Veterinary Microbiology Graduate Student Handbook
(Updated May 2026)

TABLE OF CONTENTS

1. INTRODUCTION 3
2. APPLICATION FOR ADMISSION TO THE GRADUATE PROGRAM 3
3. PROGRAM ADMINISTRATION 4
a. Graduate Affairs Committee 4
b. Scholarship Committee 5
c. Administrative Staff 5
4. STUDENT ADVISORY COMMITTEES 5
5. GENERAL REGULATIONS AND CONSIDERATIONS 6
a. Student/Supervisor Relationship 6
b. Supervisors on Sabbatical or other Leave 7
c. Residency Requirements 7
d. Time in Program and Extensions 7
e. Financial Support 8
f. Vacation/Leaves of Absence 8
g. Requirement to Withdraw 9
h. Office/Laboratory Space 9
i. E-mail & Website accounts 10
6. STUDENT'S ROLE IN THEIR GRADUATE PROGRAM 10
7. PROGRAM REQUIREMENTS 10
a. Program Expectations 10
b. Program of Studies 12
c. Course Requirements 12
d. Seminars (VTMC 990) 13
e. Research (VTMC 994/996) 13
f. Courses and Academic Standing 13
g. Candidacy Assessment 14
h. M.Sc. to Ph.D. transfers 15
i. Direct Entry Ph.D. 16
j. Use of Generative AI 16
k. Permission to Write 17
l. Theses 18
8. SCHOLARSHIPS 19
9. THESIS DEFENCE 19

1. INTRODUCTION

The Department of Veterinary Microbiology (https://wcvm.usask.ca/departments/vet-micro.php) has students with diverse interests, including Virology, Bacteriology, Parasitology, Immunology, and Epidemiology, and their research questions address these areas at levels ranging from the molecular to the population. We are united by our desire to explore microorganisms and their relationships with us, with other animals, and the environment.

The purpose of this handbook is to provide you with basic information on the various services available to you in your graduate program, as well as the duties and requirements that you will need to fulfill to complete your graduate degree. While your program may seem at times like an exercise in hoop-jumping, it is not intended to be so. Indeed, each step in your program is designed to fulfill a specific function. In brief, our graduate programs comprise two components, a didactic one and your independent research. The didactic learning is intended to provide a knowledge framework upon which your research is based.

---

2. APPLICATION FOR ADMISSION TO THE GRADUATE PROGRAM

The Department accepts students for training programs leading to M.Sc. and Ph.D. degrees.

For further information regarding graduate studies, please contact:

Dr. Emily Jenkins, Graduate Chair
Department of Veterinary Microbiology
Western College of Veterinary Medicine
52 Campus Drive
Saskatoon, SK S7N 5B4
Phone: (306) 966-2569
emily.jenkins@usask.ca

OR

Michelle Reiter, Graduate Programs Coordinator
Department of Veterinary Microbiology
Western College of Veterinary Medicine
52 Campus Drive
Saskatoon, SK S7N 5B4
Phone: (306) 966-7210
michelle.reiter@usask.ca

Details of requirements and procedures for admission to graduate programs at the University of Saskatchewan are available from the web site of the **College of Graduate and Postdoctoral Studies (CGPS)** (https://grad.usask.ca/programs/veterinary-microbiology.php). These include information for **international students** (https://grad.usask.ca/admissions/admission-requirements.php#Minimumadmissionrequirements) such as requirements for demonstrating **proficiency in English** (https://grad.usask.ca/admissions/admission-requirements.php#Englishlanguageproficiencyrequirements) and an estimate of the **financial cost** (https://grad.usask.ca/funding/tuition.php) of attending the University.

We strongly advise prospective students to contact individual departmental faculty members, to inquire if they are willing to supervise the student, before applying for admission. Information about the research interests of departmental faculty can be obtained from the **Department** website (https://wcvm.usask.ca/departments/vetmicro/vetmicro-people/all-people.php). Only applicants who are supported by scholarships or through their supervisor's research grant will be accepted as graduate students in the program. Faculty who are entertaining specific applications should inform the graduate chair and program coordinator as soon as possible; this will facilitate a preliminary evaluation of the student's academic performance (U of S grade conversions) and scholarship eligibility. Our department admissions committee requires a pre-application checklist completed by the proposed supervisor that outlines the interview and screening process and the proposed funding plan. The Department does not require applicants to take the Graduate Record Examination (GRE) or entrance examinations other than those required to demonstrate **proficiency in English** (https://grad.usask.ca/admissions/admission-requirements.php#Englishlanguageproficiencyrequirements).

