Department of Large Animal Clinical Sciences

GRADUATE PROGRAM HANDBOOK

~A GUIDE FOR SUPERVISORS AND GRADUATE STUDENTS~

UNIVERSITY OF SASKATCHEWAN
Western College of Veterinary Medicine
USASK.CA/WCVM

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# LACS Graduate Student Handbook

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1 WELCOME AND INTRODUCTION

Welcome to the Department of Large Animal Clinical Sciences at the Western College of Veterinary Medicine. Beginning life as a graduate student is often a daunting prospect. Many of our graduate students move to Saskatoon from other parts of the world and may not be familiar with the city of Saskatoon and the University of Saskatchewan. In addition, for many of you this will be your first experience as a graduate student. Your role as a graduate student will be very different than that as an undergraduate student. As a graduate student, you will be much more independent and responsible for your own learning. Your Supervisor and Advisory Committee will be there for guidance, along with the LACS Graduate Chair and Graduate Program Coordinator, but ultimately, the success of your graduate degree is primarily up to you. This guidebook has been written to give new LACS graduate students a brief background to life as a graduate student at WCVM. It is a fairly comprehensive document but it does not contain details on every single issue you may encounter. Moreover, if you enrolled in a clinical residency, it is not a complete guide for completing that portion of your program. The guiding principles for the LACS graduate programs are outlined by the University of Saskatchewan College of Graduate and Postdoctoral Studies (CGPS). Additional information you may find of value can be found on their website and the CGPS Policy and Procedures Manual.

Main Department Contacts:
- Dr. David Wilson, Department Head – (306) 966-1809 / david.wilson@usask.ca
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For your reference:
- CGPS website: http://www.usask.ca/cgps/

1.1 INFORMATION ABOUT THE DEPARTMENT AND THE COLLEGE

The Department of Large Animal Clinical Sciences is one of the largest academic units at the Western College of Veterinary Medicine. Currently there are approximately 20 - 25 faculty members in the department who specialize in the areas of Large Animal Medicine, Large Animal Surgery, Theriogenology, Production Medicine, Behavior and Animal Welfare, Epidemiology and Public Health.

There are four other departments within the WCVM: Small Animal Clinical Sciences, Veterinary Microbiology, Veterinary Pathology and Veterinary Biomedical Sciences.
Many of our clinical faculty members provide clinical services within the Veterinary Medical Centre at the WCVM, which provides primary and referral veterinary services for a wide variety of species.

The Veterinary Medical Centre has four main sections that provide veterinary care to food animals and horses. These include the Field Service or Ambulatory Practice (Ruminant and Equine), the Large Animal Medicine Service, the Large Animal Surgery Service and the Theriogenology Service. Most of the graduate students with a Doctor of Veterinary Medicine degree (or equivalent) who have a residency component as part of their training, work in these clinical areas as part of their clinical training program.

1.2 ON THE DAY OF YOUR ARRIVAL

- Introduce yourself to the LACS Graduate Program Coordinator (Rm 2401; 306-966-7076)
- Pick up keys from the LACS office (building key, resource room key (2502), office key, any lab keys)
- Fill out employment and payroll documents provided by the Graduate Program Coordinator
- Locate your office and mailbox; pick up office supplies needed for your academic program (at LACS Office, Room 2401)
- Apply for parking if eligible: FAQ’s - https://www.usask.ca/parking/
- Walk to the Bookstore and have your photo taken for your University student card or apply online (See section 13.1).
- Register for any courses if it is at the beginning of the semester
- Thoroughly read this document
- Discuss further instructions with your supervisor regarding your program of studies, research and clinical work (if any).

2 GRADUATE PROGRAMS IN LACS

The LACS department has two types of graduate programs.

2.1 CLINICAL RESIDENCY PROGRAM

Only students with a Doctor of Veterinary Medicine degree (or equivalent) may enroll in a clinical residency program. In some cases, a previous internship may also be required. These programs are typically three or four years in length and include advanced clinical training, which often allows the students to qualify to write specialty board exams in their area of interest. Research and research training is a vitally important component of these clinical residency programs, and is fulfilled by the completion of a non-thesis, Master of Science – Project (MSc-project). Admission to most of these programs is done through the Veterinary Intern Resident Matching Program (VIRMP). LACS does not typically offer a residency program without a graduate degree. Clinical students must be eligible for licensure by the Saskatchewan Veterinary Medical Association (SVMA).

2.2 NON-CLINICAL PROGRAMS

The LACS non-clinical graduate programs are more traditional graduate programs that require the completion of a thesis-based Master of Science (MSc) or Doctor of Philosophy (PhD) degree;
there is no residency component. Application does not require a DVM degree (or equivalent); however, both DVM graduates and graduates from other selected undergraduate degree programs are welcome to apply. Admission to these programs is on a case-by-case basis and is largely dependent on supervisor approval and adequate funding. These programs do not include a clinical residency component; hence, SVMA licensure is not usually required. Typically, students wanting to complete a PhD degree must have either completed a MSc degree, or transfer from a MSc to a PhD program within two years. The transfer procedure is outlined in more detail in the CGPS Policy and Procedures Manual, but in general, requires the completion of a Qualifying Examination, evidence of sufficient research progress, and above average academic standing. In addition, the research project must be adequately funded and meet the standards of a PhD.

3 GRADUATE DEGREES IN LACS

The LACS department offers three graduate degrees within the clinical residency and non-clinical programs:

3.1 Master of Science Degree (MSc - Project)

This is a project-based degree that is less research intensive than a thesis-based MSc. This degree is done along with a clinical residency program. Completion of a research project of appropriate size and scope is an important component of this degree and is required of all students. The MSc-Project degree is non-thesis, but students must complete at least one research project or experiment that results in the equivalent of a peer-reviewed quality publication. The manuscript does not need to be submitted prior to graduation but there are advantages of doing so.

Course requirements:
• 30 credit units comprised of:
  o 18 cu of approved course work - in area of clinical and research interest
  o 12 cu (total over three years; 4 per course) Advanced Clinical Practice I, II, and III during each year of program
  o Students wishing to take additional courses can do so with the permission of their Advisory Committee provided adequate progress has been made on their research project.
• GSR 960
• GSR 961 or GSR 962 if research involves human (GSR961) or animal (GSR962) subjects
• VLAC 990 Seminar Conference – enroll term 1 and 2 each year
3.2 Master of Science Degree (MSc - Thesis)

This is a thesis-based degree that requires the preparation and defence of a MSc level thesis. This can be either traditional or manuscript style format, which generally consists of a short abstract, a comprehensive literature review, at least two independent and robust research chapters, and a concluding chapter that summarizes and ties the results of the thesis together. The research chapters are the equivalent to publishable papers, and require the student to be involved in at least two research experiments or separate analyses of a larger dataset that are related around a common theme. The thesis must follow the format outlined by the CGPS and be approved by the CGPS by prior to graduation. Minimum requirements for admission include a DVM, BSc or BSc in Agriculture or applicable discipline for the research project.

Course requirements:
- 12 credit units of approved course work - in area of research interest
  - Students wishing to take additional courses can do so with the permission of their Advisory Committee provided adequate progress has been made on their research project.
- GSR 960
- GSR 961 or GSR 962 if research involves human (GSR961) or animal (GSR962) subjects
- VLAC 990 Seminar Conference – enroll term 1 and 2 each year
- VLAC 994 Research – students must maintain a continuous registration each semester

3.3 Master of Science Degree in Field Epidemiology (MSc – Project)

This project-based graduate training program for veterinarians will combine self-directed learning, formal and informal instruction with a focus on application of epidemiology skills/competencies in real life situations. Size and scope of the projects for each required competency will allow completion of the program within two years of full time work. Connection with other formal Field Epidemiology Training programs will round out the learning environment.

Course Requirements:
- VLAC 809 Field Epidemiology Competencies I
- VLAC 810 Field Epidemiology Competencies II
- 12 credit units of coursework covering biostatistics and epidemiology courses
  - VLAC 812 Statistics for Clinical Research and VLAC 813 Advanced Statistics for Research
  - PUBH 800 Introduction to Epidemiology for Public Health or VLAC 808 Introduction to Veterinary Epidemiology
  - PUBH 809 Field Epidemiology
  - One other elective 3 credit course
- GSR 960
- GSR 961 or GSR 962 if research involves human (GSR961) or animal (GSR962) subjects
- VLAC 990 Seminar Conference – enroll term 1 and 2 each year
- VLAC 992 Project – students must maintain a continuous registration each semester
3.4 Doctor of Philosophy Degree (PhD)

This is a thesis-based program that requires the preparation and defence of a PhD level thesis. The format is similar to that of the MSc thesis, except that it includes at least three, and generally four or five research chapters, which are the equivalent of publishable papers. This would require the student to be involved in at least three research experiments or separate analyses of a larger dataset that are related around a common theme. The thesis must follow the format outlined by the CGPS and be approved by the CGPS by prior to graduation. PhD students must also pass a Comprehensive Examination, which is generally scheduled after all courses are completed. All PhD student are required to pass a Qualifying Examination at the start of their program (see Section 6). As discussed below, the qualifying examination is mandatory for students transferring from a MSc degree, but at the discretion of the Advisory Committee, may be waived for students that have completed a MSc from a North American university.

Course requirements:

- **18 total or 6 credit units of approved course work beyond the MSc-Thesis minimum** - in area of research interest
  - Students wishing to take additional courses can do so with the permission of their Advisory Committee provided adequate progress has been made on their research project.
- GSR 960
- GSR 961 or GSR 962 if research involves human (GSR961) or animal (GSR962) subjects
- VLAC 990 Seminar Conference – enroll term 1 and 2 each year
- VLAC 996 Research – students must maintain continuous registration each semester

3.5 English Language Proficiency

Entry into all graduate programs by international, non-English speaking students requires proof of acceptable English language proficiency. The “Current” minimum acceptable test scores, as determined by CGPS are effective as of May 2018.

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<td>Remedial Score</td>
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4 COURSES

COURSES AND CREDIT UNITS

Graduate courses at the University of Saskatchewan are typically worth either three or six credits. Courses that last for one semester are usually worth three credits and courses that last for two semesters are usually worth six credits. There are also a number of courses which you must register for which are non-credit courses.
For a full listing of courses and to register, please consult the online Course and Program Catalogue: http://www.usask.ca/calendar/coursecat/index.php

**LACS GRADUATE COURSES**

The following is a partial listing of graduate courses that are commonly taken by graduate students in our department. Courses prefixed by VLAC are offered through LACS. There are also many courses available through different departments in the WCVM, as well as different colleges around campus. Some are listed below. Explore these different options, and discuss with your Advisory Committee about what courses would be most suitable for your program of studies. You should also consult the university's online course catalog to see all the possibilities. Please note that most graduate courses are numbered beginning in the 800’s, and not all courses are offered each academic year. **Your program of studies must be submitted to the CGPS following your first Advisory Committee meeting scheduled in the November or May, after you begin your program.**

### 4.1 NON-CREDIT COURSES

**GSR 960 Introduction to Ethics and Integrity (mandatory)**

This is a required course for all first year graduate students at the University of Saskatchewan and **should be completed prior to your first Advisory Committee meeting.** The purpose of this course is to discuss ethical issues that graduate students may face during their program. All students must complete modules dealing with integrity and scholarship, graduate student-supervisor relationships, conflict of interest, conflict resolution and intellectual property and credit.

**GSR 961 Ethics and Integrity in Human Research**

This online course is required for students whose research involves collecting clinical or survey data from humans, and introduces students to the ethics of research pertaining to human subjects. Students will complete the Tri-Council Policy Statement: Ethics Conduct for Research involving Humans (TCPS) Tutorial and become familiar with the human ethics processes at the University of Saskatchewan.

**GSR 962 Ethics and Integrity in Animal Research**

This course is required for students whose research involves animals, regardless if they are client-owned or experimental, and it introduces students to the ethics of research involving animal subjects. Students must complete the Canadian Council for Animal Care tutorial and become familiar with the animal ethics processes at the University of Saskatchewan.

**VLAC 990 Seminar (mandatory)**

This is a departmental seminar course that is required for all registered graduate students. Students will be required to register in the course and participate in the departmental seminar conferences in term 1 and term 2 (dates to be announced each year). For additional information about VLAC 990, see Appendix 15.8.

**VLAC 992 Project**

Students enrolled in a MSc-Project degree must register in this course throughout their program, **and remain registered right up until you defend until your thesis has been uploaded and approved by CGPS.**
VLAC 994 Research
Students enrolled in a MSc-Thesis degree must register in this course throughout their program, and remain registered right up until you defend AND until your thesis has been uploaded and approved by CGPS.

VLAC 996 Research
Students enrolled in a PhD degree must register in this course throughout their program, and remain registered right up until you defend AND until your thesis has been uploaded and approved by CGPS.

4.2 CREDIT COURSES OFFERED BY LACS

VLAC 801.3
Principles of Embryo Transfer
The course covers background information on embryo transfer with special emphasis on bovine embryo transfer. Specialized techniques e.g. embryo freezing, sexing, and splitting will be reviewed and in some cases form parts of laboratory exercises. Laboratory exercises will be conducted primarily on cattle. These will include superovulation, artificial insemination, embryo collection and transfer, and embryo handling techniques. Designed to provide the student with sufficient knowledge and laboratory experience to conduct the entire procedure in one species.

VLAC 802.3 and 803.6
Special Field Experiences
A total immersion experience in the area of study pertinent to the graduate student. A detailed report is required and should be based on a daily log of activities and relate back to the goals and objectives established by the student's Advisory Committee prior to embarking on this experience. This course is mainly used for students wanting to gain experience with a clinical or research technique or procedure at an external agency or university.

VLAC 808.3
Introduction to Veterinary Epidemiology
The course will introduce students to the concepts and basic methods of epidemiology used to evaluate the distribution and determinants of disease and health interventions. The course will have a specific focus on epidemiology as it pertains to animal health issues.

