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**THE VETERINARY MEDICINE GRADUATE PROGRAM  
STATEMENT OF POLICY AND GUIDELINES  
(For first term enrollment in Fall 2021, Spring 2022)**

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The purpose of this handbook is to provide faculty and students with the necessary information for successfully completing the requirements and expectations of the Veterinary Medicine (VMED) graduate program. Included are specific program requirements and advice for students in the M.S., Ph.D., and combined D.V.M./Ph.D. programs.

**VETERINARY MEDICINE  
GRADUATE PROGRAM**



**UNIVERSITY OF MINNESOTA**

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**College of Veterinary Medicine**

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Additional sources of information for VMED graduate students include:

- 1) The Graduate Program Catalog for the University of Minnesota contains the primary information that students need for their graduate studies. The catalog provides information on financial assistance, housing, and registration. Access online at <https://catalogs.umn.edu/>.
- 2) General information for students is also available on the Graduate Education website at <http://www.grad.umn.edu/>
- 3) The VMED program website at: <https://www.vetmed.umn.edu/education-training/ms-and-phd-programs/ms-and-phd-veterinary-medicine>

*The information in this handbook and other University catalogs, publications, or announcements is subject to change without notice. University offices can provide current information about possible changes. This document is available in alternative formats on request.*

# THE GRADUATE PROGRAM IN VETERINARY MEDICINE

## A. OBJECTIVES

The mission of the *Veterinary Medicine* graduate program is to promote science-based research and provide high quality education to develop scientists working to improve animal health and well-being in the interface of animals, humans and the environment.

### Program Goals:

- Prepare independent basic, applied, and translational scientists for successful careers in academia, industry, or government;
- Foster development of specific skills including leadership, communication, independent and critical thinking, teaching, interdisciplinary research in collaborative environments, scientific and grant writing, experimental and analytical methods;
- Contribute to the body of knowledge in basic, translational, and applied sciences in animal health and well-being, and emerging and zoonotic threats.

## B. ADMINISTRATIVE STRUCTURE

### B.1 Director of Graduate Studies (DGS)

Primary administrative responsibility for the program is vested in the Director of Graduate Studies (DGS). The DGS must be a tenured or tenure-track faculty member of the VMED Graduate Program, and must hold a Ph.D. degree in a relevant field from an accredited university. The selection of the DGS is made via a nomination and election process by the VMED faculty. The DGS is elected by a simple majority of the votes received. The DGS appointment is approved by the Dean of the College of Veterinary Medicine on the recommendation of the Associate Dean for Graduate Programs (ADGP). The DGS term is three to five years, with annual review by the faculty as conducted by the PAC. The DGS cannot serve more than two consecutive terms. The DGS will be reviewed annually by the ADGP.

#### **The specific responsibilities of the DGS include:**

- 1) Communicate with the Associate Dean for Graduate Programs (ADGP) regarding decisions to accept new students or terminate existing students.
- 2) Administrative responsibility for the program.
- 3) Lead student recruitment efforts and facilitate review of student applications by the Program Advisory Committee (PAC). Approval will be based on the consensus of the PAC. Admission will be recommended when a faculty member has accepted responsibility for advising and funding the prospective student or the VMED program awards a first year research assistantship.
- 4) Hold VMED faculty meetings at the minimum of one per semester.
- 5) Hold annual meetings with VMED graduate students to discuss matters of governance and curriculum.
- 6) Conduct an annual review of the program, including its policy and guidelines. Faculty will be asked to assess the current status of the graduate program and recommend plans for its continued development. Recommendations will also be solicited from graduate students. Results of the program evaluation will be communicated to the faculty and students and maintained on file.
- 7) Conduct, in concert with the PAC, annual reviews of individual graduate student progress within the program. With the aid of tracking forms maintained for each student, progress toward completion of his/her degree will be assessed. Problems identified during the review process will be addressed in consultation with the graduate advisor.
- 8) Establish short-term and long-term goals for the program and plans for achieving them.
- 9) Conduct, together with the PAC, reviews for faculty with graduate education responsibilities. Individual faculty will be reviewed every five years.
- 10) Provide leadership in developing and maintaining the VMED curriculum.

- 11) Disseminate information concerning fellowship and training opportunities for graduate students and assist in the selection of program nominees for Graduate School Fellowships and Awards.

### B.2 Program Advisory Committee (PAC)

The Program Advisory Committee (PAC) consists of five VMED faculty members selected at large from within the program; one graduate student representative, and the current DGS. Faculty members of the PAC will be elected by the graduate faculty to serve a three-year term, with elections staggered such that one or two members are elected each year. The immediate past DGS serves as an ex-officio PAC member for one year. The student representative's participation in PAC meetings is confined to matters of general administrative and educational policy and does not extend to matters that relate to the progress of individual graduate students, or to the applications of prospective graduate students.

The DGS will ask a member of the PAC to serve as interim DGS when the DGS is away. Electronic records will be kept of all committee deliberations. Decisions will be reached by consensus.

The faculty establishes the general policies of the VMED graduate program. The PAC administers these policies and provides a broad base of input from the signature programs research emphases within the veterinary medicine graduate program. The PAC serves both faculty and students in the maintenance of academic standards, without impinging on the advisor/advisee relationship, through periodic reviews of the progress of all VMED graduate students and faculty. The PAC will present recommendations to the VMED faculty on matters such as changes in program policy, as well as any major issues or problems as needed.

#### **Specific responsibilities of the PAC include:**

- 1) Recruitment, review and ranking of new student applications.
- 2) Approval of individual student graduate degree programs and examining committees.
- 3) Review of graduate student progress in conjunction with the DGS.
- 4) Review of faculty with graduate education responsibilities appointment.
- 5) Review of curriculum and graduate program policies.
- 6) Annual review of DGS.

### B.3 Associate Dean for Graduate Programs (ADGP)

The Associate Dean for Graduate Programs is appointed by, reports to, and serves at the discretion of the Dean of the College of Veterinary Medicine, in consultation with CVM leadership. The ADGP is to be reviewed annually by the Dean, DGSs, and other CVM Leadership as determined by the Dean. The ADGP provides support and strategic direction for the College, seeking to enhance the vision and vitality of its graduate degree training programs. In collaboration with College leadership, DGS and faculty, develops and implements the strategic plan for the College's graduate programs.

#### **Specific responsibilities of the Associate Dean for Graduate Programs:**

- 1) Develop strategic plan to ensure growth and excellence of the CVM graduate programs.
- 2) Increase awareness and visibility of graduate programs at the University, AHC, and Collegiate levels.
- 3) Represent graduate programs at collegiate level; liaison with College leadership and DGS.
- 4) Represent graduate programs interests in collegiate budget process.
- 5) Facilitate graduate programs reviews to provide effective assessment of graduate programs.
- 6) Oversee collegiate training grant programs to increase funding opportunities.
- 7) Provide leadership in the recruitment and retention of high quality graduate students.
- 8) Identify sources of funding for Ph.D. trainees, including emergency or bridge funding.

#### **B.4 Office of Graduate Programs (OGP)**

The College of Veterinary Medicine is the administrative home for the VMED graduate program. The Office of Graduate Programs oversees the graduate programs housed within the college. It functions as the student services office for all students enrolled in the graduate programs of the college. Further, this office provides leadership and support in new training initiatives and coordinates interactions between graduate programs within the College.

The office is staffed by a Graduate Program Coordinator and a Graduate Program Specialist who report to the Associate Dean for Graduate Programs. The responsibilities of the Office of Graduate Programs staff are identified in collaboration with the DGS and the ADGP.

#### **Specific responsibilities of the Office of Graduate Programs:**

- 1) Respond to program inquiries and requests.
- 2) Maintain current recruitment materials.
- 3) Maintain a database of prospective students.
- 4) Process new applications, prepare applicant files for evaluation by the PAC, and store a record of applicants for each academic year.
- 5) Coordinate Recruitment Day for prospective students.
- 6) Organize New Student Orientation prior to the start of fall semester.
- 7) Coordinate course schedule and online registration process.
- 8) Provide general student services specific for graduate student population.
- 9) Liaison between students and Graduate Student Services and Progress Office (GSSP).
- 10) Oversight of student academic program and progress, including annual progress reports and annual thesis committee meetings.
- 11) Resource for all students and faculty on university policies impacting graduate programs.
- 12) Complete exit interviews with students leaving the VMED program.
- 13) Maintain an up-to-date website describing the VMED program.
- 14) Maintain e-mail lists for graduate students and faculty.
- 15) Maintain student and faculty files and database.
- 16) Maintain database of alumni and create quarterly alumni newsletter.
- 17) Record and maintain notes of PAC and graduate faculty meetings.
- 18) Represent needs of graduate programs and students on university committees for graduate education.

#### **C. FACULTY with GRADUATE EDUCATION RESPONSIBILITIES (updated 11/3/20 per MR instructions, identical to CMB language)**

Faculty with Graduate Education Responsibilities represent the establishment of an academic community in which the commitment to scientific discovery is coupled with the desire to train, advise and nurture graduate students. The goal of the faculty is to provide graduate students with training, which will equip them for careers in academia, industry, specialty practice or government service, and at the same time allow ample opportunity to develop initiative and self-reliance. Graduate education is fundamentally a dynamic process between faculty and students. Faculty should be committed to teaching the skills and techniques necessary for graduate students to generate new knowledge. Faculty should also assist graduate students in maintaining focus on degree completion. Faculty members who serve as major advisors have direct responsibilities in administering the programs of their graduate students. In addition, faculty assume responsibility for championing faculty development and for maintaining the standards of the graduate programs.

#### **The responsibilities of the VMED faculty with graduate education responsibilities include:**

- 1) Serve as thesis advisor for VMED graduate students.
- 2) Serve on examining and thesis committees.
- 3) Teach VMED courses.

- 4) Participate in the VMED graduate program seminar series via regular attendance, presenting seminars and by providing evaluations of student seminars.
- 5) Serve on the PAC if elected and ad hoc VMED graduate program committees as requested.
- 6) Attend VMED faculty meetings.
- 7) Promote the VMED graduate program.
- 8) Maintain an active research program as demonstrated by the publication of at least five primary authorship (as determined by discipline) papers of original research in a peer-reviewed journal in the five-year period preceding the evaluation.
- 9) Conduct themselves in a professional manner in accordance with University of Minnesota Policies regarding student-mentor relationships and scientific ethics.

### ***C.1 Faculty with Graduate Education Responsibilities Appointment***

VMED Faculty may be appointed to either the Senior Member (SM) or the Member/Advising (M2) level. Regular established or tenure-track faculty who have previously advised graduate students are considered for appointment at the SM level. Term or junior faculty, who have not previously advised graduate students, may be considered for initial appointment at the M2 level. Promotion of M2 faculty to the SM level can occur at any time by petition of the PAC. All individuals must be classified as University faculty or adjunct faculty or have an exception granted by the ADGP.

New faculty members are elected to the program by the VMED PAC. Applicants must submit a C.V. and brief statement on their views on graduate education and how they plan to contribute to the VMED program. This information is reviewed by the PAC and voted on. To be admitted to the program, the applicant must be approved by a majority vote of the PAC. The decision to admit the applicant is based on the quality of the applicant's research program, written statement on graduate education, and training record or potential for training graduate students. The successful applicant will be invited to present a seminar in either the VMED graduate program seminar series (VMED/VMED8550) or the CVM Research seminar series. Program faculty are expected to conduct themselves in accordance with University policies especially those pertaining to graduate education <http://www.grad.umn.edu/about/policiesgovernance>

To be appointed at the Member/Advising (M2) level, faculty must hold an earned doctorate or equivalent from an accredited institution. Faculty appointed at the M2 level can:

- Advise M.S. students;
- Advise PhD students with a senior member as co-advisor;
- Chair and sit on M.S. examining committees as well as be a reviewer for the M.S. thesis;
- Sit on Ph.D. preliminary examination committees;
- Sit on Ph.D. final examining committees as well as be a reviewer for the Ph.D. thesis.

To be appointed as a Senior Member, faculty must be tenure or tenure track, hold a Ph.D., D.V.M. or M.D. degree in a relevant field from an accredited university. Faculty appointed at the Senior Member (SM) level can:

- Advise M.S. or Ph.D. students;
- Chair and sit on Ph.D. preliminary examination committees;
- Chair and sit on M.S. and Ph.D. final examining committees;
- Serve as reviewer for M.S. and Ph.D. thesis.

Faculty will be re-appointed every five years provided that they have carried out their responsibilities in a satisfactory manner as determined by an evaluation by the PAC. The objective of the review process is to ensure that faculty members meet the criteria for continued membership.

