

From: noreply@wsu.edu
To: [curriculum.submit](#)
Subject: 459684 Veterinary Medicine Requirements Revise - Revise or Drop Graduate Plan
Date: Thursday, August 02, 2018 2:23:15 PM
Attachments: [2018.08.02.14.23.09.77.FormData.html](#)
[2018.08.02.14.23.08.22.currentCatalogFile IID curriculum for IID PhD students.docx](#)
[2018.08.02.14.23.08.22.currentCatalogFile1 Please note.docx](#)

Douglas Call has submitted a request for a major curricular change. His/her email address is: drcall@wsu.edu.

Requested change: Revise or Drop Graduate Plan

Degree: Ph.D. in Veterinary Sciences

Title: Immunology and Infectious Disease

Requested Effective Date: Fall 2019

Revise plan requirement: Yes

Dean: Slinker, Bryan - Dean - Vet Med Grad ,

Chair: Kawula, Tom,

UCORE Committee
Approval Date

All-University
Writing Com / Date

Catalog Subcommittee
Approval Date

GSC or AAC
Approval Date

Faculty Senate
Approval Date

From: Kawula, Thomas Hardin
To: curriculum.submit; Slinker, Bryan Keith
Subject: RE: 459684 Veterinary Medicine Requirements Revise - Revise or Drop Graduate Plan
Date: Thursday, August 02, 2018 2:28:42 PM

From: curriculum.submit@wsu.edu [mailto:curriculum.submit@wsu.edu]
Sent: Thursday, August 02, 2018 2:23 PM
To: Kawula, Thomas Hardin <tom.kawula@wsu.edu>; Slinker, Bryan Keith <b_slinker@wsu.edu>
Subject: 459684 Veterinary Medicine Requirements Revise - Revise or Drop Graduate Plan

Kawula, Tom,

Slinker, Bryan - Dean - Vet Med Grad ,

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Both Chair and Dean approval is required to complete the submission process. Please indicate that you have reviewed the proposal by highlighting one of the statements below and **reply all** to this email. (curriculum.submit@wsu.edu.) [Details of major change requested can be found in the attached supplemental documentation]

1. I approve this proposal in its current form.
2. I approve this proposal with revisions. Revisions are attached.
3. I do not approve this proposal. Please return to submitter.

If you do not respond within one week, you will be sent a reminder email. If no response is received within three weeks of the submission date, the proposal will be returned to the submitter.

Thank you for your assistance as we embark on this new process. If you have any questions or concerns, please let us know wsu.curriculum@wsu.edu.

From: [Slinker, Bryan Keith](#)
To: [Kawula, Thomas Hardin](#); [curriculum.submit](#)
Subject: RE: 459684 Veterinary Medicine Requirements Revise - Revise or Drop Graduate Plan
Date: Monday, August 06, 2018 11:19:52 AM

I approve the proposal

From: Kawula, Thomas Hardin
Sent: Thursday, August 02, 2018 2:29 PM
To: curriculum.submit <curriculum.submit@wsu.edu>; Slinker, Bryan Keith <b_slinker@wsu.edu>
Subject: RE: 459684 Veterinary Medicine Requirements Revise - Revise or Drop Graduate Plan

From: curriculum.submit@wsu.edu [<mailto:curriculum.submit@wsu.edu>]
Sent: Thursday, August 02, 2018 2:23 PM
To: Kawula, Thomas Hardin <tom.kawula@wsu.edu>; Slinker, Bryan Keith <b_slinker@wsu.edu>
Subject: 459684 Veterinary Medicine Requirements Revise - Revise or Drop Graduate Plan

Kawula, Tom,

Slinker, Bryan - Dean - Vet Med Grad ,

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Rationale for updated core curriculum for the Immunology and Infectious Disease program

The Immunology and Infectious Disease program (IID) is a shared graduate program between two units on the Pullman campus: Department of Veterinary Microbiology and Pathology, and the Paul G. Allen School for Global Animal Health. A new director (D. Call) was elected in June 2017 and we are in the process of updating a number of documents, many of which will be submitted to the Faculty Senate review and approval processing during the fall of 2018. Updated IID Bylaws were approved by the Faculty Senate in February 2018.