VLAC 809.9
Field Epidemiology Competencies I
This course provides applied epidemiology training for graduate students enrolled in the first year of field epidemiology focused on project-based (non-thesis) MSc degree. The goal is to prepare students through applied opportunities to master skills in applied epidemiology and complete the required list of competency outcomes. In addition to field training opportunities, students will receive formal and informal instruction in the form of weekly epidemiologic rounds in conjunction with other Field Epidemiology Training Program (FETP) groups across North America (human health focused).
VLAC 810.9
Field Epidemiology Competencies II
This course provides applied epidemiology training for graduate students enrolled in the first year of field epidemiology focused on project-based (non-thesis) MSc degree. The goal is to prepare students though applied opportunities to master skills in applied epidemiology and complete the required list of competency outcomes. In addition to field training opportunities, students will receive formal and informal instruction in the form of weekly epidemiologic rounds in conjunction with other Field Epidemiology Training Program (FETP) groups across North America (human health focused).

VLAC 811.1
Clinical Trial Design
This is an introductory graduate course for clinicians and clinical researchers who need a basic understanding of clinical trial design and clinical epidemiology in order to carry out their own research. The course will cover areas of clinical trial design, critically appraising and understanding clinical trials.

VLAC 812.2
Statistics for Clinical Research
This is an introductory graduate course for clinicians and clinical researchers who need a basic understanding of clinical statistics and clinical epidemiology in order to carry out their own research. The course will cover areas of applied medical statistics. Common parametric and non-parametric statistical tests that are used in medical research will be presented and used.

VLAC 813.1
Advanced Statistics for Research
This is an introductory graduate course for clinicians and clinical researchers who need a basic understanding of clinical statistics and clinical epidemiology in order to carry out their own research. The course will cover areas of applied medical statistics. Common parametric (and non-parametric or Bayesian) statistical tests that are used in medical research will be presented and used.

VLAC 840.3
Zoonoses and Food Safety
The course will focus on the characterization and distribution of diseases common to animals and man. A selection of important zoonoses and food safety issues will be specifically covered with an emphasis on the principles of zoonotic disease transmission and control, risk factors to humans, and surveillance methods.

VLAC 855.3
Advanced Equine Surgery I
Advanced equine surgery I will focus on general surgery in the horse. The anatomy, pathophysiology and surgery of the equine species will be studied with respect to the basic principles of wound healing, tissue response to trauma and the related physiologic responses. Regular seminars based on current literature reviews of selected topics will be required of all students. Weekly case-based discussions will be used to bridge from the classroom to the clinical patient.
VLAC 856.3
**Advanced Equine Surgery II**
Advanced Equine Surgery II will focus on orthopedic conditions of the horse. The anatomy, pathophysiology and surgery of the equine species will be studied with respect to the basic principles of wound healing, tissue response to trauma and the related physiologic responses. Regular seminars based on current literature reviews of selected topics will be required of all students. Weekly case-based discussions will be used to bridge from the classroom to the clinical patient.

VLAC 857.3
**Advanced Equine Surgery III**
Advanced equine surgery III will focus on orthopedic conditions of the horse. The anatomy, pathophysiology and surgery of the equine species will be studied with respect to the basic principles of wound healing, tissue response to trauma and the related physiologic responses. Regular seminars based on current literature reviews of selected topics will be required of all students. Weekly case-based discussions will be used to bridge from the classroom to the clinical patient.

VLAC 860.3
**Advanced Equine Reproduction**
This courses consists of lectures, laboratories and seminars pertaining to equine reproduction. Students will attend lectures and present seminars on selected topics covering reproductive biology of the brood mare and stallion, reproductive diseases and management of brood mare farms. Laboratories include demonstrations of assisted reproductive procedures and practical techniques.

VLAC 861.3
**Advanced Bovine Reproduction**
The course covers clinical aspects of male and female breeding soundness evaluation, and includes laboratory exercises in embryo transfer and semenology.

VLAC 875.3 (tentative numbering subject to change when course is approved)
**Advanced Large Animal Internal Medicine**
This course replaces VLAC 873 (Advanced Bovine Medicine) and VLAC 874 (Advanced Equine Medicine). This is an advanced graduate seminar course for clinical residents and graduate students who need in-depth knowledge of large animal internal medicine. This course is designed to help residents prepare for large animal internal medicine and bovine/equine practitioners board examinations.

VLAC 878.3
**Spermatology**
This is an advanced course in normal and abnormal spermatogenesis and spermatology with emphasis on the bovine species. It includes prenatal and postnatal development of the testis, pubertal changes, detailed study of the cycle of the seminiferous epithelium, semen collection, evaluation and cryopreservation.
VLAC 881.3  
Clinical Trial Design and Analysis  
NO LONGER EXISTS - PLEASE SEE VLAC 811

VLAC 883.6  
Clinical Practice – Interns (Non-Degree)  
This course is designed for clinical interns who are automatically registered in the course by the graduate program coordinator. It is designed to enhance the students' clinical education and experience under the guidance of a supervisor or senior clinician. The course emphasizes clinical practice in the student's field of specialization. Procedures in diagnostics, therapeutics and disease control are emphasized. The course involves student contribution to the Veterinary Medical Centre, routine practice, and emergency work during normal hours and on the out-of-hours duty roster.

VLAC 891.4  
Advanced Clinical Practice I  
This course provides advanced clinical training for graduate students enrolled in the first year of a LACS clinical residency and a project-based (non-thesis) MSc degree. The goal is to help students prepare for specialty boards, to facilitate the development of critical thinking and problem solving skills, to foster a culture of academic inquiry based on clinical experiences, to instruct students in the critical review of the veterinary literature, and to hone students’ presentation and discussion skills. In addition to training received as part of daily clinical practice, students receive formal instruction in form of a weekly journal club and/or case discussion rounds. Specific expectations and course details for each specialty are outlined in the discipline-specific sections below. Grading is based on the graduate students’ performance of their clinical duties, their participation and performance in the structured instructional sessions, and their progress towards becoming board-certified specialists.

VLAC 892.4  
Advanced Clinical Practice II  
This course is similar to 891.4 above, but for second year residents.

VLAC 893.4  
Advanced Clinical Practice III  
This course is similar to 891.4 above, but for third year residents.

VLAC 898.3 and VLAC 899.6 (credit units are based on instructional hours and may be less)  
Special Topics  
This course is available to any student and is defined and described each time it is offered. The purpose of the course is to enable one or more students to study in a unique area of interest, either in a formal class setting or through self-study specific to the students' needs and goals, and assumes an equivalent course is not routinely offered in the course calendar. The syllabus for a Special Topics course must be approved by the student's Advisory Committee, Graduate Chair (or department head) and the CGPS.
4.3 SELECTED COURSES OFFERED BY OTHER DEPARTMENTS

This is not a comprehensive list; please consult your supervisor and Advisory Committee for other course suggestions applicable for your area of interest.

PUBH 800.3
Epidemiology for Public Health
The course introduces students to the concepts and basic methods used in epidemiology in order to evaluate the distribution and determinants of disease and health interventions in public health. It is a core course for students in the Master of Public Health program, but open to other health science students.
Note: Students with credit for CHEP 800 will not receive credit for this course.

PUBH 805.3
Biostatistics for Public Health
The course is designed for students who wish to understand basic biostatistical methods and principles as they apply to public health data. The methods include descriptive statistics, confidence intervals and hypothesis testing, analysis of variance, non-parametric methods, multiple regression and logistic regression. The emphasis of the course is on applications of these methods to public health data, on correct interpretations of the resulting analyses as to be presented to both public health professionals and general lay audiences, and on the critical appraisal of these methods as used in the public health literature. The course also introduces the computer software program SPSS as it applies to the statistical topics discussed in the course.
Note: CHEP 805 is an alternative course number. Students with credit for CHEP 805 will not receive credit for this course.

PUBH 809.3
Field Epidemiology
The course links the underlying theory to the practical application of epidemiological methods in the investigation and control of disease outbreaks. Case examples will be drawn from communicable and non-communicable diseases in both humans and animals.
Note(s): Students with credit for CHEP 809 may not take this course for credit.

PUBH 832.3
Infectious Disease Epidemiology
Lectures and exercises will provide an introduction to epidemiology of infectious disease including issues in diagnosis and surveillance, disease ecology and transmission, options for control, discussion of diseases important to public health, emerging diseases, and reporting. Prerequisite(s): PUBH 800.3 or equivalent and an introductory course in microbiology or by permission of the instructor.
Note: Students with credit for VTMC 832 will not receive credit for PUBH 832.

PUBH 846.3
Analytic Methods in Epidemiological Research Level II
The course will provide students an advanced and comprehensive understanding of the principles of design and statistical analysis of epidemiologic research. Students will learn the strengths and weaknesses of established methods of epidemiologic research and will also...
achieve the ability to independently design, perform, analyze and critique observational health research.
Prerequisite(s): Epidemiology for Public Health (PUBH 800.3) or equivalent and Biostatistics for Public Health (PUBH 805.3) or equivalent, and Current Biostatistical Methods and Computer Applications (PUBH 842.3) or PUBH 811.3 or CHEP 806.3 or equivalent (by instructor permission)

PUBH 843.3
Advanced Topics in Analytical Epidemiology Level III
The course introduces students to advanced epidemiological tools and analytical concepts including complex data management, exposure analysis, general linear mixed models, GEE, survival analysis, detection of clusters, spatial models, and Bayesian analysis. Emphasis is placed on the correct application and interpretation of techniques presented as they apply to observational epidemiology.
Prerequisite(s): PUBH 846.3 and, either PUBH 842.3 or CHEP 806.3, or by permission of the instructor

VTMC 830.3
Recent Advances in Microbiology
This is a requisite course for students in Veterinary Microbiology. Partly tutorial, consisting of assigned reviews of recent advances in selected areas of microbiology, including bacteriology, epidemiology, immunology, parasitology and virology. These discussions are student-driven and facilitated by individual faculty members with expertise in the areas of discussion. Training is also given in the writing of grant applications, such that a major part of the course comprises each student writing a full-scale, mock Canadian Institutes of Health Research (CIHR) application that addresses their proposed dissertation research.

VTMC 831.3
Techniques in Molecular Biology
A "hands-on" laboratory course designed to familiarize students with a wide variety of techniques in molecular biology: manipulation of DNA for cloning and analysis, detection and quantitation of nucleic acids, sequencing of DNA, site directed mutagenesis, purification and detection of proteins, detection of rare nucleic acids by polymerase chain reaction, monitoring gene expression by cDNA microarrays and 2D-protein analysis, nucleic acid-based techniques for identifying organisms.
Note: 5 week course beginning in May, typically every other year.

VTMC 833.3
Advanced Virology
Students, in discussion groups and seminars, explore current topics in virology. Some topics discussed in previous years include: interferon response and viral strategies for evading it, viral oncogenesis, viruses and cancer therapy, antiviral agents and viral strategies for resistance, viruses as tools for nanotechnology. Reviews prepared by students will be considered for publication in Student Reviews in Current Virology, an on-line publication.

VTMC 835.3
Diagnostic Veterinary Bacteriology
The course is devoted to the culture, biochemical reactions and identification of pathogenic, aerobic and anaerobic bacteria and fungi from domestic, exotic and "alternate species" including birds. Emphasis will be on interpretation of findings in agreement with information gathered from clinical history/lesion(s) provided in different cases. Other responsibilities include familiarization with culture media; some new diagnostic techniques; completion by each student of 20-30 cases.

VTMC 840.3  
Molecular Diagnostics in Veterinary Medicine  
The course provides an introduction to molecular diagnostic methods including the concepts underlying nucleic acid sequencing, manipulation, detection, quantification and genomics and bioinformatics. Concepts will be illustrated by drawing on specific applications of these techniques in veterinary medicine with an emphasis on infectious disease diagnosis and research.

VTMC 841.6  
Research Methods in Cellular and Molecular Immunology  
This is an intensive "hands-on" course designed to teach graduate students basic and advanced cellular and molecular methods commonly employed in studying the host's immune-inflammatory system: cell purification and characterization, antibody production, purification and characterization, T-cell assays, ELISA, ELISPOT, bioassays, purification of cells using magnetically-labeled antibodies, in situ hybridization, immunohistochemistry, Northern blotting, and real-time RT-PCR, among others.

VBMS 880.3  
Experimental Design and Statistical Analysis for the Natural Sciences  
This course is designed to provide students with a working knowledge of experimental design, data analysis and data reporting. The course will cover major univariate parametric and non-parametric tools, including more complex ANOVA designs (nested, repeated-measures, ANCOVAs), as well as a few multivariate ones (MANOVA, PCA). The course introduces the computer software program SPSS.

VTPA 873.3  
Wildlife Diseases  
This course deals with the ecology of infectious and non-infectious diseases of free-living mammals and birds. The etiology, epizootiology, pathogenesis and ecologic significance of the conditions are considered. Emphasizes diseases occurring in Western Canada.

VTPA 878.3 (Instructor permission required)  
Veterinary Clinical Pathology for Veterinary Internal Medicine and Surgery Residents  
The objective of this course is to provide the student an opportunity to study the principles of cytology and clinical pathology as well as gain experience evaluating clinical case data. This course will meet the requirements of the ACVS and ACVIM for board preparation in the respective fields. (Contact: Hilary Burgess at hilary.burgess@usask.ca, or call 966-3277 / WCVM 1728). VTPA 878 and VTPA 879 are offered every year, back-to-back, starting two weeks prior to the start of the 4th year 580 rotations.
VTPA 879.3 (Instructor permission required)
Veterinary Anatomic Pathology for Veterinary Internal Medicine and Surgery Residents
The objective of this course is to provide experience in anatomic pathology. This will be achieved by performing post-mortem examinations, histological evaluations of necropsy and biopsy specimens and review of principles of gross pathology. This course will meet the requirements of the ACVS and ACVIM for board preparation. (4 spots available only – Instructor permission required: Contact: Helene Philibert at helene.philibert@usask.ca, or call 966-2369 / WCVM 1640). VTPA 878 and VTPA 879 are offered every year, back-to-back, starting two weeks prior to the start of the 4th year 580 rotations

ANSC 811.3
Welfare of Agricultural Animals
The course examines various aspects of farm animal welfare including historical, philosophical and scientific perspectives. The positions of animal interest groups, scientific societies, and commodity groups will be discussed. Emphasis will be on agricultural animals, but material relevant to laboratory animals and wildlife may also be presented.

