

POLICIES AND PROCEDURES MANUAL FOR
GRADUATE STUDENTS

DEPARTMENT OF VETERINARY CLINICAL SCIENCES
COLLEGE OF VETERINARY MEDICINE
PURDUE UNIVERSITY

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Graduate students in the Department of Veterinary Clinical Sciences are governed by the rules in effect at the time of enrollment. If a rule changes while the student is in the program, the student may elect to be governed under the new rule in effect or under the version of the rule in effect at the time of first enrollment:

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THE GRADUATE PROGRAM

As a unit of the Graduate School of Purdue University, the Department of Veterinary Clinical Sciences (VCS) offers graduate programs leading to the Master of Science (M.S.) non-thesis degree, the M.S. thesis degree, and the Doctor of Philosophy (Ph.D.) degree. Graduate training in clinical and translational research may be pursued in a number of fields including Anesthesiology and Pain Management, Behavior Medicine, Cardiology, Clinical Epidemiology and Population Medicine, Dermatology, Diagnostic Imaging (Radiology), Emergency and Critical Care, Large Animal Internal Medicine, Large Animal Surgery, Medical Oncology, Neurology, Ophthalmology, Production Medicine (Food Animal, Ruminant and Swine), Radiation Oncology, Small Animal Internal Medicine, Small Animal Surgery, and Theriogenology. The VCS Department, along with the Purdue Veterinary Hospital, has state of the art facilities, equipment and infrastructure for studying the health and diseases of animals, conducting clinical trials and performing translational research.

The primary goal of the advanced degree program is to prepare students for successful careers in academia, research, specialty clinical practice, government, or industry. Criteria for recommending granting of the M.S. degree (non-thesis and thesis) are demonstrated ability to: (1) understand the scientific method; (2) effectively communicate in the field of study and to the broader community; (3) think critically and creatively about problems in the field of study; and (4) conduct activities in an ethical and responsible manner. In addition, for successful completion of the M.S. thesis degree candidates will be able to apply the scientific method and conduct research using the abilities listed above. For successful completion of the Ph.D. degree, candidates are also expected to plan and conduct original research, and engage in scholarship and other creative endeavors. Students can focus their studies and research in any of the fields listed above.

The VCS residency programs, designed to train veterinarians for specialty clinical practice, are combined with the graduate program. While the requirements for the M.S. non-thesis or thesis degree can usually be completed in a shorter time period (two years), the duration of a combined Residency/M.S. program is usually three years, reflecting the time required to satisfy the objectives of both programs. The duration of a combined Residency/Ph.D. program should be a minimum of five years, reflecting the time required to satisfy the objectives of both programs.

Directions for completing the application process are described below, and applications must be approved by the Graduate School of Purdue University (www.purdue.edu/gradschool), as well as the Graduate Program Committee (GPC) and Head of the Department of VCS.

Application Procedures and Addresses

Prospective applicants not concurrently completing residency training should contact a faculty member of VCS before starting the application process, in order to determine whether a suitable research training position and financial support are available. Residents are selected or matched through the Veterinary Internship and Residency Matching Program independent of the VCS graduate program. All applicants to the VCS graduate program must apply to the Graduate

School at Purdue University. The completed application will be forwarded to the VCS GPC for review and recommendation to the department head.

The VCS contact address is:

Department of Veterinary Clinical Sciences
Attention: Graduate and International Programs Coordinator
Purdue University
Lynn Hall of Veterinary Medicine, Room 1352B
625 Harrison St.
West Lafayette, IN 47907-2026
Email: jmabbitt@purdue.edu

For additional information, contact the VCS office, Telephone 765-494-9900, or visit www.vet.purdue.edu/vcs/.

A complete application must include: (1) letter of intent (one to two pages), (2) curriculum vitae, (3) official transcripts from each university that the applicant has attended, and (4) a minimum of three letters of recommendation evaluating the applicant's potential for graduate studies. Applicants to the combined Residency/M.S. program do not need to submit a second copy of requirements (1), (2), (3), and (4) to the VCS Department as long as they have submitted the same information as part of their application to the residency training program. However, it should be noted that when applying to the graduate program the application must include official/unofficial transcripts from each university that the applicant has attended and not just the official/unofficial transcript from the veterinary college or school.

Foreign applicants from a country where English is not their native language must also include in their application to VCS evidence of satisfactory performance on the TOEFL test (Test of English as a Foreign Language; www.toefl.org), or the IELTS test (International English Language Testing System; www.ielts.org). Applicants must achieve the minimum test scores set by the Graduate School (see English Proficiency Requirements in Section III B of *Policies and Procedures for Administering Graduate Student Programs* available online: <https://www.purdue.edu/gradschool/faculty/publications.html>) or on the Graduate School webpage (<https://www.purdue.edu/gradschool/admissions/how-to-apply/apply-toefl.html>). The Graduate Record Examination (GRE) and Graduate Management Aptitude Test (GMAT) are not required for admission of students with post-baccalaureate or professional degrees. More information for prospective international graduate students is available at: <https://www.purdue.edu/gradschool/admissions/student-experience/international/index.html>.

Applicants must apply electronically to the Graduate School at Purdue University (<https://www.purdue.edu/gradschool/>). A small nonrefundable fee will be charged for your application to the Graduate School.

The PVM values, nurtures, and respects all members of its community and ensures an environment of inclusive excellence where all students, faculty, and staff are inspired and empowered to achieve their full potential. In order to be better informed about issues of climate,

diversity and inclusion, Purdue University and the PVM provide the opportunity for all its faculty and staff to participate in various diversity training activities.

Financial Support

Students may apply for university assistantships and fellowships as forms of financial aid to support graduate study (<https://www.purdue.edu/gradschool/fellowship/funding-resources-for-students/index.html>). Employment is secondary to graduate study. Students who receive fellowships are not employees and are not obligated to provide services to the university. The purpose of fellowships is to recognize outstanding graduate students and to support their education. While there are broad policies and procedures covered in this document that may apply to fellowships, in general, these guidelines are intended to address graduate student employment.

Graduate students who are employed by the university provide services (teaching, research, administrative/professional) that further the missions of the university. At the same time, graduate students receive valuable professional experience and financial remuneration in the form of tuition remission and a salary. These graduate students are considered employees and are subject to the policies and procedures outlined in the Purdue University Graduate Staff Employment Manual.

Assistantships

Assistantships are designed to allow graduate students to obtain income and valuable professional experience to enhance the university's efforts in teaching and research, and to make certain that the balance between work and study is appropriate. Employment is subject to the availability of funds.

Assistantships provide a salary for services that are typically unrelated to the student's thesis research. The monthly minimum amount for an assistantship is set annually by the Graduate School. Assistantships are 0.25, 0.50, 0.75, or 1.0 Full Time Equivalent (FTE) increments and graduate tuition fees are waived for graduate students with at least a 0.25 FTE appointment. Graduate students receiving an assistantship must be registered for at least three credit hours of graduate-level course or research work during the fall and spring semesters and for at least one of the summer sessions for the entire appointment period and are required to pay university activity fees (contact VCS Office for specific information). Graduate students on a 0.50 FTE appointment or higher for at least one semester are eligible for participation in the University-subsidized Graduate Student Staff Health Plan. Graduate students enrolled full-time (8 or more hours in fall and spring semesters, 6 or more hours in the summer semester) who have paid their tuition and fees are eligible to receive many Purdue University Student Health (PUSH) services at no additional charge. International students are limited by law to working a total of 20 hours (i.e. 0.50 FTE) per week for fall and spring semesters. The Graduate Staff Employment Manual (<https://www.purdue.edu/gradschool/faculty/publications.html>) should be consulted for more detailed information.

There are two basic classifications of employment (assistantships) for students who are eligible for a graduate appointment (<https://www.purdue.edu/gradschool/fellowship/funding-resources-for-students/assistantships.html>):

1. **Graduate Staff:** Performing teaching, research, academic counseling, or other activities directly supporting teaching and research under close faculty supervision
2. **Graduate Professional:** Performing administrative or other duties not directly related to teaching or research. Graduate professionals are permitted in academic areas, and many graduate students in VCS completing a combined Residency/M.S. program are employed under this classification.

Fellowships

Talented and productive graduate students may also be eligible for university fellowships (<https://www.purdue.edu/gradschool/fellowship/funding-resources-for-students/fellowships/index.html>). The purpose of fellowships is to recognize outstanding graduate students and to support their education. The Fellowship Office website should be consulted for detailed information.

Outside Activities

In general, Purdue employees may not engage in outside employment and receive remuneration for other outside activities that would conflict with their university duties. Such outside activities include: connections with businesses, public offices, professional associations, educational institutions, and foundations. All outside activities should be reported annually on the Outside Activity Disclosure and Conflict of Interest Database Form: <https://sp2013.itap.purdue.edu/pvm/PVM%20Intranet%20Pages/Forms.aspx>.

Admission Requirements

The GPC is responsible for recommending approval or disapproval of graduate student applications. In addition to the specific requirements outlined below, the GPC may request additional requirements such as additional test scores or documentation for an individual applicant prior to admission.

The VCS Department requires applicants without a post-baccalaureate or professional degree to provide GRE test scores from within the previous 5 years.

M.S. degree (non-thesis or thesis)

Admission requirements to the M.S. non-thesis or thesis degree graduate program include a Doctor of Veterinary Medicine (D.V.M.) degree or equivalent, or an appropriate undergraduate degree, and a minimum grade point average of 3.0 (based on 4.0 = A). Admission averages are computed from the entire professional curriculum for those with a D.V.M. or equivalent degree,

or from the undergraduate studies for those without the D.V.M. degree. Applicants with a grade point average below 3.0 may be considered for admission on conditional status on the basis of individual merit. Students admitted on conditional status generally have one semester to change their status to unconditional. Applicants with a graduate degree, and applicants that have completed some graduate course work, will be evaluated on the basis of their graduate work as well as their undergraduate or professional record.