It is expected that graduate faculty will contribute meaningfully to the success of our students and program. All renewal applications will be reviewed by the PAC and will include assessment of prior mentorship outcomes. Graduate faculty members who have not fulfilled the minimum requirements will

be asked to change their membership status or submit plans for increased participation. Continued faculty status in this graduate program must be evidenced in the following ways:

1) Presence of an active research program as demonstrated by the publication of at least five primary or senior authorship (based on discipline) research or original data papers in peer-reviewed journals in the five-year period preceding the evaluation,

**AND**

2) Successful completion of a Ph.D. or M.S. student thesis and degree in the VMED program under their tutelage within the previous 5-year period, or be in the process of training a Ph.D. student or M.S. student in the VMED program at the time of evaluation,

**OR**

3) Evidence of significant and regular contribution to the delivery of new or existing VMED graduate program courses, and/or hosting of rotation students when solicited, participation in VMED program activities, and/or regular and diligent service on PhD and MS committees within the VMED graduate program.

### ***C.2 Considerations for Terminating Faculty Membership***

- Faculty who have retired or resigned from the University of Minnesota will lose their faculty appointment. They may continue to advise students and serve on committees which were approved prior to their departure, but they may not advise new students or participate in new committee activities.
- Faculty may voluntarily resign.
- Faculty members who do not adhere to criteria for continued membership may be asked to relinquish membership.

### ***C.3 Faculty as Student Advisors***

Each VMED student has a faculty advisor. The advisor must be a member of the VMED faculty and advisors of Ph.D. students must be at senior member level. Faculty at the member/advising M2 level can advise M.S. students or have a co-advisor when advising Ph.D. students.

#### **The responsibilities of graduate student advisors include:**

- 1) Helping the student identify a novel and testable hypothesis and providing an experimental system with which to test the hypothesis.
- 2) Ensuring that adequate funds are available to support the student's stipend and fringe benefits and the purchase of supplies required for the student's thesis project.
- 3) Consulting with the student on design and interpretation of experiments.
- 4) Consulting with the student on coursework.
- 5) Assembling the thesis committee in accordance with guidelines and convening the thesis committee no less than once every 12 months to review advisee's achievements and to set goals for the coming year. The advisor will ensure a [Thesis committee meeting summary form](#) is completed by the committee chair.
- 6) Assisting in preparation and attending the student's seminar presentations.
- 7) Working with the student to identify, read, and critically evaluate scientific literature relevant to the thesis project.
- 8) Critically and expeditiously reviewing the student's thesis.
- 9) Assisting the student in submitting and publishing original research in peer-reviewed journals.
- 10) Assisting the student in making professional contacts outside of the University and in obtaining subsequent employment.
- 11) Ensuring that all research and academic activities of the advisee are conducted in agreement with current ethical standards.

#### **C.4 Faculty as Co-advisor**

The term co-advisor is used for a more experienced graduate faculty member who works with a new graduate faculty member to assist in the advising of a PhD graduate student. The new graduate faculty member is considered the primary advisor and is responsible for the student's support and thesis research topic. The co-advisor has no financial responsibility for the student, as that rests with the primary advisor, but rather is a resource for the student and primary advisor in terms of program requirements, graduate education policies and examining committees.

#### **C.5 Faculty Misconduct**

Being a graduate faculty member and a student advisor is a powerful privilege. Faculty are required to act ethically and professionally. They are to be fair and respectful to their trainees and other graduate faculty. Sexual harassment or discrimination based on race, sexual orientation, age, or religion as defined by the Board of Regents will not be tolerated. Members must avoid conflicts of interest in their management and advising of graduate students and courses while promoting a culture of compliance to all university, graduate program, and federal policies.

Allegations of misconduct will be forwarded to the Associate Dean of Graduate Programs and the accused's department chair who will review the charges and circumstances with the DGS. They will prepare a written document outlining the complaint(s). The faculty member may then submit a written appeal and present their rebuttal to the DGS and Associate Dean who will seek to resolve the situation. The process may be assisted by the head of the CVM HR department and the faculty member's department chair.

Any advisor, co-advisor, or graduate faculty mentor found to be in violation of [University of Minnesota Codes of Conduct](#) will face discipline or remediation, including removal from their graduate faculty position(s) based on a decision of the DGS in consultation with the Associate Dean for Graduate Programs. All decisions will be final and permanent.

### **D. GRADUATE STUDENTS**

The recruitment of new graduate students is the combined responsibility of the DGS, the PAC, and all faculty within the program. The graduate program should strive continually to obtain training grants, graduate fellowships, and scholarships by maintaining the highest standards of quality for both its faculty and students. The program should also strive for increased opportunities and competitiveness in the D.V.M. /Ph.D. combined degree program.

#### **D.1 Admission Evaluation Procedures**

The preferred performance standards prescribed by university policy, with several graduate faculty approved modifications, will be utilized in the selection of VMED students. The graduate program has the responsibility for the formal notification of admission decisions.

- 1) D.V.M. or equivalent foreign veterinary degree is preferred. Students with a B.A., B.S., or M.S. degree in non-veterinary programs will be reviewed for admission on an individual basis by the PAC.
- 2) A minimum preferred performance level of a 3.25 undergraduate GPA or equivalent (on a 4 point scale).
- 3) Statement of applicant's experience and goals indicating research interests, career goals, and previous research experience. This will help the PAC evaluate strengths and weaknesses of applicants, ensure that the program is appropriate for their career goals, and provide students the opportunity to promote themselves.
- 4) Three letters of reference from individuals knowledgeable of the applicant's academic and research performance.

- 5) TOEFL score preferred performance level obtained within the previous two years; total score minimum of 79, writing section score minimum of 21, and reading section score minimum of 19.
- 6) Curriculum Vitae.

Applicants whose credentials are borderline may be offered admission on a conditional basis. The VMED PAC will outline the specific conditions that need to be met and a timeframe for meeting those conditions. If the specified conditions are not satisfied before the expiration of the timeframe, the admission is revoked.

#### D.2 Timetable for the Application and Admission Process

To enable the administration of an efficient, cohesive, competitive, and successful graduate program, a single admission for fall semester is recommended for all students. The approximate timetable for the entire process of application and admission is as follows:

Application deadline:	December 1
Decision letter:	March 1
Commitment by student:	April 15
Students enter program:	Fall Semester

There will be flexibility on the application deadline to allow for applications of D.V.M. residents desiring admission to a graduate degree program. There are a variety of mechanisms by which prospective students may join the University Community throughout the year and enter the Graduate Program in the fall.

Offers of admission to the VMED graduate program will not be extended unless the VMED program has offered a first year research assistantship or a faculty advisor has accepted responsibility (both advising and financial) for the student in writing.

#### D.3 Assignment of an Advisor

Once students are determined to be eligible for admission an advisor needs to be identified. Some students apply with an advisor already identified. Other applicants need to have an advisor identified by the PAC. In all cases, an advisor must be identified, accept mentoring and financial support responsibilities for the student before an offer of admission can be extended. Advisors assume mentoring and administrative responsibility for an individual student's program of study. The advisor makes final decisions regarding degree program content and student progress following consultation with the student and the PAC.

#### D.4 Financial Support for Students

Students are first determined to be eligible for admission. For those eligible for admission, an advisor with an opening and financial support must be identified before the student is offered admission. Advisors are responsible for the financial support of their graduate students. The OGP must receive confirmation from the advisor's Chair that sufficient funding exists for the student.

The **minimum** stipend for students is adjusted annually to meet the NIH recommendations or Graduate School fellowships, whichever is higher, plus fringe benefits as determined by the university. Candidates who have passed their oral prelims **may receive \$1,000 additional** stipend support. Note that all students must be registered in both the Spring and Fall semesters in order to maintain active status.

#### D.5 Transfer of Credits

The University policy on Application of Credits for Students Earning Graduate Degrees (<https://policy.umn.edu/education/gradcreditdegree>) should be consulted for questions regarding transfer of credits. Credits to be transferred must be graduate level. Students request the transfer of course credits by including the courses on their GPAS (graduate planning and audit system). In all cases, official transcripts of the graded work must be included in the student's graduate admission office application file.

A limited number of credits of graduate level coursework taken as a non-degree seeking or non-admitted student may be considered for transfer. Transfer of graduate credit is not allowed for courses completed through independent (correspondence) study, completed through extension or special categories at other institutions, or taken before the awarding of a baccalaureate degree. Transfer of thesis credits is not allowed.

#### D.6 Professional Development

All students need to engage in activities that enrich their graduate experience and help them identify and prepare for their post-graduate career. A personalized individual plan will assist the student and advisor in identifying appropriate activities. Activities that qualify include (but are not limited to), mentored teaching, professional externships, and outreach activities designed to advance the career goals as identified in the students' Individual Development Plan (IDP).

Students are required to develop an IDP and to complete meaningful professional development activities prior to graduating from the VMED graduate program. IDPs provide a planning process that identifies professional development needs in the context of career objectives.

There are several resources for completing the IDP, the program recommends the online AAAS version (<https://myidp.sciencecareers.org>). Each student is expected to complete an IDP, discuss goals with their advisor and committee during regular and mandated meetings, and update it regularly as goals are achieved and new ones added. Completion of this process is to be reported each year in conjunction with the Annual Progress Report.

#### D.7 Professional Conduct and Science Ethics

Students in the VMED program are expected to conduct themselves in a professional manner at all times, including personal interactions outside of University structures and events. A respectful workplace is to be maintained at all times. Incoming students are required to attend a Respectful Workplace discussion held at regular intervals within the College of Veterinary Medicine. It is also of utmost importance that the highest quality of academic integrity be maintained. All research and learning is to be conducted in agreement with current ethical standards, particularly when the research involves the use of human and/or animal subjects. Students found in violation of these codes of conduct will be brought before the PAC and/or University Review Panels, with possible dismissal from the program. Students have the right to file grievances against VMED program students, faculty, and staff (<http://www.sos.umn.edu/>) and the execution of this right shall not impede the academic progress of the student.

The Graduate School describes the mutual rights and responsibilities for graduate students and their mentors, and these are used as the model for student and mentor conduct by the VMED program. Standards of Student Conduct Enforceable by University Agencies and the actions defined as disciplinary offenses actionable by the University can be found at <http://www1.umn.edu/oscai>. Expectations for behavior concerning Graduate Students in Research, Scholarship, and Professional Education are described at <https://research.umn.edu/ethics-compliance/overview>. Information regarding approval of animal use protocols is available at <http://www.research.umn.edu/iacuc/>. Related policies are described at <http://www1.umn.edu/ohr/gae> or through the College of Veterinary Medicine Office of Human Resources, 416 VMC.

## E. MASTER'S DEGREE PROGRAM

The master's degree (M.S.) is awarded in recognition of academic accomplishment as demonstrated by a coherent program of coursework, preparation of a thesis (Plan A), and passing of the final examination. The M.S. degree ordinarily requires from 2 to 3 years in residence and cannot be completed in less than one year. **All requirements for the master's degree must be completed and the degree awarded within five calendar years of initial enrollment in the graduate program.**

### E.1 Degree Requirements

Formal coursework for the M.S. degree varies according to the field of study, interests, and career goals of the individual graduate student. Courses may be taken in disciplines other than Veterinary Medicine. Students wishing to enroll in a 4000 level course need to consult with their advisor and the DGS prior to registration if the student wants to use the course in their degree program. Such courses may be appropriate to supplement any deficiencies in the student's academic background.

- A maximum of six 4000-level course credits may be used to satisfy the master's course requirement, with approval.
- At least 60% of the coursework on the official graduate degree plan must be completed as a registered University of Minnesota graduate student in VMED.
- A maximum of eight graduate course credits may be counted in common between two University master's degree programs.
- Approved transfer coursework may make up the remaining 40% of degree credits and can include a maximum of 12 graduate credits taken as a non-degree seeking or non-admitted student.
- Transfer of thesis credits is not allowed.
- As per graduate education requirements, at least 2/3 of course credits must be taken with grades A-F.
- Based on individual student needs, exceptions to requirements can be petitioned to the PAC

### Plan A M.S. requirements:

- Course credits: 20 credits minimum
  - To be taken in VMED or a related field
- Thesis credits: 10 credits
  - VMED 8777
- Total credits: **30 credits minimum**

### **Required courses:**

- VMED 5190 Seminar and Presentation Development for Graduate Students (fall)
- VMED 5910 Grant Writing: What Makes a Winning Proposal? (fall)
- VMED 8134 Ethical Conduct of Animal Research (fall)
- VMED 8550 Veterinary Medicine Seminar (take two times for total of 2 credits) (fall/spring)
- At least one additional 8000 level course
  - Preferably a 2+ credit course
  - Exclusive of seminars or journal clubs
  - Or other PAC-approved graduate level course (5000+)
- At least one course in statistics or biostatistics (VMED5915 Essential Statistics for Life Sciences is recommended)

### Recommended courses to fulfill biostatistics requirement:

VMED 5915 Essential Statistics for Life Sciences	3 cr
VMED 8910 Statistical Principles of Research Design	3 cr
PUBH 6414 Biostatistical Literacy	3 cr
PUBH 6450 Biostatistics I	4 cr
PUBH 6451 Biostatistics II	4 cr
Stat 5021 Statistical Analysis	4 cr
Stat 5031 Statistical Methods for Quality Improvement	4 cr

Stat 5302 Applied Regression Analysis	4 cr
Stat 5303 Designing Experiments	4 cr
Stat 5421 Analysis of Categorical Data	3 cr

Statistics courses other than those recommended can be used to fulfill this requirement with the approval of the student's advisor, thesis committee, and the PAC.