ANSC 815.3
Advanced Ruminant Nutrition and Metabolism
The course covers the impact that nutrition has on ruminant metabolism in order to maintain optimal production throughout the animal’s life. The main emphasis is on dairy and beef cattle. The role of nutrition in the metabolism of the fetus, the calf from birth to puberty, and of the pregnant and the lactating cow is covered. Advances in feed and animal biotechnology that may improve the efficiency of production and have an impact on metabolism are discussed. Students will be assigned to a local dairy farm, cow-calf operation, or feedlot so that they can apply the knowledge gained in this course to a practical situation. Some tours will be given.

VBMS 828.3
Gastointestinal physiology
This course provides an in-depth coverage of monogastric gastrointestinal physiology, stressing those aspects related to the understanding of gastroenteric disease. It is suitable for clinical and non-clinical students in Agriculture and WVM.

4.4 COURSE REGISTRATION DEADLINES
Using the links below, you can find additional information on these and other courses, registering and/or making changes to your registration, repeating or auditing classes, deadlines, missing a class, etc.

- How to register and make changes:
  http://students.usask.ca/academics/classes.php#Registeringandmakingchanges

- Registration deadlines:
  http://students.usask.ca/academics/classes.php#Registrationdeadlines

- Link to Academic Calendar:
4.5 OTHER MANDATORY UNIVERSITY COURSES DURING ORIENTATION

All new students must register in the WSEP safety course “Safety Orientation for Employees”. Information on how to register for this and other WSEP courses can be found at the WSEP website: http://safetyresources.usask.ca/services/training/index.php

Depending on your area of research the following courses may also be required. Please consult your supervisor or the WCVM’s Biosafety Officer about registration:

- Safety Orientation for Employees: required for all employees
- Biosafety: required for all handling level 2 pathogens
- Laboratory Safety: required for all working in a laboratory
- Radiation Safety: required for all working with radioactive reagents and chemicals
- Fieldwork and International Travel Safety: required for all working outside of North America
- Safety Orientation for Supervisors: required for all supervisors, including graduate students if involved in the supervision of summer students

Students will receive a certificate for each of these courses completed/passed. Please forward a copy of the certificate to the Graduate Programs Coordinator who will update your graduate file.

If you have any questions regarding enrollment and registration please the Graduate Program Coordinator or SESD:

STUDENT AND ENROLMENT SERVICES DIVISION (SESD)
Administration Building – 105 Administration Place
Student Central General Inquiries
Phone: (306) 966-1212
Email: askus@usask.ca

5 COMMITTEES & ADVISORY COMMITTEE MEETINGS

5.1 WHO IS INVOLVED IN YOUR GRADUATE PROGRAM?

In addition to yourself, your graduate program involves your supervisor or co-supervisors, Advisory Committee members, the LACS Graduate Chair, the LACS Graduate Program Coordinator, and support staff in the College of Graduate and Postdoctoral Studies (CGPS). As a graduate student at the University of Saskatchewan, you are enrolled in the CGPS, but your graduate program is administered at the Department LACS, which operates within the regulations provided by the CGPS. Your supervisor is a member of faculty who agrees to oversee your progress throughout your graduate program. As described in more detail below, the role of your supervisor and Advisory Committee is to assist you in course selection and definition of your research area, provide support and advice, regularly evaluate your progress, and take appropriate and timely action in view of this progress, as well as keeping records of this evaluation and all actions taken.
5.2 WHO CAN SUPERVISE GRADUATE STUDENTS AT THE WCVM?

Supervisors must be members of the CGPS, and have suitable credentials and experience. LACS and other clinical units at the University are unique in that many faculty supervisors have advanced clinical training, rather than a PhD, which is often required for graduate supervision. Thus, a policy has been established by the Deans of WCVM and CGPS to ensure that clinical training is recognized, while also ensuring that the supervisors of all WCVM graduate students have adequate training and experience for the role. The matrix provides guidelines for faculty involvement in graduate Advisory Committees and supervision (extracted from letter to Dean; Sept 30, 2012).

Table 1: Credentials and experience expected for faculty members in the Western College of Veterinary Medicine to participate in various roles in graduate student training, as indicated by the Western College of Veterinary Medicine.

<table>
<thead>
<tr>
<th></th>
<th>DVM</th>
<th>DVM/Board Cert.</th>
<th>MSc, MSc/DVM, MVetSc/DVM</th>
<th>PhD, PhD/DVM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member of Advisory Committee</td>
<td>No additional experience required</td>
<td>No additional experience required</td>
<td>No additional experience required</td>
<td>No additional experience required</td>
</tr>
<tr>
<td>Co-supervise Master student with experienced faculty</td>
<td>Not eligible</td>
<td>No additional experience required</td>
<td>No additional experience required</td>
<td>No additional experience required</td>
</tr>
<tr>
<td>Supervise Master student</td>
<td>Not eligible</td>
<td>co-supervised at least 1 master student to successful completion</td>
<td>co-supervised at least 1 master student to successful completion</td>
<td>No additional experience required</td>
</tr>
<tr>
<td>Co-supervise PhD student</td>
<td>Not eligible</td>
<td>sole supervise at least 1 master student to successful completion</td>
<td>sole supervise at least 1 master student to successful completion</td>
<td>No additional experience required</td>
</tr>
<tr>
<td>Supervise PhD student</td>
<td>Not eligible</td>
<td>Not eligible</td>
<td>co-supervised at least 1 PhD student to successful completion</td>
<td>No additional experience required</td>
</tr>
</tbody>
</table>

5.3 SUPERVISOR-SUPERVISEE AGREEMENT

At the beginning of the program, it is strongly recommended that supervisors and graduate students meet to comprehensively discuss expectations and responsibilities. To assist, the CGPS and Graduate Student Association (GSA) have recently developed a Supervisor-Supervisee Agreement template that can serve as a guideline for discussion (Appendix 15.7). While this document is meant for the wider University Community and not all sections are pertinent for LACS graduate programs, the document can be modified as required and should be reviewed annually. During the program, regular meetings (weekly, biweekly) should be scheduled to discuss progress and bottlenecks to completion.
5.4 ROLES AND RESPONSIBILITIES OF THE GRADUATE STUDENT

You are responsible for the success of your program, although your supervisor, Advisory Committee, the Graduate Chair and the Graduate Program Coordinator will always be available to help with any problems. Graduate students are specifically responsible for:

- Demonstrating a commitment to your research project through diligent and conscientious work in all situations
- In the case of clinical residents, demonstrating a commitment to clinical service within your particular discipline
- Maintaining a spirit of collegiality with peers, laboratory and clinical co-workers, faculty, staff and undergraduate students
- Adherence to University regulations concerning Academic Integrity: http://www.usask.ca/integrity/
- Timely registration for courses and payment of fees owing
- Maintaining of appropriate academic performance (minimum 70% GPA in coursework)
- Attending and participating in the departmental seminar series (VLAC 990)
- Being prepared for Advisory Committee meetings (usually twice yearly), and undertaking any recommendations provided
- Seeking advice from members of the Advisory Committee where appropriate
- Timely submission of scholarship applications and renewals, awareness and attendance to the stipend funding periods
- Timely submission of research proposal, annual progress reports (Graduate Student Progress Document), manuscripts, thesis, etc
- Completing all items listed in the graduation checklist (Appendix 15.3) provided by the Graduate Program Coordinator.

5.5 ROLES AND RESPONSIBILITIES OF YOUR SUPERVISOR

Supervisors should be available at all times to help solve issues that are clinical or scientific in nature. Your supervisor is responsible for providing supportive advice and discussions about the research, assistance with research design, and for timely review of research proposals, manuscripts and thesis drafts. Supervisors are also required to provide sufficient resources to ensure that the research can proceed as effectively as possible. These resources include the provision of research-operating funds, and access to research space and equipment as necessary. In the case of clinical residency programs, your supervisor may also be responsible for guiding you through the requirements for board certification within your discipline. Some students may have multiple supervisors: either co-supervisors in a research project, or for some clinical residents, separate resident and research supervisors. Regardless, of the number of supervisors you have, they are accountable to the University or granting agency for the research you undertake.

The supervisor is responsible for recording the minutes of the Advisory Committee meetings and circulates to all Advisory Committee members and the Graduate Program Coordinator within seven days of the meeting.

Supervisor-Supervisee relationships can unfold in many different ways and depend on the needs and personalities of both parties. However, developing a strong, positive relationship is
fundamental to successfully meeting the goals of the graduate program. Your supervisor may wish to have a weekly meeting with each of his/her students, may desire a less formal (as required) schedule of meetings, or expect you to request meetings based whenever you require assistance or complete a task. Any of these approaches may work, but some may be preferred over others. In the end, it is best you discuss and work out the best form of communication with your supervisor early in your program.

5.6 THE ROLES OF ADVISORY COMMITTEE MEMBERS

The guiding principle underlying the Advisory Committee is that the student needs sustained advice from the beginning of their program if they are to move expeditiously and constructively through the program requirements. Our department aims to have two formal Advisory Committee meetings annually (November and May). However, students are encouraged to arrange more frequent meetings and/or to contact individual members of their committee whenever they need assistance. The Advisory Committee also plays an important role in assessing student performance in qualifying and comprehensive examinations, and at the thesis defence.

The Advisory Committee consists of the following members (minimum of three for MSc and five for PhD):

1. **Supervisor** - a faculty member of LACS and the CGPS (adjunct professors included)
2. **Advisory Committee Chair** - the department Graduate Chair or designate
3. **Additional Regular Members** - a minimum of one for MSc students, and two for PhD students. Each member must be a member of the CGPS graduate faculty, an adjunct professor, or professional affiliate, or have special approval. The Graduate Chair and Graduate Program Coordinator will assist with obtaining the required CGPS approval for all regular members.
4. **Cognate Member** - a minimum of one for PhD students. The cognate member must be a member of an external department (not LACS) and a member of the CGPS graduate faculty or be granted permission to serve as cognate by the Dean of CGPS. The Graduate Chair and Graduate Program Coordinator will assist with obtaining the required CGPS approval.

The supervisor, the student and the Graduate Chair most often guide the decision-making process for committee member selection. Collectively, committee members should have sufficient experience and knowledge to be able to effectively assist the student with research design, background, methods, and analysis. It is however, not always possible or necessary to have a committee member representing each of the technical aspects of a research project. Moreover, there are advantages of having small and engaged committee.

5.7 ROLE OF THE LACS GRADUATE CHAIR

The LACS graduate chair offers advice and information regarding LACS and CGPS regulations to ensure consistency among Advisory Committees and ensure departmental standards are maintained. The graduate chair should be viewed as an advocate for the student and should be the first person that the student consults should problems arise that cannot be resolved with the supervisor and/or committee members. On an administrative level, the LACS graduate chair is responsible for chairing each meeting, preparing the CGPS progress report, overseeing any
qualifying and comprehensive examinations and thesis defenses. At the University level, the Graduate Chair acts as the primary liaison between the Department and the CGPS.

5.8 ROLE OF THE LACS GRADUATE PROGRAMS COORDINATOR

The LACS Graduate Program Coordinator provides administrative support and is a resource person who provides advice and guidance on procedural matters related to the Department, the graduate program, and CGPS requirements. The Graduate Program Coordinator is responsible for scheduling Research Advisory Committee meetings, examinations and defences, as well as maintaining and submitting the appropriate paperwork to CGPS.

5.9 ADVISORY COMMITTEE MEETINGS

Our department aims to routinely have two Advisory Committee meetings per year for each graduate student, generally in November and May, unless events require that they be held at other times. Our Graduate Programs Coordinator will email Doodle polls to you and your Advisory Committee members to schedule a time when everyone can be present. **Please make yourself available for as many time slots as possible!** It is often very difficult to arrange these meetings because many of the faculty have very busy schedules. Thus, it may be periodically necessary to schedule a committee meeting in the absence of one or more committee members. **If you require WebEx for your meeting, it is far better for you (the student) to make the arrangements as the person who submits the request should be on hand to ensure all the equipment and connections are working.**

5.10 WHAT IS EXPECTED OF YOU AT A COMMITTEE MEETING?

The purpose of the Advisory Committee meeting is to assess your progress in terms of your program of studies and research activities. In keeping with this goal, it is important that you provide satisfactory evidence of progress at each meeting.

At least **one week** before your Advisory Committee meeting, you must circulate to all committee members the **LACS Graduate Student Progress Document**. A template is attached in the Appendix of this handbook (Appendix 15.1 for MSc-Project; 15.2 for MSc-Thesis and PhD). You should send this to your supervisor and seek their review and comments before you submit it to other committee members. Having the document updated at least 2 weeks before your committee meeting is suggested to ensure your supervisor has time to comment before distributing it to your committee.

In addition, you will be expected to update the committee by opening the meeting with a **brief PowerPoint presentation** (approximately 20 minutes and **no more than 30 minutes**) focused on your **progress in terms of your program of studies and research activities**. Again, your supervisor should be given the opportunity to check this over before you present.

For new students, there may not be experimental data to present but a summary of your program of studies as well as a brief literature review, research objectives and planned methodology would be expected.

For continuing students, please focus on an update of your project – classes completed from your program of studies, any presentations or publications, changes to your research objectives,
new data, and answers to any questions raised during previous meetings. Do not repeat material from previous meetings unless requested.

Committee meetings generally take 60 minutes, and no more than 90 minutes, including a brief in-camera session during which the committee will privately discuss your performance and progress.

**5.11 LACS GRADUATE STUDENT PROGRESS DOCUMENT**

The purpose of the LACS Graduate Progress Student Document (Appendix 15.1 for MSc-Project; 15.2 for MSc-Thesis and PhD) is to create a dynamic record of your course work and research progress. Prior to each Advisory Committee meeting, you must update the LACS Graduate Student Progress Document to make the committee members aware of your progress over the preceding 6 months.

The document should be updated in consultation with your supervisor. *Instructions on filling out the Graduate Student Progress Document can be found within the report’s header.*

You must update and circulate it to your Advisory Committee at least 7 days prior to your committee meeting.

Any new material that is being added to the document should be clearly indicated (highlighted or in different font colour) so that the reader can easily see the new material being presented for each meeting. Track changes can become very messy. A clean version with a new font color is preferred in the version sent to the committee and the graduate chair.