Ph.D. degree

Admission requirements to the Ph.D. degree graduate program include a Doctor of Veterinary Medicine (D.V.M.) degree or equivalent, a M.S. degree or equivalent, or a Bachelor of Science (B.S.) or Bachelor of Arts (B.A.) degree or their equivalent, and a minimum grade point average of 3.0 (based on 4.0 = A). Admission averages are computed from the last degree. Applicants with a grade point average below 3.0 may be considered for admission on conditional status on the basis of individual merit. Students admitted on conditional status generally have one semester to change their status to unconditional. Students seeking to transfer from other graduate programs will be judged on the basis of past undergraduate and graduate performance.

Administrative Structure

The Head of the Department of VCS is the head of the VCS graduate program. The department head reviews the Graduate Program Committee appointments annually at the start of the academic year. The department head also appoints the chair of the committee for a 3 year term. The committee is advisory to the department head who ultimately has authority regarding the graduate program.

The Graduate Program Committee consists of 6 VCS faculty (one of whom serves as chair) and 1 VCS graduate student. Faculty members of the committee serve 3-year terms which are staggered so that two new members are appointed annually. All faculty members of the committee must have graduate faculty status. The chair of the committee must hold a Ph.D. degree (or equivalent), at least 3 faculty members of the committee must have a Ph.D. degree (or equivalent), and at least 4 faculty members of the committee must have a Ph.D. or thesis M.S. degree (or equivalent). The VCS graduate student representative serves a 1-year term and must have completed at least 2 semesters of course work in their graduate program. Committee members may be reappointed. The final committee therefore consists of 6 appointed VCS faculty, 1 appointed VCS graduate student, and the department head (*ex officio*), with the 6 faculty and 1 graduate student having equal voting rights.

Graduate Program Committee (GPC) Responsibilities

The responsibilities of the Graduate Program Committee are to:

- Provide general guidance to the graduate program.
- Assist the VCS Department or individual VCS faculty in recruiting new graduate students.
- Make recommendations to the department head of VCS regarding admission of prospective students into the graduate program.

- Provide guidance and counseling as needed for new graduate students before they have been assigned to a major professor.
- Provide general guidance or help in administering required examinations.
- Evaluate VCS graduate student progress on an annual basis, usually in July (see **Appendix 1**). Based on the documentation and assessment of progress, the GPC should bring to the attention of the department head any student not progressing satisfactorily in the graduate program. The department head will make a final decision whether the student should be retained or dismissed after consultation with the student's faculty advisor.
- Prepare with assistance from the VCS office a report annually for the VCS Department summarizing the status of the VCS graduate program. This report will be presented at a VCS faculty meeting at the start of each academic year and provide information, related to the previous fiscal year, of the following: (1) number of candidates that applied to open masters and doctoral positions; (2) number of graduate students that enrolled into masters and doctoral programs and the total number currently enrolled; (3) number of enrolled graduate students that left the graduate program and reason for leaving; and (4) number of graduate students that completed programs (with degree).
- Protect the interests of both the graduate student and the institution and act as advocates for both.
- Suggest new course offerings and review and recommend new graduate courses proposed by faculty (i.e. act as the Graduate Courses and Curriculum Committee for the VCS Department).
- Recommend policy and procedural changes in the graduate program to VCS faculty.
- Conduct exit evaluations with graduating students or students departing the program.

Procedure for evaluating applications to the graduate program

The application will be evaluated separately by the Graduate Program Committee (GPC) of VCS and the Graduate School of Purdue University. Communications should be done electronically whenever possible.

Each GPC member will evaluate the applicant within 1 week of receiving a copy of the completed application and return a written decision to the committee chair. If returned responses are unanimous the application will be returned to the department head with the accompanying written decisions and a recommendation of approval or disapproval of the application. Under these circumstances the GPC will not formally meet. The committee will meet to discuss any application where a unanimous decision was not reached in the returned individual evaluations and e-mail correspondence did not reach a consensus decision.

The GPC is responsible for recommending approval or disapproval of graduate student applications. Processed applications will then be sent to the department head at which time the section head and potential advisor of the graduate student applicant will be notified of the recommendation. Graduate faculty members who disagree with the decision of the GPC should discuss their reasons for disagreement with their section head or chair of the GPC. Following such discussions, the section head or potential advisor of the graduate student applicant can formally challenge the decision of the GPC by notifying the department head in writing, stating the reasons for disagreeing with the decision of the GPC. Interested parties have one week from

receipt of the notice to formally challenge the decisions of the GPC. The final decision will then be made by the department head, who will subsequently inform the GPC of the final disposition of the application.

The Graduate and International Programs Coordinator will prepare the electronic recommendation form and forward to the department head of VCS for electronic signature (or electronically process the application for denial, if applicable). Once that electronic signature has been secured, the application will be electronically forwarded to the Graduate School for final approval. Students who do not meet one or more of the minimum requirements for admission may be admitted on conditional status. The most common reason for conditional status admission is a grade point average below 3.0 (A = 4.0); such students must maintain a grade point average above 3.0 to continue past the first semester. Other conditional status conditions include missing academic transcripts that must be submitted or English language proficiency that must be demonstrated (see Graduate School web site: <https://www.purdue.edu/gradschool/admissions/how-to-apply/apply-toefl.html> / <https://www.purdue.edu/gradschool/admissions/how-to-apply/apply-transcripts.html>).

In cases where an applicant is considered acceptable for admission to the graduate program with a conditional status, the GPC may identify areas of deficiency and recommend courses (and possibly grade requirements) that would correct the deficiency. If the department head is in agreement, the department head can either:

- a. Specify courses which must be completed with specified minimum grade to remove the student from conditional status, or
- b. Identify only required course areas, and provide the Graduate Program Committee the responsibility for selecting the courses.

Immediately upon enrollment of a student with conditional status the department head should, after consultation with the student's advisor, appoint an advisory committee. The department head will communicate to the advisory committee the conditions for removal of conditional status. The advisory committee will report to the department head the student's progress towards removal of the conditional status designation. The department head will decide when the conditions for removal of conditional status have been satisfied. After a student on conditional status has satisfied the conditions imposed, the VCS Department Head will request that the Graduate School adjust the student's graduate admission status from conditional to unconditional. No advanced degree will be awarded to a student who has not qualified for, and been granted, unconditional status.

Copies of material pertaining to information, review, and decisions on admissions and similar correspondence with prospective applicants will be kept on file for 1 year in the VCS Department Office.

Graduate Student Responsibilities

The quality and success of the graduate student's program is ultimately the responsibility of the student and depends primarily on the energy, talent, and intellectual motivation that the student applies to their education.

- a. It is the applicant's responsibility to ensure that all required portions of the application have been received by the VCS Department and the Purdue University Graduate School.
- b. Students are expected to be familiar with and adhere to the university procedure and policies as described in the Graduate Staff Employment Manual (<https://www.purdue.edu/gradschool/faculty/publications.html>)
- c. It is the student's responsibility, upon prior consultation and with the assistance of their advisor, to schedule meetings of their advisory committee at intervals mandated by the VCS Department, and more frequently if needed.
- d. The student should provide an updated checklist for the M.S. degree (non-thesis or thesis; **Appendix 2**) or Ph.D. degree (**Appendix 3**) at each advisory committee meeting.
- e. The student must discuss all proposed courses and course changes with their advisor before on-line registration, and notify the advisory committee of any changes in course registration.
 1. The student must complete all course work, examinations and other degree requirements to meet applicable deadlines.
 2. It is the student's responsibility to request transfer of credits from previous programs or universities.
- f. The student must conduct independent research and scholarly activities in an ethical manner.
- g. The student must ensure that their thesis or dissertation is presented in final draft form to members of the advisory committee and the department head (or designated representative) by the date agreed upon with the advisor, and not less than two weeks before the scheduled final examination.
- h. The student will initiate petitions to the appropriate committee or administrative official, when indicated.

Failure of the student to meet their responsibilities in the shared student/advisor relationship or to satisfy the requirements of the VCS Department may be grounds for dismissal.

Residents and graduate students (with a Purdue University appointment) may occasionally be allowed to engage in outside activity. In order for this to happen, the request must first have the support of the student's major professor/advisor and their advisory committee. The proposed activity must be scheduled during non-working hours and be seen to enhance the educational program of the student and to not interfere with timely and satisfactory progress in their program. The student also must complete an Outside Activity Disclosure and Conflict of Interest Database Form: <https://sp2013.itap.purdue.edu/pvm/PVM%20Intranet%20Pages/Forms.aspx> and obtain approval by the Department Head, Dean of the College, and President of the University prior to

engaging in outside activities. Students must be properly licensed to practice for the proposed activity and they will need to arrange for their own professional liability insurance coverage. Residents and graduate students will not be allowed to engage in outside activities (act as a consultant) in the specialty field of their ongoing training. (Excerpt from SVM Administrative Document #37)

Major Professor (Advisor) Responsibilities

The major professor (advisor) and the graduate student constitute the fundamental unit of graduate education. The quality of graduate work depends upon their relationship and scholarly attitude. **Appendix 4** (*Guiding Standards for Advising and Mentoring Graduate Students at Purdue University*) describes the standards to which all members of the graduate faculty should aspire.

The major professor (advisor) shall have the following responsibilities:

- a. To meet with the student before they begins course work to assist in orientation of the student and in planning the student's tentative course program.
- b. To discuss with the student, and recommend to the department head, the names of faculty members to be appointed to the advisory committee, according to guidelines for VCS and Purdue University Graduate School M.S. (non-thesis and thesis) and Ph.D. programs.
- c. To assist the student in arranging meetings of the appropriate advisory committee to assess the student's progress.
- d. To guide thesis research of students for whom they serve as advisor, both in content and timeliness. Informal assignment by the advisor of responsibility for guidance of thesis research to another member of the VCS faculty should be avoided. If it is apparent that such reassignment of responsibility is in the best interests of the student, a formal request for change in advisor should be considered, and directed to the department head.
- e. To read and revise draft forms of the thesis and scholarly manuscripts in a timely fashion.