Courses for consideration to meet the additional graduate level (5000+) course requirements:

GCD 8131	Advanced Genetics	3 cr.
GCD 8151	Cell Structure & Function	3 cr.
GCD 8161	Advanced Developmental Biology	3cr.
MICA 8002	Structure, Function & Genetics of Bacteria & Viruses	4 cr.
MICA 8003	Immunity & Immunopathology	4 cr.
MICA 8004	Cellular & Cancer Biology	4 cr.
VMED 5180	Ecology of Infectious Diseases	3 cr.
VMED 5181	Spatial Analysis in Infectious Disease Epidemiology	3 cr.
VMED 5340	Structural Biology in Biomedical Research	2 cr.
VMED 5571	Pathogenomics and Molecular Epidemiology	3 cr.
VMED 8012	Basic concepts in Skeletal Biology	2 cr.
VMED 8208	Neuropsychopharmacology	3 cr.
VMED 8361	Neuro-Immune Interactions	3 cr.
VMED 8371	Mucosal Immunobiology	3 cr.
VMED 8481	Advanced Neuropharmaceutics	4 cr.
VMED 8571	Pathogenomics and Molecular Epidemiology	3 cr.

In addition, many other 5000 and 8000 level courses in Microbiology, Parasitology, Virology, Immunology, Molecular and Cellular Biology, Biochemistry, Neuroscience, Physiology, Pharmacology, Genetics, Anatomy, Histology, Cytology, and Pathology can be used to meet this requirement. Students are required to consult with their advisor and committee members to determine which courses are appropriate for the student's program.

E.2 Selection of an Advisor

Only University faculty, including adjunct faculty, may serve as advisors. The advisor must be appointed at the SM or TENURE-TRACK/M2 level and hold an earned doctorate or equivalent degree from an accredited institution. The Associate Dean for Graduate Programs, on recommendation by the PAC, must approve all assignments as advisor. Individuals working toward a graduate degree at the University may not serve as advisor. Please refer to University policy on Graduate Examining Committees at <https://policy.umn.edu/education/gradexamcommittee>. Financial support is the responsibility of the advisor and the student and will not be provided by the VMED graduate program.

E.3 Credits Required Each Term

Students with a research assistantship need to register for 6-14 credits. The minimum of 6 credits is considered full time. **Anything less than 6 credits is part time.** Assistantships allow for the registration of up to 14 credits. Registration for more than 14 credits includes an additional charge which is the responsibility of the student and/or advisor. Students who have completed all coursework and thesis credits may register for VMED 8333, which is a 1 credit full-time equivalent course.

E.4 Graduate Planning and Audit System

By the beginning of the second semester of the first year, students must submit their official program plan using GPAS (Graduate Planning and Audit System). This online form lists all completed and planned coursework, and transfer credits. The GPAS is submitted online and the Graduate Program Coordinator takes it to the PAC for approval. It is then submitted to GSSP.

### E.5 Designated Minor

Most VMED students do not declare an official minor. If a student does decide to formally declare a minor, the student will need to contact the graduate program of the minor he/she wishes to declare to find out what the requirements are for a minor in that program. The minor is then filed at <https://onestop.umn.edu/add-or-remove-graduate-minor>. The approval and signature of the minor program DGS must be obtained before the GPAS is submitted for approval.

### E.6 VMC and VDL Resident Graduate Degree Plans

There is a significant overlap between the emphasis areas in residency training and the graduate program resulting in the development of graduate courses focusing on disease pathophysiology, diagnosis and treatment that were designed to assist students in the mastery of clinical specialty. While in many cases these courses cover topics that are directly related or are tangential to the students' research areas, it appears that the main emphasis of these courses is in specialty and diagnostic medicine.

In an effort to ensure that students enrolled in the VMED graduate program receive appropriate scientific training in alignment with the mission and objectives of the graduate program (see mission statement) the Program Advisory Committee established the following credit requirements.

1. M.S. students may have a **maximum** of 30% of the required course credits on their graduate degree plan coming from 5000 or 8000 level courses designated as **board-preparatory** or **seminar courses**. (see list below). This equates to 6 of the 20 required credit hours.
2. In some circumstances a 6000 level statistical course may be considered equivalent to an 8000 level course. Equivalency of these 6000 level courses must be approved by the PAC.

#### **5000 level board-prep courses**

VMED5210 Advanced Large Animal Physiology I  
VMED5211 Advanced Large Animal Physiology II  
VMED5232 Comparative Clinical Veterinary Dermatologic Pathology  
VMED5240 Advanced Small Animal Pathobiology I  
VMED5241 Advanced Small Animal Pathobiology II  
VMED5242 Advanced Small Animal Pathobiology III  
VMED5243 Advanced Small Animal Pathobiology IV  
VMED5310 Topics in Veterinary Clinical Pathology  
VMED5319 Veterinary Gross Pathology  
VMED5330 Veterinary Descriptive Histopathology  
VMED5621 Principles of Veterinary Anesthesiology  
VMED5670 Bovine Surgery Practicum

#### **5000 level seminar courses**

VMED5295 Problems in Large Animal Clinical Medicine/Surgery and Theriogenology

#### **8000 level seminar courses\*\***

VMED8210 Seminar: Veterinary Medicine  
VMED8230 Medical Conference  
VMED8492 Seminar: Infectious Diseases and Swine Medicine  
VMED8693 Seminar: Large Animal Surgery  
VMED8781 Seminar: Advanced Veterinary Anesthesiology  
VMED8793 Seminar: Veterinary Anesthesiology

**\*\*8550 Veterinary Medicine Seminar** - This course is required and it is not included in the limits set above.

#### **8000 level board prep courses**

VMED8220 Advanced Nephrology/Urology Clinics  
VMED8292 Journal Club: Large Animal Internal Medicine  
VMED8682 Advanced Large Animal Surgery

### E.7 Selection of the M.S. Thesis Committee

By the beginning of the second semester of the first year, the student and advisor will select the thesis committee to assist in evaluating the research activity. The committee shall consist of the advisor, at least one faculty member from the VMED graduate program, and at least one expert from outside of the VMED program. The student should request a current CV from the outside committee member.

Experts outside of the University may serve on examining committees with appropriate review and approval by the PAC. The student should request a current CV from the individual and the student must submit that along with a paragraph outlining why the individual is appropriate to sit on their examining committee. Additionally the individual must submit a HRIF (Human Resources Information Form) in order to be assigned an ID number and U of M e-mail address. It will be necessary for the e-mail address to be activated for use in the thesis review and final exam process. It will be the student's and advisor's responsibility that the outside of the University committee member complete these processes.

Individuals working toward a graduate degree at the University may not serve as committee members in any capacity. Please refer to University policy on Graduate Examining Committees at <https://policy.umn.edu/education/gradexamcommittee>.

In order to approve the student's committee, a form must be completed identifying the desired committee members. This form is available from the Graduate Program Coordinator. It is completed by the student with the advisor's input and returned so that it can be taken to the PAC for approval. Once approved by the PAC the student submits their request online at <https://onestop.umn.edu/academics/examination-committees> for entry into the student's official record.

If it becomes necessary to replace a thesis committee member, the DGS must approve all replacements. The ADGP will mediate a solution in cases where there are disagreements with removing a committee member. Substitutions for a final oral examination that are necessitated by emergency situations must also be approved in advance. In such cases, the advisor should consult with the Office of Graduate Programs (624-7413), the DGS, or the Graduate Student Services and Progress Office (625-3490) before the start of the examination.

### E.8 M.S. Committee Meetings

The first thesis committee meeting should take place during the second semester of the first year in the M.S. program and it is **required** that the committee be convened every six months through the duration of the program. The graduate student, in consultation with his/her advisor, is responsible for convening committee meetings. Students should supply each committee member with a progress report and a plan for the following semester. These committee meetings should be viewed as an opportunity for the student and advisor to obtain valuable input concerning the direction of the research project. Students are encouraged to meet with their committee more frequently as the need arises. Students not making sufficient progress towards their degree requirements (as determined by coursework and research milestones established by their thesis committee) will have one semester to meet the stipulations (imposed by their thesis committee and approved by the PAC) for continuance in the program.

**Thesis committee instructions:** The purpose of the Thesis Committee is to help the candidate achieve full scientific potential, improve the quality of research and enrich the scientific training. The committee meetings aim to:

- Ensure that the project is scientifically valid and suitable for a M.S. project.
- Determine the student's familiarity with relevant literature.
- Evaluate the progress and future plans of the M.S. project.
- For hospital residents, ensure integrity of both specialty and graduate training.
- Oversee the timely graduation of the student.

The Committee must convene in full. Committee members may participate via video conference formats,

if necessary.

**Meetings and reporting:** The first meeting should convene *prior* to the end of second semester for M.S. students. A thesis committee meeting is required every six months but may be held more often if desired. The following is a recommended structure:

*Meeting 1:* Form a personal study plan with the student; discuss objectives of the thesis project.

*Meeting 2:* Following-up on the personal study plan (M.S. committees).

*Meetings 3-5:* Follow up on the personal study plan, thorough check of research results, etc.

*Final Meeting:* Accepting the project, formally grant permission to write the thesis.

**Conducting Regular Thesis Committee Meetings:** For each meeting the student is to prepare a report for the thesis committee summarizing coursework and scientific research progress. During the meeting, which should not exceed 2 hours, the student and committee will discuss:

- Coursework progress, quality, how it meets the student's needs, and plans for additional learning and professional development
- Specific aims of the research and the current status of the project, including technical difficulties and unsuccessful experiments,
- Progress on work accomplished since the last committee meeting,
- Future short-term and long-term plans of the thesis project,
- The project's experimental strengths and weaknesses, and
- Expectations and deadlines for obtaining significant results.

At the end of the meeting, the following actions will be taken:

- Committee members will make a majority recommendation regarding continuation of the student's program.
- The student is informed of any concerns or pending milestones.
- The committee chair completes the [Thesis committee meeting summary form](#) and submits it online.
- OGP receives the form and sends copies to the student, advisor and committee members.

### E.9 Professional Development

All students need to engage in activities that enrich their graduate experience and help them identify and prepare for their post-graduate career. A personalized individual plan will assist the student and advisor in identifying appropriate activities. Activities that qualify include (but are not limited to), mentored teaching, professional externships, and outreach activities designed to advance the career goals as identified in the students' Individual Development Plan (IDP).

### **Individual Development Plan**

An individual development plan (IDP) is a tool to assist you in considering career options and in developing and reaching short- and long-term goals. As a VMED graduate student you are required to complete and use an IDP during your graduate training. To assist in the process, we recommend the AAAS web tool myIDP available at <https://myidp.sciencecareers.org>. To create an IDP, you will assess your scientific skills, interests, and values. The web tool will generate careers that fit your interests, and you then set personal (short and long term) goals. After completing the assessment, you will have a working document to use in meeting with your advisor to help you gain insight into your plans for the future. You may choose to use other IDP tools, but the process is essentially similar.

### E.10 Annual Student Review

Students will be evaluated by the PAC every year to assess their progress towards their degree requirements. The performance in the lab, courses, and VMED seminars, as determined by advisors and faculty, must be satisfactory. If it is determined that a student is not making adequate progress, the student will be required to petition the PAC to provide reasons for the delay in progress and to provide a timeline for addressing the issue. If the PAC does not deem this petition to be reasonable, the student will be required to meet with the PAC and a timeline will be determined at that meeting. Failure by the

student to adhere to the timeline will result in a request by the PAC that the student be dismissed from the graduate program.

#### E.11 Minimum Grade Requirements

Students are required to have a minimum grade point average of 3.0 (on a 4.0 scale) for all courses on their U of M graduate transcript and on the official graduate degree plan. Courses with grades of A, B, C (including C-) and S may be included, but grades of S are not calculated in the GPA. At least 2/3 of all course credits on the graduate degree plan must be graded A-F.