---

3. PROGRAM ADMINISTRATION

a. Graduate Affairs Committee

The Department Graduate Affairs Committee (GAC) and standing subcommittees (Admissions, Assessments) makes decisions regarding the Department's graduate program, including the approval of applicants for admission to the program, regulations regarding Candidacy Assessments and conditions for transfer of students from M.Sc. to Ph.D. programs. The GAC is chaired by the Graduate Chair and membership consists of faculty, adjunct and associate members of the department who are supervisors of Veterinary Microbiology graduate students. Standing subcommittees have at least 3 GAC members and report to the Graduate Chair.

b. Scholarship Committee

The Departmental Scholarship Committee is composed of three tenure-track or tenured faculty members of the department, including the Graduate Chair. The department also received approval from CGPS to include two graduate students as ex-officio members of the committee. This committee is responsible for evaluating applications for departmental bursaries and scholarships, and ranking applications for other internal scholarship competitions, when required.

c. Administrative Staff

Dr. Emily Jenkins is the Departmental Graduate Chair and Michelle Reiter is the Graduate Programs Coordinator. Please see section 2 for contact details.

---

4. STUDENT ADVISORY COMMITTEES

As soon as possible following a student's initial registration in their program, an Advisory Committee should be named and a meeting held to assist in course selection and definition of the research area. The graduate chair, the supervisor, and the student most often guide the decision-making process for Advisory Committee selection. The guiding principle is that the student needs sustained advice from the beginning of their program if they are to move expeditiously and constructively through the various program requirements.

The first meeting of a student's Advisory Committee **must** be held within **six** months of the student's initial registration. The purpose of the first meeting is introductory, to familiarize the student with programmatic requirements and the role of the advisory committee, meet his/her committee members, select courses and to provide an opportunity to discuss plans for the student's research.

Each Advisory Committee will have a committee chair, a faculty member who will be assigned to the committee by the Graduate Chair or Head. The Graduate Chair or designated committee chair is a non-voting *ex officio* member of the committee. A chair will attend all advisory committee meetings (ACMs) where a formal decision is made (program of study, examinations, and meetings following unsatisfactory progress). At any time, the chair, student or supervisor can call an ACM. In Vet Micro, our program norms are 2 ACMs per year (every 6 months), and this is strongly recommended for MSc students, who have shorter times in program than PhD students. At the end of each ACM, the committee will collectively decide whether the next meeting will be in 6 or 12 months, and whether it needs to be chaired; the CGPS requirement is an ACM every 12 months. However, students are encouraged to contact members of their committee whenever they need assistance. The Advisory Committee also plays an important role in assessing student performance in MSc to PhD transfer examinations, candidacy assessments and thesis defences.

The M.Sc. Advisory Committee consists of at least three members, the Ph.D. Advisory Committee consists of at least four members, as follows:

Advisory Chair - The Graduate Chair or designate
Supervisor - A member of the faculty of the CGPS (adjunct professors included) but cannot be a Professional Affiliate.
Co-Supervisor, if applicable - Persons who are not members of the faculty of CGPS, may be granted permission to be a co-supervisor by the Dean, CGPS. (Note: co-supervisors share a vote in decision-making at the oral defence, and thus count as one member).

Additional Members - a minimum of one. Must be members of the faculty of CGPS, adjunct professors, Professional Affiliates or be granted one-time membership by the Dean, CGPS.
Cognate Member – a minimum of one for a Ph.D. program. Must be a member of the Graduate Faculty, CGPS or be granted one-time membership by the Dean, CGPS, but cannot be a member of the student's home department. Adjuncts are not eligible to act as a cognate member, except for those from VIDO.

Each spring and fall, the graduate administrator will poll for ACM scheduling. Priority will be given to students or supervisors who have requested a special meeting, or who have imminent deadlines for exams, permission to write, or planned leaves. If no proposed time slot is mutually agreeable for all members of a committee greater than 3 people, the administrator will ask the supervisor if the missing person(s) are critical to the meeting. If not, we will proceed to book the meeting; otherwise, we will re-poll. All members of the Advisory Committee will receive the student progress report and are encouraged to contact the student or supervisor individually or via email if they cannot attend the meeting.

---

5. GENERAL REGULATIONS AND CONSIDERATIONS

a. Student/Supervisor Relationship

The relationship between a student and their Supervisor is the single most important relationship in a graduate student's program. Communication is a key element of this relationship. In order to ensure clear communication, expectations and guidelines, students and supervisors are required, per CGPS Policy, to meet within the first 12 months of the student's program to discuss and complete the CGPS Student-Supervisor Agreement. **It is strongly recommended to complete this form prior to the first committee meeting.** Once completed and signed, please forward this document to Graduate Programs Coordinator, Michelle Reiter.

b. Supervisors on Sabbatical or other Leave

Students can expect their Supervisors and the academic unit (the Department) to ensure that adequate provisions have been made for continued supervision during absence or leave of any kind. Supervisors must communicate such arrangements well in advance (whenever possible) to the Graduate Chair, the Department Head) and the student. Faculty members should recognize that it is imperative to make an appropriate reduction in supervisory and advisory responsibilities prior to and during sabbatical and similar types of leave. Students can expect their supervisors to recognize that the thesis and examinations required by the Program of Studies are important events. Interim examining and supervisory arrangements that have been made to cover a period of absence do not release Supervisors and Advisors from final responsibility for the adequate supervision of their students.

c. Residency Requirements

The minimum residency requirement for a M.Sc. program is one regular academic session (i.e. 8 continuous months), starting in September and ending in April. Within the Residency period, candidates in a thesis program must have full-time status and must register in VTMC 994, VTMC 990, and the minimum number of graduate credit units for their specific program of study.