Advisory Committee Responsibilities

Advisory committees usually serve as the examination committee for students undertaking the M.S. (thesis) or Ph.D. degrees. Advisory committees have the following responsibilities:

1. To assist the major professor (advisor) in graduate student orientation and planning the student's program of course work.
2. To meet with the major professor and graduate student at intervals mandated by the VCS Department and the Purdue University Graduate School (and more frequently if needed) to assess the student's progress at least annually. A copy of the Evaluation of Academic Progress (see **Appendix 1**) should be filed in the VCS Department Office within 2 weeks of this meeting.

3. To approve the proposed research project(s) (thesis M.S. and Ph.D. degrees) for completion within an agreed time frame.
4. To formally examine the student in written or oral form as required for conferment (thesis M.S. and Ph.D. degrees)
5. To read and revise the final form of the thesis (thesis M.S. and Ph.D. degrees) in a timely fashion.

Procedures for Review of Academic Progress

The GPC will meet at least once during the academic year (usually late in the Fall semester) for the purpose of a formal review of academic progress of all graduate students in the department. A recommendation of satisfactory progress is usually based on 2 to 3 years for completion of the M.S. degree (non-thesis and thesis) and 5 to 6 years for completion of the Ph.D. degree.

1. The student's advisory committee will forward a recommendation of satisfactory, needs improvement, or unsatisfactory to the GPC. If progress is determined to need improvement or be unsatisfactory, the GPC will recommend the conditions under which the student will be permitted to continue in the graduate program, or recommend a termination date if the student is not allowed to continue in the program. This recommendation will be forwarded to the student, major professor, other members of the advisory committee, and department head.
2. The department head may agree or disagree with the GPC, and following consultations with the student, the student's major professor, and the chair of the GPC, the department head's decision will be final.
 - a) The student, the major professor (advisor), advisory committee, and the GPC will be informed in writing of the department head's decision.
 - b) Students have the right to appeal within 30 days following notification of the decision of the department head.

The chair of the GPC is available for discussions of any issues related to the student's graduate program. Such discussions are confidential.

Graduate student support resources:

Any member of the GPC is available to discuss any concern that a VCS graduate student may have on any aspect of their program. The Office of Graduate Assistance was created to serve as a resource for graduate students to receive feedback on any issues related to graduate education at Purdue. The Office of Graduate Assistance is an informal, neutral, and, in most cases, confidential resource for new and continuing graduate students to raise questions or concerns about any aspect of their graduate experiences. If a graduate student would like to share and/or attempt to improve a concern regarding their graduate education, please contact the Office of Graduate Assistance through the Graduate School website (<https://www.purdue.edu/gradschool/student/oga/index.html>).

There are many resources available to the graduate student through the Graduate School website (<https://www.purdue.edu/gradschool/index.html>).

It is the responsibility of the graduate student to initiate contact or voice any concern to the GPC or the Office of Graduate Assistance.

THE M.S. DEGREE (non-thesis)

To obtain the Master of Science (M.S.) non-thesis degree in the VCS Department, the candidate must fulfill all requirements of the Graduate School and department. The Graduate School requirements are stated in the *Policies and Procedures for Administering Graduate Student Programs* and are available online <https://www.purdue.edu/gradschool/faculty/publications.html>. The departmental requirements are demonstrated ability to: (1) understand the scientific method, (2) think critically and creatively about problems in the field of study; (3) effectively communicate in the field of study, and (4) conduct activities in an ethical and responsible manner. These requirements are met, in part, by completion of required course work. Experience in teaching is considered to be part of graduate education and the student will participate in the teaching program; however, the extent of participation will be determined for each graduate student by their major professor and/or their clinical service unit.

Minimum Requirements for the M.S. non-thesis Degree

The credit requirements for the M.S. non-thesis degree are in accordance with those of the Graduate School. The minimum is **30 total credit hours of course work**, with credit being given for courses with a grade of C- or better. Full-time study is regarded as a minimum of 8 credit hours during fall and spring semesters and 6 credit hours during summer semester, with 9 credit hours being the maximum course workload in fall and spring semesters for Residency/M.S. program graduate students and 18 credit hours being the maximum course workload in fall and spring semesters for graduate students not concurrently completing residency training. Students must register for a minimum of 6 credits in the fall and spring semesters, and a minimum of 3 credits in the summer semester in order to maintain part-time graduate student status. This represents a minimum of 30 credit hours for a 2-year program and 45 credits for a 3-year program. International graduate students must be registered for at least 8 credit hours during fall and spring semesters in order to fulfill the immigration requirement of full-time graduate student status (6 credit hours if receiving a 0.50 FTE assistantship). Graduate students who are non-native speakers of English must demonstrate minimum writing proficiency in English. The TOEFL or IELTS score will be used in consultation with the student's advisor in determining whether to enroll the student in ENGL 62100 (Written Communication for International Graduate Students).

Course work requirements must be met, under normal circumstances, within five years of being admitted to the Graduate School. Research credits cannot be used to meet course work requirements. Graduate courses taken as pass/not pass or satisfactory/unsatisfactory cannot be used to meet course work requirements. A current listing of courses approved to be offered at all Purdue campuses is maintained by the Office of the Registrar (https://catalog.purdue.edu/preview_entity.php?catoid=14&ent_oid=4084&returnto=16540).

Course work must be appropriate to meet the needs of the student in their chosen field, as determined by the advisory committee and approved by the Head of the VCS Department, the Dean of the College of Veterinary Medicine, and the Dean of the Graduate School. The plan of

study should include a primary area of study (e.g. Large Animal Medicine) and may include a related area or areas that are chosen on the basis of the student's interests and needs. The Graduate School regards the plan of study as an individualized curriculum designed by the advisory committee to assist the student in achieving educational objectives. Changes in the plan of study must be accompanied by a brief rationale in the space provided on the form.

Specific departmental course work requirements are:

- At least three semesters of VCS 62000 – Seminar in Clinical Medicine and Surgery (1 cr./sem. when a seminar is given): Seminars provide a forum for residents, interns, and graduate students to create, deliver, observe, and critique seminars for veterinarians, the scientific community, and veterinary students.
- Two semesters/year of VCS 63000 – Current Topics in Veterinary Clinical Sciences (1-2 cr./sem.): One-two hour sessions organized and conducted weekly by VCS residents, with input/discussion from the attending VCS faculty. Alternating weekly topic sessions may include journal club and morbidity and mortality patient rounds or other topics appropriate to the specialty.
- VCS 60300 – Introduction to Clinical Research, Trials and Translational Research (1 cr.)
- VCS 60400 – Animal Models in Translational Research (1 cr.)
- One biostatistics course such as
 - CPB 62500 – Clinical Biostatistics (2 cr.),
 - STAT 50300 – Statistical Methods for Biology (3 cr.), or
 - STAT 51400 – Design of Experiments (3 cr.)
- Complete the CITI Responsible Conduct of Research available through the Collaborative Institutional Training Initiative program (<https://www.citiprogram.org>) during the first semester of study. Certificate of completion will be required. Additionally 2 hours of discipline specific training are required within the first year of program.
- *VCS 61000 – Clinical Training (2-6 cr.) is required for Residency/M.S graduate students, who must register for this course each semester working in the clinic. For graduate students not concurrently completing residency training, this is an elective course.

We strongly recommend that graduate students take a course/workshop in technical writing such as Graduate School workshops (“How to publish in academic journals”).

To maintain good standing in the graduate program a student must have a cumulative grade point average of at least 3.0 (A = 4.0).

A graduate student is expected to maintain a 3.0 GPA. A graduate student who possesses less than a 2.0 semester or cumulative GPA will be placed on academic probation. A student on academic probation shall be dropped from the University at the close of any fall or spring semester in which their semester and cumulative GPA is less than a 2.0.

Major Professor (Advisor) and Advisory Committee

For graduate students completing a combined clinical residency and graduate degree program (Residency/M.S. graduate students), the appropriate program director will be assigned as their temporary advisor immediately upon commencement of clinical duties. In consultation with the resident/graduate student, the faculty will then select a major professor (advisor), who will be a faculty member in their clinical service unit and has graduate faculty status; the major professor can be another faculty member in VCS if none of the faculty in the clinical service unit is a member of the graduate faculty. Members of the graduate faculty are faculty members at Purdue University who have been nominated by the head of the graduate program and the Dean of the College of Veterinary Medicine for appointment to the Graduate Faculty. Selection of an advisor must be done within 6 months of starting the program.

The major professor is responsible for supervising the student's graduate program. The student and the major professor will select the advisory committee, which will contain a minimum of 3 people (including the major professor), and the advisory committee must be appointed before submission of the plan of study. At least 3 members, as well as the majority (51%), of the advisory committee must be members of the graduate faculty. Members of the advisory committee should be faculty who can provide help, guidance and support for the student with reference to the individual area of study. The advisory committee and the student must submit a plan of study no later than 8 weeks after the beginning of the second semester of study. The plan of study may be amended as required after initial approval. Subsequently, the advisory committee must meet with the student at least once per year.

Examination

A final examination is not required for the M.S. non-thesis degree.

Exit survey

The *Exit Survey* (from the department) must be completed and submitted before the end of the final semester of the program. An email with the link to the Qualtrics survey will be sent to the student by the Graduate Program Coordinator.

THE M.S. DEGREE (thesis)

To obtain the Master of Science (M.S.) thesis degree in the VCS Department, the candidate must fulfill all requirements of the Graduate School and department and pass the final M.S. examination. The Graduate School requirements are stated in the *Policies and Procedures for Administering Graduate Student Programs* and are available online <https://www.purdue.edu/gradschool/faculty/publications.html>. The departmental requirements are demonstrated ability to: (1) understand and apply the scientific method; 2) think critically and creatively about problems in the field of study; (3) effectively communicate in the field of study; (4) conduct activities in an ethical and responsible manner; and (5) conduct independent research using the abilities described above. These requirements are met, in part, by completing required course work and conducting research activities. Experience in teaching is considered to be part of graduate education and the student will participate in the teaching program; however, the extent of participation will be determined for each graduate student by their major professor and/or their clinical service unit.