The GS Progress Document contains sections where you will detail activities completed since the previous meeting, and planned over the subsequent 6 months.

Also, students must provide, on a yearly basis, the title and date of the seminar they have presented at the LACS VLAC 990 Seminar Conference.

**6 QUALIFYING AND COMPREHENSIVE EXAMINATIONS**

**6.1 QUALIFYING EXAMINATION FOR PhD STUDENTS**

The purpose of the Qualifying Examination is to "satisfy the department that the student has the potential to obtain sufficient knowledge in the chosen field to proceed towards candidacy for the PhD degree" (Section 12.6.1, CGPS Policy Manual). Guidelines for the Qualifying Examination approved by the department are as follows:

- All PhD students must pass a Qualifying Examination.
- At the discretion of the Advisory Committee and the CGPS the Qualifying Examination may be waived for students who have a MSc degree from a recognized University (generally meaning North America and some European countries). If you are in either of
these situations, ensure that you inquire about this exam at your first committee meeting.

- The research advisory committee will inform the student of the date, format, means and criteria of assessment, and relative grading weight for each assessment at least 60 days prior to the Examination.
- Students failing all or parts of a Qualifying Examination are permitted a second examination with permission from the CGPS Dean or designate, but may be asked to discontinue their program.
- A Qualifying Examination is required for all students transferring from a MSc into a PhD degree program.
- **The Qualifying Examination shall be completed in the first year of their program for students who have a MSc degree, or in the second year of the graduate program for students transferring from a MSc to a PhD.**
- The typical format of the Qualifying Examination will be that of a research proposal, specific to the student's field of research. The research proposal must be submitted to all members of the research advisory committee by the student 14 days prior to the scheduled oral examination, and should include:
  - Brief literature review and justification of the research
  - Overarching hypotheses and objectives
  - Experimental chapters: at least 4, each describing specific objectives, methodologies, anticipated results and analyses, limitations and potential pitfalls.
  - Budget including sources of funding.
  - Timeline for completion

- **The written document and presentation comprising the qualifying exam must be completed independently without input from the supervisor or committee members.**
- There may be situations where a research proposal has previously been prepared by the student with their supervisor or research advisory members assistance or simply prepared by the faculty members, for example as part of a research funding application for part of the thesis. In this case, the student will: 1) prepare a detailed research proposal fulfilling the above criteria describing their plans for new research to extend the current body of work to meet the requirements for a PhD or 2) complete data analysis and reporting consistent with that expected for at least one full research paper. The selected option must clearly demonstrate the student’s potential to conduct independent research.
- The research proposal/report should provide sufficient detail to be fairly evaluated by the examiners; all members of the research Advisory Committee. While there are no limits on length, 15-20 double spaced pages should be appropriate for most students.
- At the oral examination, the student will first present the proposal to the committee (approximately 20-30 minutes), which will be followed by a question/answer period.
- An overall pass is contingent on satisfactory performance in both the written and oral components of the Qualifying Examination.

### 6.2 COMPREHENSIVE EXAMINATION FOR PhD STUDENTS

A Comprehensive Examination must be completed by all PhD students after all courses are completed and before “permission to write” has been granted. The purpose of the Comprehensive Examination is to satisfy the department that the student "has a mature and substantive grasp" of his/her chosen field of research (Section 12.6.2, CGPS Policy Manual).
• All PhD students must pass their Comprehensive Examination, and upon completion, are deemed a PhD Candidate.
• The research Advisory Committee will inform the student of the date, format, means and criteria of assessment, and relative grading weight for each assessment at least 60 days prior to the Examination.
• Students failing all or parts of a Comprehensive Examination are permitted a second examination with permission from the CGPS Dean or designate, but may be asked to discontinue their program.
• The Comprehensive Examination shall be comprised of a written examination (~3 hours), followed one week later by an oral examination (~2 hours). For preparation, each Advisory Committee member will assign a topic and reading list to the student at least 60 days prior to the written examination, and will subsequently submit two questions related to these materials to the supervisor. The student will answer one of the two questions submitted by each examiner. The examination will be "closed-book" unless there is a compelling reason for why all or parts should be "open-book".
• During the oral examination, the student will be queried on their written answers, as well as on the questions that were unanswered. In some situations the examination committee may feel it important to query the student on other topics related to their research field. For this to occur, the student must be advised in writing 60 days prior to the Examination, and these topics should be outlined and included in the reading materials.
• An overall pass is contingent on satisfactory performance in both the written and oral components of the Comprehensive Examination.

7 THESIS WRITING & FORMATTING

7.1 FORMAT

A thesis or dissertation is a lengthy written document that MSc and PhD students must prepare upon completion of their research. As stated above, it contains many chapters including a comprehensive literature review, and multiple research chapters. The format of the thesis varies according to the academic institution and the final product is approved by the CGPS prior to uploading to a public thesis depository.

Most graduate students of LACS write a Manuscript Style thesis (Appendix 15.5) (http://students.usask.ca/graduate/manuscript-style.php#Beforeyoubegin), although a traditional thesis format is also acceptable. In a manuscript style thesis, each of the research chapters are prepared as stand-alone papers that can be submitted to a peer-reviewed journal, some of which may be submitted or published prior to the defence. Between each research chapter is a “transition section” (see Appendix 15.6) that ties one chapter to the next, ensuring the thesis is a coherent document. Regardless of the style, the thesis represents a body of work centered on overarching hypotheses and objectives, that are generally stated at the end of the Introduction or Literature Review.

Before starting the writing process, ensure that you are formatting your thesis document appropriately. You can refer to the “Guidelines for Preparation of a Thesis” on the CGPS website:
http://www.usask.ca/CGPS/for_students/thesis.php. The CGPS has specific guidelines for thesis formatting (i.e. Permission to Use and Disclaimer Statement, Global Page Settings, etc.). Determine the appropriate format with your supervisor and Advisory Committee to avoid formatting issues later in your program. It is also helpful to look through some theses of past LACS students, which are available in the LACS resource room.

Most students start working on their literature review early in their program. Towards the end of their program, students will query their Advisory Committee to ensure the necessary topics and sub-topics are included.

MSc-Thesis students require a minimum of two robust and independent research chapters that are related around a common theme. A PhD thesis must have at least three, and generally four or five research chapters. The research outcomes of a PhD program must be novel and substantially contribute new information to a given area of research. Thus, PhD students must have an Advisory Committee meeting in which the student is granted "permission to write". In essence, this is an acknowledgement by the committee that sufficient research has been completed during the program. In most cases, students have already written various sections of their thesis prior to their "permission to write" committee meeting. For this meeting, students should be prepared to present an overview of all experiments and results in order to provide the evidence that sufficient research has been completed during the program.

### 7.2 TIMELINES FOR Completing Your Thesis

Depending on the length, most students will require 2-3 months to write their thesis, perhaps longer for a lengthy PhD dissertation and for students whose first language is not English. Your supervisor will offer suggestions and revisions along the way. When completed and approved by your supervisor, the thesis must be read and approved by all Advisory Committee members. They are typically given **3 weeks to complete their review** and verify that it is ready to be sent to an External Examiner. Committee members may offer suggestions revisions at this time, or wait until the defence examination. Some committee members want to see the entire thesis when completed; others want to see it one chapter at a time. Discuss this with your committee and realize that reading a thesis takes considerable time. You are best to give advanced warning of when it will be completed.

The LACS Graduate Chair and Graduate Program Coordinator also requires a copy of your thesis. This is typically provided after it is approved by the committee and prior to submitting to the external examiner. When received, it will be scanned for non-original content using commercially available software and/or services (Grammarly, Ithenticate, etc). The Graduate Program Coordinator will prepare the required paperwork to submit your thesis to the CGPS. For MSc-Thesis students, the Grad Program Coordinator will forward the thesis to the external examiner, when approved. For PhD students, the CGPS will forward a copy of the thesis to the external examiner. This may be a hard copy or electronically. **The graduate coordinator and CGPS require between 1 and 2 weeks combined to process the thesis and obtain formal approval of the external examiner after the committee has approved the thesis for examination.**

The External Examiner is granted a **mandatory three (MSc) or five (PhD) weeks** to review your thesis prior to the oral examination. Thus, it generally requires a minimum 2 to 3 months from
the time your supervisor approves your thesis to the date of your final examination. After your final exam, it may require anywhere from a few days to 6 weeks to make any required revisions prior to submission to the CGPS.

8 THESIS & DEFENCE

8.1 PROGRAM DURATION

While it may seem like a long road that lay ahead, LACS aims to have students complete their graduate degrees within targeted timelines, which are periodically reviewed by the CGPS. That being said, research does not always unfold as initially planned, so delays can and do happen. If this happens, it is most important to work through the problems as quickly and effectively as possible to prevent a lengthy delay or an unsurpassable problem.

- Master of Science-Project with clinical residency: 36 months (surgery = 48 months)
- Master of Science-Thesis: 24 months
- Doctor of Philosophy: 48 months

The official program time limits imposed by the CGPS are five years for a MSc, and six years for PhD degree, measured from the beginning of the first term of registration. However, lengthy delays such as this may be problematic for grant holders and/or supervisors since funding agencies are not always flexible, so your supervisor may be required to make other arrangement to complete the research.

8.2 PREPARING FOR THE ORAL EXAMINATION

Regardless of your degree, one of the final events is the defence examination, which includes a public seminar of your research results followed immediately by an oral examination, which is a defence of your research dissertation (or paper for MSc-Project). For MSc-Project students, the oral defence may extend beyond your research to include topics related to your clinical discipline. Your Advisory Committee will advise you of this before the event.

The thesis Defence will be scheduled with the assistance of the Graduate Program Coordinator only after the LACS office has advised the CGPS that the thesis is ready to defend. In addition, the Advisory Committee will recommended at least one (MSc) or three (PhD) person(s) to serve as External Examiner. The External Examiner must not have any conflicts of interest with the supervisor and members of the research advisory committee (see Policy and Procedures Manual for the details - https://cgps.usask.ca/policy-and-procedure/Academics/defence.php#82APPOINTMENTOFTHEEXTERNALEXAMINER ).

The Graduate Program Coordinator will ensure the student file contains all necessary documentation and that all academic requirements for the degree have been met. The student must ensure all requirements of the Program of Studies have been completed, registration is current, outstanding fees are paid, and University deadlines are respected in view of any particular convocation.

For MSc defences, the CGPS must be notified a minimum three weeks prior to the desired oral defence date. Upon receipt of the notification, a convocation check will be completed by the CGPS to verify that all program requirements have been met, including current registration.
For PhD defences, the CGPS must be notified a minimum four weeks prior to the desired oral defence date. At least seven days prior to the defence, the students must provide a dissertation summary (not bound with the thesis) to the CGPS. This summary will be provided at the oral defence. All logistical arrangements for the PhD defence examination (time, date, location, etc) will be made by the LACS Graduate Program Coordinator. The CGPS Programs Advisor forwards the thesis and any necessary documentation to the External Examiner. The CGPS will provide a maximum of CDN$2,000 to help cover the expenses (travel, lodging, and meals) of the External Examiner to travel to Saskatoon.

The student is not permitted to correspond with the External Examiner in any way prior to the defence examination.

8.3 ORAL EXAMINATION OF THE THESIS

In LACS, the examining committee generally comprises of the Advisory Committee members plus the External Examiner. For MSc defences, the examination is chaired by the Graduate Chair, Department Head, or a designate. For PhD defences, the examination is chaired by the CGPS Dean or the Dean’s Designate. The Research Supervisor may not under any circumstances serve as the Chair of the oral defence examination.

Following the public seminar of 30-40 minutes in length, the examination committee will convene in a private room with the student. The student will answer questions from the examining committee, beginning with the External Examiner. Examination questions are limited to work done by the candidate for the thesis, to knowledge of matters directly related to it, and to peripheral knowledge of the subject matter. Typically, there are two rounds of questions, with each examiner allotted 15-20 minutes total, depending on the number of examiners. At the conclusion of the examination, the candidate shall withdraw while the examining committee decides by majority vote whether the thesis as submitted and the candidate's oral defence meet the requirements for the degree.

Exceptional thesis may be nominated by the external examiner and Advisory Committee for one of several University of Saskatchewan thesis awards. If nominated on examination, the supervisor will take a lead role in preparing the application (generally each spring). An updated CV of the graduate student may be required.

8.4 COMPLETION OF YOUR THESIS

After the final revisions to the thesis have been addressed and approved by your supervisor and/or External Examiner, and your thesis is properly formatted, it will be submitted electronically to the CGPS for approval (http://students.usask.ca/graduate/thesis-etd.php). In addition, students are required to print at least one copy that will be permanently stored by the LACS department. Additional copies may be printed for distribution to your supervisor(s), research advisory committee members, and of course, yourself. Before you print, check with your supervisor regarding the number of copies needed. The department typically covers the cost of printing for the student, supervisor and committee (if required). Additional personal copies for family members will be covered by the student.
8.5 PRINTING HARD COPIES OF YOUR THESIS

It is recommended that you seek guidance from the LACS Graduate Program Coordinator, and look at available examples (or template) for formatting the spine and cover. The cost of printing and binding is based on the cover title only (the number of pages to be printed doesn't matter). For example, the 2018 cost of printing is:

- Binding and first 2 lines = $25.47
- Each additional line of print = $2.78

FRONT COVER FORMAT: each line cannot contain more than 26 characters including spaces and symbols, and includes the author name and year. Create a word document and forward to Program Coordinator (Appendix 15.4)

SPINE FORMAT: cost is based on front cover title only; title cannot be more than 40 characters including spaces and symbols (character count does not include name or year). Create a word document to forward to Program Coordinator (Appendix 15.4)

PRINTER:
Universal Bindery, 516 A Duchess Street, Saskatoon SK  S7K 0R1
Phone: 652-8313; Fax: 244-2994; Toll Free: (888) 563-6368
Email: christina@unibindery.com

If you would like examples (template) of the spine and cover, please contact the Graduate Program Coordinator, or see Appendix 15.4.