The minimum residency requirement for a Ph.D. program is two full years (i.e. 24 continuous months) for those students who hold a recognized M.Sc. degree in a suitable field. Within the Residency period, candidates must have full-time status and must register in VTMC 996, VTMC 990, and the minimum number of graduate credit units for their specific program of study. They must be actively engaged during this period in academic work as prescribed by the department or college, including research.

The minimum residency period for students who **transfer from an M.Sc. program to a Ph.D. program without completing the M.Sc. program** is three regular academic sessions (i.e. 32 continuous months). Students transferring from an M.Sc. program are required to complete a minimum of two regular academic sessions in residence as Ph.D. candidates, regardless of the time in residence completed at the M.Sc. level.

d. Time in Program and Extensions

Graduate students and all those involved in graduate studies are strongly encouraged to ensure that students move as expeditiously as possible through their programs of studies. Official program time limits are 4 years for M.Sc. and 6 years for Ph.D., whether full or part time, although expected timelines in the Veterinary Microbiology graduate program are shorter (see Section 7a). Students who transfer from an M.Sc. into a Ph.D. program also have a time limit of 6 years. This time is measured from the beginning of the first term of registration for work that is included in the Program of Studies (may be course work done at U of S or elsewhere, thesis, project, or practicum). Approved leaves (i.e. medical or parental) are not counted towards time in program.

As soon as it is apparent that a student will not complete their program requirements within the time limit of the program, the student should meet with their supervisor to discuss a plan and timeline for completion. The plan should consist of a detailed explanation of the reasons for the delay, a detailed plan to address these issues, and a developed timeline for completion and the planned steps to meet these expectations. Once the plan has been drafted, it should be distributed to the advisory committee, and an advisory committee meeting should be scheduled to discuss, finalize, and approve the plan.

If the Advisory Committee supports the extension request, the request is forwarded to the Graduate Chair for approval and submission to CGPS.

The department has the authority to approve one extension to time in program of up to 12 months (three academic terms). If program requirements are still incomplete by the end of the first extension, a request may be submitted to the Dean of CGPS for one (MSc) or two (PhD) additional extensions of up to 12 months (three academic terms each).

e. Financial Support

Supervisors shall ensure stipend support for graduate students under their supervision - at least $25,000/year for both M.Sc. and Ph.D. students, for a minimum of 24 months for M.Sc. students and a minimum of 48 months for Ph.D. students. Students must inform their supervisor, and the department, of awards won and any other alterations in funding. Support beyond the minimum requirements cannot be guaranteed and will be contingent on availability of funding and documented evidence of adequate progress by the student.

f. Vacation/Leaves of Absence

Graduate students are entitled to a minimum of three weeks of vacation per year. Vacation should be scheduled at a time that is mutually convenient to the student and supervisor.

Leaves of absence are available to students under the following categories: personal or health, maternity/parental, professional, and leave to pursue an additional program of study. **Leaves of absence are normally granted in four-month blocks, to coincide with the registration terms**, except in the case of parental leave (maternity, adoption or paternal caregiving). The Head of the academic unit or Graduate Chair has the authority to approve initial leave requests. Please review the Leaves of Absence policy in the CGPS Policies and Procedures Manual for specific details about each type of leave. The leave period is not included in the time for completion of the degree, and in most cases, tuition is not assessed during the leave. While a student is on leave, all supervisory processes are suspended.

The student must submit the request in writing to the department, and it should include the following:

- The student's program type
- A clear indication of what type of leave is being requested
- The start and end dates of the leave being requested
- Whether the student is the recipient of a graduate scholarship or award
- Residency status of the student
- An explanation of the circumstances necessitating the leave
- Documentation from a practitioner, where applicable
    - Please note that specific diagnoses, details of conditions, details regarding medication, treatment, etc. are NOT required.
    - Notes from practitioners must state how long the practitioner has been treating the student and specific dates/duration of time away being recommended.

Once the request has been approved by the Graduate Chair or Head, the department will inform CGPS, who will process the request.

Unless otherwise permitted by the source of funding, financial support offered to a full-time student is not available to a student on leave.

g. Requirement to Withdraw

Students who fail to make satisfactory progress in their program, as demonstrated by performance in course work, in examinations, in research, or in other program components, will be required to withdraw from the graduate program. Such students must be invited to meet with their Advisory Committee as soon as evidence of unsatisfactory performance is available to either the Supervisor or the Graduate Chair. All relevant circumstances should be considered, every possible accommodation made, and appropriate procedures followed to ensure that the student has full opportunity to explain their situation and to take reasonable remedial action.