Minimum Requirements for the M.S. thesis Degree

The credit requirements for the M.S. thesis degree are in accordance with those of the Graduate School. The minimum is **30 total credit hours**, with credit being given for courses with a grade of C- or better. Fewer than 30 credit hours of course work may be listed on the plan of study for a thesis option M.S. degree, providing there is a total of at least 30 hours of course work and research credits. Full-time study is regarded as a minimum of 8 credit hours during fall and spring semesters and 6 credit hours during summer semester, with 9 credit hours being the maximum course workload in fall and spring semesters for Residency/M.S. program graduate students and 18 credit hours being the maximum course workload in fall and spring semesters for graduate students not concurrently completing residency training. Students must register for a minimum of 6 credits in the fall and spring semesters, and a minimum of 3 credits in the summer semester in order to maintain part-time graduate student status. International graduate students must be registered for 8 credit hours during fall and spring semesters in order to fulfill the immigration requirement of full-time graduate student status (6 credit hours if receiving a 0.50 FTE assistantship). Graduate students who are non-native speakers of English must demonstrate minimum writing proficiency in English. The TOEFL or IELTS score will be used in consultation with the student's advisor in determining whether to enroll the student in ENGL 62100 (Written Communication for International Graduate Students).

A minimum of **15 credit hours of course work is required**. Course work requirements must be met, under normal circumstances, within five years of being admitted to the Graduate School. Research credits cannot be used to meet course work requirements. Graduate courses taken as pass/not pass or satisfactory/unsatisfactory cannot be used to meet course work requirements. A current listing of courses approved to be offered at all Purdue campuses is maintained by the Office of the Registrar (https://catalog.purdue.edu/preview_entity.php?catoid=14&ent_oid=4084&returnto=16540).

Course work must be appropriate to meet the needs of the student in their chosen field, as determined by the advisory committee and approved by the Head of the VCS Department, the Dean of the College of Veterinary Medicine, and the Dean of the Graduate School. The plan of study should include a primary area of study (e.g. Large Animal Medicine) and may include a related area or areas that are chosen on the basis of the student's interests and needs. The Graduate School regards the plan of study as an individualized curriculum designed by the advisory committee to assist the student in achieving educational objectives. Changes in the plan of study must be accompanied by a brief rationale in the space provided on the form.

Specific departmental course work requirements are:

- At least two semesters of a seminar series, one of which must be VCS 62000 (45-min presentation; 1 cr. when seminar is given): seminars provide a forum for residents, interns, and graduate students to create, deliver, observe, and critique seminars for veterinarians, the scientific community, and veterinary students.
- At least two research presentations/seminars such as: VCS 62000, CPB 69700, conference presentation, or other appropriate forum (a research seminar presented in a seminar course can be applied to both seminar requirements).
- Two semesters/year of VCS 63000 – Current Topics in Veterinary Clinical Sciences (1-2 cr./sem): One-two hour sessions organized and conducted weekly by VCS graduate students, with input/discussion from the attending VCS faculty. Alternating weekly topic sessions may include journal club and morbidity and mortality patient rounds or other topics appropriate to the specialty.
- VCS 60300 – Introduction to Clinical Research, Trials and Translational Research (1 cr.)
- VCS 60400 – Animal Models in Translational Research (1 cr.)
- One biostatistics course such as
 - CPB 62500 – Clinical Biostatistics (2 cr.),
 - STAT 50300 – Statistical Methods for Biology (3 cr.), or
 - STAT 51400 – Design of Experiments (3 cr.)
- Complete the CITI Responsible Conduct of Research available through the Collaborative Institutional Training Initiative program (<https://www.citiprogram.org>) during the first semester of study. Certificate of completion will be required. Additionally 2 hours of discipline specific training are required within the first year of program (coursework meets this requirement).
- At least one course in the responsible conduct of research before thesis defense, such as:
 - CPB 61800 – Ethical Issues in Biomedical Research (2 credits)
 - GRAD 61200 Responsible Conduct of Research (1 credit)
 - PSY 46400 –Research Ethics in Psychological Sciences (3 credits)

- Graduate students are also encouraged to participate in Grad School workshops/seminars: RCR series (<https://www.purdue.edu/gradschool/research/rcr/index.php>).
- Public seminar related to thesis defense.
- *VCS 61000 – Clinical Training (2-6 cr.) is required for Residency/M.S. graduate students, who must register for this course each semester working in the clinic. For graduate students not concurrently completing residency training, this is an elective course.

We strongly recommend that graduate students take a course/workshop in technical writing such as Graduate School workshops (“How to publish in academic journals”).

A course in teaching is recommended but not required.

To maintain good standing in the graduate program a student must have a cumulative grade point average of at least 3.0 (A = 4.0).

A graduate student is expected to maintain a 3.0 GPA. A graduate student who possesses less than a 2.0 semester or cumulative GPA will be placed on academic probation. A student on academic probation shall be dropped from the University at the close of any fall or spring semester in which their semester and cumulative GPA is less than a 2.0.

The student is also expected to earn S grades for research registration. Two consecutive sessions of U grades for research registration mandate that the department take formal action and inform the student, in writing, and the Graduate School with regard to discontinuation or conditions for continuation of the student’s graduate study.

The student must present a written plan of research which contains specific aims, background and significance, research design and methods including statistical analysis and power analysis (if indicated), and potential problems to be encountered. The format should follow guidelines for the NIH R01 grant application. These guidelines can be found at:

http://grants.nih.gov/grants/writing_application.htm (Writing your application/Developing your research plan). The plan of research must be at least 4 pages in length but no more than 15 pages and should be submitted no later than the third semester for the M.S. degree. Committee members will evaluate the plan of research using the rubric provided in Appendix 5.

The student must present an informal seminar of less than 45 minutes to their advisory committee before starting the thesis research; during the seminar the student should: (1) describe the problem and the significance of the research, (2) define the hypothesis or hypotheses to be tested, (3) describe the methodology, and (4) state the likely problems to be encountered. The plan of research must be sent to the advisory committee at least 1 week before the informal seminar. After the seminar the advisory committee will convey in writing to the graduate student that the proposed research project is sufficient for a M.S. thesis. The graduate student must notify and obtain the written approval of the advisory committee for any major changes in the proposed research project.

M.S. thesis requirements

The thesis must be original and include at least one paper written in a format suitable for publication in a peer-reviewed scientific journal. The thesis must conform to the requirements of the Graduate School and the VCS Department. The Graduate School requirements for the thesis are stated in the *Policies and Procedures for Administering Graduate Student Programs* (<https://www.purdue.edu/gradschool/faculty/publications.html>) and as established by the Thesis and Dissertation Office (<https://www.purdue.edu/gradschool/research/thesis/resources/policies.html>). The departmental requirements for the thesis are as follows:

Preliminary Pages: The preliminary pages must include the Title Page, Table of Contents, List of Tables, List of Figures, and an Abstract.

Text: The text must contain at least 4 chapters. Chapter 1 is named Introduction, which is a brief (≤ 3 page) introduction to the topic. Chapter 2 is named Literature Review, which is an in-depth review of the topic. Chapter 3 (and any additional chapters) describes the original research conducted by the candidate. The final chapter is named Conclusions, which is a brief (≤ 3 page) summary of the findings and their significance within the research area. The final chapter should also include suggested areas for future research of the topic. Because it is strongly encouraged that parts of the thesis be published in an appropriate journal, Chapters 2 and 3 (and any additional chapters) should be organized in a style suitable for publication in a scientific journal. Formatting of the chapters should follow the style of the *Journal of the American Veterinary Medical Association* (default format) or scientific journal selected for publication of the manuscript. The reference list for each chapter should start on a new page after the article.

Reference Section: References should be cited in a consistent style throughout the thesis. It is preferable that all references be described in a Bibliography, which is the summary of source material at the end of the thesis. Alternatively, references may be given at the end of each chapter instead of at the end of the thesis, in which case the heading should be List of References or Literature Cited instead of Bibliography.

Appendices: Serious consideration should be given to including additional supporting material in an appendix or series of appendices at the end of the thesis.

The VCS Department is not financially responsible for the typing or printing of the thesis, and VCS staff are not permitted to assist graduate students with their thesis during regular business hours.

Following a successful final defense examination, completed MS Thesis and Defense Exam Evaluations (Appendix 6) should be turned into the VCS Office. Original evaluations will then be provided to the student. The graduate student is responsible for following the Formatting Guidelines and Deposit Procedures

(<https://www.purdue.edu/gradschool/research/thesis/resources/formatting-guidelines-and->

[deposit-procedures.html](#)) by the appropriate deadlines (<https://www.purdue.edu/gradschool/about/calendar/>).

Major Professor (Advisor) and Advisory Committee

For graduate students completing a combined clinical residency and graduate degree program (Residency/M.S. graduate students), the appropriate program director will be assigned as their temporary advisor immediately upon commencement of clinical duties. In consultation with the resident/graduate student, the faculty will then select an advisor, who is usually a faculty member in their clinical service unit and a graduate faculty; the major professor can be another faculty member in VCS if none of the faculty in the clinical service unit are members of the graduate faculty. Members of the graduate faculty are faculty members at Purdue University who have been nominated by the head of the graduate program and the Dean of the College of Veterinary Medicine for appointment to the Graduate Faculty. Selection of an advisor must be done within 6 months of starting the program.

For graduate students not concurrently completing residency training, the faculty member who agreed to be responsible for their graduate program will be assigned as major professor immediately upon commencement of graduate studies.