9 UNIVERSITY REGULATIONS ON ACADEMIC MISCONDUCT

Effective January 1, 2017, revised regulations for student academic misconduct came into effect. The new regulations are available through the following link:


The process flowchart is available through the following link:


Please note the following pertinent information:

- Each College/School has a faculty Academic Administrator responsible for academic misconduct. For graduate students, it is the Associate Dean of CGPS.
- If there is a suspicion of academic misconduct, proceed as follows:
  - If the matter relates to a course (including requirements satisfied under 99X courses, such as dissertations, comprehensive exams, qualifying exams, practicums, etc.) and the instructor or supervisor consider the infraction to be minor, the instructor/supervisor should first speak to the student about the matter where
then, contact the Academic Administrator to determine if the matter should be resolved formally or informally. When the course instructor/supervisor and Academic Administrator agree that the infraction is minor, and if the student concedes, informal resolution may be agreed upon. The informal resolution form is to be signed, and a copy is to be provided to the Academic Administrator.

- In all other instances, or if the student does not concede to the allegation, the matter will proceed to a formal hearing as follows:
  - Any person affected by the alleged academic misconduct is able to submit a written allegation of academic misconduct against any current or former student to the Academic Administrator. Supporting documentation should be provided when/where appropriate.
  - On limited grounds as indicated in Section IV. 6. of the regulations, the Academic Administrator may dismiss an allegation. (Note that if the Academic Administrator dismisses the allegation, the matter may be appealed to the Provost, and the ruling of the Provost would be final.)

Note that:
- All suspicions of academic misconduct must be reported to CGPS.
- Informal resolution is only possible when an allegation is being made by the instructor.

10  ADMINISTRATIVE AND COLLEGE INFORMATION

10.1 IDENTIFICATION AND WEBSITE
The Graduate Program Coordinator will arrange to have your profile updated on the department website. It may require making an appointment with her to provide any necessary information. The College will arrange for a professional photographer to take your picture (a mug shot). This is arranged by Myrna MacDonald, and typically occurs three times per year (winter, summer, fall). Please arrange to have your picture taken as soon as possible. The Graduate Program Coordinator will advise of the date close to the time.

10.2 OFFICE SPACE
Office space is very limited in WCVM and is allocated by the College, not LACS department. You will be assigned a desk in one of several potential locations in the building. Clinical residents may be assigned a shared office. While we do our best to provide office space close to your supervisor and/or area of your work, it is not always possible. DO NOT CHANGE OFFICES UNLESS YOU HAVE RECEIVED PRIOR PERMISSION FROM THE GRADUATE PROGRAM COORDINATOR.

10.3 DOGS
Dogs are allowed in the building but must remain in offices either in a kennel or on a leash at all times. A sign must be placed on office doors at all times to indicate that a dog is in the room. Please be respectful of others working in the office space and leave your dog at home if required.

10.4 PERSONAL COMPUTERS
If you are not able to supply your own computer, a computer (PC) might be supplied by ITS depending on current availability. Please discuss with your supervisor. To gain access to the
University network, please contact the WCVM Information Technology Services department: wcvm_itsupport@usask.ca

10.5 OFFICE SUPPLIES
The LACS departmental office provides basic supplies such as binders, notebooks, pens, etc. Any supplies that are used for research must be charged to a research account, including paper and envelopes for letters, etc. Please talk to your supervisor regarding permission to bill to a research account.

10.6 USING THE LACS COPY ROOM (ROOM 2502) AND COMPUTERS
You can log in to the computers in the LACS resource room using your NSID and password. These computers are already set to print to the Xerox. There are supplies such as paper, pens, envelopes and paper available in this room (not to be used for research purposes).

10.7 XEROX AND PRINTERS
The LACS office staff will provide you with a security device to access the copier. To get access to print to the LACS Xerox from a personal computer, you need to see the ITS staff in WCVM Room 2524.

10.8 KEYS
If you lose your keys, please inform the department office assistants immediately so they can report the loss and order you new keys.

10.9 WCVM LIBRARY INFORMATION
The WCVM library is located on the third floor of WCVM. Journal stacks are now located in the Health Science Library across campus, however, study spaces are still available to students on the fourth floor. To find the hours of operation and access search engines for publications and journal articles, etc, please phone a librarian at 306-966-7205 (7205 if using a campus phone) or search online: http://library.usask.ca/vetmed/

10.10 RABIES VACCINATION
The WCVM Rabies Immunization Policy is designed to ensure that all faculty, students and staff of the WCVM working with animals, carcasses and animal tissues have the opportunity to be protected from exposure to rabies. All faculty, students and staff of the WCVM must be immunized against rabies or accept liability by signing an appropriate release (Appendix 15.9). Rabies immunization and titre verification will be available to all WCVM personnel free of charge. If you haven’t already, you will receive information from the Dean’s or LACS office regarding these immunizations. If you have any questions, please contact the Dean's office: 306-966-7455. Please see the Rabies form <15.9>

10.11 TUITION REFUND
Tuition must be paid until your thesis is approved by the CGPS. To avoid paying tuition for the upcoming semester, you should aim to submit your thesis to the CGPS and have all documents signed by the last day of a given term (April 30th, August 30th, December 31st). If you fail to meet
one of these deadlines, you will be charged tuition, but can be refunded a pro-rated amount based on the day all of the paperwork is submitted.

Please see the following links for the most current information:

https://cgps.usask.ca/policy-and-procedure/financial/Tuition-Fees.php#121GRADUATESTUDENTTUITION

10.12 LEAVES AND VACATION

Please see the CGPS Policies and Procedures Manual for the most current information regarding leaves of absence, including compassionate, medical and maternity, and vacations.


10.13 AWARDS AND SCHOLARSHIPS

There are numerous awards potentially available for graduate students at the U of S. You can look up awards that pertain to you at: https://cgps.usask.ca/policy-and-procedure/financial/graduate-student-funding.php#101CENTRALLYADMINISTEREDFUNDING

Contact the College of Graduate Studies and Research (CGPS) if you have any questions regarding these awards (i.e. your academic average that will be used for specific awards)

10.14 PAYING TUITION AND STUDENT FEES (PLUS SOME INFO ON TAXES)

Payment info and due dates: http://students.usask.ca/money/tuition-fees/pay.php#Payment

10.15 SOFTWARE ISSUES

The University has resources available for computer issues that may come up during your graduate program, such as with Blackboard, or other software programs. More information on these resources can be found on the following website: http://www.usask.ca/ict/help-support/it-support-services.php.

If you ever require assistance with your computer or software, the WCVM Information Technology department is willing to help but cannot guarantee a solution. Requisitions are dealt with first-come-first serve. To request a service appointment, please email wcvm_itsupport@usask.ca. A ticket number will be issued and your issue addressed as soon as possible. The WCVM IT department has experience with both Mac and PC systems.

10.16 CONFIRMATION OF ENROLLMENT

If you need to prove to a person or organization that you are a student, you can request a Confirmation of Enrolment letter:

https://students.usask.ca/academics/registration/coe.php#UsesofConfirmationofEnrolmentletter
10.17 HEALTH AND SAFETY AT THE WCVM

A link to some of the health and safety services available at the WCVM and on campus is available at: https://wcvm.usask.ca/the-college/health-safety.php#Health

11 TRAVEL AND CONCUR

11.1 TRAVEL ALLOTMENT / RESEARCH ASSISTANCE

Recipients of IPGF, EHRF and PEP fellowships are allotted funding to be used for travel to conferences and/or to assist with research costs. The amount is $1,300.00 per year and any unused funds can be rolled over for use in the following year for the entirety of your graduate program. The amounts are renewed each September, and any claims for reimbursement or travel must be submitted within two months using the Concur* system. You can see the department office assistants for help using Concur*. (Concur is the mandated University expense reimbursement and travel booking system. DO NOT BOOK TRAVEL OUTSIDE OF THIS ONLINE SYSTEM).

If you are not a recipient of the fellowships listed, please speak to your supervisor about funding that may be available through a research grant or scholarship.

11.2 CONCUR*

Concur is the system located in your PAWS account that enables you to submit Travel Requests (required for any travel in which an expense claim will be submitted). In Concur, you will need to set up the department office assistants as Expense Delegates and Travel Assistants. Please see the department office assistants for help in setting this up.

- Log into your PAWS account
- Under the “Admin Services” option, click on “Concur Travel and Expense”
- Click on “Go to My Concur”
- Once the department approves the request, flights, hotels and car rentals can be booked using Concur. After travel is complete, a Travel Expense Report can be submitted for reimbursement of travel expenses
- Reimbursements for food can be made based on actual costs (requires a receipt) or based on per diems. Discuss with your supervisor which is most appropriate.
- Concur can also be used for staff reimbursement for items purchased for research purposes.

EXPENSE REPORTS MUST BE SUBMITTED WITHIN TWO MONTHS OF TRAVEL.

12 HANDY EMAILS AND OTHER USEFUL INFO

12.1 CAMPUS EMAIL ADDRESSES

Emailing just about anyone on campus is typically firstname.lastname@usask.ca, however there are a few exceptions to this rule so it is best to look up an email address in the University directory rather than assume. However, all individuals on campus can be contacted by email using their NSID (example: JMG287); the email address is jmg287@mail.usask.ca
Emails (and other information) can be searched using the University’s home page search engine - in the People, places, web... search space, type in the person’s name or a campus telephone number to perform a search, or use the following link: https://www.usask.ca/search/.

**12.2 EMAIL GROUPS**

**LACS**
- wcvm_lacs_ca@usask.ca - all clinical associates in LACS
- wcvm_lacs_faculty@usask.ca - all faculty in LACS
- wcvm_lacs_gs@usask.ca - all graduate students and residents of LACS
- wcvm_lacs_residents@usask.ca - reaches only clinical residents of LACS
- wcvm_lacs_interns@usask.ca - reaches only clinical interns of LACS
- wcvm_lacs_staff@usask.ca - LACS Department Assistants, Lab Techs, etc.

**WCVM**
- wcvm_everyone@usask.ca - just like it says but does not undergraduate DVM students
- wcvm_itsupport@usask.ca - any issues or assistance
- wcvm_classifieds@usask.ca - you can use this to advertise housing for example

*Do not use "everyone" email addresses for personal business of any type. You must contact WCVM ITS to subscribe to a “classifieds” email address in order to place or receive emails for personal business.*

**13 AROUND CAMPUS**

**13.1 CAMPUS IDENTIFICATION (ID) CARD**

On campus, these cards are used in the libraries and at the gym.

The cards are issued through the University Bookstore located at 97 Campus Drive in Marquis Hall. The hours of operation are 8:30 AM – 5:00 PM, Monday to Friday.

*Students should take with them their departmental letter of offer (not your CGPS admissions letter) and a photo ID (passport, drivers license or two other pieces of ID such as a Social Insurance Card or Health Card). Replacement cards ID cards can be issued for $20.00, if required.*

Phone: (306) 966-4482
Website: https://www.usask.ca/bookstore/campus-id.php

**Order your student ID card online**

If you're getting an ID card for the first time, you can order your student ID card online and pick it up at the U of S Bookstore. Please wait one to two business days from when you submit the order form before picking up your card. Learn more and fill out the order form: https://students.usask.ca/essentials/student-id-cards.php#Whatisitfor
13.2 PARKING ON CAMPUS

Not all students are entitled to a parking permit. Students with a clinical component (residents, interns) are eligible for a parking tag because they have after-hours and on-call attendance. If you are a non-clinical graduate student, you can apply for a parking permit via the main Parking Services site: https://www.usask.ca/parking

If you are a resident or intern, please fill out the Staff/Faculty Parking Application: https://www.usask.ca/parking/stafffaculty/stafffacultyparkingapplication%20.php

Parking on campus costs approximately $80 per month and is automatically deducted from your payroll.

Phone: (306) 966-4502
Email: parking@usask.ca

13.3 INTERNATIONAL STUDENT AND STUDY ABROAD CENTRE (ISSAC)

The ISSAC is a central support unit and campus partner for all students, staff and faculty. ISSAC is dedicated to fostering a welcoming, globally aware and inclusive campus community. They can also assist with obtaining visa’s and extensions.

Arrival, Transition and Cultural Support
The International Student and Study Abroad Centre is a place for international students to:
• receive support with their transition into student life in Canada
• get involved in transition events and social activities
• access advising services, including immigration advice
• make friends from around the world
• attend workshops on topics such as employment in Canada and immigration
• get support throughout their studies
• inquire about supports during unexpected life events

Study Abroad, Awards and Travel Safety
ISSAC supports all USask students who wish to travel abroad with the university. Through ISSAC’s various programs and services, the centre is a place where students can:
• apply to go on exchange for one or two terms
• take part in summer programs offered by our international partners
• get travel safety support and complete the University’s pre-departure process
• apply for travel awards and conference funding
• get support while studying abroad with the university

You can access the ISSAC site here: https://students.usask.ca/international/issac.php

Contact ISSAC:
Room 80, Place Riel, 1 Campus Drive
(306) 966-4925
EMAIL: international.students@usask.ca or study.abroad@usask.ca
13.4 ACCESS AND EQUITY SERVICES
You are encouraged to register with AES as soon as possible if you identify with one or more of the following broad categories. Please contact: https://students.usask.ca/health/centres/access-equity-services.php
- Attention Deficit Hyperactivity Disorder (ADHD)
- Autism Spectrum Disorder
- Brain injury or concussion
- Chronic health issues (bowel diseases, epilepsy, migraines)
- Deaf or hard of hearing
- Learning disability
- Mental health (anxiety, depression, schizophrenia, eating disorders)
- Mobility or functional issues
- Low vision or legally blind
- Temporary issues (broken limbs)

13.5 GRADUATE STUDENT ASSOCIATION – HEALTH AND DENTAL BENEFITS INFORMATION
Phone: (306) 966-8471 or (306) 966-1295

Please visit these sites for the latest information:
- Main site: http://gsa.usask.ca/

13.6 DENTAL CLINIC
103 Wiggins Road
Appointments: (306) 966-5056 (Student Clinic)

13.7 STUDENT COUNSELLING SERVICES
Place Riel Student Centre – 1 Campus Drive
Phone: (306) 966-4920

13.8 STUDENT HEALTH SERVICES
Place Riel Student Centre – 1 Campus Drive
Reception and Clinical Services: (306) 966-5768

13.9 STUDENT CENTRAL
Student Central provides undergraduate and graduate students with holistic, centralized assistance with finances, registration and academic life.

