years. This scholarship will only be available for selected students who have been fully accepted into the DVM/PhD concurrent program by the end of summer of their second DVM year. The scholarship is available to the selected students only following successful defense of their PhD, although there may be some flexibility upon time to PhD (eg. if a student is unable to the requirements for defense of their PhD thesis after 3 years, a fourth year will be considered with approval of mentor and the college during this extension).



Appendix

PhD Coursework requirements for concurrent DVM/PhD Students

Coursework requirements are dependent on PhD program (VMPPM, BMS, VDPAM, VPTH)

*courses taken for DVM credit that can be taken at graduate (500) level for credit towards PhD

VETERINARY MICROBIOLOGY AND PREVENTIVE MEDICINE (VMPPM)

Required Courses for all students:

VPth554/GRST565 Ethics in Scientific Research and Writing/Responsible Conduct of Research Cr 1
STAT 401 Statistical Methods for Research Workers Cr.4
VMPPM 604 Seminar VMPPM 604 **OR** Micro 604 **OR** Imbio 604 (3X for Ph.D students during program)

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

Bacteriology:

*VMPPM 586 Medical Bacteriology Cr. 4
VMPPM 625 Mechanisms of Bacterial Pathogenesis Cr. 4
Micro 552 & 553 & 555 Cr. 3

Virology:

*VMPPM 587 Animal Virology Cr. 3
VMPPM 608 Molecular Virology Cr. 3

Immunology:

VMPPM 520 Medical Immunology Cr. 4
VMPPM 575 Immunology Cr. 3

Epidemiology:

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

Preventive Medicine Emphasis

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

BIOMEDICAL SCIENCES (BMS)

4 specialties (Cell biology, Physiology, Anatomy, Pharmacology)

Required Courses for all students:

Statistics 401 (4 cr)
*Biochemistry (BMS 336 Veterinary Nutrition is accepted) (2 cr)
Seminar (BMS 698, 1 cr, taken all semesters)
Literature review course (4 cr, BMS 688)

Specialties:

Cell Biology:

BMS 575 Cell Biology (3 cr) and *BMS 533 Biomedical Sciences 1 (6 cr) OR
BMS 575 (3 cr) Cell Biology and BMS 538X Principles of Physiology (4 cr)

Anatomy:

2 from the following 4 courses

*BMS 530 Principals of Morphology I (5 cr)

*BMS 531 Principals of Morphology II (4 cr)

BMS 547X Principals of Anatomy (5 cr)

*BMS 537 Neuroanatomy (3 cr)

Physiology:

BMS 538X Principals of Physiology (4 cr) AND

*BMS 533 Biomedical Sciences I (6 cr) OR

BMS 534 Biomedical Sciences II (6 cr) OR

BMS 575 Cell Biology (3 cr)

Pharmacology:

BMS 538X Principals of Physiology (4 cr) AND

*BMS 554 General Pharmacology (3 cr) OR

BMS 539X Principals of Pharmacology (4 cr)

VETERINARY DIAGNOSTIC AND PRODUCTION ANIMAL MEDICINE (VDPAM)

A. Required core courses (minimum of 18 course credits)

Course	Description	Credits	Semester
GR ST 565	Responsible Conduct of Research	1 Cr	S, F
STAT 587 ^{ON}	Statistical Methods for Research Workers	4 Cr	S, SS, F
VDPAM 527 ^{ON}	Applied Statistical Methods in Population Studies	3 Cr	Alt F, Odd
*VDPAM 528 ^{ON}	Principles of Epidemiology and Population Health	3 Cr	S
VDPAM 529 ^{ON}	Epidemiological Methods in Population Research	3 Cr	Alt F, Even
VDPAM 699 ^{ON}	Research	Variable	S, SS, F

B. Required applied courses (select *at least 2* out of 6):

Course	Description	Credits	Semester
VDPAM 560X ^{ON}	Ecology of Infectious Disease	3 Cr	Alt S,
Odd VDPAM 562X	Applied Diagnostic Technologies	3 Cr	Alt F, Even
VDPAM 564X ^{ON}	Animal Welfare Science and Research	2 Cr	Alt S, Even
VDPAM 650	Swine Diagnostic Medicine	4 Cr	F
VDPAM 654	Comparative Antimicrobial Clinical Pharmacology	2 Cr	Alt F, Odd
MIS 537 or IE 561	Project Management; Total Quality Management.	3 Cr	F

ON = available online. ON* = STAT 587 available online typically only in Summer. S = Spring, SS = Summer, F = Fall. Odd = offered in odd numbered years. Even = offered in even numbered years.

Elective courses: To be selected from ISU Graduate level courses in consultation with the student's Major Professor and Program of Study committee. At least 6 credits of elective courses are required, achieving a cumulative total of at least 26 course credits. The remaining credits for a total of 72 credits may be a combination of research credits (VDPAM 699) and graduate-level courses approved by the POSC.

VETERINARY PATHOLOGY (VPTH)

Anatomic Pathology

Current dual degree eligible credits (up to 9): None

Anatomic Pathology is considered training for board certification plus a PhD with an emphasis in that order.

Clinical Pathology

Current dual degree eligible credits (up to 9): None

Clinical Pathology is considered training for board certification plus a PhD with an emphasis in that order.

Veterinary Parasitology

Current dual degree eligible credits (up to 9): 7 credits:

*VPath 476 Veterinary Parasitology (4 credits, must be declared prior to taking course).

*VPath 542 Anatomic Pathology (3 credits, must be declared prior to taking course).

Immunobiology Interdepartmental Program

Current dual degree eligible credits (up to 9): None

There may be several courses that could fulfill expectations such as Microbiology, Parasitology, if taken as a graduate level course.