The major professor is responsible for supervising the student's graduate program. The student and the major professor will select the advisory committee. The committee consists of the major professor and at least two other faculty members and must be appointed before submission of the plan of study. At least 3 members, as well as the majority (51%), of the advisory committee must be members of the graduate faculty. It is strongly recommended that at least 1 member of the advisory committee should have a faculty appointment in a department outside VCS. Members of the advisory committee should be faculty who can provide help, guidance and support for the student with reference to the individual area of research. The advisory committee and the student must submit a plan of study no later than 8 weeks after the beginning of the second semester of study. The plan of study may be amended as required after initial approval. Subsequently, the advisory committee must meet with the student at least once per year.

Examination

The final examination will be scheduled with the approval of the student, the major professor (advisor), and all members of the advisory committee. An electronic request for *Appointment of an Examining Committee* (G.S. Form 8) must be received by the Graduate School at least 2 weeks before the proposed examination date. Final examination must be held before the last week of classes. The first draft of the thesis should be in the hands of the major professor (advisor) at least six weeks before the end of the semester in which the degree is to be conferred. A copy of the final draft of the thesis must be distributed to all members of the advisory committee and the department head (or their representative) at least 2 weeks before the examination. The final draft must bear the written approval of the professor who has directed the research. If the department head should find the thesis unsatisfactory, they should inform the student, the advisor, and the advisory committee before the final examination.

The final examination will consist of a 45 minute presentation of the dissertation in the form of a departmental seminar, which is open to the public. The seminar will be followed by an oral examination administered by the advisory committee in a closed session. The oral examination will focus on material related to the written thesis and presented during the departmental seminar. The oral examination will be chaired by the major professor. At the completion of the final examination the examining committee must indicate, in the student's absence, approval or disapproval. The committee chair should initiate the *Report of the Final Examination* (G.S. Form 11) in the Graduate School Database, which is sent to the examination committee by the Graduate School. If there is more than one dissenting vote, the examination is judged unsatisfactory. In the event of an unsatisfactory judgment, the advisory committee must decide whether the student will be permitted to take a second examination or be dismissed from the program. The candidate must wait at least until the following semester (including summer session) to repeat the final examination. If a second examination is held, the examining committee must be the same as the original one, unless the department head approves substitution. The second examination must take place within 6 months of the first, and a second unsatisfactory judgment constitutes dismissal of the student from the VCS graduate program.

A GPC representative, appointed by the department head, shall attend all examinations for M.S. thesis degree candidates in the department. During the examination, the GPC representative may ask questions to the student and deliberate with the advisory committee. The GPC representative cannot vote in the final committee decision. The representative shall have the following responsibilities:

- a) To ensure that the student is treated fairly and that the examination meets departmental standards.
- b) To act as a resource for questions on graduate rules and protocols.
- c) To approve the format of the thesis.

After the final examination, each committee member will evaluate the candidate's presentation using the rubric provided in Appendix 6 *MS Thesis and Defense Exam Evaluation*. The advisory committee will convey in writing to the graduate student if the student passed the final examination. After the examining committee meets, the student prepares a final copy of the thesis. That copy, called the "deposit" copy, incorporates all revisions requested by the members

of the examining committee. A final copy of the thesis should be provided in electronic form to the major professor, other members of the advisory committee, and department head.

Exit survey

The *Exit Survey* (from the department) must be completed and submitted before the end of the final semester of the program. An email with the link to the Qualtrics survey will be sent to the student by the Graduate Program Coordinator.

The *Exit Questionnaire* (from the Graduate School) must be completed and submitted before the graduate student can receive their thesis deposit receipt. The questionnaire is accessed through the myPurdue portal.

THE Ph.D. DEGREE

To obtain the Ph.D. degree in the VCS Department, the candidate must fulfill all requirements of the Graduate School and department and pass the final Ph.D. dissertation. The Graduate School requirements are stated in the *Policies and Procedures for Administering Graduate Student Programs* and are available online:

<https://www.purdue.edu/gradschool/faculty/publications.html>. The departmental requirements are demonstrated ability to: (1) understand and apply the scientific method; 2) effectively communicate in their field of study; (3) think critically and creatively about problems in their field of study; (4) conduct their activities in an ethical and responsible manner; (5) plan and conduct original research using the abilities described above; and (6) engage in scholarship and other creative endeavors. These requirements are met, in part, by completing required course work and conducting research activities. Experience in teaching is considered to be part of graduate education and the student will participate in the teaching program; however, the extent of participation will be determined for each graduate student. Every candidate for the Ph.D. in VCS is required to obtain a broad knowledge of basic science and a high degree of expertise in their area of specialization.

Minimum Requirements for the Ph.D. Degree

The credit requirements for the Ph.D. degree are in accordance with those of the Graduate School. The **minimum is 90 credit hours**, with credit being given for courses with a grade of C- or better. A master's degree or DVM degree (or equivalent) from any accredited institution may be considered to contribute up to **30 credit hours** toward satisfying the credit hour requirement at the discretion of the Graduate Program Committee. Full-time study is regarded as 8 credit hours during fall and spring semesters and 6 credit hours during summer semester, with 18 credit hours being the maximum course workload in fall and spring semesters and 9 credits being the maximum course work load during summer session. Students must register for a minimum of 6 credits in the fall and spring semesters, and a minimum of 3 credits in the summer semester in order to maintain part-time graduate student status. International graduate students must be registered for a minimum of 8 credit hours during fall and spring semesters in order to fulfill the immigration requirement of full-time graduate student status (6 credit hours if receiving a 0.50 FTE assistantship). Graduate students who are non-native speakers of English must demonstrate minimum writing proficiency in English. The TOEFL or IELTS score will be used in consultation with the student's advisor in determining whether to enroll the student in ENGL 62100 (Written Communication for International Graduate Students).

A minimum of **15 credit hours of course work is required**. Course work requirements must be met, under normal circumstances, within five years of being admitted to the Graduate School. Graduate courses taken as pass/not pass or satisfactory/unsatisfactory cannot be used to meet course work requirements. Research credits cannot be used to meet course work requirements. A current listing of courses approved to be offered at all Purdue campuses is maintained by the Office of the Registrar (https://catalog.purdue.edu/preview_entity.php?catoid=14&ent_oid=4084&returnto=16540)

Course work must be appropriate to meet the needs of the student in their chosen field, as determined by the advisory committee and approved by the Head of the VCS Department, the Dean of the College of Veterinary Medicine, and the Dean of the Graduate School. The plan of study should include a primary area of study (e.g. Large Animal Medicine) and may include a related area or areas that are chosen on the basis of the student's interests and needs. The Graduate School regards the plan of study as an individualized curriculum designed by the advisory committee to assist the student in achieving educational objectives. Changes in the plan of study must be accompanied by a brief rationale in the space provided on the form.

Specific departmental course work requirements are:

- At least two semesters of a seminar series, one of which must be VCS 62000 (45-min presentation; 1 cr. when seminar is given): seminars provide a forum for residents, interns, and graduate students to create, deliver, observe, and critique seminars for veterinarians, the scientific community, and veterinary students.
- At least two research presentations/seminars such as: VCS 62000, CPB 69700, conference presentation, or other appropriate forum (a research seminar presented in a seminar course can be applied to both seminar requirements).
- At least two biostatistics courses such as:
 - CPB 62500 – Clinical Biostatistics (2 cr.),
 - STAT 50300 – Statistical Methods for Biology (3 cr.),
 - STAT 51400 – Design of Experiments (3 cr.)
- VCS 60300 – Introduction to Clinical Research, Trials and Translational Research (1 cr.)
- VCS 60400 – Animal Models in Translational Research (1 cr.)
- At least two courses that are foundational to the area of research (total minimum of 6 credit hours) as agreed by the graduate student advisory committee
- Complete the CITI Responsible Conduct of Research available through the Collaborative Institutional Training Initiative program (<https://www.citiprogram.org>) during the first semester of study. Certificate of completion will be required. Additionally 2 hours of discipline specific training are required within the first year of program (coursework meets this requirement).
- At least one course in the responsible conduct of research before the preliminary examination, such as:
 - CPB 61800 – Ethical issues in biomedical research (2 credits)
 - GRAD 61200 – Responsible conduct in research (1 credit)
 - PSY46400 – Responsible conduct of scientific research (3 credits).
 - Graduate students are also encouraged to participate in Graduate School workshops/seminars: RCR series for students in Life Sciences (on-line modules; <https://www.purdue.edu/gradschool/research/rcr/index.php>)
- At least one course/workshop in grant writing such as:
 - HORT 60300 Grants and Grantsmanship (1 cr.)

- MCMP 62500 Grant Writing (1 cr.)
- Workshops sponsored by the Graduate School

- Public seminar related to thesis defense.

We strongly recommend that graduate students take a course/workshop in technical writing such as: Graduate School workshops (“How to publish in academic journals”).

A course in teaching is recommended but not required.

To maintain good standing in the graduate program a student must have a cumulative grade point average of at least 3.0 (A = 4.0).

A graduate student is expected to maintain a 3.0 GPA. A graduate student who possesses less than a 2.0 semester or cumulative GPA will be placed on academic probation. A student on academic probation shall be dropped from the University at the close of any fall or spring semester in which their semester and cumulative GPA is less than a 2.0.

The student is also expected to earn S grades for research registration. Two consecutive sessions of U grades for research registration mandate that the department take formal action and inform the student, in writing, and the Graduate School with regard to discontinuation or conditions for continuation of the student’s graduate study.

Ph.D. dissertation (hereafter referred to as thesis) requirements

The thesis must be original and include at least one paper written in a format suitable for publication in a peer-reviewed scientific journal; however, if the student’s advisory committee determines that sufficient work has been performed to meet the requirements for awarding of the PhD degree, but there is insufficient data for publication in a peer-reviewed scientific journal, then this requirement may be waived. The thesis must conform to the requirements of the Graduate School and the department. The Graduate School requirements for the thesis are stated in the *Policies and Procedures for Administering Graduate Student Programs* (<https://www.purdue.edu/gradschool/faculty/publications.html>) and as established by the Thesis and Dissertation Office (<https://www.purdue.edu/gradschool/research/thesis/resources/policies.html>). The departmental requirements for the thesis are as follows:

Preliminary Pages: The preliminary pages must include the Title Page, Table of Contents, List of Tables, List of Figures, and an Abstract. Additional pages which may be added at the discretion of the student include a Dedication, Acknowledgements, and List of Abbreviations and Acronyms.