**Students who are not making satisfactory progress will not be re-appointed for a second year.**

#### E.12 Summer Registration

Students **do not** register during summer session unless required to do so by a funding agency or government, or need to accrue thesis credits in order to graduate by the end of fall semester. Students need to consult with their advisor and obtain permission through the Graduate Programs Office **prior** to registering. If approved, a request for graduate assistant tuition benefits form must be completed and submitted prior to registration.

#### E.13 GRAD999 Registration

Students need to maintain active enrollment each fall and spring semester and at the time their final manuscript is submitted. There may be a situation when students need to have an active enrollment, but do not need to have full-time status. These situations are the exception, but it is possible that the student may be eligible to register for GRAD999, a non-tuition and non-credit bearing course. Note that GRAD999 registration does not provide full-time student status. Please check with the graduate program office before registering for GRAD999.

If it is determined that the student is eligible to register for GRAD999, they may do so for one semester only. After which, if the student needs to register for an additional semester, they must petition the PAC for permission prior to the start of the term. The petition will need to outline the student's academic progress over the previous term and the progress intended to be made over the coming term. The petition must be accompanied by signatures of the student's advisor and examining committee members.

#### E.14 Request extension to time limit for degree

Those students who experience extraordinary circumstances which prevent M.S. degree completion within the established time limits may request a one-time extension of up to 12 months. The student needs to discuss this option with their advisor to determine if it is a viable solution. If the student decides to request an extension they must complete the form [Master's Degree: Request for Extension to the Maximum Time Limit \(UM1779\)](#).

The extension request form is submitted to the CVM Office of Graduate Programs after being signed by the advisor, at least 6 months prior to the 5 year time limit. The extension request must include a letter from the advisor recommending the time extension and identifying a new completion date. The request is then taken to the PAC. If approved the PAC will establish a new completion date and the DGS will sign the form. If the request is denied the student will be terminated from the program if they do not complete within the standard 5 year time limit. The student will be informed of the PAC's decision in writing.

#### E.15 Graduation Packet

Download a graduation packet from GSSP the term before you plan to defend your thesis. The graduation packet is online at <https://onestop.umn.edu/forms> (click on Graduation and then Graduation Packet). This packet will include a link to the "Thesis Reviewer's Report" form and the "Master's Final Examination Report." The "Thesis Reviewer's Report" form must be initiated by you. The Application for Degree must be submitted prior to the first day of the month in which you plan to defend. You can find that form by going to <https://onestop.umn.edu/forms> (click on "Graduation" and then "Application for Degree").

### E.16 M.S. Thesis

The thesis should be an independent research project. It should be well written and presented in such a form that the major research results are suitable for submission to a recognized, refereed journal. It should be suitable for publication, with the student as primary author. The suitability will be determined by the student's examining committee. It is expected that the thesis contains a literature review and at least two research chapters. The VMED program allows only single author theses.

Students nearing completion of their thesis research should discuss the timeframe for completing their program with their thesis committee at their semi-annual committee meeting. If the thesis committee agrees that the student has enough data to form a defensible thesis, the student then begins writing the thesis. Students should refer to the thesis formatting and submission instructions which can be found at <https://onestop.umn.edu/academics/thesisdissertation-submission-and-formatting>.

After the thesis is completed and the advisor is satisfied with the draft, the student submits a copy to the thesis reviewers and other members of the examining committee. **The committee members must be given a minimum of three weeks** to confer with the candidate on the content of the thesis. Any major revisions must be completed **prior** to the final defense. Minor revisions can be made after the defense but before the final manuscript is submitted. All thesis committee members must agree that the thesis is suitable for defense by submitting the online "Master's Reviewers Report" form. The link to the Master's Reviewer's Report form is in the Graduation Packet.

### E.17 The Final Oral Examination

**Announcements to the VMED students and faculty need to be sent out a minimum of two weeks prior to the exam.** The student should contact the Graduate Program Coordinator with the date, time, location of the thesis presentation as well as the title of the thesis and the advisor's name. The GPC will send out an announcement for the final oral presentation to the VMED students and graduate faculty. The candidate will then present his/her thesis in a public seminar with the examining committee present. The seminar constitutes the final oral exam, and is followed by a short meeting with the examining committee. After this meeting the committee chair submits the Final Oral Examination Report Form. All faculty and students are encouraged to attend the final oral exam seminar.

The decision options for the final oral exam are pass or fail. Retakes are not allowed. Per policy, "To be recommended for the award of the doctoral degree, **all committee members, or all committee members save one, must vote that the student has passed** the doctoral final oral examination. Students are not allowed to retake the final oral examination."

Please refer to <https://policy.umn.edu/education/doctoralcompletion> for more information.

### E.18 Thesis Submission

The thesis is required to be submitted online. Students should follow the format outlined in the Graduate School's Thesis Formatting and Submission instructions found at <https://onestop.umn.edu/academics/thesisdissertation-submission-and-formatting>. The University will not award the official degree until the thesis has been submitted. Most students will need at least two bound copies of the thesis, (which is the responsibility of the student).

- ✓ one for the advisor
- ✓ one for the Office of Graduate Programs
- ✓ one for each committee member (optional)

### E.19 Exit Interview

Upon completing the M.S. degree, the Graduate Program Coordinator will solicit a written evaluation of the student's experience in the VMED graduate program. The student will be offered an opportunity to meet individually with the GPC or to submit the written evaluation electronically. These evaluations will be used to assess the quality of the M.S. program and faculty, and to provide guidance for improving graduate education.

### E.20 Leave of Absence

A leave of absence (LOA) from the graduate program may be possible under limited circumstances. If a LOA is approved the student must not have contact with their graduate program, advisor, research, etc. A LOA is a total respite from all forms of graduate education, courses, lab work, contact with professors and staff. Students must apply for a LOA and have it approved by the DGS and OGP, before it goes into effect. LOAs are for full semesters and cannot be approved for less than one semester or more than four semesters. More information is available at <https://policy.umn.edu/education/gradstudentleave>.

Circumstances that may warrant a request for a LOA include serious illness, death of a close family member, birth or adoption of a child and for voluntary military service. Other circumstances may cause a request to be initiated but there is never a guarantee that a LOA will be approved.

#### **When considering a Leave of Absence:**

- Review Administrative Policy: [Leave of Absence and Reinstatement from a Leave: Graduate Students \(Twin Cities, Duluth, Rochester\)](#);
- Read instructions on the Leave of Absence form (located on bottom of LOA policy page);
- Confer with your advisor(s), DGS, Graduate Program Coordinator, and relevant offices (e.g., ISSS, Graduate Assistant Employment, Financial Aid) regarding the impact of a LOA on your financial, academic, work-related, and personal circumstances
- Confer with your DGS and CVM Office of Graduate Programs about what, if any, conditions may be placed on your reinstatement after the LOA.

If, after review and consultation, you choose to request a LOA:

- Complete the form (include supporting documentation, if requested) immediately
- Obtain signatures of your advisor(s) and DGS
- Submit the signed form to the CVM Office of Graduate Programs for review

DGS in consultation with GPC and ADGP will review request and make decision.

The Graduate Program Coordinator will notify student in writing of decision and time limit of approved leave, including any conditions that are placed on reinstatement.

#### **Reinstatement after Leave of Absence:**

A reinstatement request is required at least one month prior to the *beginning of the term* in which the student wishes to return. Submit the [LOA Reinstatement Request](#) form with advisor signature(s) to the Graduate Program Coordinator (GPC). The GPC will notify the student in writing of decision and any reinstatement conditions after consultation with DGS and ADGP. The graduate program reserves the right to request documentation that the student has acceptably addressed the reasons that necessitated the LOA prior to granting reinstatement. Students may submit a request to return from LOA earlier than the term approved. However, any requests submitted after the term approved, will be denied and will require a formal re-admission application to the graduate program.

### E.21 Recommended Timeline for M.S. Students

The following timeline is recommended for all M.S. students in the VMED program. Participation as described will ensure that each student will complete all of the requirements of the program and progress through the program in an efficient and timely manner.

#### **YEAR 1**

- Begin coursework.
- Required courses are:
  - VMED5190 Seminar and Presentation Development for Graduate Students (fall)**
  - VMED5910 Grant Writing: What Makes a Winning Proposal? (fall)**
  - VMED 8134 Ethical Conduct of Animal Research (fall)
  - VMED 8550 Veterinary Medicine Seminar (2 credits) (fall/spring)

At least one course in Biostatistics (VMED5915 Essential Statistics for Life Sciences is recommended)

At least one additional 8000 level course in major field (suggest VMED8202)

- Submit [GPAS \(Graduate Planning and Audit System\)](#) for approval beginning of second semester.
- Select thesis committee members and submit for approval beginning of second semester (obtain form from Graduate Program Coordinator).
- Complete first committee meeting during year one and submit [Thesis committee meeting summary form](#).
- Begin Individualized Development Plan (IDP) <https://myidp.sciencecareers.org>.

## **YEAR 2**

- Complete remaining coursework.
- Update IDP.
- Schedule two committee meetings to discuss thesis proposal, approximately once every 6 months and Submit [Thesis committee meeting summary form](#).
- Complete research project and write thesis.

## **SUMMER YEAR 2 or YEAR 3**

- Update IDP.
- Download graduation packet at <https://onestop.umn.edu/forms> (click on “Graduation” and then “Graduation Packet”).
- Submit draft of thesis to advisor for approval.
- Submit thesis to committee members (*allow at least three weeks for review*) and notify Graduate Program Coordinator.
- Submit Application for Degree prior to the first day of the month in which you plan to defend. You can find that form by going to <https://onestop.umn.edu/forms> (click on “Graduation” and then “Application for Degree”).
- Provide graduate program coordinator with thesis title, date, time and location of thesis defense (*two weeks prior to defense*).
- Initiate Master’s Thesis Reviewers Report Form.
- Complete final defense and Committee Chair submits final oral examination report form to GSSP.
- Electronically submit final thesis manuscript, deposit agreement, thesis signature page, and ProQuest thesis submission, more information at <https://onestop.umn.edu/academics/thesisdissertation-submission-and-formatting>.
- Schedule exit interview with Graduate Programs Coordinator.

## F. Ph.D. DEGREE PROGRAM

The Doctor of Philosophy (PhD) degree is granted not on the basis of successful completion of a definite amount of prescribed work, but chiefly as a result of recognition of the candidate's research attainments. This is determined by completing the required coursework, passing the required written and oral preliminary examinations covering the candidate's thesis proposal, and successful completion of a thesis. It is expected that the completed thesis will contain data sufficient for at least one publications in refereed journals. **All requirements of the Ph.D. program must be completed within eight calendar years of the initial term of enrollment in the graduate program.**

### F.1 Degree Requirements

Formal coursework for the Ph.D. degree varies according to the field of study, interests, and career goals of the individual graduate student. Courses may be taken in disciplines other than VMED. Students wishing to enroll in a 4000 level course need to consult with their advisor and the DGS prior to registration if the student wants to use the course in their degree program. Such courses may be appropriate to supplement any deficiencies in the student's academic background.

- A maximum of six 4000-level course credits may be used to satisfy the doctoral course requirements.
- At least 12 course credits and 24 doctoral thesis credits must be completed while enrolled in the VMED graduate program.
- Approved transfer coursework may include a maximum of 12 graduate credits taken as a non-degree seeking or non-admitted student.
- Transfer of thesis credits is not allowed.
- As per graduate education requirements, at least 2/3 of course credits must be taken with grades A-F.

### **Breakdown of 48 Minimum PhD Credits**

- Course credits: 24 credits minimum
  - To be taken in VMED or a related field
  - Students usually take a minimum of 24 course credits in VMED and related fields. If students choose to have an official minor, those required course credits can be a subset of the 24 course credits.
- Thesis credits: 24 credits
  - VMED 8888
  - 24 thesis credits are required. Thesis credits may be taken at any time and it is suggested that students add thesis credits each semester until they have the maximum of 14 credits per term. Pre-thesis credits (VMED 8666) may be taken but do not count toward the required course credits, or the 24 thesis credits (VMED 8888) requirement.
- Total credits: 48 credits minimum

### **Course credits (minimum 24 total)**

- **Required Courses (nine credits)**
  - VMED 5190 Seminar and Presentation Development for Graduate Students (fall)
  - VMED 5910 Grant Writing: What Makes a Winning Proposal? (spring)
  - VMED 8134 Ethical Conduct of Animal Research (fall)
  - VMED 8550 Veterinary Medicine Seminar (take two times for total of two credits) (fall/spring)
- **Statistics Requirement (at least one course required)**
  - VMED 5915 Essential Statistics for Life Sciences is recommended (fall)
  - Alternate pre-approved statistics options:
    - VMED 8910 Statistical Principles of Research Design
    - PUBH 6414 Biostatistical Literacy
    - PUBH 6450 Biostatistics I
    - PUBH 6451 Biostatistics II

- Stat 5021 Statistical Analysis
- Stat 5031 Statistical Methods for Quality Improvement
- Stat 5302 Applied Regression Analysis
- Stat 5303 Designing Experiments
- Stat 5421 Analysis of Categorical Data

Statistics courses other than those listed can be used to fulfill this requirement with the approval of the student's advisor, the thesis committee, and the PAC.