Student Central Officers:
- provide confirmation of enrolment for federal and provincial student loans
- authorize emergency loans and financial appeals
- provide information on scholarships, bursaries and other financial information
• troubleshoot registration problems
• process late registrations, audit registrations and section changes
• help students navigate PAWS
• provide information about exams, transcripts and convocation

Staff can also help complete Pension Plan forms, provide information on student records to third parties with appropriate authorization and assist with personal information changes. In addition to these direct services, Student Central Officers are information specialists who guide students to campus-wide services and resources. For more information: call (306) 966-1212 or email: askus@usask.ca

14  AT THE END OF THE LINE......

14.1 OFFICIAL TRANSCRIPTS
You can order official transcripts through your PAWS account at a cost of $10.00

14.2 PAWS ACCOUNT CLOSURE
If an individual has taken 30 credit units or more their PAWS account will stay active indefinitely as they are considered alumni. Contact University Advancement to request at #5186 or email advancement@usask.ca

14.3 WHEN YOUR PROGRAM IS COMPLETE – A CHECKLIST
• Return keys to LACS office, pharmacy, clinic, etc.
• Return parking tag to parking services (if applicable)
• Return cell phone or pager to VMC Office (if applicable)
• Clean out your space for the next user
• Maintain your PAWS account (if 30 cu minimum)
15 APPENDICES

15.1 GRADUATE STUDENT PROGRESS DOCUMENT (MSc-PROJECT)

LACS Graduate Student Progress Report (Advisory Committee update)
Version: MSc-Project (clinical residents)
April 2017

Instructions:

• This report is to be completed by graduate students (residents) enrolled in a project-based (non-thesis) Master of Science (MSc project) degree, with assistance from their supervisor.
• It is to be electronically submitted to all members of their advisory committee at least 7 days prior to the committee meeting.
• New students are to complete sections 1-11 to the best of their ability. Section 12 is to be completed as research plans are finalized.
• Section 13 must be updated by all students for each meeting. These will assist the advisory committee in determining if the student is making sufficient progress.
• As the research and residency progress, appropriate sections should be updated to assist advisory committee members in monitoring progress. Students should track all changes made for each committee meeting.

1. Date of report: Nov 1, 2017
2. Name: John Doe
3. Program: MSc-Project
4. Title of research project: “Characterization of extracurricular habits of LACS graduate students”
5. List of members of advisory committee (minimum 3 including grad chair and supervisor):

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Role</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Grad Chair</td>
<td>LACS</td>
<td>LACS Grad chair</td>
<td><a href="mailto:Grad.chair@usask.ca">Grad.chair@usask.ca</a></td>
</tr>
<tr>
<td>Dr. John Smith</td>
<td>LACS</td>
<td>Supervisor</td>
<td><a href="mailto:John.smith@usask.ca">John.smith@usask.ca</a></td>
</tr>
<tr>
<td>Dr. Gus Smith</td>
<td>Dept LACS</td>
<td>Regular Member</td>
<td><a href="mailto:Gus.smith@usask.ca">Gus.smith@usask.ca</a></td>
</tr>
</tbody>
</table>

6. Program dates:
• Start date of graduate program: July 1, 2017
• Projected end date of graduate program: June 30, 2020
• Expected program duration: 36 months
• Number of months since start of program: 8 months
7. A program of studies* (a list of courses and credit hours approved by committee):

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course title</th>
<th>Credit units</th>
<th>Year/Term</th>
<th>Grade (when completed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VLAC 990</td>
<td>Seminar</td>
<td>0</td>
<td>2016/17 - Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>VLAC 994</td>
<td>Research</td>
<td>0</td>
<td>2016/17 - Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>GSR-960</td>
<td>Introduction to Ethics and Integrity</td>
<td>0</td>
<td>2016/17 - Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>GSR 962</td>
<td>Ethics and Integrity in Animal Research</td>
<td>0</td>
<td>2016/17 - Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>VLAC 891</td>
<td>Adv. Clinical Practice 1</td>
<td>4</td>
<td>2016/17 - Term 1 &amp; 2</td>
<td>Incomplete</td>
</tr>
<tr>
<td>VLAC 892</td>
<td>Adv. Clinical Practice 2</td>
<td>4</td>
<td>2017/18 - Term 1 &amp; 2</td>
<td>Incomplete</td>
</tr>
<tr>
<td>VLAC 893</td>
<td>Adv. Clinical Practice 3</td>
<td>4</td>
<td>2018/19 - Term 1 &amp; 2</td>
<td>Incomplete</td>
</tr>
<tr>
<td>VLAC 881</td>
<td>Clinical trial design &amp; analysis</td>
<td>3</td>
<td>2016/17 - Term 2</td>
<td>Incomplete</td>
</tr>
<tr>
<td>VLAC XXX</td>
<td>Diseases of camelids</td>
<td>3</td>
<td>2016/17 - Term 1</td>
<td>Incomplete</td>
</tr>
<tr>
<td>VLAC XXX</td>
<td>Course title XXX</td>
<td>3</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>VLAC XXX</td>
<td>Course title XXX</td>
<td>3</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>VLAC XXX</td>
<td>Course title XXX</td>
<td>3</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>VLAC XXX</td>
<td>Course title XXX</td>
<td>3</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

*Required program credit units: MSc (project) = 30

8. Titles and dates of VLAC 990 seminar

<table>
<thead>
<tr>
<th>Year of program</th>
<th>Date of seminar</th>
<th>Title</th>
<th>Supervisor attended (y, n)</th>
<th>Feedback given</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Funding source for research project(s): Sask ADF – project number #2015001

10. Animal care protocol number(s) and faculty applicant:
11. Background, relevance and justification for proposed research (maximum 1 page including references):

12. Description of research:
- *This section forms the basis of the required paper and is to be updated for each committee meeting. For students starting their program, this section must be completed by their first committee meeting and should reflect their intended research plan over the duration of their program. For results, state the anticipated results of research to be completed.*
- *MSc (project) students require 1 publication quality paper that is properly formatted for the targeted journal. The paper does not need to be submitted at the time of examination, but if it is, it will be an asset.*

  a) Specific objectives:

  b) Methods/experimental design:

  c) Analysis (statistical, laboratory):

  d) Results:

  e) Discussion/Conclusions:

13. List progress made since your last committee meeting (or beginning of program for new students) in terms of: a) PROGRAM OF STUDIES, b) CLINICAL COMPETENCIES, AND c) RESEARCH. Please complete in bullet form.

a) PROGRAM OF STUDIES

<table>
<thead>
<tr>
<th>Progress made in last 6 months</th>
<th>Anticipated progress for next 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Completed GSR 960 &amp; 962</td>
<td>• Complete VLAC XXX</td>
</tr>
<tr>
<td>• Enrolled in VLAC XXX</td>
<td>• Start VLAC YYY</td>
</tr>
</tbody>
</table>

b) CLINICAL COMPETENCIES

<table>
<thead>
<tr>
<th>Progress made in last 6 months</th>
<th>Anticipated progress for next 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>• XX weeks of on clinic time</td>
<td>• complete first of 2 case reports</td>
</tr>
<tr>
<td>• XX cases (or farm visits)</td>
<td>• prepare and deliver undergraduate</td>
</tr>
<tr>
<td>• online surgical case log up to date and submitted appropriately</td>
<td>lecture</td>
</tr>
<tr>
<td>• presented in XX journal dubs</td>
<td>• present t departmental seminar</td>
</tr>
<tr>
<td>• attended xx journal clubs</td>
<td></td>
</tr>
<tr>
<td>• presented in xx case rounds</td>
<td></td>
</tr>
</tbody>
</table>
• attended xx case rounds

c) RESEARCH

<table>
<thead>
<tr>
<th>Progress made in last 6 months</th>
<th>Anticipated progress for next 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Experiment 1 was completed, blood samples were submitted to the laboratory for testing, statistical analysis is substantially complete, manuscript will be drafted by January 1st</td>
<td>• Experiment 2 is designed and recruitment of animals underway. Research funding was confirmed. Anticipate completing this experiment by March 31st. • submit research abstract for presentation at scientific meeting</td>
</tr>
</tbody>
</table>

Discipline-specific residency requirement can be found at the following URLs:

ACVIM: http://www.acvim.org/Certification/GIG

• Please refer to the version of the GIG that corresponds to the start year of your residency program.

ACVS: https://www.acvs.org/residents

15.2 GRADUATE STUDENT PROGRESS DOCUMENT (MSc-THESIS & PhD)

LACS Graduate Student Progress Report (Research Advisory Committee update)
Version: MSc-Thesis & PhD
April 2017

Instructions:
• This report is to be completed by the graduate student, with assistance from the supervisor, and electronically submitted to all members of the research advisory committee (RAC) at least 7 days prior to the committee meeting.
• New students are to complete sections 1-13 to the best of their ability. Section 14 will be completed as research plans are finalized. More senior students will complete sections 15-16 as their research draws to a conclusion.
• Section 17 must be updated by all students for each meeting. These will assist the RAC in determining if the student is making sufficient progress.
• As the research progresses, appropriate sections should be updated to assist advisory committee members in monitoring progress. Students should track all changes made for each committee meeting.

1. Date of report: Nov 1, 2016
2. Name: John Doe
3. Program: PhD, MSc-Thesis
4. Title of research project: “Characterization of extracurricular habits of LACS graduate students”
5. List of members of advisory committee:

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Role</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Grad Chair</td>
<td>LACS</td>
<td>LACS Grad chair</td>
<td><a href="mailto:grad.chair@usask.ca">grad.chair@usask.ca</a></td>
</tr>
<tr>
<td>Dr. John Smith</td>
<td>LACS</td>
<td>Supervisor</td>
<td><a href="mailto:john.smith@usask.ca">john.smith@usask.ca</a></td>
</tr>
<tr>
<td>Dr. Ted Smith</td>
<td>Dept, Univ of Someplace</td>
<td>Cognate Member</td>
<td><a href="mailto:tedsmith@someplace.edu">tedsmith@someplace.edu</a></td>
</tr>
<tr>
<td>Dr. Gus Smith</td>
<td>Dept LACS</td>
<td>Regular Member</td>
<td><a href="mailto:Gus.smith@usask.ca">Gus.smith@usask.ca</a></td>
</tr>
</tbody>
</table>

6. Program dates:

- Start date of graduate program: **July 1, 2017**
- Projected end date of graduate program: **June 30, 2019**
- Expected program duration: **24 months**
- Number of months since start of program: **8 months**
- Qualifying examination required (PhD only):  No  Yes  Date if required __________
- Date of comprehensive examination (PhD only): __________

7. A program of studies* (a list of courses and credit hours approved by committee):

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course title</th>
<th>Credit units</th>
<th>Year/Term</th>
<th>Grade (when completed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VLAC 990</td>
<td>Seminar</td>
<td>0</td>
<td>2016/17-Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>VLAC 994 or 996</td>
<td>Research</td>
<td>0</td>
<td>2016/17-Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>GSR-960</td>
<td>Introduction to Ethics and Integrity</td>
<td>0</td>
<td>2016/17-Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>GSR 962</td>
<td>Ethics and Integrity in Animal Research</td>
<td>0</td>
<td>2016/17-Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>Safety resources</td>
<td>Biosafety, lab safety (as required)</td>
<td>0</td>
<td>2016/17-Term 1</td>
<td>n/a</td>
</tr>
<tr>
<td>VLAC 881</td>
<td>Clinical trial design &amp; analysis</td>
<td>3</td>
<td>2016/17-Term 2</td>
<td>Incomplete</td>
</tr>
<tr>
<td>VLAC XXX</td>
<td>Diseases of camelids</td>
<td>3</td>
<td>2016/17-Term 1</td>
<td>Incomplete</td>
</tr>
</tbody>
</table>

*Required program credit units: MSc = 12; PhD = 6 above MSc (18 in total)
8. **Titles and dates of VLAC 990 seminar**

<table>
<thead>
<tr>
<th>Year of program</th>
<th>Date of seminar</th>
<th>Title</th>
<th>Supervisor attended (y, n)</th>
<th>Feedback given</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. **Funding source for research project(s):** Sask ADF – project number #2017001

10. **Animal care protocol number(s) and faculty applicant:**

11. **Background, relevance and justification for proposed research (maximum 1 page including references):**

12. **Overarching research hypothesis (encompassing entire thesis for MSc and PhD students):**

13. **Overarching research objectives (encompassing entire thesis for MSc and PhD students):**

14. **Description of research:**

   - *This section is to be updated for each committee meeting. For students starting their program, this section must be completed by their first committee meeting and should reflect their intended research plan over the duration of their program. For results, state the anticipated results of research to be completed.*

   - *Please use different colored text to indicate new material. Use of track changes in the final version provided to the committee is not encouraged as it becomes very messy over time.*

   - *Each project/chapter/experiment will likely result in separate manuscript although not all will be necessarily submitted for publication, or more than one experiment may be combined into a single published paper. MSc students require minimum 2 chapters that are both unique and independent. PhD students require 3 or more chapters that are unique and independent which collectively contribute to a novel body of work.*

**Experiment/chapter 1:**

   f) *Intro/justification:*

   g) *Specific objectives (this experiment):*

   h) *Methods/experimental design:*
i) Analysis (statistical, laboratory):

j) Results:

k) Discussion/Conclusions:

Experiment/chapter 2:

a) Intro/justification:

b) Specific objectives (this experiment):

c) Methods/experimental design:

d) Analysis (statistical, laboratory):

e) Results:

f) Discussion/Conclusions:

Experiment/chapter 3:

a) Intro/justification:

b) Specific objectives (this experiment):

c) Methods/experimental design:

d) Analysis (statistical, laboratory):

e) Results:

f) Discussion/Conclusions:

Experiment/chapter 4:

g) Intro/justification:

h) Specific objectives (this experiment):

i) Methods/experimental design:

j) Analysis (statistical, laboratory):

k) Results:

l) Discussion/Conclusions:

15. General conclusions (entire thesis):

16. Limitations and future research:

17. List progress made since your last committee meeting (or beginning of program for new students) in terms of: a) PROGRAM OF STUDIES, and b) RESEARCH. Please complete in bullet form.
a) PROGRAM OF STUDIES

<table>
<thead>
<tr>
<th>Progress made in last 6 months</th>
<th>Anticipated progress for next 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Completed GSR 960 &amp; 962</td>
<td>• Complete VLAC XXX</td>
</tr>
<tr>
<td>• Enrolled in VLAC XXX</td>
<td>• Start VLAC YYY</td>
</tr>
</tbody>
</table>

b) RESEARCH

<table>
<thead>
<tr>
<th>Progress made in last 6 months</th>
<th>Anticipated progress for next 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Experiment 1 was completed,</td>
<td>• Experiment 2 is designed and</td>
</tr>
<tr>
<td>blood samples were submitted</td>
<td>recruitment of animals underway.</td>
</tr>
<tr>
<td>to the laboratory for testing,</td>
<td>Research funding was confirmed.</td>
</tr>
<tr>
<td>statistical analysis is</td>
<td>Anticipate completing this experiment</td>
</tr>
<tr>
<td>substantially complete,</td>
<td>by March 31st.</td>
</tr>
<tr>
<td>manuscript will be</td>
<td></td>
</tr>
<tr>
<td>drafted by January 1st</td>
<td></td>
</tr>
</tbody>
</table>

15.3 STUDENT GRADUATION CHECKLIST

Completion of the following checklist is required in order for you to graduate:

— ALL students: online application to graduate can be found on your PAWS account under Browse Channels.