Text: The text must contain at least 5 chapters. Chapter 1 is titled “Introduction”, and is a brief (≤3 page) introduction to the topic. Chapter 2 is titled “Literature Review”, and is an in-depth review of the topic being investigated, including a thorough exploration of supportive and conflicting previously published literature. Chapters 3 and 4 (and any additional chapters) describe the original research conducted by the candidate. These

chapters should follow the format of a scientific journal manuscript (i.e. brief introduction, materials and methods, results, and discussion). The final chapter is titled “Conclusions”, and is a brief (≤ 3 page) summary of the novel findings reported in the thesis and their relevance and significance within the framework of the prevailing understanding of the topic. This final chapter should also include suggested areas for future research of the topic. Because it is strongly encouraged that parts of the thesis be published in an appropriate journal, Chapters 2, 3, and 4 (and any additional chapters) may be organized in a style suitable for publication in the *Journal of the American Veterinary Medical Association* (default format) or scientific journal selected for publication of the manuscript.

Reference Section: References must be cited in a consistent style throughout the thesis. It is preferable that all references be described in a Bibliography, which is the summary of source material at the end of the thesis. Alternatively, references may be given at the end of each chapter instead of at the end of the thesis, in which case the reference list for each chapter should start on a new page and the heading should be List of References or Literature Cited instead of Bibliography.

Appendices: Additional supporting material should be included in an appendix or series of appendices at the end of the thesis. Example materials to include in an appendix include ancillary data produced by the student during their doctoral work which will not be included in a scientific journal publication, results of validation experiments for new techniques which are then applied to the novel work, or results produced by others in the laboratory which are critical for understanding the work reported by the student, but have not been published elsewhere in peer-reviewed journals.

Curriculum Vitae: The candidate’s vita should be included after the appendices following the departmental format.

The VCS Department is not financially responsible for the typing or printing of the thesis, and VCS staff are not permitted to assist you with preparation of your thesis during regular business hours.

Major Professor (Major Advisor) and Advisory Committee

The advisory committee, in consultation with the major professor, has the responsibility for assisting the student in planning appropriate advanced course work to ensure that the student satisfies program requirements. The advisory committee should serve as the nucleus for the Preliminary Examination Committee and the Final Examination Committee. The advisory committee should be available to offer the student advice about choosing appropriate course work, preparation for the preliminary examination and the student's research program.

The major professor (advisor) must be a faculty member in VCS and a member of the graduate faculty. The major professor is responsible for supervising the student’s graduate program. The student and the major professor are responsible for the selection of the advisory committee. The committee consists of the major professor and at least two other faculty members and must be

appointed before submission of the Plan of Study. At least 3 members, as well as the majority (51%), of the advisory committee must have regular graduate faculty certification. At least 1 member of the advisory committee must have a faculty appointment in a department outside VCS. The committee must be approved by the head of the graduate program, the school dean, and the Dean of the Graduate School. The advisory committee and the student must submit a plan of study no later than 8 weeks after the beginning of the second semester of study. The plan of study may be amended as required after initial approval. Subsequently, the advisory committee must meet with the student at least once per year.

Preliminary Examination

An electronic request for *Appointment of an Examining Committee* (G.S. Form 8) must be received by the Graduate School at least 2 weeks before the proposed examination date. To become eligible to take the preliminary examination, the student must have filed a plan of study and satisfactorily completed most of the required course work. The examination should be scheduled as early as possible in the program and must be completed at least two sessions (including summer session) before the date of the final examination. For example, if the preliminary exam is completed in Fall 2021, the final exam cannot be completed any earlier than Fall 2022. Full-time doctoral students should take the preliminary examination by the end of their third year in the program.

Membership of the preliminary examination committee is usually the same as that of the advisory committee, but additional members may be added if their expertise is required. The preliminary examination committee has responsibility for helping the student define the research problem, helping solve technical or design problems, and administering the preliminary examination. The student's major professor (advisor) will serve as chair of the preliminary examination committee. Any interested faculty may be present at the preliminary examination, without vote.

The objective of the preliminary examination is to evaluate the general knowledge and intellectual creativity of the student, and to define the plan of research. The preliminary examination has written and oral components and the examination format is determined by the committee. The student should ask each committee member to define, in broad terms, the scope of the examination. At least 1 week before the scheduled date of the preliminary examination, the student must present a written plan of research which contains specific aims, background and significance, research design and methods including statistical analysis and power analysis (if indicated), and potential problems to be encountered. The format should follow guidelines for the NIH R01 grant application or other applicable grant agency as agreed upon by the student's advisor. These guidelines can be found at: http://grants.nih.gov/grants/writing_application.htm.

Committee members will evaluate the plan of research using the rubric provided in Appendix 5. The preliminary examination starts by having the student present an informal seminar of less than 45 minutes to the preliminary examination committee which may or may not be identical to the advisory committee; during the seminar the student should: (1) describe the problem and the significance of the research, (2) define the hypothesis or hypotheses to be tested, (3) describe the methodology, and (4) state the likely problems to be encountered.

A GPC representative shall attend all preliminary examinations for Ph.D. degree candidates in the department. During the examination, the GPC representative may ask questions to the student and deliberate with the advisory committee. The GPC representative cannot vote in the final committee decision. The representative shall have the following responsibilities:

- a) to ensure that the student is treated fairly and that the examination meets departmental standards.
- b) to act as a resource for questions on graduate rules and protocols.

After the preliminary examination, each committee member will evaluate the candidate's presentation using the rubric provided in Appendix 7. The advisory committee will convey in writing to the graduate student if they passed the preliminary examination and if the proposed research project is sufficient for a Ph.D. thesis or if it needs improvement. The committee chair should initiate the *Report of the Preliminary Examination* (G.S. Form 10) in the Graduate School Database, which is sent to the examination committee by the Graduate School. Graduate students who pass the doctoral preliminary examination are considered doctoral candidates. The graduate student must notify and obtain the written approval of the advisory committee for any major changes in the proposed research project. If the report is unsatisfactory, the examining committee may recommend that the student be permitted to request a second examination by submitting a *Request for Appointment of Examining Committee* (G.S. Form 8). The student must wait at least until the following semester (including summer session) to repeat the examination. Should the preliminary examination be failed twice, the student may not be given a third examination, except upon the recommendation of the examining committee and with special approval of the Dean of the Graduate School.

Final Examination

An electronic *Request for Appointment of an Examining Committee* (G.S. Form 8) must be received by the Graduate School at least 2 weeks before the proposed examination date. The committee consists of at least four members of the graduate faculty.

The doctoral candidate must provide each member of the final examination committee and the department head (or their designated representative) a copy of the final draft of the thesis at least two weeks before the final examination. If the department head should find the thesis unsatisfactory, they should inform the student, the advisor, and the final examination committee before the final examination. At the start of the final examination, the candidate is expected to give a 45 minute oral presentation of their dissertation research work as a public seminar to the VCS Department. The candidate is expected to demonstrate scholarly knowledge in the field of research and the ability to respond with rational answers reflecting ample relevant knowledge to questions raised by the audience, and later that day, in a closed session, by members of the final examination committee. Concerns and comments raised by the final examination committee are generally expected to be incorporated into the thesis prior to final approval. The oral examination should not last more than two hours. If additional time is needed, the examination may be continued at a later date.

A GPC representative shall attend all final examinations for Ph.D. degree candidates in the department. During the examination, the GPC representative may ask questions to the student and deliberate with the advisory committee. The GPC representative cannot vote in the final committee decision. The representative shall have the following responsibilities:

- a) to ensure that the student is treated fairly and that the examination meets departmental standards.
- b) to act as a resource for questions on graduate rules and protocols.
- c) to approve the format of the thesis.

After the final examination, each committee member will evaluate the candidate's presentation using the rubric provided in Appendix 8. The advisory committee will convey in writing to the graduate student if the student passed or failed the final examination. At the completion of the final examination, the committee chair should initiate the *Report of the Final Examination* (G.S. Form 11) in the Graduate School Database, which is sent to the examination committee by the Graduate School. Each member of the examining committee must indicate approval or disapproval and electronically sign the report form. No more than one dissenting vote is acceptable in certifying a candidate to receive the Ph.D. degree. If the examination is unsatisfactory, a candidate must wait at least until the following semester (including summer session) to repeat the final examination. A *Request for Appointment of Examining Committee* (G.S. Form 8) must be submitted. After the examining committee meets, the student prepares a final copy of the thesis. That copy, called the "deposit" copy, incorporates all revisions requested by the members of the examining committee. The complete and corrected deposit copy of the thesis, including the completed *Thesis Acceptance* (G.S. Form 9), must be submitted to the Thesis/Dissertation Office on or before the last day of classes of the session in which the student is to graduate. The student must follow Graduate School guidelines for submission of the thesis (<https://www.purdue.edu/gradschool/research/thesis/requirements.html>). A final copy of the thesis should be provided in electronic form to the major professor, other members of the advisory committee, and department head.

Exit surveys

The *Exit Survey* (from the department) must be completed and submitted before the end of the final semester of the program. An email with the link to the Qualtrics survey will be sent to the student by the Graduate Program Coordinator

The *Exit Questionnaire* and the *Survey of Earned Doctorates* must be completed and submitted before the student can receive their thesis deposit receipt. The *Exit Questionnaire* is accessed through the myPurdue portal.

To complete the *Survey of Earned Doctorates*, the student should follow instructions provided by the Thesis and Dissertation Office.