- **Additional 5000/8000 (graduate level) courses (three courses, equaling at least seven credits)**
  - At least three additional 5000/8000 level courses
  - Preferably 2+ credit courses
  - Must be at least seven credits total
  - Exclusive of seminars or journal clubs
  - 5000-level courses must be reviewed and approved by the PAC
  - Courses for consideration to meet the credit requirements and the three additional 8000 level courses in major field requirement:
    - GCD 8131 Advanced
    - GCD 8151 Cell Structure & Function
    - GCD 8161 Advanced Developmental Biology
    - MICA 8002 Structure, Function & Genetics of Bacteria & Viruses
    - MICA 8003 Immunity & Immunopathology
    - MICA 8004 Cellular & Cancer Biology
    - VMED 8192 Dairy Health Management: Critical Thinking
    - **VMED 8592 Infectious Disease Journals: Critical Thinking**
    - VMED 8012 Basic concepts in Skeletal Biology
    - VMED 8208 Neuropsychopharmacology
    - VMED 8361 Neuro-Immune Interactions
    - VMED 8371 Mucosal Immunobiology
    - VMED 8481 Advanced Neuropharmaceutics
    - VMED 8571 Pathogenomics and Molecular Epidemiology
    - VMED 8910 Statistical Principles of Research Design

### F.2 Selection of an Advisor

Only University faculty, including adjunct faculty, may serve as advisors. The primary advisor must be appointed at the SM level and hold an earned doctorate or equivalent degree from an accredited institution. Faculty at the TENURE-TRACK/M2 level may advise PhD students if they have a Senior Member serve as co-advisor. Individuals working toward a graduate degree at the University may not serve as advisor. Emeritus faculty and faculty who have left the university may continue as advisor so long as the faculty, student, and ADGP agree in writing. An active faculty co-advisor will be named. The advisor and student will be responsible for obtaining financial support for the student during completion of the Ph.D. studies.

Students who wish to change advisors during their training must make arrangements with the advisor in due course, and to properly notify the DGS and their current advisor. The DGS and the PAC can assist in cases where a student may need to change advisors, but the graduate program will provide no stipend support in these instances.

### F.3 Credits Required Each Term

Students with a research assistantship need to register for 6-14 credits. The minimum number of 6 credits is considered full time. **Anything less than 6 credits is part time.** Assistantships allow for the registration of up to 14 credits. Registration for more than 14 credits includes an additional charge which is the responsibility of the student and/or advisor. Students who have passed their oral preliminary exam, completed all coursework and 24 thesis credits may register for VMED 8444, which is a 1 credit full-time equivalent course.

To assist students in completing thesis credits in a timely fashion, they should register for thesis credits each semester they do not have at least 14 course credits on their schedule. This should facilitate completing the 24 required thesis credits within the first two years of the Ph.D. program.

#### F.4 Graduate Planning and Audit System

**No later than the end of spring semester** of the first year, students must file their official program using GPAS (Graduate Planning and Audit System). This online tool lists all completed and planned coursework, as well as requested transfer credits. The GPAS is submitted by the student and then the Graduate Program Coordinator takes it to the PAC for approval. It is then submitted to GSSP.

#### F.5 Designated Minor

Most VMED students do not declare an official minor. If a student does decide to formally declare a minor, the student will need to contact the graduate program of the minor he/she wishes to declare to find out what the requirements are for a minor in that program. The minor is then filed at <https://onestop.umn.edu/academics/gpas>. The minor must also be approved in GPAS.

#### F.6 VMC and VDL Residents in Ph.D. Program

There is a significant overlap between the emphasis areas in residency training and the graduate program resulting in the development of graduate courses focusing on disease pathophysiology, diagnosis and treatment that were designed to assist students in the mastery of clinical specialty. While in many cases these courses cover topics that are directly related or are tangential to the students' research areas, it appears that the main emphasis of these courses is in specialty and diagnostic medicine.

In an effort to ensure that students enrolled in the VMED graduate program receive appropriate scientific training in alignment with the mission and objectives of the graduate program (see mission statement) the Program Advisory Committee established the following credit requirements:

1. Ph.D. students may have a **maximum** of 18% of the required course credits on their degree program plan coming from 5000 or 800 level courses designated as **board-preparatory** or **seminar courses**. (see list on page 10). This equates to 4 of the 24 required credit hours.
2. Ph.D. students must have a **minimum** of 25% of the course credits on their degree plan coming from 8000 level courses.\*

\*In some circumstances 6000 level statistical courses may be used towards this minimum. Substitution of these 6000 level courses must be approved by the PAC.

#### F.7 Selection of Thesis Committee

Prior to the start of the second year the student and advisor will select the thesis committee to advise the student in further course selection and assist in evaluating the research activity. The committee must consist of at least four graduate faculty members: three members from VMED, including the advisor, and one member who is not a member of the VMED graduate program. Of these four at least one must be tenured, at least one other must be tenured or tenure-track. The other two must be university faculty who hold an earned doctorate or designated equivalent from an accredited institution.

Experts outside of the University may serve on examining committees with appropriate review and approval by the PAC. The student should request a current CV from the individual and the student must submit that along with a paragraph outlining why the individual is appropriate to sit on their examining committee. Additionally the individual must submit a HRIF (Human Resources Information Form) in order to be assigned an ID number and U of M e-mail address. It will be necessary for the e-mail address to be activated for use in the thesis review and final exam process. It will be the student's and advisor's responsibility that the outside of the University committee member complete these processes.

Individuals working toward a graduate degree at the University may not serve as committee members in any capacity. Please refer to University policy on Graduate Examining Committees at <https://policy.umn.edu/education/doctoralcompletion>.

Individuals who do not meet the policy's eligibility criteria may receive collegiate approval by submitting a CV and paragraph outlining the rationale for their committee involvement. This is reviewed and approved by the PAC.

The preliminary and final defense examining committees must designate a chair who holds an earned doctorate or designated equivalent in an appropriate field from an accredited institution and meets VMED graduate faculty criteria (see C.1). The chair cannot be the advisor or co-advisor.

In order to approve the student's committee, a form must be completed identifying the desired committee members. This form is available from the Graduate Program Coordinator. It is completed by the student with the advisor's input and returned to the GPC who takes it to the PAC for approval. Once approved by the PAC the student submits their request online at <https://onestop.umn.edu/academics/examination-committees> for entry into the student's official record.

#### F.8 Professional Development

All students need to engage in activities that enrich their graduate experience and help them identify and prepare for their post-graduate career. A personalized individual plan will assist the student and advisor in identifying appropriate activities. Activities that qualify include (but are not limited to), mentored teaching, professional externships, and outreach activities designed to advance the career goals as identified in the students' Individual Development Plan (IDP).

#### **Individual Development Plan**

Students are required to develop an IDP and to complete meaningful professional development activities prior to graduating from the VMED graduate program. IDPs provide a planning process that identifies professional development needs in the context of career objectives.

There are several resources for completing the IDP, the program recommends the online [AAAS version \(https://myidp.sciencecareers.org\)](https://myidp.sciencecareers.org). Each student is expected to complete an IDP, discuss goals with their advisor and committee during regular and mandated meetings, and update it regularly as goals are achieved and new ones added. Completion of this process is to be reported each year in conjunction with the Annual Progress Report.

#### F.9 Annual Student Review

Students will be evaluated by the PAC every year to assess their progress towards their degree requirements. If it is determined that a student is not making adequate progress, he/she will be required to petition the PAC to provide reasons for the delay in progress and to provide a timeline for addressing the issue. If the PAC does not deem this petition to be reasonable, the student will be required to meet with the PAC and a timeline will be determined at that meeting. Failure by the student to adhere to the timeline will result in a request by the PAC that the student be dismissed from the graduate program.

#### F.10 Minimum Grade Requirements

Students are required to have a minimum grade point average of 3.0 (on a 4.0 scale) for all courses on their U of M graduate transcript and on the official graduate degree plan. Courses with grades of A, B, C (including C-) and S may be included, but grades of S are not calculated in the GPA. At least 2/3 of all course credits on the graduate degree plan must be graded A-F. Students whose GPA falls below 3.0 will be placed on probation and allowed one semester to raise cumulative GPA to the 3.0 minimum. After that time students will be dismissed for lack of satisfactory progress.

**Students who are not making satisfactory progress will not be re-appointed for another year.**

#### F.11 Summer Registration

Students **are not** to register for summer session unless required to do so by a funding agency or government, or need to accrue thesis credits in order to graduate by the end of fall term. **Students need to consult their advisor and obtain permission through the Graduate Programs Office prior to registering.** If approved, a Request for Graduate Assistant Tuition Benefits form must be completed and submitted prior to registration.

### F.12 Second Year in the Ph.D. Program

Beginning in the second year of the Ph.D. program, students will initiate their research program. This may be working on an established project, or the beginning of a new project. During the second year it is expected that the student will generate preliminary data to be used to develop and defend their thesis proposal. In addition, it is expected that the remaining required and elective course credits will be completed during the second year.

### F.13 Annual Thesis Committee Meetings

Students are **required** to meet with their thesis committee *at least once each academic year*. The first thesis committee meeting **should** take place during the summer after year one or during fall semester of the second year of the Ph.D. program, and again prior to the preliminary written exam, at the preliminary oral exam, and no less than once per year afterwards, including approximately 6 months prior to the Ph.D. defense to ensure all members are aware of student progress and that there is agreement on the body of work for the Ph.D. *At the last committee meeting prior to the final defense all committee members must agree that the student should be ready to defend within the next 6 months.* This is indicated as a check box at the bottom of the [Thesis committee meeting summary form](#).

It is the responsibility of the student to convene the thesis committee within the timeframes described above. The advisor and all committee members accept the obligation to be available and participate in committee meetings. Meetings with individual committee members do not meet the committee meeting requirements but are encouraged. Committee meetings are compulsory and a prerequisite for stipend support for the following year. Students who fail to convene committee meetings may be dismissed from the program and the advisor may not be allowed to accept additional graduate students. Students and advisors are encouraged to solicit the DGS or Office of Graduate Programs if scheduling difficulties arise.

#### **Thesis Committee Instructions:**

The purpose of the thesis committee is to help the candidate achieve full scientific potential, improve the quality of research and enrich the scientific training. In addition to preparing the candidate for the Ph.D. preliminary exams and conducting the exams the committee meetings aim to:

- Ensure that the project is scientifically valid and suitable for a Ph.D. project;
- Ensure that coursework supports the Ph.D. project, assures adequate knowledge and expertise in the field, and provides the necessary skills for completion of the research;
- Determine the student's familiarity with relevant literature;
- Evaluate the progress and future plans of the Ph.D. project;
- For hospital residents, ensure integrity of both specialty and graduate training;
- Oversee the timely graduation of the student.

The committee must convene as a quorum, defined as the mentor and at least two other committee members. Committee members may participate via video conference formats, if necessary.

#### **Meetings and reporting:**

The first meeting should convene prior to the end of third semester for Ph.D. students. After the preliminary exams a thesis committee meeting is required annually (Ph.D.) until the thesis defense, but may be held more often if desired. The nature of thesis committee work changes according to the maturation of the Ph.D. student and the progress of the project. The following is a recommended structure:

*Meeting 1:* Form a personal study plan with the student; discuss objectives of the thesis project

*Meetings 2:* Complete the preliminary examinations

*Meetings 3-5:* Follow up on the personal study plan, thorough check of research results

*Final Meeting:* Accept the Ph.D. project, formally grant permission to write the thesis.

### **Conducting Regular Thesis Committee Meetings:**

For each meeting the student is to prepare a report for the thesis committee summarizing coursework and scientific research progress. During the meeting, which should not exceed 2 hours, the student and committee will discuss:

- Coursework progress, quality, how it meets the student's needs, and plans for additional learning and professional development;
- Specific aims of the research and the current status of the project, including technical difficulties and unsuccessful experiments;
- Progress on work accomplished since the last committee meeting;
- Future short-term and long-term plans of the dissertation project;
- The project's experimental strengths and weaknesses;
- Expectations and deadlines for obtaining significant results.