The core curriculum document outlines the minimum credit expectations for a PhD student in the IID program. There are several different mechanisms by which a student can enter the program, defined in part by the funding mechanism. Consequently, the core program (16-graded credits) best represents the minimum requirements for a student who enters the program by direct admission. Other “pathways” of entry include additional requirements (see core curriculum document for details). We have included pathway distinctions as a means to improve comprehension of the requirements and to help students understand why one individual may have different total requirements compared with another individual.

The submitted core document represents how the program has been functioning for the past several years. It is not clear if earlier versions of the curriculum were approved by the faculty senate process, nor is there an archive of previous versions. Consequently, we cannot provide “mark-up” details about changes specific to an earlier approved version. Procedures are being implemented to maintain an orderly record of programmatic details to fully document future changes and to ensure that future changes are submitted for review and approval.

The primary change relative to recent practices is that the research-in-progress seminar (VET_PATH 555) will be changed from a graded credit to a pass/fail course pending approval by the Faculty Senate (the revised syllabus for VET_PATH 555 will be submitted separately).

Immunology and Infectious Diseases PhD Core Curriculum

Program Director: Douglas Call, drcall@wsu.edu, 509-335-313

Graduate Student Coordinator: Ms. Sue Zumwalt, szumwalt@wsu.edu, 509-335-6027

Please note:

- Your graduate committee has the final word on composition of your program-of-study.
- Your program-of-study must include a minimum of 16 graded credits. Eight of these credits should come from VET_PATH 545 and VET_PATH 544. There are iPBS exceptions for VET_PATH 545 (see below).
- IID students enter the program from different “pathways” that have additional requirements. Please see “Pathway requirements” for further explanation.
- You need to register for at least one 800-level research credit each semester. If you sign up for VET_PATH 800 or VET_MICR 800 your first semester, continue with this prefix for your remaining time in the degree program (i.e., do not mix prefixes).
- You need to register for 10 credits in the fall and spring to qualify for an assistantship.
- You need to register for a minimum of 3 credits in the summer.

Term	Description	Credits ^a	Notes
Fall Year 1			
	If you are rotating labs during the first semester, please do not enroll for more than 6 didactic credits without authorization from the IID first-year advisor.		
GLANHLTH 563 ^b	Deconstructing Research	3, G	See pathway notes
Elective (graded)	See first year advisor	3, G	Recommended
_PATH or _MICR 800	Research (vary credits as needed)	4, S/U	Required
Spring Year 1			
VET_PATH 545	Mechanisms of Disease	4, G	See pathway notes
GLANHLTH 564 ^b	Topics in Biomedical Experimentation	2, G	See pathway notes ^c
_PATH or _MICR 800	Research (vary credits as needed)	4, S/U	Required
Every Summer			
_PATH or _MICR 800	Research (vary credits as needed)	3, S/U	Required
Fall Year 2			
VET_PATH 544	Immunopathology	4, G	Required
Elective	If needed or recommended	3, G	Recommended
_PATH or _MICR 800	Research (vary credits as needed)	3-6, S/U	Required
Spring Year 2 and subsequent semesters			
GLANHLTH 564	Topics in Biomedical Experimentation	2, G	Recommended ^c
_PATH or _MICR 800	Research (vary credits as needed)	10, S/U	Required

^aG = graded; S/U = satisfactory/unsatisfactory.

^bUse the GLANHLTH, VET_PATH, or VET_MICR prefixes for the 563 and 564 courses.

^cThe first two modules of 564 are required for iPBS (see entry pathway specifics on page 2). For others we recommend that you take at least the first two modules of 564, which include “Philosophy of Experimental Design” and “Statistics” (each one credit). The statistics module is designed to guide your understanding of how to interpret statistics; this is not a substitute for a didactic course in statistics. Other elective modules are offered and these may vary by year. Check with iPBS coordinator for most current information.