— All thesis and dissertation students: submit the final revised and approved version of the thesis or dissertation to the ETD Site http://etd.usask.ca/

— all students who plan to attend the Convocation Ceremony: order ceremony tickets and a graduation gown (once email from the Convocation office comes through your PAWS email account telling you that the window is open for ordering)

“How to Submit an ETD” information site: http://www.usask.ca/CGPS/for_students/etd.php
“Where to submit” site – http://etd.usask.ca/

Important Information for Graduating Students

1. Complete the Online Application to Graduate:
   Deadlines: March 31 for Spring Convocation / August 31 for Fall Convocation
   — Available on your PAWS account under Browse Channels. Thesis and Dissertation titles can also be entered on this application; however, no formatting is yet available. A Convocation Officer will check and edit each title.

2. Submit all required documentation indicating program completion to CGPS
Deadlines: April 12 for Spring Convocation / September 19 for Fall Convocation

Thesis/Dissertation Students: Once you have successfully defended your thesis or dissertation, there are several forms that your supervisor, committee members, and graduate chair must complete and sign and submit to the Convocation Officer in CGPS, C180 Administration Building.

*Course-based and Project students: Check with your department to ensure that you have completed all requirements.

Some general notes:

- Course registration must be maintained until all requirements for graduation are complete. You must be registered in the term in which you defend and until all requirements have been met, including the submission of all required documents.

- Ensure that you are within the allowed timeline for completion of your degree. This timeline begins with the first class credited towards the degree. Extensions to complete requirements may be granted; contact your academic unit to apply for an extension or to inquire about your time in program status. If you are on extension at the time of your defence, CGPS will register you in the thesis course for the following term until you have finished all requirements. You will be responsible for tuition and student fees.

- If you are a current recipient of a graduate scholarship from CGPS, you must notify the Director of Awards when you will complete your degree. Students are financially responsible for reimbursing the University for any payments given in error.

- Tuition is prorated monthly. So for example if you complete by the 2nd day of a month, you will not receive a tuition rebate for that month, you must complete by the last day of the previous month. Students need to submit a form to be refunded any tuition money. The form can be found here: https://students.usask.ca/documents/awards/Request%20for%20Refund.pdf

- Information about the graduation list will be available approximately three to four weeks before the ceremony – once CGPS has the chance to enter all information and do all the checks for all graduate students.

- If you defend in Term 1 and complete all program requirements and submit all forms by the registration Term 2 deadline, you will not need to register in Term 2. If you have any outstanding requirements, you will need to register in Term 2.

- You can check if your documents are complete for graduation with your graduate secretary/administrative assistant located in your department or by accessing your account in DegreeWorks.

- If you are eligible to receive tuition refund, a Graduate Programs Advisor will initiate this process on your behalf. Contact Student Accounts to receive your refund once the refund credit appears on your PAWS account. In order to receive your refund you must fill out the form available at: https://students.usask.ca/documents/awards/Request%20for%20Refund.pdf
• If you require written confirmation that you have completed your degree before you receive your parchment, please email grad.studies@usask.ca with the request, including the type of letter needed and a mailing address. **Please allow ample time for processing of your request.**

3. **Submit the final approved version of your Thesis/Dissertation/Project to the ETD Site:**

   Deadline: **April 12** for Spring Convocation / **September 19** for Fall Convocation

   All Master’s Thesis and Ph.D. students are now required to submit their theses and dissertations to the Electronic Thesis and Dissertation Site. Project students are now able to submit their projects to the ETD site as well. Please see the site at [http://etd.usask.ca/](http://etd.usask.ca/) for detailed information about this process.

   Please name the document in the following format:
   
   **LastName, FirstName_Degree_thesis_Month_Year**

   **Notes about the ETD:**
   
   • Supervisors and academic units may still require bound copies – please check with your home department. **CGPS does not require bound copies.**
   
   • Supervisors and academic units have the option to delay publication of a thesis/dissertation for copyright or other reasons. Students will have options to limit access to their ETD. Any request to modify these restrictions **must** be submitted before the allowed access time has expired. Contact 966-1987 if further explanation is required.

   **Notes on Thesis Formatting**
   
   • **NO CONVOCATION DATE IS TO BE INCLUDED ON THE TITLE PAGE.** The only date is in your copyright line. An example would be: “Copyright Jonny Smith, December, 2007 All Rights Reserved”
   
   • Use Roman Numerals for the preface pages of your thesis. Roman numeral “i” is to be placed on the Permission to Use page and continues through to the end of list of tables. Arabic numerals then begin on Chapter 1, page 1 and throughout the rest of your thesis. **Do not include the title page in the numbering!**
   
   • Landscape Pages need to be numbered the same way as the rest of your thesis. If your table is too wide for portrait pages and you must switch to landscape position, the page number must be in the same position as the other portrait pages (middle bottom of the page) in the rest of the thesis. **An easy fix** for this is to suppress the page number for that page; insert a text box with no borders in the position (middle bottom). Then insert the page in this box and change the text direction.
   
   • If you are having trouble with the conversion changing your page numbering, divide your thesis into 3 files (named very clearly as to their order) and convert to PDF. A suggested grouping is the title page (with no page number at all), then the preface pages (with roman numerals) and finally the rest of the thesis with the Arabic numerals. The
Convocation Office is able to put the three files together – as long as they are clearly named.

- The CGPS Electronic Thesis site (http://www.usask.ca/CGPS/for_students/thesis.php ) has Microsoft templates for formatting theses. Please feel free to download the zip files for use in your thesis preparations. Check with your unit as well as they may have already taken the template and adjusted it to suit your unit’s specific needs or styles.
- The Learning Commons in the Main Library has computers with Adobe and other programs and are able to assist you in converting to Adobe PDF.
- Submit directly to the ETD site where the Convocation Officer can check the formatting of your thesis. The Officer can then advise you about any needed changes. This site can be accessed from anywhere in the world and will accept just about any size file that may be attached.

4. About the Convocation Ceremony

- Information about the ceremony is available at https://students.usask.ca/academics/graduation.php#Ceremonies
- This site will have information about tickets, ceremonies, where to meet, photos, etc. It is adjusted for the next ceremony approximately a month after current ceremonies.
- Announcements will also come through your PAWS email account regarding graduation.
- In order to order tickets online for the ceremony – you must have a current address on your PAWS account. Go to paws.usask.ca, click on address, click on “My Mailing Address”, and ensure that the most current address is listed and “move to top”. The address at the top is where your degree diploma will be mailed if you do not attend the graduation ceremony. It is the student’s responsibility to ensure this information is accurate and complete. This address change should be done at the time of submitting your application to graduate online.
- The Ph.D. gowns are black with green silk lining and bright gold trim. Please keep this in mind when choosing your attire for the ceremony.
- All other degrees have black robes with hoods of different colours (some of these may be silk – some may be cotton, however, the colour of the hood is of more importance than the type of fabric). Appropriate dress wear should be worn as well, as the black robes have no sleeves.
- Purses, handbags, etc are NOT allowed in the backstage area. There are NO facilities available to store valuable articles so please leave any items with a family member or in your vehicle.

Contact Information:
(306) 966-5751, C180 Administration Building

Students who wish to arrange for others to submit their post-defence paper work need to complete an authorization form:
No information about a student can be released to a third party without the student’s authorization.
EXAMPLE COVER:

MULTI-SPECIES EVALUATION
OF HUMAN RISK OF
WEST NILE VIRUS INFECTION,
SASKATCHEWAN, 2003

YOUR NAME HERE

2005
EXAMPLE SPINE:

HUMAN RISK OF WNV, SK, 2003

2005

U. NAME
15.5 CGPS MANUSCRIPT STYLE THESIS GUIDELINES

Consistent with CGSR Policies and Procedures (section 5.3.4), all theses must be written in good scholarly style and conform to the requirements approved by the academic unit. The following are intended to act as guidelines for minimum requirements in the creation of a manuscript style thesis. Academic units may choose to provide additional discipline-specific instructions.

Introduction - Principles of a Thesis

The thesis is an essential element of a research-based graduate degree. The thesis serves as evidence that a student is able to describe, explain and defend the research work that he/ she has undertaken, and how it contributes to and furthers the knowledge within the discipline. The thesis describes why the research work was undertaken, justifies the methods used, and provides an interpretation and analysis of the results. If a student is successfully able to defend the thesis, it prepares him/ her to undertake further research in the field of study, and to make significant contributions to the field of knowledge. With these principles in mind, a thesis should be presented as a single, cohesive, consistently formatted and unified document, which clearly articulates the progression of a student’s chosen field of research. A thesis presents a student’s research work as a whole, rather than discrete pieces, and the student should be able to justify and defend each part of it, from the introduction through to the conclusion.

Manuscript-Style Thesis:

With the permission of his/ her research Advisory Committee, a student may submit a manuscript-style thesis in a style approved by the academic unit. A manuscript-style thesis is a document that includes one or more scholarly manuscripts, written in a manner suitable for publication in appropriate venues. A manuscript-style thesis allows a student to prepare and present their graduate research work in a format that facilitates publication.

A manuscript-style thesis is not, however, merely a collection of published or publishable papers, and it must meet the principles and objectives required of a thesis (see CGPS Policies and Procedures section 5.3.4).

Format:

Consistency of format and style is essential in a manuscript-style thesis to produce a coherent and defendable document which will satisfy the principles of a thesis. Consistent formatting will help maintain the integrity of the document as a cohesive whole and sustain the clarity required to facilitate the review of the thesis by the Advisory Committee and Examining Committee. A consistent style and format must therefore be maintained throughout the thesis.

- The format and style of a thesis may differ from department to department, and from discipline to discipline. The student’s academic unit will identify an acceptable format for the thesis and communicate it to the student, and the style selected must be maintained throughout the thesis.
• Accepted rules of grammar must be followed, and forms of spelling and punctuation must be used with consistency.

• Even if a manuscript was published in a particular format, when included as a chapter in a thesis, it will match the formatting standard of the thesis. For example, it is expected that the numbering of tables and figures within chapters (see details below) should be done for the thesis as a whole, which means that there should not be two tables or two figures in the thesis with the same number.

• Previously published manuscripts should not simply be inserted into the thesis as copies of journal pages. To ensure consistency and clarity in presentation, previously published materials should be assigned page numbers that are sequential within the thesis, and page numbers as they may have been assigned within the publication must be removed. The page numbers assigned within the publication will be included in the citation.

• Guidelines on more general aspects related to formatting and style, including suggested arrangement of preliminary content, referencing, layout of figures and chapters, etc. are available on the Electronic Theses and Dissertations page of the CGSR website.

Content:

The thesis is a single cohesive document that presents and describes the entirety of the research work that was conducted as part of the graduate degree. Individual manuscripts in a manuscript-style thesis should fit together into a single body of work to achieve the goals of the thesis.

• The manuscript-style thesis, as with any thesis, will develop a general theme that presents the candidate’s research work; it must include an introduction that outlines the theme and objectives of the research, and a conclusion that draws out its overall implications.

• The different chapters or sections will contribute to the general theme, but the substance of each chapter should focus on a different aspect of the research.

• As the thesis needs to be a single body of work, there needs to be some content of the thesis that deals with the thesis as a whole and unifies it into a single document. How this content is arranged may vary from discipline to discipline, and from thesis to thesis (see details below).

• Chapters of the thesis need to be numbered sequentially. Subsections, tables, figures and equations within each chapter will be assigned a unique number, (for example use the chapter number followed by a sequentially increasing number, separated by a period, i.e. 1.1, 1.2, 1.3…), with no two elements of the same type having the same number. This will help ensure the clarity of the document and ease of navigation for the Examining Committee.

• References for the thesis can either be listed chapter-by-chapter, or be presented in a single list at the end of the thesis. If the chapter-by-chapter approach is adopted, each chapter, including chapters that are not manuscripts (such as the introduction and concluding chapters), requires a list of references. If a single list appears at the end of the thesis, all references cited in the component manuscripts must be included in the list of references at the end of the thesis.

A particular manuscript can only be included in a student’s thesis if that student’s Advisory Committee agrees that it is appropriate to be included in the thesis.
Co-authored manuscripts can be included in the thesis, if acceptable to the student’s Advisory Committee and if approved by the academic unit:

- The Advisory Committee will confirm that the student has made a substantial contribution to each of the manuscripts, and determine that the paper merits inclusion in the thesis. There is no limit to the number of co-authors.

- To assist the Examining Committee in assessing work involving multiple authors, the student should include an explicit statement in the thesis describing his/her original contributions to the paper in detail, and justifying the inclusion of the paper in the thesis. Individual disciplines and academic units may require further acknowledgment of contributions.