At the end of each meeting, the following actions will be taken:

- Committee members will make a majority recommendation regarding continuation of the student's program;
- The student is informed of any concerns or pending milestones;
- The committee chair completes the [Thesis committee meeting summary form](#) and submits it online;
- OGP receives the form and sends copies to the student, advisor and committee members.

#### F.14 Changes to Examining Committee

**To change an examining committee member you must have the approval of your Advisor, the DGS, and the ADGP as appropriate.** At the discretion of the DGS or ADGP the committee member being removed is to be solicited for input prior to the decision. If it becomes necessary to replace a thesis committee member, the DGS must approve all replacements. The ADGP will mediate a solution in cases where there are disagreements with removing a committee member. Substitutions for a preliminary or final oral examination that are necessitated by emergency situations must also be approved in advance. In such cases, the advisor should consult with the Office of Graduate Programs (624-7413 or [cvmmssphd@umn.edu](mailto:cvmmssphd@umn.edu)), the DGS, or the Graduate School Student Services and Progress Office (625-3014) before the start of the examination.

#### F.15 Preliminary Examinations

The preliminary examination consists of both a written and an oral component. **The written preliminary exam must be successfully completed before the end of August, following year 2. The oral preliminary exam must be completed by the end of Fall semester, Year 3, as described below.** Only under unique circumstances will students be allowed to delay the preliminary examination. Any delay in taking the preliminary exam needs prior approval by the DGS.

Written Preliminary Exam: Students will write a thesis research proposal to be approved by the student's examining committee. The written thesis proposal should be scientifically based and present novel hypotheses or statement of need. The written thesis proposal should be a mentored writing exercise, with feedback from the advisor, even though it is written solely by the student. Committee members may be consulted, but should not be involved in the editing process for the written preliminary exam. It is strongly recommended that the student draft the thesis proposal as part of VMED5910 (Grant writing class). Thesis proposals must follow the VMED written preliminary exam template. It should be written as proposed research, i.e. in future verb tense. The written proposal is to include the following components:

#### **Specific Aims or Objectives (1-Page):**

1. Briefly state the problem being addressed and recap major knowns and gaps in knowledge in the area being addressed by the proposal.
2. State a central hypotheses or statement of need and define specific aims under which this will be studied.
3. Recap any preliminary data that has led you to your hypothesis/statement of need.

**Project Narrative must include all of the following (not to exceed 12 Pages):**

1. Introduction
  - Include a clear statement of the long-term goal(s) and supporting objectives of the proposed project;
  - Summarize the body of knowledge and/or past activities that substantiate the need for the proposed project;
  - Describe ongoing or recently completed activities significant to the proposed project including the work of key project personnel;
  - Include preliminary data/information pertinent to the proposed project. All works cited should be referenced.
2. Rationale and Significance
  - Concisely present the rationale behind the proposed project;
  - Concisely state the significance of the proposed research and problem it addresses.
3. Approach (should be included for each individual aim)
  - A description of the activities proposed/problems addressed and the sequence in which the activities or approaches applied are to be performed;
  - Methods to be used in carrying out the proposed project, including the feasibility of the methods;
  - Expected outcomes;
  - Means by which results will be analyzed, assessed, or interpreted;
  - How results or products will be used;
  - Pitfalls that may be encountered and alternate approaches to overcome them;
  - Limitations to proposed procedures;
  - A timeline for attainment of objectives and for production of deliverables that includes annual milestones with specific, measurable outcomes.

After completing the thesis proposal **and** with the advisor's approval, a written copy is submitted to the Graduate Program Coordinator for distribution to the committee members. Committee members will have three weeks to review the thesis proposal and return the proposal evaluation form to the Graduate Program Coordinator. If a majority of committee members finds the thesis proposal "acceptable" the student is considered to have passed the written preliminary exam. The Graduate Program Coordinator then submits the online form indicating the written preliminary exam has been successfully completed.

If majority approval is not obtained, the student will be allowed **one** chance to revise the thesis proposal based on the comments of the committee members. If revisions are necessary the student has two weeks to complete them. Those committee members requesting revisions will then have one week to review the student's revisions and accept or reject the thesis proposal. Upon successful completion of the written preliminary examination the student can schedule the oral preliminary exam.

Oral Preliminary Exam: Students must schedule the oral preliminary exam electronically with the Graduate Student Services and Progress Office (GSSP). Details here: <https://onestop.umn.edu/academics/doctoral-oral-exam-scheduling>. You must schedule with the GSSP at least one week prior to your oral preliminary exam. The oral preliminary exam consists of two components to be completed during a single examining period not to exceed 3 hours of committee questions (does not include the opening oral presentation period).

- 1) **Oral presentation to the committee based on the thesis proposal.** This portion of the exam shall be a seminar format without significant committee member questions. The presentation will include an introduction to the research project, relevancy of the scientific problem, the hypothesis to be tested, an outline of the proposed studies, including preliminary results obtained, anticipated results, and potential pitfalls.

- 2) **Examination by the thesis committee.** The oral exam is focused on the student's coursework, thesis proposal and general research knowledge. The exam requires the student to demonstrate satisfactory knowledge in both the major area of research and the specific research topic. The committee questions period shall not exceed 3 hours. Upon completion of the preliminary oral examination, there will be a vote by the thesis committee, as outlined below. After discussion and voting the student will be informed of their performance.

*There is no expectation that food will be provided during the oral preliminary examination.*

*Furthermore, the student is neither responsible for nor expected to provide food for their oral preliminary examination.*

### **Outcome of the committee vote will be; Pass, Pass With Reservations, or Fail**

#### **Step 1. Determine Pass or Fail:**

*Pass and Pass with Reservations count as a Pass. The voting proportions necessary to Pass are:*

*4 member committee - 3 Pass/1 Fail*

*5 member committee - 4 Pass/1 Fail*

*6 member committee - 4 Pass/2 Fail.*

#### **Step 2. For a Pass, determine whether there are reservations:**

*The voting proportions necessary to Pass without any reservations are:*

*4 member committee - 3 Pass/1 Pass With Reservations*

*5 member committee - 4 Pass/1 Pass With Reservations*

*6 member committee - 4 Pass/2 Pass With Reservations.*

*If in Step 1, a fail vote occurs but the student passes, it is recommended that the committee member changes his/her *Fail* vote to a *Pass With Reservations* vote for which the student may then be required to address particular issues.*

- *Pass: Students who pass the preliminary exam will continue with their graduate studies.*
- *Pass with reservations: Students who pass with reservations will be given a letter outlining the necessary requirements to have the reservations removed. The letter will contain a completion date, as determined by the thesis committee, for the requested stipulations. After successfully addressing the reservations to the satisfaction of the thesis committee the student will continue with their graduate studies.*
- *Fail: Students who fail the preliminary examination may have the opportunity to retake the preliminary examination in accordance with the Doctoral Degree: Performance Standards and Progress policy. If a fail with retake is the outcome committees must allow a minimum of 4 weeks before the retake exam.*

**Within 24 hours of completing the preliminary oral exam, the student must submit the signed Preliminary Oral Examination Report form to GSSP.** For a Pass With Reservations, the committee is permitted one week to submit the signed Preliminary Oral Examination Report form to GSSP along with a letter detailing the conditions of the reservation. A copy of the letter outlining the reservations should also be submitted to the OGP.

*Once a student achieves Ph.D. candidacy (successfully completing preliminary exams) if they are paid at the base stipend level, the student is eligible for a \$1000 increase. Students must initiate this increase by communicating directly with the Graduate Program Coordinator. After officially passing their exams students must send an e-mail to the graduate program coordinator in order for the increase in stipend support to be initiated.*

### F.16 Thesis Credits

PhD students are required to complete 24 doctoral thesis credits (VMED8888). Thesis credits may be taken at any time and it is suggested that students add thesis credits each semester until they have the maximum of 14 credits per term. Pre-thesis credits (VMED 8666) may be taken but do not count toward the required course credits, or the 24 thesis credits (VMED 8888) requirement. Upon completion of all 24 thesis credits students should register for VMED8444 (1 credit but offers full-time status) to decrease tuition costs.

### F.17 Teaching Experience

Ph.D. candidates are encouraged to take part in the Preparing Future Faculty (PFF) program. All Ph.D. students are encouraged to assist in teaching. This may be either a didactic form such as a lecture or laboratory demonstration, or assisting in clinical supervision of veterinary students.

The following courses are offered through the Center for Teaching and Learning and are part of the PFF program.

GRAD8101	Teaching in Higher Education	3 cr.
GRAD8200	Practicum for Future Faculty	1 cr.
GRAD8200	Topics in Higher Ed	1 cr.

For further information go to <http://cei.umn.edu/courses-programs/preparing-future-faculty/future-faculty-courses>

### F.18 Final Examining Committee

Students must complete the online Assign/Update Final Oral Examining Committee form which is found at <https://onestop.umn.edu/academics/examination-committees>, even if their committee remains the same as the preliminary examination committee.

### F.19 GRAD999 Registration

Students need to maintain active enrollment in the graduate program each fall and spring semester and at the time their final manuscript and all other required paperwork is submitted. There may be a situation when students need to have an active enrollment, but do not need to have full-time status. These situations are the exception, but it is possible that the student may be eligible to register for GRAD999, a non-tuition and non-credit bearing course. Note that GRAD999 registration does not provide full-time student status. Please check with the graduate program office before registering for GRAD999.

If it is determined that the student is eligible to register for GRAD999, they may do so for one semester only. After which, if the student needs to register for an additional semester, they must petition the PAC for permission prior to the start of the term. The petition will need to outline the student's academic progress over the previous term and the progress intended to be made over the coming term. The petition must be accompanied by signatures of the student's advisor and examining committee members.

### F.20 Request extension to time limit for degree

Those students who experience extraordinary circumstances which prevent Ph.D. degree completion within the established time limits may request a one-time extension of up to 24 months. The student needs to discuss this option with their advisor to determine if it is a viable solution. If the student decides to request an extension they must complete the form [Doctoral Degree: Request for Extension to the Maximum Time Limit](#).

The extension request form is submitted to the CVM Office of Graduate Programs after being signed by the advisor, at least 6 months prior to the 8 year time limit. The extension request must include a letter from the advisor recommending the time extension and identifying a new completion date. The request is then taken to the PAC. If approved the PAC will establish a new completion date and the DGS will sign the form. If the request is denied the student will be terminated from the program if they do not complete within the standard 8 year time limit. The student will be informed of the PAC's decision in writing.

### F.21 Graduation Packet

Download a graduation packet from GSSP the term before you plan to defend your thesis. The graduation packet is online at <https://onestop.umn.edu/forms> (click on “Graduation” and then “Graduation Packet”). This packet will include a link to the Thesis Reviewer’s Report form. You will need to initiate the “Thesis Reviewer’s Report” form at least one week before your defense date. Your committee members should respond to the form at least three – four days prior to your defense date. Once all committee members have responded to the form your student record will be updated and you will receive an e-mail with a link to complete the final exam form. The “Application for Degree” must be submitted prior to the first day of the month in which you plan to defend. You can find that form by going to <https://onestop.umn.edu/forms> (click on “Graduation” and then “Application for Degree”).

### F.22 Doctoral Thesis

Students nearing completion of their thesis research should discuss the timeframe for completing their program with their thesis committee at their annual committee meeting. The committee chair must indicate on the last **section of the Thesis Committee Meeting Summary Report form** that the student has approval to begin writing his/her thesis (this should be done at an annual committee meeting). The student then begins writing the thesis. Students should refer to the thesis/dissertation submission and formatting document which is located at <https://onestop.umn.edu/academics/thesisdissertation-submission-and-formatting> on the OneStop website. Single author and not collaborative, shared, or co-authored theses are required.

The body of work should contain original research and yield at least three manuscripts suitable for publication in recognized, refereed scientific journals, with the student as primary author. One of these should be in review or under revision for publication in a peer-reviewed journal. This research should demonstrate that the candidate is trained as an independent research investigator.

After the thesis is completed and the advisor is satisfied with the draft, the student submits a copy to the thesis reviewers and other members of the examining committee. **The committee members must be given a minimum of three weeks to confer with the candidate on the content of the thesis.** Any major revisions must be completed prior to the final defense. Minor revisions can be made after the defense but before the final manuscript is submitted. The appropriate committee members must agree that the thesis is suitable by submitting the online Ph.D. Thesis Reviewers Report Form. The Ph.D. Thesis Reviewers Report Form must be submitted, to the GSSP, at *least* three – four days prior to the final defense date.