Pathway Notes

Students enter the IID program through different “pathways” that define how stipends are initially funded. With the exception of combined residency students, all CVM PhD students receive the same support package and thus the pathway of entry has no effect on your stipend or benefits. Students can exceed the baseline support through fellowships or top-off awards, but these awards have no impact on curriculum requirements.

Importantly, for the different pathways described here, *there are different curriculum requirements*. At a minimum, IID students must complete 16-graded credits of graduate coursework. IID students are not limited to 16-graded credits, and IID graduate committees may require additional coursework depending on the student’s background and research interests.

The following is a description of the differences that arise depending on the pathway that students follow for admission to IID. We endeavor to keep this document current with any changes in requirements for different pathways, but students should still confirm requirements with pathway administrators. Contact the IID Program Director if you need assistance.

Direct admission: Students who are admitted directly to an advisor’s lab are required to meet the minimum 16-graded credit limit (including -544 and -545), although we encourage the advisor and student to follow the iPBS requirements as much as possible, including attending the iPBS professional workshops (see page 3).

iPBS students: Students who are admitted through the iPBS pathway are limited to six graded credits during their first semester and have rotation requirements and professional development workshop requirements. These students must complete Deconstructing Research and the first two modules of GLANHLTH 564 (“Philosophy of Experimental Design” and “Statistics”; each one credit). *Unlike other IID students, students that enter through the iPBS pathway may substitute Deconstructing Research for Mechanisms of Disease, but these students are welcome to take both.*

Biotechnology Training Program Students: Biotech students have rotation and internship requirements. In addition, these students are required to take Protein Biotech (3 credit), General Biochemistry (3 credit), Bioethics (2 credit) and one 3-credit elective from a list of approved choices, for a total of 11-graded credits. In addition to these graded credits and the 8-required IID graded credits (-544 and -545), we recommend that Biotech students take at least the first two modules of GLANHLTH 564 (“Philosophy of Experimental Design” and “Statistics”; each one credit) and take Deconstructing Research (MBIOS 563) if scheduling allows. Biotech students are encouraged to participate in iPBS professional development workshops.

Combined PhD/pathology and PhD/microbiology residency students: IID graduate students who are part of the combined pathology and microbiology programs are required to complete the 8 IID graded credits (-544 and -545). They are also required to take VET_PATH 542 Anatomic Pathology Seminar or VET_MICR 591 Seminar in Diagnostic Microbiology (1 credit/semester), and VET_PATH 592 Advances in Diagnostic Pathology or VET_MICR 541 Advanced Diagnostic Microbiology (1 credit/semester) every fall and spring semester. Combined students are encouraged to follow the iPBS program as much as their schedule allows, and they are encouraged to participate in iPBS professional development workshops.

Immunology and Infectious Disease T32 training program students: Some students are funded by the IID NIH T32 training grant. These students are usually combined residents or direct admissions and should follow these pathway requirements as outlined above.

General progression and expectations for IID PhD students

The general progression and expectations for IID students include:

- iPBS and Biotech students must complete two rotations during the first semester and a third during the second semester. Other pathway students are not required to complete rotations and should seek permission from their advisor before committing to a rotation schedule. Contact the program director if you need assistance.
- Select a training mentor by the end of the second semester (required).
- Attend RIP seminars every semester (typically noon, every Tuesday). There is no grade or credit for attending the seminar, but everyone should complete rubrics for speaker evaluations (distributed at the seminar). Once a student passes his/her preliminary exam, he/she is expected to present one RIP seminar every year until the semester scheduled for thesis defense. Habitual absence for RIP will be noted in annual reviews. Failure to present a required seminar in RIP will be noted as a deficit in annual reviews.
- Form a graduate committee during the third semester and complete a program-of-study, which is filed with the Graduate School (please see the graduate coordinator for assistance). Please note that students cannot take preliminary exams the same semester in which the program-of-study is approved, so please plan ahead.
- All students should complete their preliminary exam by the end of the fourth semester. We recognize that there can be extenuating circumstances that may prevent completion by this time, but it is best to complete this process in a timely manner.
- Generally, most if not all of graded credit requirements should be met by the time the preliminary exam is completed.
- Once courses and preliminary exam are completed, students are typically focused on completing research and other scholarship activities (e.g., presenting at meetings). At the time of the defense, IID expects one accepted, first-authored journal article in a reputable and appropriate journal, and a second paper should be submitted for peer review.
- Before scheduling a defense, students must prepare a defense portfolio for the student committee to review and approve (sign). This document will be distributed to the IID faculty before the defense exam is scheduled. Please see your advisor or the program director for suggested formats.

iPBS professional development workshops and events

All students that enter the IID program as iPBS students are required to attend the following events and workshops. All other IID students are encouraged to participate. For more information, please see the iPBS website at <http://graduate.vetmed.wsu.edu/>. Please note that your participation in the required workshops and events is tracked by the iPBS administration (whether you are an iPBS student or not).

The following events/workshops occur during the annual orientation and leadership retreat.

- Responsible Conduct of Research (RCR)
- Laboratory Safety
- Biological Safety
- Laboratory Notebook
- Teaching Assistant Training Part I – Student Conduct
- myIDP: How to Begin

In addition, students should attend at least 10 events sponsored by iPBS or the PDI series that is sponsored by the Graduate School. For iPBS students, the following are the minimal recommendations and students are encouraged to engage in professional development opportunities beyond these minimums and throughout their graduate student career. In fact, students may find many of the events more pertinent in their 4th or 5th year and are always welcome to participate (even if they attended the same event in prior years):

- One (1) event in Communication
- One (1) event in Academics
- Three (3) events in Leadership & Professionalism
- Three (3) events in Career
- Additional events (2 or more) are the student's choice and can include other events in the iPBS series or events found in the PDI series sponsored by the Graduate School.

Potential electives as needed/recommended by the mentor or advisory committee. Please note that some of electives listed below may not be allowed for Biotech and iPBS students. It is the student's responsibility to confirm program requirements when developing their program-of-study. Please contact the program director if you need assistance.

MBIOS 501, Cell Biology
MBIOS 503, Advanced Molecular Biology I
MBIOS 513, General Biochemistry I
MBIOS 540, Immunology
MBIOS 501, Cell Biology
MBIOS 542, General Virology
MBIOS 578, Bioinformatics
MBIOS 585, Molecular Biotechniques

GLANHLTH 564, Topics in Biomedical Experimentation – multiple modular offerings are available every year for this course, so be sure to contact the iPBS Coordinator for more information. Please note that a new bioethics module is offered as of spring 2019.

STATS 511, Statistical Methods for Graduate Researchers
VET_PATH 571-01, Introduction to Epidemiology
VET_PATH 571-02, Analysis in Epidemiology
VET_PATH 571-03, Modeling Infectious Disease

STATS 512, Analysis of Variance of Designed Experiments
STATS 523, Statistical Methods for Engineers and Scientists 3, or
STATS 530, Applied Linear Models
STATS 574, Linear and Nonlinear Mixed Model
MATH 579, Modeling in the Biological Sciences
CPTS 591, Elements of Network Science and Structure, or EE 503, Dynamics and Control of Large-scale Networks

Not all classes are offered every semester or every year. See the WSU Registrar's office for catalog and scheduling details.

Please note that the following courses have been dropped from the IID Core Curriculum and from the WSU catalog:

VET_PATH 555 – RIP seminar
VET_MICR 592/MBIOS 549 – Seminar in Immunology
VET_MICR 535 – Advanced Readings in Veterinary Microbiology
VET_PATH 525 – Introductory Readings in Veterinary Pathology