When departments or colleges recommend that a student be required to withdraw, they must inform the student in writing through a copy of the recommendation sent to the CGPS Dean. After the Dean is convinced of the appropriateness of this action, official notification of the requirement to withdraw will be sent by the Dean to the student. The student may appeal this decision to the CGPS Associate Dean.

h. Office/Laboratory Space

Each student in our department will be provided with access to either shared or open office space, as well as adequate lab space in which to perform their duties.

i. E-mail & Website accounts

Upon enrollment in the CGPS each student will automatically be issued an email account by ICT Services. Graduate students also have an opportunity to establish their own websites.

---

6. STUDENT'S ROLE IN THEIR GRADUATE PROGRAM

The student is responsible for the success of their graduate program, although the faculty, Advisory Committee and the Graduate Chair will always be available to help with problems within the student's program. Specific responsibilities include timely registration for courses and payment of fees owing, maintaining academic performance at a level commensurate with the program, attending and participating in the weekly departmental seminar series, a commitment to research, adherence to University regulations concerning Academic Integrity (https://governance.usask.ca/student-conduct-appeals/academic-misconduct.php#About), and maintaining a spirit of collegiality with peers, laboratory co-workers, and faculty. It is the student's responsibility to seek advice from their Advisory Committee where appropriate. Students can request an Advisory Committee meeting at any time by contacting the Graduate Chair.

---

7. PROGRAM REQUIREMENTS

a. Program Expectations

Master of Science

Program scope and goals:

The program is designed to train students to become capable, critical and self-reliant scientists who can apply their knowledge and skills in research and development, education, and policymaking.

The program includes 9 credit units of courses, including VTMC 830.3 "Critically Evaluating and Communicating Microbiology", and a defined research project that forms the basis for a written thesis. A student's thesis must be defended to the satisfaction of the advisory committee and an arms-length examiner. M.Sc. students are expected to produce publication quality results. Publication of results from the thesis project is desirable, but not a specific requirement of the program.

The goal of the research project and thesis is to allow the student to demonstrate competence in hypothesis development, experimental design and execution, interpretation and discussion of the results in the context of the scientific literature.

Expected characteristics and capabilities of an M.Sc. graduate:

- Knowledge of discipline
- Competent experimentalist
- Capable of critical reading and interpretation of the literature
- Able to recognize problems and questions, and generate hypotheses
- Able to design experimental plans to address hypotheses
- Able to interpret results of experiments, and report them both orally and in writing
- Able to keep clear and interpretable records
- Able to work as a member of a team
- Have sufficient knowledge and skills to start a Ph.D. program

Anticipated timelines:

The targeted duration of the program is 2 years, and stipend support beyond 2 years is not guaranteed. The research project portion of the program will be completed within 20 months of entry into the program, with 4 months to write and defend the thesis. Although desirable, publication of the results is not a requirement of the program, and the publication process would not be an acceptable excuse for delays in program completion.

Doctor of Philosophy

Program scope and goals:

The program is designed to train students to become capable, critical and independent scientists and leaders who can apply their knowledge and skills as a principal investigator in research and development, academia, and policymaking.

The program includes courses (a minimum of 3 credit units for students entering into the Ph.D. program with a completed M.Sc. degree, 12 credit units for students transferring from the M.Sc. program and for Direct Entry Ph.D. students, including VTMC 830.3 "Critically Evaluating and Communicating Microbiology", and a research project that forms the basis for a written thesis, defended to the satisfaction of the advisory committee and an external examiner. Ph.D. students are required to make a novel contribution to their field of study, and to publish their results in peer-reviewed journals.

Expected characteristics and capabilities of a Ph.D. graduate:

- Advanced knowledge of discipline, and comprehensive understanding of the area of focus
- Competent, and independent experimentalist
- Advanced critical reading skills, sufficient for future success as a peer reviewer
- Able to recognize problems and questions, and generate hypotheses
- Able to design experimental plans to test hypotheses, and make novel contributions to the field of study
- Able to interpret results of experiments, and report them both orally and in writing to a wide variety of audiences including peers, stakeholders, and the public
- Able to function as a team leader

- Have sufficient knowledge and skills to start a post-doctoral fellowship or work as an independent scientist in industry

Anticipated timelines:

The targeted duration of the program is 4 years, and stipend support beyond 4 years is not guaranteed. Publication of the results of the research project is a requirement of the program, with a minimum of one manuscript describing results of the thesis research accepted or published in a peer-reviewed journal at the time of thesis defence.

b. Program of Studies

Within the first year of a student's registration at the University of Saskatchewan in a graduate degree program, a Program of Studies must be developed by the student's committee. The Program of Studies forms a contract between the University and the student such that successful completion of the noted courses, passing required examinations and defence of the thesis will result in the conferring of the degree. The Program of Studies is therefore a critically important component of each student's file. In the Department of Veterinary Microbiology, the Program of Studies is discussed and recorded in the committee meeting minutes document. Program changes, such as a general change in course work requirements, change in supervisor, or significant change in research area, must be recorded in the committee meeting minutes document.