APPENDIX 1 Evaluation of Academic Progress

Graduate Program Committee
Department of Veterinary Clinical Sciences, Purdue University

Date: _____

EVALUATION OF ACADEMIC PROGRESS (to be completed by Major Professor/Advisor)

Evaluations are due by July 15 of each year. Please return to Jesse Mabbitt, VCS GPC Administrative Assistant in room 1352B and attach updated copy of the student's checklist for the M.S or Ph.D. degree and applicable rubrics.

(Graduate Student's name: PRINT)

(Major Professor's name: PRINT)

Graduate School date of admission
(month/year): _____

(Major Professor's signature)

Degree Sought: _____ Non-thesis MS _____ Thesis MS _____ PhD

Tentative thesis topic/title (if applicable): _____

Status of Plan of Study (POS): _____ No POS _____ Draft POS _____ Saved POS

PROGRESS TO DATE

Purdue POS (Cumulative) GPA: /4.0

Dates the committee met Examination dates:

- | | |
|----|--------------|
| 1. | Preliminary: |
| 2. | Final: |

In the space below, please evaluate the student's progress in the program during the last calendar year with regard to course work, research, and any potential problems.

Graduate Student's comments: _____

(Graduate Student's signature)

Overall evaluation of graduate student progress by Advisory Committee
--

Progress:

- | |
|-------------------------|
| _____ Satisfactory |
| _____ Needs Improvement |
| _____ Unsatisfactory |

Comments:

Committee members present	Initials

APPENDIX 2 (Non-thesis and Thesis)

Checklist for the M.S. Degree

It is the responsibility of the graduate student to keep this form current and to meet the requirements on time.

- _____ 1. Admission to Graduate School.
- _____ 2. Appointment of the temporary advisor. The advisor must be appointed before starting graduate study. If the student has not selected a major professor before beginning the graduate program the department head will appoint a temporary advisor, who will usually be their program director.
- _____ 3. Start graduate program (start course work).
- _____ 4. Appointment of major professor. The major professor must be appointed within 6 months of starting the graduate program. The major professor is selected by the student, and usually is a faculty member in the service unit of the student. The major professor must be a member of VCS and the graduate faculty.
- _____ 5. Appointment of the Advisory Committee by the major professor with approval by the department head. The committee (comprising at least 3 members) must be appointed before submission of the Plan of Study. The majority of committee members must be members of the graduate faculty, and at least one member must hold a faculty appointment in VCS.
- _____ 6. Meet with the Advisory Committee before the start of the second semester of study to plan a tentative course program that must be filed with the VCS department office. Submit a plan of study no later than 8 weeks after the beginning of the second semester of study.
- _____ 7. Present a written plan of research and an informal seminar to the Advisory Committee before starting thesis work, and have the Advisory Committee agree, in writing, that the proposed research project is sufficient for a M.S. thesis. *Only applicable to thesis students*
- _____ 8. Complete the course work required for the M.S. degree.
 - _____ a. At least 30 credit hours total.
 - _____ b. At least 15 credit hours of course work.
 - _____ c. Fulfilled all course work requirements.

- _____ 9. Present a first draft of the thesis (that conforms to Graduate School and VCS department requirements) to the advisor at least 6 weeks before the anticipated final examination date. *Only applicable to thesis students*
- _____ 10. Apply for graduation; consult the Graduate School calendar for deadlines.
- _____ 11. Schedule the final examination after consultation with the advisor and members of the Advisory Committee. *Only applicable to thesis students*
- _____ 12. Present the final draft of the thesis to the advisory committee and department head (or their designated representative) at least 2 weeks before the final examination. *Only applicable to thesis students*
- _____ 13. Present the VCS thesis defense seminar and take the final examination. *Only applicable to thesis students*
- _____ 14. After all revisions have been made to the thesis and it is in its final form, present the thesis to the chair of the Graduate Program Committee or their designated representative for a format check. Allow 1 week for corrections and departmental approval of your thesis. *Only applicable to thesis students*
- _____ 15. Submit the thesis that has been approved by the Veterinary Clinical Sciences Department to the Graduate School for final approval. *Only applicable to thesis students*

APPENDIX 3

Checklist for the Ph.D. Degree

It is the responsibility of the graduate student to keep this form current and to meet the requirements on time.

- _____ 1. Admission to Graduate School.
- _____ 2. Appointment of the temporary advisor. The major professor must be appointed before starting graduate study. If the student has not selected major professor before beginning graduate work the department head will appoint a temporary advisor, who will usually be a senior faculty member in the student's service unit or the section head.
- _____ 3. Start graduate program (start course work).
- _____ 4. Appointment of major professor. The major professor must be appointed within 6 months of starting the graduate program. The major professor is selected by the student, and usually the major professor is a faculty member in the service unit of the student. The major professor must be a member of VCS and the graduate faculty.
- _____ 5. Appointment of the major professor with approval by the department head. The committee (comprising at least 3 members) must be appointed before submission of the Plan of Study. The majority of committee members must be members of the graduate faculty, and at least one member must hold a faculty appointment in VCS. The Advisory Committee must be appointed within 6 months of starting the program.
- _____ 6. Meet with the Advisory Committee before the start of the second semester of study to plan a tentative course program that must be filed with the VCS office. Submit a plan of study no later than 8 weeks after the beginning of the second semester of study.
- _____ 7. Complete the course work required for the Ph.D. degree.
 - _____ a. At least 90 credit hours total.
 - _____ b. At least 15 credit hours of course work.
 - _____ c. Fulfilled all course work requirements.
- _____ 8. Appointment of the Preliminary Examination Committee by the Dean of the Graduate School. This committee is usually the same as the advisory committee.

- _____ 9. Present a written plan of research to the advisory committee at least 1 week before the scheduled date of the preliminary examination.
- _____ 10. Completion of the written and oral examination phase of the preliminary examination.
- _____ 11. Appointment of the Final Examination Committee by the Dean of the Graduate School. This committee is usually the same as the advisory committee, except that it must contain at least 4 members of the Graduate School.
- _____ 12. Present the first draft of the thesis (that conforms to the Graduate School and VCS department requirements) to the advisor.
- _____ 13. Apply for graduation, consult the Graduate School calendar.
- _____ 14. Schedule the final examination after consultation with the advisor and members of the Final Examination Committee. A minimum of two semesters must elapse between completion of the preliminary examination and the final examination.
- _____ 15. Present the final draft of the thesis to the Final Examination Committee and department head (or their designated representative) at least two weeks before the final examination.
- _____ 16. Present the VCS thesis defense seminar and take the final examination.
- _____ 17. After all revisions have been made to the thesis and it is in its final form, present the thesis to the chair of the Graduate Program Committee (or their designated representative) for a format check. Allow one week for corrections and departmental approval of your thesis.
- _____ 18. Submit the thesis that has been approved by the Veterinary Clinical Sciences Department to the Graduate School for approval.

APPENDIX 4

Guiding Standards for Advising and Mentoring Graduate Students at Purdue University

Graduate Council Report 17-18a
Approved by the Graduate Council on May 8, 2017

Guidelines for Graduate Student Mentoring and Advising

Preamble: Purdue University is committed to providing its graduate students with a world-class education and equipping them to become leaders in society and in the global workforce. Key to success is the relationship between the student and major professor. The advisory role of the major professor is arguably the most significant factor influencing quality of education, development of professional skills, and overall career success for Purdue graduate students. Consequently, it is imperative that graduate faculty members provide mentoring and advising concomitant with a preeminent university. The principles articulated in this document were endorsed by the Graduate Faculty via approval by the Graduate Council to help assure that every graduate student receives the best educational experience Purdue has to offer.

General Advising Guidelines

Serving as a major professor involves being supportive and engaged in promoting academic and career success for Purdue graduate students.

1. Although the Graduate School offers orientation programming for new students and departments and colleges typically also provide orientation sessions, most students are not fully aware of academic expectations, the best ways to navigate their graduate program, and the employment opportunities available to them when they graduate. Major professors should:
 - a) work with their students to develop an academic plan (to include periodic milestones along the way) that will help them progress through their degree program in a timely manner and properly prepare them for success after graduation;
 - b) encourage participation in professional development activities, relevant to their students' professional goals;
 - c) assist their students in assembling their advisory and examining committees; and
 - d) discuss with their students long-term career objectives and provide guidance in securing summer internships (when appropriate) and permanent job placement. This assistance may include introductions to colleagues in industry, government, or at other universities, and/or referrals to resources on campus, such as the Center for Career Opportunities.
2. On occasion, major professors may have to change the nature of their advisory relationship with their student. This can occur when professors retire or move to another university, or when students change major professors. In such cases, major professors should do all that is possible to ensure that their students have a pathway to completion and assist their students during the transition.
3. Research style and organization can vary widely among faculty. Students are often not aware of what is expected and how progress is measured. Major professors should make their expectations for research and their view of what constitutes satisfactory progress clear. Furthermore, at the onset of thesis/dissertation research, students should be given a clear picture of the accomplishments expected for degree completion.
4. An important part of developing as a scholar and successfully progressing through a degree program involves receiving feedback. Major professors should provide progress reviews to their students at least annually and should be accessible so that students can receive input when needed.

Guidelines for Supervising Graduate Staff

Graduate faculty oversee research, but in many cases they also supervise graduate teaching assistants, graduate research assistants, and other graduate staff. In these cases, faculty members have additional responsibilities.

1. Faculty supervisors should be familiar with department, college, Graduate School, and university policies regarding graduate staff employment and should refer students to the appropriate sources for employment information, such as the *Graduate Staff Employment Manual*, department resources (if available), and the Office of Human Resources.
2. Faculty should provide graduate staff working as research, administrative, and/or teaching assistants clear expectations of the roles, responsibilities, and professional benefits that come with that employment, and the associated time commitments should be consistent with university policy. For example, students on 50 CUL and 25 CUL appointments are expected to work approximately 20 and 10 hours per week respectively.
3. A common source of stress among graduate students is the uncertainty associated with funding. Loss of funding or gaps in funding can result in student attrition. Major professors should discuss the funding situation with their students, keep the students apprised of any anticipated changes as soon as this information becomes known, and discuss contingency options in the event funding becomes unavailable. Where possible, the academic unit should ensure continuity of funding, except in cases of poor academic or work performance.
4. Faculty members, departments, and colleges should regularly review graduate student salary levels to assure that they are appropriate.