### F.23 Final Oral Exam

Only when the thesis committee agrees that sufficient research accomplishments have been achieved by the student, the final oral exam may be scheduled. Committee approval is demonstrated by submission of the Ph.D. Thesis Reviewers Report Form. The student must submit the online Final Oral Defense/Examination Scheduling Form found at <https://onestop.umn.edu/academics/doctoral-oral-exam-scheduling> a minimum of one week *prior* to the final exam.

The decision options for the final oral exam are pass or fail. Retakes are not allowed. Per policy, “To be recommended for the award of the doctoral degree, **all committee members, or all committee members save one, must vote that the student has passed** the doctoral final oral examination. Students are not allowed to retake the final oral examination (<https://policy.umn.edu/education/doctoralcompletion>).

**Announcements to the VMED students and faculty need to be sent out a minimum of two weeks prior to the exam.** The student should contact the Graduate Program Coordinator with the date, time, location of the final defense as well as the title of the thesis and the advisor’s name. The graduate program coordinator will send out an announcement for the final oral defense to the VMED students and graduate faculty. The candidate will then present his/her thesis in a public seminar with the examining committee present. The seminar constitutes the final oral exam, and is followed by a short meeting with the examining committee. After this meeting the committee chair submits the Final Oral Examination Report Form. All faculty and students are encouraged to attend the final oral exam.

#### F.24 Dissertation Submission

University policy requires students to submit the final completed dissertation electronically. Directions for submitting the dissertation are found in Dissertation Submission which is located at <https://onestop.umn.edu/academics/thesisdissertation-submission-and-formatting>. **The University will not award the official degree until the dissertation has been received.**

Paper copies of the dissertation are required for the following with thesis binding being the responsibility of the student. Most students will need at least two copies of the thesis:

- ✓ one for the advisor,
- ✓ one for the Office of Graduate Programs, and
- ✓ one for each committee member (optional).

#### F.25 Exit Interview

Upon completing the Ph.D. degree, the Graduate Program Coordinator will solicit a written evaluation of the student's experience in the VMED graduate program. The student will be offered an opportunity to meet individually with the GPC or to submit the written evaluation electronically. These evaluations will be used to assess the quality of the Ph.D. program and faculty, and to provide guidance for improving graduate education.

#### F.26 Leave of Absence

A leave of absence (LOA) from the graduate program may be possible under limited circumstances. If a LOA is approved the student must not have contact with their graduate program, advisor, research, etc. A LOA is a total respite from all forms of graduate education, courses, lab work, contact with professors and staff. Students must apply for a LOA and have it approved by the DGS and OGP, before it goes into effect. LOAs are for full semesters and cannot be approved for less than one semester or more than four semesters. More information is available at <https://policy.umn.edu/education/gradstudentleave>.

Circumstances that may warrant a request for a LOA include serious illness, death of a close family member, birth or adoption of a child and for voluntary military service. Other circumstances may cause a request to be initiated but there is never a guarantee that a LOA will be approved.

When considering a Leave of Absence:

- Review Administrative Policy: [Leave of Absence and Reinstatement from a Leave: Graduate Students \(Twin Cities, Duluth, Rochester\)](#);
- Read instructions on the Leave of Absence form (located on LOA policy);
- Confer with your advisor(s), DGS, Graduate Program Coordinator, and relevant offices (e.g., ISSS, Graduate Assistant Employment, Financial Aid) regarding the impact of a LOA on your financial, academic, work-related, and personal circumstances;
- Confer with your DGS and CVM Office of Graduate Programs about what, if any, conditions may be placed on your reinstatement after the LOA.

If, after review and consultation, you choose to request a LOA:

- Complete the form (include supporting documentation, if requested) immediately;
- Obtain signatures of your advisor(s) and DGS;
- Submit the signed form to the CVM Office of Graduate Programs for review.

The DGS in consultation with GPC and ADGP will review request and make decision.

GPC will notify student in writing of decision and time limit of approved leave, including any conditions that are placed on reinstatement.

Reinstatement after Leave of Absence:

A reinstatement request is required at least one month prior to the beginning of the term in which the student wishes to return. Submit the [LOA Reinstatement Request](#) form with advisor signature(s) to the Graduate Program Coordinator. The GPC will notify the student in writing of decision and any reinstatement conditions after consultation with DGS and ADGP. The graduate program reserves the right

to request documentation that the student has acceptably addressed the reasons that necessitated the LOA prior to granting reinstatement. Students may submit a request to return from LOA earlier than the term approved. However, any requests submitted after the term approved, will be denied and will require a formal re-admission application to the graduate program.

#### **F.27 RECOMMENDED TIMELINE FOR Ph.D. STUDENTS**

The following timeline is recommended for all Ph.D. students in the VMED program. Completion of requirements as described will ensure that each student will progress through the program in an efficient and timely manner.

#### **YEAR 1**

Begin coursework.

Required courses are:

**VMED5190 Seminar and Presentation Development for Graduate Students (fall)**

VMED 8134 Ethical Conduct of Animal Research (fall)

VMED 8550 Veterinary Medicine Seminar (2 credits) (fall/spring)

At least one course in Biostatistics

Three additional 8000 level major or supporting courses (recommend VMED8202)

Submit GPAS (Graduate Planning and Audit System) <https://onestop.umn.edu/academics/gpas> for approval by end of year 1.

Identify thesis committee members and request approval of committee from PAC.

Submit preliminary exam committee online <https://onestop.umn.edu/academics/examination-committees>.

Begin Individualized Development Plan (IDP) <https://myidp.sciencecareers.org/>.

#### **YEAR 2**

Complete coursework:

VMED5910 Grant Writing: What Makes a Winning Proposal?

*(Required course to be taken spring term as lead up to preliminary exam)*

Schedule first committee meeting during fall semester to discuss thesis proposal.

Committee chair submits [Thesis committee meeting summary form](#).

Submit thesis proposal to Graduate Program Coordinator for committee approval (written preliminary exam) by end of August.

Update [IDP](#).

#### **YEAR 3**

Schedule oral preliminary examination with GSSP <https://onestop.umn.edu/academics/doctoral-oral-exam-scheduling>.

Complete preliminary oral exam before end of December.

Submit final oral examination committee <https://onestop.umn.edu/academics/examination-committees> after successfully completing oral preliminary exam.

Schedule and complete annual committee meeting; Submit [Thesis committee meeting summary form](#).

Update [IDP](#).

## YEAR 4

### **Complete thesis research, write and defend dissertation**

Schedule and complete annual committee meeting and submit [Thesis committee meeting summary form](#).

Update [IDP](#).

Download graduation packet at <https://onestop.umn.edu/forms> (click on “Graduation” and then “Graduation Packet”).

Submit “Application for Degree” prior to the first day of the month in which you plan to defend. You can find that form by going to <https://onestop.umn.edu/forms> (click on “Graduation” and then “Application for Degree”).

Provide draft of thesis to committee (*allow at least three weeks for review*).

Initiate Ph.D. Thesis Reviewers Report Form.

Provide graduate program coordinator with thesis title, date, time and location of thesis defense (*two weeks prior to defense*).

Complete final oral examination scheduling <https://onestop.umn.edu/academics/doctoral-oral-exam-scheduling>.

Complete final defense and Committee Chair submits online final oral examination report form to GSSP.

Electronically submit final thesis manuscript <https://onestop.umn.edu/academics/thesisdissertation-submission-and-formatting>.

Complete exit interview with graduate program coordinator.

## G. COMBINED D.V.M. /Ph.D. PROGRAM

The most significant discoveries in medicine result from collaboration between the basic sciences and clinical medicine. Both industry and training institutions require a population of individuals skilled in both hypothesis-based research and clinical practice to generate new knowledge to address basic health issues in veterinary and human medicine and food safety. To meet the shortfall of research veterinarians, the CVM Graduate Programs have established a dual/combined degree program (D.V.M. /Ph.D.). Acceptance into the D.V.M. /Ph.D. dual degree program is based on competitive review of D.V.M. applicants who have also completed a separate graduate program application.

### G.1 Application to the Graduate Program

Students apply for admission to the Ph.D. program at the same time they are applying to the D.V.M. program. The deadline for completing the Ph.D. application is December 1. Students who apply and are offered a D.V.M. interview for admission will have a Ph.D. admission interview on the same day as their scheduled interview for the D.V.M. program.

To be offered admission to the formal dual degree program students must meet all eligibility requirements for both the D.V.M. and the Ph.D. program.

### G.2 Process for Completing the Formal Dual Degree Program.

D.V.M. /Ph.D. trainees have two options for completing both degrees. In the **concurrent** training model, students step out of the D.V.M. program in the middle of year three and begin the Ph.D. program. Upon completing the Ph.D. requirements (3-4 years), the student re-enters the D.V.M. program in the spring semester of the third year of the D.V.M. program. In the **consecutive** training model students will first complete their D.V.M. requirements prior to starting the Ph.D. program in the summer following their fourth year of the D.V.M. curriculum. Students choosing the consecutive option should choose the Interdisciplinary Track and arrange research rotations during their fourth year.

### G.3 Research Rotations

Research rotations in at least two different laboratories (each 8 weeks in length) are required of all dual degree students (VMED 8100) before a thesis advisor is selected. For those admitted into the combined D.V.M./Ph.D. program, participation in the CVM Summer Scholars Program (or perhaps other research programs) during the summer sessions after the first and second year of the D.V.M. curriculum is required and will count towards the recommended research rotations if conducted in the laboratories of potential advisors. Students register for VMED 5594 as DVM students. Any remaining research rotations must be completed upon starting the Ph.D. portion of the degree program.

For all research projects that count as a rotation, students are required to present a research poster at the CVM Points of Pride Research Day. Alternatively, a short research talk (15-20 min.) can be scheduled in the VMED Graduate Student Seminar Course (VMED8550). Presentations should include the necessary background information to understand the research problem, an overview of the rotation project, results obtained by the student, and a discussion of future directions or implications of the proposed project.

### G.4 Student Advising

The ADGP and the DGS are available to provide advice to D.V.M. students considering the D.V.M. /Ph.D. combined degree program. For students choosing the consecutive training model, the ADGP will work with the Academic Affairs Office to arrange fourth year rotations that allow the student to begin a research project. The DGS will serve as their temporary advisor following their admission into the Ph.D. program, until their research advisor is determined. Each new student will be assigned a current D.V.M. /Ph.D. student to serve as a mentor as well.

### G.5 Selection of an advisor

Upon completion of all research rotations, including Summer Scholars experiences students will select a research advisor who will mentor the student's research program. It is the responsibility of the student to identify a research advisor. This must be a mutually agreed upon arrangement between the student and the advisor. The advisor will be responsible for providing financial support for the student during completion of the Ph.D. studies.

### **F.6 Financial support**

No support is provided to combined degree students during their first two years in the professional curriculum. Support during the graduate training portion of the combined degree program is the responsibility of the advisor. Students are strongly encouraged to compete for external fellowships, particularly those who have completed the D.V.M. prior to beginning the Ph.D. training. Upon completing the Ph.D. requirements (including the final thesis defense), D.V.M. /Ph.D. students who have chosen the concurrent training model will receive \$12,500 per semester toward their final 4 semesters of D.V.M. tuition. The VMED graduate program will provide \$12,500 the second semester of their third year of D.V.M. training, and the OGP will provide \$12,500 over each of the remaining semesters. The student will be responsible for all other fees, costs, or tuition charges over and above this \$12,500/semester tuition funding. **Return to the D.V.M. curriculum and the tuition funding will be contingent upon 1) completion of all Ph.D. requirements (including final thesis defense), and 2) good academic standing in the professional degree program.**

Students who complete the D.V.M. prior to beginning the Ph.D. program will receive an augmented graduate stipend (\$5,500 greater than the minimum graduate stipend) throughout the course of their Ph.D. training. The VMED graduate program will provide that differential stipend for the first year, and the OGP will provide the stipend differential for the remaining years of the Ph.D. program. Continuation in this program requires the student to remain in good academic standing as determined by GPA and Annual Student Progress reviews.

When a DVM/PhD student, who opts for the "concurrent model, DVM - PhD - DVM" of the dual degree program, receives funding from an NIH F30 fellowship that partially supports their professional (DVM) tuition after finishing the PhD, the Office of Graduate Programs will cover the tuition balance not covered by the F30 for the student's final four semesters in vet school. In addition to the tuition balance not covered by the F30, the Office of Graduate Programs will provide \$2,500 directly into the student's account each semester for the final four semesters.

### **F.7 Coursework**

Graduate courses will provide information, perspectives and emphasis different from that offered in the D.V.M. curriculum. Generally, the D.V.M. /Ph.D. students follow the same requirements as the Ph.D. students.