c. Course Requirements

The following credit unit requirements are required for graduate programs in the Department of Veterinary Microbiology:

- M.Sc.: Minimum of 9 credit units
- Ph.D.: Minimum of 3 credit units
- Transfer from M.Sc. to Ph.D.: Minimum of 12 credit units.
- Direct Entry Ph.D.: Minimum of 12 credit units; 9 of these credit units must be taken within the first year in program

VTMC 830.3 (Critically Evaluating and Communicating Microbiology) is a **required course for all graduate students in Veterinary Microbiology.**

In addition to credit courses, students are **required** to complete the on-line Graduate Research Ethics and Integrity Training Course (GPS 960) **during the first term of their program**. Depending on the research area, some students may be required to complete an additional module geared for work with either human (GPS 961) or animal subjects (GPS 962), as determined by the student's advisory committee. Students will need to complete this online training before they begin their research and data collection.

Students may elect to complete non-credit courses offered by the CGPS, such as Graduate Professional Skills (GPS 974); Academic Preparation for International Graduate Students

(GPS 981); Mentored Teaching (GPS 982); Thinking Critically: Professional Skills for Global Citizens (GPS 984); Teaching Preparation Certificate (GPS 986); and others as offered. These courses have no credit or fees but require registration. The courses will appear on students' official transcripts.

d. Seminars (VTMC 990)

All graduate students **must** be registered for, and attend, the departmental research seminar series. In addition to being our Departmental Seminar Series, VTMC 990 is a **required** course for all Vet Micro graduate students. If for some reason a student is unable to attend a seminar due to illness or other unavoidable conflict, they must notify the course coordinator in advance of the session they will miss. Failure to attend at least 70% of the seminars may result in the assignment of remedial work at the discretion of the VTMC 990 course coordinator and the Graduate Chair.

All Vet Micro students are required to give a seminar each year during the series. Students who have been officially granted Permission to Write are exempt from presenting a seminar but must still attend. Normally, credit is assigned after defence of the thesis.

e. Research (VTMC 994/996)

Students in an M.Sc. or Ph.D. program must register in the thesis course (994 or 996) in each academic term throughout the program. Credit is awarded after successful defence of the thesis.

f. Courses and Academic Standing

To receive credit for a graduate class, you must obtain a grade of ≥60% for MSc students and ≥70% for PhD students. Some students may be required by their Advisory Committee to take additional classes to make up for deficiencies in their knowledge base. M.Sc. students may be granted permission by their Advisory Committee to take one undergraduate class to make up for deficiencies. Undergraduate course credit will not count towards minimum graduate program credit requirements.

All students entering a graduate degree should very seriously consider investing in a bibliography management program (e.g., End-Note, Zotero) at the beginning of their graduate program. These programs employ references (including abstracts) downloaded directly from the many bibliography services available (e.g., PubMed). They could save you many dozens of hours of computer labour during your degree, particularly within the context of your thesis.

g. Candidacy Assessment

> *The purpose of the Candidacy Assessment is to ensure that a student is sufficiently prepared to be successful in their doctoral research and dissertation. A student must be able to demonstrate to their committee that they have an adequate grasp of the current state of knowledge in the intended field of research; they have the potential ability to conduct advanced original research independently using relevant methodologies; and the ability to communicate in ways appropriate to the field of research and practice.* (Policies and Procedures manual)

The Candidacy Assessment will occur within 24 months of the initial registration directly into a Ph.D. program. For students who transfer from an M.Sc. to a Ph.D. program, the Candidacy Assessment will take place within 36 months of the student's initial registration in the M.Sc. program. All course credit requirements must be completed prior to the Candidacy Assessment.

The Candidacy Assessment will take the form of a literature review, which can be subsequently used as a starting point for the development of the first chapter (i.e., the general introduction) of the student's thesis. The student and supervisor will develop an outline of the literature review in the form of a table of contents (TOC), which will be submitted to the Advisory Committee for their approval. The members of the Advisory Committee can suggest additional sub-headings and topics for the TOC. Once the student and the Advisory Committee have agreed on the TOC, the student will write the literature review. While there are no page limits for the literature review, the range is expected to be between 6,000-10,000 words. The supervisor is allowed to give high level input into the literature review but should not help write or edit the review (we are assessing the student and not the supervisor). Once the Candidacy Assessment date has been confirmed, the student will submit their written literature review to the Committee a *minimum* of 2 weeks prior to the meeting date. At the meeting, an oral examination will be held to ensure that the student can describe and defend their material to the satisfaction of the Committee. The oral examination typically contains two rounds of questions by each member of the Committee (15 to 20 minutes per committee member for the first round of questions, typically less time for the second round of questions). The total length of the oral exam depends on the size of the Committee and can range from 1 to 2 hours.

For the candidacy assessment, students will be assessed on their combined performance on the literature review and the oral examination. Students who fail their first candidacy assessment are given a second opportunity. If the student fails the candidacy assessment twice, they will be required to discontinue their doctoral program (option to complete with an M.Sc.). Students who successfully complete the Candidacy Assessment are deemed a doctoral candidate. The date of the successful completion of the Candidacy Assessment will be noted on the student's official USask transcript.