Guiding Principles

A good student-advisor relationship is an important ingredient in helping students to be productive in their research and requires establishing reasonable expectations. While it is difficult to define “reasonable expectations” in a broad sense, the following principles and practices can be helpful in achieving a positive climate for discovery in which graduate students can thrive.

1. Major professors should take care in not overburdening their graduate students: there should be realistic expectations, recognizing that students have the right to a personal and social life outside of work and time off, periodically, to rest and relax. Major professors should avoid working conditions that preclude their students from having a manageable work-life balance, as this is not in the best interest of Purdue’s graduate students.
2. The best major professors are understanding, supportive, and empowering, providing enough guidance to allow students to explore and discover without over directing or micromanaging. Students should be encouraged by their major professors to interact with their advisory and examining committees, as these committee members can provide multiple perspectives that can be beneficial. They should also encourage other types of mentoring relationships where appropriate.
3. The best major professors put their students first amid competing priorities.
4. Students should be given opportunities to attend and participate in professional development activities as these are important to prepare them for the competitive job market.
5. Projects in which faculty members involve students should be appropriate and consistent with providing a valuable educational work or research experience

APPENDIX 5

M.S./Ph.D. Research Proposal Rubric Evaluation

M.S. & Ph.D. Dissertation Research Proposal Rubric Evaluation

form VCS_GC_5

Chair of Evaluation Committee: _____ Student Name: _____ Date: _____

Research Proposal Title: _____

Rate: 1 = Does not meet expectations **5 = Exceeds expectations**
1 → 5

Attribute	Does Not Meet Expectations	Meets Expectations	Exceeds Expectations	Rate
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Overall quality of science

Arguments	incorrect, incoherent, or flawed	coherent and clear	superior	1	2	3	4	5
Objectives	poorly defined	clear	well defined	1	2	3	4	5
Critical thinking skills	rudimentary	average skill	mature skill	1	2	3	4	5
Subject matter and associated literature	poor understanding	reflects understanding	master	1	2	3	4	5
Understanding of theoretical concepts	poor understanding	demonstrates understanding	master	1	2	3	4	5
Originality	limited	demonstrates originality	exceptional	1	2	3	4	5
Creativity and insight	limited	creative and insightful	exceptional	1	2	3	4	5
Success	little potential	good potential	excellent potential	1	2	3	4	5

Contribution to discipline

Discovery	limited potential	some potential	exceptional potential	1	2	3	4	5
Previous research	limited expansion	builds upon research	greatly extends research	1	2	3	4	5
Theoretical or applied significance	limited significance	reasonable significance	exceptional significance	1	2	3	4	5
Publication potential	limited potential	reasonable potential	exceptional potential	1	2	3	4	5

Quality of writing

Writing	weak	adequate	publication quality	1	2	3	4	5
Grammatical and spelling error	numerous errors apparent	some errors apparent	no errors apparent	1	2	3	4	5
Organization	poor	logical	excellent	1	2	3	4	5
Documentation	poor	adequate	excellent	1	2	3	4	5

Overall Assessment

Expectations	does not meet expectations	meets expectations	exceeds expectations	1	2	3	4	5
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Completed by: _____ Signature: _____ Date: _____

Individual Committee Member comments for student concerning performance on Dissertation Research Proposal:

APPENDIX 6

M.S. Thesis & Defense Exam Rubric Evaluation

M.S. Thesis & Defense Exam Rubric Evaluation

Candidate Name: _____

Date: _____

Thesis Title: _____

Evaluation/Guidance	Needs Significant Improvement	Needs Improvement	Acceptable	Very Good	Excellent	
1. Problem Definition: Has stated the research problem clearly, providing motivation for undertaking the research	1	2	3	4	5	
2. Literature and Previous Work: Demonstrates sound knowledge of literature in the area, and of prior work on the specific research problem	1	2	3	4	5	
3. Impact of Proposed Research: Demonstrates the potential value of solution to the research problem in advancing knowledge within the area of study	1	2	3	4	5	
4. Solution Plan: Has applied sound state-of-the-field research methods/tools to solving the defined problem and has described the methods/tools effectively	1	2	3	4	5	
5. Results: Analyzed and interpreted research results/data effectively	1	2	3	4	5	
6. Quality of Written and Oral Communication: Communicates research proposal clearly and professionally in both (a) written form and (b) oral form	(a)	1	2	3	4	5
	(b)	1	2	3	4	5
7. Quality of Response to Questions completeness, organization of argument, subject area of study and expertise in the area	1	2	3	4	5	
8. Critical Thinking: Has demonstrated capability for independent research in the area of study, and expertise in the area	1	2	3	4	5	
9. Broader Impact: Demonstrates awareness of broader implications of the proposed research. Broader implications may include social, economic, technical, ethical, business, etc. aspects.	1	2	3	4	5	
10. Publications: Journal or conference publications have resulted (or anticipated) from this research	1	2	3	4	5	

Overall Assessment: The assessment of the overall performance of the candidate based on the evidence provided in items 1 –10 above.

CRITERIA	PERFORMANCE RATINGS				
	Does NOT PASS	Passes DEFENSE Exam			
OVERALL, my rating of the PERFORMANCE	Needs Significant Improvement	Needs Improvement	Acceptable	Very Good	Excellent

Name of the Examining Committee Member: _____

Signature of the Examining Committee Member: _____

Please report additional comments on the backside of this page.

APPENDIX 7

Written & Oral Preliminary Examination/Oral Proposal Presentation Rubric Evaluation for Ph.D. Candidacy

Candidate Name: _____ Date of Examination: _____

Chair of Evaluation Committee: _____

Proposed Dissertation Title: _____

Evaluation/Guidance	Needs Significant Improvement	Needs Improvement	Acceptable	Very Good	Excellent	
1. Problem Definition: States the research problem clearly, providing motivation for undertaking the research	1	2	3	4	5	
2. Literature and Previous Work: Demonstrates sound knowledge of literature in the area, and of prior work on the specific research problem	1	2	3	4	5	
3. Impact of Proposed Research: Demonstrates the potential value of solution to the research problem in advancing knowledge within the area of study	1	2	3	4	5	
4. Solution Plan: Provides a sound plan for applying state-of-the-field research methods/tools to solving the defined problem and shows a good understanding of how to use methods/tools effectively	1	2	3	4	5	
5. Expected Results: Provides a sound plan for analyzing and interpreting research results/data	1	2	3	4	5	
6. Quality of Written and Oral Communication: Communicates research findings clearly and professionally in both (a) written form and (b) oral form	(a)	1	2	3	4	5
	(b)	1	2	3	4	5
7. Critical Thinking: Demonstrates capability for independent research in the area of study, preparedness in core disciplines relevant to research, and ability to complete the proposed research	1	2	3	4	5	
8. Broader Impact: Demonstrates awareness of broader implications of the proposed research. Broader implications may include social, economic, technical, ethical, business, etc. aspects.	1	2	3	4	5	
9. Breadth: Demonstrates a basic knowledge reflective of the VCS required cores and how they connect with the specific research area.	1	2	3	4	5	

Overall Assessment: The assessment of the overall performance of the candidate based on the evidence provided in items 1 – 9 above.

CRITERIA	PERFORMANCE RATINGS				
	Does NOT PASS	Passes PRELIMINARY Exam			
OVERALL, my rating of the PERFORMANCE (circle rating category)	Needs Significant Improvement	Needs Improvement	Acceptable	Very Good	Excellent

Name of the Examining Committee Member: _____

Signature of the Examining Committee Member: _____

Please report additional comments on the backside of this page.

APPENDIX 8

Ph.D. Dissertation & Defense Exam Rubric Evaluation

Candidate Name: _____

Date: _____

Dissertation Title: _____

Evaluation/Guidance	Needs Significant Improvement	Needs Improvement	Acceptable	Very Good	Excellent
1. Problem Definition: Has stated the research problem clearly, providing motivation for undertaking the research	1	2	3	4	5
2. Literature and Previous Work: Demonstrates sound knowledge of literature in the area, and of prior work on the specific research problem	1	2	3	4	5
3. Impact of Proposed Research: Demonstrates the potential value of solution to the research problem in advancing knowledge within the area of study	1	2	3	4	5
4. Solution Plan: Has applied sound state-of-the-field research methods/tools to solving the defined problem and has described the methods/tools effectively	1	2	3	4	5
5. Results: Analyzed and interpreted research results/data effectively	1	2	3	4	5
6. Quality of Written and Oral Communication: Communicates research proposal clearly and professionally in both (a) written form and (b) oral form	(a)	2	3	4	5
	(b)	1	2	3	4
7. Quality of Response to Questions completeness, organization of argument, subject area of study and expertise in the area	1	2	3	4	5
8. Critical Thinking: Has demonstrated capability for independent research in the area of study, and expertise in the area	1	2	3	4	5
9. Broader Impact: Demonstrates awareness of broader implications of the proposed research. Broader implications may include social, economic, technical, ethical, business, etc. aspects.	1	2	3	4	5
10. Publications: Journal or conference publications have resulted (or anticipated) from this research	1	2	3	4	5

Overall Assessment: The assessment of the overall performance of the candidate based on the evidence provided in items 1 –10 above.

CRITERIA	PERFORMANCE RATINGS				
	Does NOT PASS	Passes DEFENSE Exam			
OVERALL, my rating of the PERFORMANCE	Needs Significant Improvement	Needs Improvement	Acceptable	Very Good	Excellent

Name of the Examining Committee Member: _____

Signature of the Examining Committee Member: _____

Please report additional comments on the backside of this page.