Upon enrollment into the graduate program, D.V.M. /Ph.D. students are considered to be in the first year of their Ph.D. program with respect to courses, evaluations, and expectations, and should follow the description for first year students. Students who have earned credit in CMB 5594 for their prior two Summer Scholars experiences will not be required to register for Research Rotations (VMED 8100). Those D.V.M. /Ph.D. students who did not complete their research rotations through the summer scholars program should register for VMED 8100 as recommended. In all subsequent years, students should follow the description and course recommendation provided for the Ph.D. program as outlined below. This includes the preliminary examination, seminar requirements, instruction experience, etc.

Students can utilize up to 7 credits from their first two years D.V.M. curriculum to count toward both the D.V.M. and Ph.D. degrees, providing they have earned satisfactory grades. The courses acceptable for this purpose are:

- CVM6913- Agents of Disease I (4 cr)
- CVM6906- Critical Scientific Reading (1 cr)
- CMB5594 or VMED5594- Directed Research (2 cr)

For CMB dual degree students, the requirement for CMB8202- Mechanisms of Animal Health and Disease will be satisfied by the CVM6913 credits. Similarly, CVM6906 will satisfy the requirement for CMB8560- Research and Literature Reports.

Dual degree students are encouraged but not required to enroll once in CMB or VMED8550- Graduate Seminar while in their second year D.V.M. period. This will count only toward the Ph.D. degree.

<b>Required courses</b>	<b>Credits</b>
VMED8100 (Research rotation) or VMED5594	2.00 – 4.00
VMED8550 (VMED Seminar)	2.00
VMED8134 (Ethical Conduct Anim Res)	3.00
VMED5190 (Seminar and Presentation Skills)	2.00
VMED5910 (Grant Writing)	2.00
Electives	7.00
Statistics	3.00
<b>DVM courses including CVM6906</b>	<b>1.00 - 3.00</b>
Total Course credits	24.00
Thesis	24.00
	48.00

*Credits from DVM curriculum are included on the GPAS for PAC approval.*

### Dual degree timeline

<b>Year</b>	<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
<b>1</b>	DVM	DVM	Rotation #1
<b>2</b>	DVM + VMED8550 + VMED5594	DVM	Rotation #2
<b>3</b>	DVM + VMED8550 + VMED5594	Grad max 14 cr (Stats, electives, thesis credits)	
<b>4</b>	Grad max 14 cr. (VMED8134, VMED5190, elective(s), thesis credits)	Grad max 14 cr. (VMED5910, thesis credits)	prelims must be completed
<b>5</b>	Research	Research	
<b>(optional yr 6)</b>	Research	Research	
<b>6 (7)</b>	Thesis writing and defense	DVM	
<b>7 (8)</b>	DVM	DVM	

#### G.8 Return to the D.V.M. Curriculum

**It is required that students defend their thesis prior to returning to the professional curriculum.** In *rare* circumstances, students will be allowed to submit the final thesis manuscript after returning to the D.V.M. program. This requires approval of the ADGP and the DGS. A signed agreement form outlining the student's timeline for completing the final manuscript must be on file in the graduate program office prior to the student's return to the D.V.M. curriculum. Failure to submit the timeline and/or completion of the final manuscript as outlined in the agreement will automatically result in the forfeit of any tuition funding. The student will be allowed a maximum of one semester to complete the final manuscript following return to the D.V.M. curriculum. If the student has not successfully submitted the final manuscript by the start of the summer term prior to fourth year they will forfeit the remaining \$30,000 of tuition funding associated with the dual degree program.

## H. MISCELLANEOUS PROGRAM INFORMATION

### H.1 Records Policy

The Graduate Program Coordinator shall maintain a file for all graduate student applicants, incoming students, current students, and students who have left the program or completed their degree requirements. Documents contained in this file include, but are not limited to, the student's initial application documents (GRE scores, official transcripts, C.V., statement of training goals), preliminary written and oral exam forms, and yearly progress and review forms including letters describing potential stipulations imposed during the preliminary exam or annual review.

Students may have access to the contents of their file for all documents for which the student has not waived viewing rights. The file can be accessed per written request to the DGS. Program faculty and staff have access to the file on a need-to-know basis, as per FERPA regulations.

### H.2 Graduate Assistant Employment

Graduate assistants may be assigned or reassigned to any teaching or other duties that are appropriate for the class title as the needs of the department dictate. A complete explanation of Graduate Assistant Policies is provided through the Office of Human Resources at <http://www1.umn.edu/ohr/gae>. The Graduate Assistant's website contains much useful information regarding policies, rights, responsibilities, and opportunities for graduate assistants. Students and faculty of the program are encouraged to access the information contained within. The policy governing graduate assistants is available at: <http://policy.umn.edu/hr/gradstudentemployment>

### H.3 Resources and Information for Graduate Students

**Council of Graduate Students (COGS).** This organization addresses graduate student concerns via formation of various issue-oriented working groups. They also staff various committees throughout the University in order to represent graduate students' interests and help graduate students navigate the University. COGS also makes available travel awards to support graduate study. The COGS newsletter is available via their website at: <https://cogs.umn.edu/>.

**Graduate Students Professional Development.** The Graduate School has created a resource page for graduate students continued professional development, including addressing issues of grant writing skills, fellowships, stress management, science ethics, and job-seeking. Their website with relevant links can be found at: <http://www.grad.umn.edu/current-students/apd> .

**Dissertation Calculator.** Available at <http://www.lib.umn.edu/help/disscalc/>, the Dissertation Calculator breaks down the thesis process into manageable timelines and provides important advice for timely completion of the thesis.

**Information for International Students.** The International Students and Scholars Services (ISSS) serves the University of Minnesota international student population. Their website is <http://www.iss.umn.edu/> and provides assistance to departments bringing in international students. This office should be consulted for all visa questions and issues.

#### H.4 Family and Medical Leave, and Parental Leave

The University of Minnesota provides for leave under the Family and Medical Leave Act for eligible employees, which includes Graduate Research Assistants and Teaching Assistants. The official language of this policy and how it is applied is located at <http://www1.umn.edu/ohr/gae/benefits/index.html>

Graduate assistants may be eligible for up to twelve weeks' absence during a fiscal year for:

**Parental leave** for childbirth and/or care of the newborn <https://policy.umn.edu/hr/parentalleave>

**Family medical leave** for care of a close family member (spouse/registered same sex domestic partner/child/parent (with a serious health condition)

**Personal medical leave** for a serious health condition that prevents you from performing your duties or job-related responsibilities.

Eligibility requires that you have worked at least 1,250 hours in the 12 months preceding the leave. Be aware that your supervisor can place you on an FMLA leave, if appropriate, without your requesting such a leave.

#### H.5 Graduate School Commitment to Diversity

The Graduate School embraces the University of Minnesota's position that promoting and supporting diversity among the student body is central to the academic mission of the University. A diverse student body enriches graduate education by providing a multiplicity of views and perspectives that enhance research, teaching, and the development of new knowledge. A diverse mix of students promotes respect for, and opportunities to learn from, others with the broad range of backgrounds and experiences that constitute modern society. Higher education trains the next generation of leaders of academia and society in general, and such opportunities for leadership should be accessible to all members of society. The Graduate School and its constituent graduate programs are therefore committed to providing equal access to educational opportunities through recruitment, admission, and support programs that promote diversity, foster successful academic experiences, and cultivate the leaders of the next generation.

The mission statement of the Graduate School's Diversity Office can be found at:

<https://www.grad.umn.edu/diversity>

The Board of Regents Policy on Diversity, Equal Employment Opportunity, and Affirmative Action can be found at:

[https://regents.umn.edu/sites/regents.umn.edu/files/2019-09/policy\\_equality\\_diversity\\_equal\\_opportunity\\_and\\_affirmative\\_action.pdf](https://regents.umn.edu/sites/regents.umn.edu/files/2019-09/policy_equality_diversity_equal_opportunity_and_affirmative_action.pdf).

#### H.6 Statement on Sexual Harassment

The VMED program, as part of the University of Minnesota, is committed to creating a welcoming and respectful work and educational environment that is free from sexual harassment and provides comprehensive support, education, and reporting mechanisms to all members of the University community.

All members of the program and University community are prohibited from engaging in sexual harassment and retaliating against individuals based on their participation in a sexual harassment investigation. When they learn about incidents of sexual harassment, University employees who are supervisors must take prompt remedial action to respond to any concerns including referring the matter to relevant internal options.

#### **Sexual Harassment**

Sexual harassment is against the law. It is prohibited by Title VII of the 1964 Civil Rights Act and by the Minnesota Human Rights Act. Sexual harassment includes unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature when (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or academic advancement in any University activity or program; (2) submission to or rejection of such conduct by an individual is used as the basis of employment or academic decisions affecting this individual in any University activity or program; or (3) such conduct has the purpose or effect of

unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive work or academic environment in any University activity or program.

### **Reporting and survivor services**

Any individual who believes they have been subjected to sexual harassment or retaliation for reporting sexual harassment can report their concerns to the Office for Equal Opportunity and Affirmative Action (EOAA), the Office for Community Standards (OCS), the UReport anonymous online reporting system, or the relevant internal office for investigation, dispute resolution, and potential disciplinary action against perpetrators. Victim survivor services are also available to provide additional support.

More steps for reporting sexual harassment can be found here:

<https://policy.umn.edu/hr/sexharassassault>

Anonymous reporting Service for the U of M:

<https://secure.ethicspoint.com/domain/media/en/gui/9167/index.html>

To report harassment through EOAA: call (612) 624-9547 or email [eoaa@umn.edu](mailto:eoaa@umn.edu).

Additionally, for a free and confidential space for victims/survivors/concerned people of sexual assault, relationship violence or stalking, contact or visit the Aurora Center for Advocacy & Education. To speak with a trained advocate, call their 24 hour hotline (612) 626-9111. The Aurora Center also offers help in reporting incidences of sexual harassment as well as legal resources. For more information, visit their website at <http://aurora.umn.edu/>.

For ongoing support, visit the counseling center: <https://counseling.umn.edu/>

### **Retaliation**

No one acting on behalf of the University may retaliate against an individual for having made a report in good faith under this policy or participated in a sexual harassment investigation. Any employee who engages in retaliation may be subject to disciplinary action up to and including termination of employment. Reports of retaliation will be reviewed and investigated in the same manner in which other allegations of misconduct are handled. This provision aligns with Board of Regents Policy.

Retaliation includes any form of intimidation, reprisal or harassment against an individual because the individual has made a report of sexual harassment or has participated in an investigation of sexual harassment by or of a University community member including (1) firing, refusing to hire, or refusing to promote the individual; (2) departing from any customary employment or academic practice regarding the individual; (3) transferring or assigning the individual to a lesser position in terms of wages, hours, job classification, job security, employment or academic status, (4) informing another student, staff, or faculty member who does not have a need to know that the individual has made a complaint or participated in an investigation of a complaint of sexual harassment; and (5) impeding the individual's academic advancement in any University activity or program.

### **H.7 Student Code of Conduct**

University of Minnesota Board of Regents Student Conduct Code:

[https://regents.umn.edu/sites/regents.umn.edu/files/2020-01/policy\\_student\\_conduct\\_code.pdf](https://regents.umn.edu/sites/regents.umn.edu/files/2020-01/policy_student_conduct_code.pdf)

## I. ACRONYMS

<b>CMB</b>	Comparative and Molecular Biosciences graduate program
<b>VMED</b>	Veterinary Medicine graduate program
<b>DGS</b>	Director of Graduate Studies
<b>PAC</b>	Program Advisory Committee
<b>ADGP</b>	Associate Dean for Graduate Programs
<b>OGP</b>	Office of Graduate Programs (in the College of Veterinary Medicine)
<b>GPC</b>	Graduate Programs Coordinator
<b>GPS</b>	Graduate Programs Specialist
<b>GPAS</b>	Graduate Planning and Audit System
<b>GSSP</b>	Graduate Student Services and Progress
<b>CVM</b>	College of Veterinary Medicine
<b>VMC</b>	Veterinary Medical Center
<b>VetSci</b>	Veterinary Science Building
<b>AS/VM</b>	Animal Science Veterinary Medicine Building
<b>VDL</b>	Veterinary Diagnostic Laboratory
<b>VCS</b>	Veterinary Clinical Sciences
<b>VPM</b>	Veterinary Population Medicine
<b>VBS</b>	Veterinary Biomedical Sciences
<b>IACUC</b>	Institutional Animal Care and Use Committee
<b>COGS</b>	Council of Graduate Students
<b>PSG</b>	Professional Student Government