This Candidacy Assessment Policy came into effect May 1, 2024, for students less than 2 years into their program on that date.

h. M.Sc. to Ph.D. transfers

Transfer from a M.Sc. program to a Ph.D. program should take place after the end of the first year and no later than the end of the second year in the program.

Recommendation to transfer from an M.Sc. program to a Ph.D. program must be initiated through a formal meeting of the student's Advisory Committee that forwards its recommendation through the academic unit to the CGPS. The following conditions must be met:

- *The student shows great promise both in terms of academic accomplishments and in potential for research.*
- *The student has completed at least 9 credit units and has achieved a high-academic standing in these 9 credit units.*
- *There is evidence of good writing and oral communication ability.*
- *There is evidence the student has the requisite research skills and knowledge to be able to successfully complete a Ph.D. dissertation.* (Policies and Procedures manual)

The Department rules and requirements for students wishing to transfer from M.Sc. to Ph.D. programs will be explained to the student at the first meeting of the advisory committee, if appropriate:

- Students may transfer within 12-24 months of starting their graduate program.
- Transfer requires a minimum grade average of 80% and completion of the 9 required course credits (including Critically Evaluating and Communicating Microbiology).
- The final decision for recommending transfer will rest with the student's Advisory Committee, based on the submission of a written proposal by the student.

Format of the written proposal:

1. Literature Review
2. Hypothesis and rationale
3. Objectives. For each objective:
   i. Rationale
   ii. Methods
   iii. Anticipated results
   iv. Anticipated problems and proposed solutions
4. Significance of the work

The student will submit the written proposal to their Advisory Committee. Within 2 weeks of that submission, the student will orally present and defend their proposal at a meeting of the Advisory Committee.

Students who transfer from an M.Sc. to a Ph.D. will complete their Candidacy Assessment within 36 months of their program start (see item 4.g. above)

i. Direct Entry Ph.D.

With the recommendation of the department, direct entry Ph.D. admission is available to exceptionally strong students not possessing a thesis-based M.Sc., who show great promise in terms of academic accomplishments and potential for research.

Admission Requirements:

- A Doctor of Veterinary Medicine, a 4-year honours bachelor of science degree or equivalent
- A cumulative weighted average of at least 80% in the last two years of undergraduate study (i.e. 60 credit units of course work)
- Demonstrated ability for independent thought, advanced study and independent research
- Evidence of English proficiency

Degree Requirements:

- 12 credit units at the graduate level, 9 of which must be successfully completed within the first year of the program
- Successful completion of required courses – VTMC 990, VTMC 996, VTMC 830, GPS 960
- Pass a Candidacy Assessment within the first 24 months in program, after completing course work and prior to focusing on the doctoral thesis
- Write and successfully defend a thesis based on original investigation

j. Use of Generative AI

Students are responsible for writing their own theses, verifying the accuracy of all sources cited in their work, and appropriate acknowledgement using a transparency statement. This transparency statement must detail whether or not Generative AI was used for the thesis, and if used, provide specifics (see below). Generative artificial intelligence (AI) tools are permitted during the research and writing process for your thesis, and we recommend using University approved tools which provide some data protection. Students should also review and follow any journal specific guidelines on AI use when publishing manuscripts that may also represent chapters in their thesis.

Sample transparency statement from WCDGS: https://www.wcdgs.ca/generative-ai-in-graduate-studies

"Name of tool" was used to [for example: find relevant material and suggest high-level categories for analysis] on [date]. Additionally, prompts on specific topics were given to [Name of tool] to generate ideas. The final document was written by [first author] and reviewed by [all authors], with copyediting and phrasing help through "Name of tool".

Other resources:
https://www.elsevier.com/about/policies-and-standards/publishing-ethics
https://www.nature.com/nature-portfolio/editorial-policies/ai
https://www.enago.com/academy/disclosing-ai-usage/

k. Permission to Write

Obtaining Permission to Write is a significant step in a student's program. Permission to write the thesis is given by the Advisory Committee when there is general agreement that sufficient work on the research project has been carried out. This will normally occur after:

- All course work and required examinations are completed
- All laboratory work* is completed and the results of research findings are available

*A small volume of additional experimental work may still be required, but this work is limited to finalizing ongoing experiments and must not include conducting new experiments for which data has not already been reviewed by the committee.

Once the student and supervisor feel that enough data has been collected to constitute a defendable thesis, the student must develop a Thesis Outline. This outline should include:

- A complete Table of Contents which includes all subheadings for the Introduction and Literature Review, as well as a list of figures and tables which matches the university's thesis format requirements.
- An abstract/summary of each data chapter, including title, objectives, the results to be included and transition statements explaining how the data chapters are connected to each other. The level of detail should be sufficient for the committee to understand what data will be presented and the major conclusions drawn. A list of tables and figures is always helpful.

Ideally, the outline will be presented at one of the student's bi-annual Advisory Committee Meetings and should be distributed prior to the meeting along with the student's regular Committee Meeting report. The student should be prepared to answer questions from the Committee on the outline. Once the Thesis Outline has been reviewed and discussed by the Committee, the Committee Chair will request a vote from the Committee Members, indicating whether they approve the Table of Contents. Substantial modifications to the approved Table of Contents require approval of the graduate advisory committee. By granting Permission to Write, the Committee is acknowledging that the student has completed a sufficient body of work for a thesis and has met all other program milestones. Once Permission to Write is granted, further Committee Meetings are not required, unless there are significant challenges or time delays in the writing process.

When permission to write is granted, the committee should discuss possible external examiners. CGPS requires a first choice for a qualified person who can serve as an objective examiner of the student's work. The department would also encourage the committee to consider identifying several alternative examiners. While this is not required by CGPS, this will help to expedite defence proceedings in a case where the first choice for external is unavailable. The committee should compile a short list of candidates and each committee member will disclose their contact or confirm that they do not have an active professional relationship (see definition) with each candidate. A consensus of the committee is required before the choice for external may be submitted to CGPS; a vote by email may be done to record agreement. For PhD defences, a University Examiner must also be identified (see definition), for students who started their program on May 1, 2022 or later.

Once permission to write is granted, the timeline to completion of the thesis should also be discussed by the committee. This should include target dates for:

- first draft of thesis to supervisor
- return of first draft comments to student
- second and additional drafts to supervisor
- return of second and additional drafts to student
- approval of the final draft of thesis by the supervisor and submission to the Chair and committee for approval
- return of committee comments to student

Once the Chair and committee have reviewed the thesis, the Chair will ask the committee for a vote as to whether the thesis is ready for defence. This step is usually conducted via email. If the vote is positive, arrangements for scheduling the defence can commence.

I. Theses

Theses must follow a very specific editorial format, as laid out by the CGPS in documentation available on their website (https://cgps.usask.ca/onboarding/roadmaps/thesis-roadmap.php#iconbookTheThesisRoadmap). Students are encouraged to review recent theses from the department, available on-line through the University (https://harvest.usask.ca/), or in the department office.

If you have published much of your research, you may wish to use these publications as the individual chapters of your thesis. In this case, each publication has its own introduction, materials and methods, results and figures/tables, and discussion section. Between each chapter, there should be a brief explanation of how each chapter relates to the overall scope and "story" of the thesis. The references from all chapters will be collected in one common bibliography at the end of the thesis. In addition, you will need to present a coherent discussion of all your work in one common discussion, presented as its own section immediately following the last "publication", and followed by your conclusions, bibliography and any appendices.

If you plan to include published material in your thesis, it is your responsibility that any licensing requirements and conditions of the publisher/owner of the copyright are met. It is also recommended that you include a cover page for each manuscript chapter that includes the full citation of the publication, an indication that permission of the copyright owner has been obtained, and a statement of author contributions for all co-authors.

If you have not published your work, you may elect to use a traditional thesis format, with one common materials and methods section, several results subsections, one common discussion, and then the conclusion, bibliography and any appendices (e.g., relevant, but somewhat ancillary data, or raw data).

---

8. SCHOLARSHIPS

CGPS Graduate Scholarships: The Department of Veterinary Microbiology is enrolled in the University of Saskatchewan CGPS Student Support Fund (SSF) program. Our CGPS funding allotments are assigned to us by the CGPS based on the numbers of students within their allotted time in our program (24 months for M.Sc., 48 months for Ph.D.). Allocation of SSF scholarship funding is based on recommendations of the Scholarship Committee. Information regarding the application process is distributed to students and supervisors annually. The department also receives one CGPS 75th Recruitment Scholarship annually, awarded on a competitive basis to an incoming student.

Please note: if you are awarded a scholarship from a source other than the department, it is incumbent upon the student to inform the department of the award.

Additional information on various University scholarships and other, external funding opportunities is available from the CGPS Funding page (https://grad.usask.ca/funding/scholarships.php and https://cgps.usahttps://cgps.usask.ca/funding/funding-info/graduate-awards-scholarships.phpsk.ca/funding/funding-info/graduate-awards-scholarships.php).

---

9. THESIS DEFENCE

Pre-Defence

Normally a student works with his/her supervisor to complete a first draft of the thesis following the approved table of contents. The student may submit initial drafts of thesis chapters to the supervisor alone or work with the committee from the beginning. The decision on which route to take should be made with input from the committee and may

depend on factors including the anticipated level of editing required and the level of involvement of committee members with experimental work. Students should expect supervisor feedback on submitted thesis chapters within 4 weeks. Once a complete draft of the thesis is ready for review, the committee chair should be notified, and they will forward the thesis to the entire graduate advisory committee. Normally, the committee requires 2-3 weeks to review the thesis and provide feedback. Committee members may request to review the thesis following revisions. If the thesis is structurally sound, the committee chair will solicit a vote of the advisory committee on the question "Is this thesis ready for defence". A thesis may be deemed ready for defence if it conforms to the approved table of contents, clearly presents experimental data, has a complete set of figures/tables and meets a standard of scientific writing that would allow it to be evaluated by an external examiner.

Scheduling the Defence

When the thesis is deemed ready, the Graduate Affairs Coordinator will poll the committee, student, and External Examiner for their availability.

- For MSc defences, once a date is chosen, a memo containing the defence details is forwarded to CGPS. For MSc defences, we are required to give CGPS a minimum of **2 weeks of notice**. The thesis and other details are sent to the External Examiner by the Graduate Programs Coordinator. The Graduate Programs Coordinator will provide the student with a CGPS "Graduating Student Checklist" prior to the defence date.
- For PhD defences, a form containing the defence details, the name and C.V. of the first choice for External Examiner, and the name of the University Examiner, are forwarded to CGPS along with the thesis. For PhD defences, we are required to give CGPS a minimum of **5 weeks of notice**. CGPS must approve the thesis and the first choice of External Examiner, and once that is done, they will contact the External Examiner and University Examiner and send them the thesis. CGPS will then contact the student to request a Dissertation Summary and will provide the student with a "Graduating Student Checklist".

The Graduate Affairs Coordinator will make any necessary travel arrangements required for PhD External Examiners.

Defence Day

Seminar Presentation

As a part of the defence, you will give a seminar presentation as an overview of your research/thesis:

- The seminar should be between 30 and 40 minutes in length. This will allow for questions after the presentation.
- Bring your presentation on a USB key.

Pro tip: *Make sure to have some water on hand during your presentation. Nervous = dry mouth. If you don't have water, ask for some.*

Oral defence
Following your seminar presentation, there will be a short break, after which you, your committee, the University Examiner (for PhD defences) and the External Examiner, will adjourn to a conference room.

- Bring a hard copy of your thesis. It will make it easier for you when the External Examiner or committee members question you on something specific in the thesis.

Pro tip*: Make sure to bring something to drink. Bring something with a little sugar in it, like fruit juice, to keep you hydrated and to keep your energy up.*

- The format of the oral defence is as follows:
  - The Committee Chair starts the meeting and explains the format of the defence.
  - The Chair will then initiate a round of questioning, starting with the External Examiner (and then for PhD defences, the University Examiner, followed by the Cognate member). All members of the advisory committee and the supervisor (or co-supervisors) can ask questions.
  - Once the first round is ended, a second, usually shorter round of questioning will begin. Additional questions may be allowed, but in most cases, two rounds is sufficient.
  - Once the questioning rounds are complete, the Chair will ask the student to leave the room while the committee and External Examiner (and University Examiner for PhD defences) discuss your defence of the thesis and vote on the outcome.
  - The Committee will then call the student back into the room, and conclude the defence. The oral defence usually takes about 2 hours.

Post Defence

Final Changes and Defence Documents
In most cases, there are revisions required to the thesis because of the defence and thesis examination. The nature and extent of the required revisions will be explained by the committee chair.

Pro tip: *Book a meeting with your supervisor or co-supervisors as soon as possible following the defence to ensure that you have a mutual understanding of revisions required.*

Students should complete these changes in a timely manner, and once complete, they must send the revised thesis to their supervisor for final approval. The supervisor indicates their final approval by signing the defence documents that were generated at the defence, and which will be in the possession of the Graduate Programs Coordinator.
ETD Upload

Once the student has the final approval of the supervisor, the student can upload their thesis to the University of Saskatchewan Electronic Thesis Dissertation website along with the GPS 404 Final Thesis Confirmation Form, signed by both the student and supervisor (details on how to do this are included in the CGPS Graduating Student Checklist). The date of this upload is considered your final day in program. The student should inform the Graduate Programs Coordinator once the upload is complete, which is the point at which she can submit the final paperwork to CGPS and also enter a final grade for your VTMC 990 and 994 or 996 courses.

CGPS may request formatting changes of the uploaded thesis. If that is the case, you can make those changes and re-submit to the ETD site, but your original upload day will be considered your final day.

Application to Graduate

There are two "application to graduate" deadlines per year, and this information is detailed in the Graduating Student Checklist you received. You must apply to graduate regardless of whether you are attending convocation. The two items are separate.

Useful links:

USask Thesis Defence information:
https://cgps.usask.ca/onboarding/blueprint/toolkits-for-success/thesis-roadmap.php#Drafting

CGPS External and University Examiner guidelines:
https://cgps.usask.ca/policy-and-procedure/Academics/defence.php#81PERMISSIONTOSUBMITTHETHESISFORDEFENCE

FOR FURTHER INFORMATION PLEASE VISIT: https://cgps.usask.ca/

CGPS regulations governing graduate programs are in the Policies and Procedures Manual available on the CGPS website (https://cgps.usask.ca//policy-and-procedure/index.php).

Grad Hub: https://cgps.usask.ca/onboarding/