- There may be cases when the student, supervisor(s) and other research collaborators are co-owners of the intellectual property presented within the thesis, and they may also be co-authors of the manuscript(s). Prior to preparing the thesis, all associated individuals should understand their respective obligations related to data confidentiality (if applicable), copyright, and authorship (see regulations below). The nature of these obligations will vary with discipline and with the specific policies of the academic unit.

- With the approval of the academic unit, the same manuscript may appear in more than one thesis if multiple students are co-authors on the manuscript, and each made a significant contribution to the research and preparation of the manuscript. Where there may be two students who will include the same manuscript in two separate theses, each student should acknowledge the existence of the other thesis, and the fact that the manuscript appears in both theses.

- In a manuscript-style thesis, it is expected that the author of the thesis will be the lead author on at least one manuscript included in the thesis.

- The manuscript-style thesis may include both published and unpublished manuscripts. However, the publication status of each manuscript should be clearly indicated:

  - For each published article, a complete citation, including first and last page numbers and recognition of the copyright holder, should be printed at the beginning of the manuscript.

  - For a paper that has been submitted but not yet published, a statement concerning the status of any dealing or contemplated dealing with the copyright or the auspices under which the work was prepared should be printed at the beginning of the manuscript.

  - If the included manuscript differs in content from a published version of the manuscript, this difference should be briefly described in an addendum. If no content has changed from the published version, there should still be a statement that indicates that the document has been reformatted from the original version for inclusion in the thesis.

  - There can be alternate ways in which to revise a manuscript that is presented as a chapter within a thesis. The manuscript itself may be revised, or an addendum explaining the modifications may be inserted within the thesis.
Thesis content falls into the following categories:

1. **Introduction and Literature Review** - The purpose of the introduction and review of literature is to establish the student’s familiarity with relevant work in the field; establish the purpose and objectives of the research; place the research within the larger context of the discipline; and provide overall context for the research manuscript(s). The introduction should establish the central aim and themes of the research and explain how these are addressed in the various manuscripts making up the thesis. In some disciplines, a separate literature review (possibly as a distinct manuscript) will be a stand-alone chapter, rather than be included in the Introduction; while in other disciplines, the literature review may be incorporated as part of the manuscripts.

2. Methods (optional) – If appropriate to the discipline, a discussion of methodology, either as its own chapter, a section in the Introduction or, depending on the context, a section in each individual manuscript can be a necessary part of the thesis.

3. Transition - The manuscripts should fit together in the thesis much as chapters would normally fit together in any thesis. Specifically, it needs to be clear to the reader how each manuscript included in the thesis contributes to the overall objectives of the thesis outlined in the abstract and introduction, and should tie each manuscript to the overall aims of the research project. There needs to be a clear and logical progression from one chapter to the next, so that the thesis functions as a complete and unified whole with a clear singular research project as its focus. How the author of the thesis accomplishes this task is at the discretion of the author, the Advisory Committee and, if available, the policies of the academic unit. It may be useful to have short transition sections appended either to the beginning or end of appropriate manuscripts that explain the progression from one manuscript to the next; however, this transition may also be accomplished in the introductory and concluding chapters.

4. Manuscript(s) - Each manuscript should have its own chapter. While the manuscript may be a published document, the format of the document in its role as a component of the thesis must be consistent with the thesis as a whole, regardless of the format in which the document was published (see comments on formatting above). The manuscript content may also differ from the published version, and may include additional tables, figures or text, as required to ensure clarity. The format of the manuscript would normally include a brief introduction and statement of the research problem; synthesis of the literature; description of research methods and study area (if applicable); analysis, and presentation and discussion of results. Manuscript length may vary and is at the discretion of the Advisory Committee, although the intent is to emulate the norms of publication or presentation in the discipline.

5. Discussion and Conclusions - The final chapter revisits the main contributions or findings of the research manuscript(s) within the broader context of the literature and discipline, linking the findings of each manuscript back to the literature identified in the introduction. Directions for future research are normally identified in this section, as well as any limitations to the research overall. Each thesis is required to contain a concluding section that relates the individual manuscripts, and the conclusions drawn in those manuscripts, to the overarching goal of the thesis.

6. Appendices and Supporting Documentation - Material that is not part of the research manuscript(s) but deemed necessary by the student’s Advisory Committee as supporting documentation (e.g. research instruments; raw data summaries; copyright permissions, additional site descriptions, etc.) should be included in Appendices. If there are changes suggested to published manuscripts (i.e., chapters of the thesis) through the defence process,
these changes may be addressed and included in a separate appendix at the end of the thesis, if copyright issues are a concern, or if it disrupts the flow of a published manuscript to make the changes within the published chapter itself. This consideration is for published manuscripts only.

Although the Advisory Committee will discuss and approve the number and focus of manuscripts at the proposal stage, this may be modified by agreement of the committee as the research progresses. Such revisions must be approved by the supervisor and Advisory Committee.

Review of the Thesis

- The merits of the manuscript-style thesis will be judged on the criteria outlined at the beginning of this document and by the defence processes outlined for all theses. The judgement of the thesis rests with the Examining Committee (Advisory Committee plus the external examiner) and is independent of and separate from any judgement (favourable or unfavourable) related to the acceptance of individual papers for publication or presentation within the relevant discipline.

- Similar to all other theses, everything in the thesis is subject to review, criticism and possible revision, following the oral defence. Notwithstanding the status of a manuscript considered for publication by other means, the form and content of the thesis must be deemed acceptable by the external examiner and a majority of the Examining Committee in order for the student to complete the degree requirements.

Copyright

It is the responsibility of the student and any co-authors of material included in the thesis to obtain from all copyright holders written permission to include copyrighted material in the thesis. Written permission must be obtained from any co-author who retains copyright or from the person to whom the co-author has assigned copyright. Any payment which might be required by the rights holder(s) is the responsibility of the student. The thesis should indicate that copyrighted and/or co-authored material have been printed either “with permission” or “under license” (either by a statement in the preface or on the first page of each article). Copies of the letters of permission or licenses must be available upon request and may be included within the thesis as appendices. Given this, it would be good practice for students to inform the journals to which they submit manuscripts that these manuscripts may eventually be included in a manuscript-style thesis.

15.6 TEMPLATES FOR THESIS TRANSITION SECTIONS

15.6.1 For chapters that are already published

Chapter 4. Diagnostic investigation of porcine periweaning failure-to-thrive syndrome in a farm from Saskatchewan: lack of compelling evidence linking to common porcine pathogens

This chapter presents a diagnostic investigation performed in a farm from Saskatchewan as the first step of the PFTS investigation. Several highly prevalent histological changes were found in this farm. And none of the tested pathogens were clearly associated with PFTS pigs in this farm.
Copyright statement: Chapter 4 has been published and is reproduced here with the permission of the copyright owner (American Association of Veterinary Laboratory Diagnosticians)


Author contributions: Huang and Harding were responsible for the experimental design and necropsies. Huang contributed to the histological evaluation of tissues. Gauvreau was the veterinarian of the farm and contributed intellectually of the discussion of potential etiologies of PFTS.

15.6.2 For chapters that have not been published
Chapter 5. Pathological features and proposed diagnostic criteria of porcine periweaning failure-to-thrive syndrome (PFTS)

The investigation from Chapter 4 revealed several highly prevalent lesions, but whether these are consistent between different farms affected by PFTS is unknown. This is a very important question to answer. In Chapter 5, a second investigation involving 8 farms is presented. The results confirmed that the pathological findings between different farms are consistent. This finding further justifies the proposal of PFTS as a clinical syndrome. Consistent with the results of the previous study (Chapter 4), there is a lack of evidence that any tested pathogen in Chapter 5 is causally associated with PFTS.

Copyright statement: This Chapter has been submitted for publication. The copyright of this Chapter will belong to the journal it is published in.


Author contributions: Huang and Harding performed farm visits, necropsies, data analysis and manuscript writing. Huang evaluated the histopathology and performed laboratory tests.
Student-Supervisor Agreement
for thesis-based degree programs (May 2017)

This document has been adapted from guidelines created by the University of Manitoba Faculty of Graduate Studies and the Canadian Association of Graduate Studies.

NOTE:

The student should be the main party responsible for the study program and the performance of related activities, such as the submission of a Master’s or Doctoral thesis, and should demonstrate a deep commitment to the program of study and interest in the selected research topic.
**Introduction**

This form is designed to provide a framework for discussion between the Supervisor(s) and the Graduate Student and to establish guidelines to govern their relationship. It may be revisited at any stage of the Student’s graduate program to accommodate for changes in the Student-Supervisor(s) relationship and/or the research project.

The Supervisor(s)-Student relationship involves mentoring, support, career development, as well as academic oversight. The Supervisor(s) and Student should work together to arrive at jointly acceptable terms to establish their relationship.

The completed form is to be regarded as an aid to planning and finishing the thesis project. It is not intended to be legally binding.

The Supervisor and the Student are free to add items to the form to tailor it to their joint purposes.

The Supervisor(s) is/are responsible for supervising the Student’s graduate program. The Supervisor(s) is/are the Student’s primary contact(s) at the University of Saskatchewan, and should be familiar with the general policies and regulations of the College of Graduate and Postdoctoral Studies as well as the specific supplementary regulations of their academic unit. This form does not replace official University of Saskatchewan statements of policy and procedure.

If the Student or Supervisor(s) have any questions or concerns regarding their graduate program or this form, advice may be sought from the program graduate chair, unit head, or the College of Graduate and Postdoctoral Studies.

Please visit the College of Graduate and Postdoctoral Studies website to find more information and guidance for both the Supervisor(s) and Student.

The Supervisor(s) and the Student should review each of the points listed below and check off each box to confirm that the items have been discussed and understood by the Supervisor(s) and the Student. Ideally, this document should be completed prior to the commencement of any research and no later than the submission of the first Progress Report for the Student.
Part 1 | Supervisor(s) and Student

The supervisor(s), (the “Supervisor(s)”) is/are a member/s of the College of Graduate and Postdoctoral Studies and agree(s) to supervise the graduate program of the Student named below; and

The student (the “Student”) is registered in the College of Graduate and Postdoctoral Studies, studying in at the University of Saskatchewan and wishes to carry out a graduate program under the supervision of the above named Supervisor(s).

Part 2 | General Roles and Responsibilities

The Supervisor(s)

Please review the following points, and click each box to acknowledge that it was discussed. The Supervisor(s) will:

- Guide the Student on degree requirements, appropriate elective course work, research, thesis proposal, thesis writing, suitable resources, and workspace.
- Assess and confer appropriate and fair acknowledgment of Student contributions to scholarly activity.
- Give reasonable notice to the Student of extended absences from campus, such as research leaves, and make satisfactory arrangements during such absences.
- Provide advice on the composition of the advisory and examining committees. Disclose any conflict of interest that may arise with respect to the Student.
- The following are optional points to be discussed. If relevant, please review the following points, and click the box to acknowledge that it was discussed.
- Provide guidance on how to work effectively as a member of a team.
- Assist in providing infrastructure and facilities required for the Student to undertake scholarly activities.
- Any other mutually agreed upon responsibilities:
The Student

Please review the following points, and click each box to acknowledge that it was discussed. The Student will:

- Familiarize themselves with the policies, procedures, regulations and deadlines established by the University of Saskatchewan, the College of Graduate and Postdoctoral Studies, and their respective unit.
- Seek the advice of the Supervisor(s) regarding required course work including appropriate electives, research, thesis proposal, thesis writing, suitable resources, and workspace.
- Demonstrate appropriate professional judgment, collegial behavior, academic rigor and integrity at all times and in every facet of the graduate program.
- Dedicate time to the graduate program to make timely and effective progress towards degree completion.
- Maintain contact with the Supervisor(s) and provide any changes in contact information. Consult with the Supervisor(s) regarding graduate program examiners and assessors.
- The following are optional points to be discussed. If relevant, please review the following points, and click the box to acknowledge that it was discussed.
  - Keep laboratory, research, and computer areas tidy, and respect the space and property of others.
  - Strive to work effectively as a member of a team. Any other mutually agreed upon responsibilities:

The College of Graduate and Postdoctoral Studies

The College of Graduate and Postdoctoral Studies holds primary responsibility for ensuring that program policies, including admission criteria, program timelines, and requirements are clearly articulated and duly followed. The College also facilitates access to funding sources. Students and Supervisor(s) should be familiar with the College website, regulations, and resources.

See http://www.usask.ca/cgps/
Part 3 | Meetings

Please review the following points, and click each box to acknowledge that it was discussed.

☐ The Supervisor(s) and Student will arrange and attend regular meetings. The frequency of the meetings may vary, but at a minimum, meetings normally will be held every ______ (indicate weekly or monthly intervals and/or frequency).

☐ The Supervisor(s) will respond in a timely manner (normally not to exceed 30 days) with constructive suggestions/revisions to written work (including proposals, literature reviews, analysis, chapters), as well as research and scholarship applications, reports, manuscripts, or scholarly presentations.

☐ The Supervisor(s) and Student will organize and schedule an in-person meeting with the entire advisory committee at least once annually. Additional meetings may be held at the request of either the Student or the Supervisor(s). If appropriate, the Student will distribute reports in advance of scheduled meetings with the advisory committee.

☐ Any other mutually agreed upon responsibilities:

Part 4 | Publications

Please review the following points, and click each box to acknowledge that it was discussed.

☐ The Supervisor(s) will acknowledge the contribution of the Student in any publications and/or presentations, as appropriate.

☐ Order of authorship and the criteria to determine the order of authorship on any shared publications will be established.

☐ All University policies pertaining to attribution and/or authorship will be followed.

☐ The Student and the Supervisor(s) will discuss the patentability of any invention arising out of the research before any publication or presentation of the research in order to ensure that the patentability of the invention is not jeopardized.

☐ Any other mutually agreed upon responsibilities:
Part 5 | Intellectual Property, Academic Integrity, and Ethics

Please review the following points, and click each box to acknowledge that it was discussed.

☐ The Student will hold the copyright of their thesis.

☐ The Supervisor(s) and Student will abide by the specific guidelines and rules for copyright and intellectual property at the University of Saskatchewan.

☐ The Student will keep orderly records of all research data produced or developed.

☐ Where research data is produced or developed, both the Student and Supervisor(s) will have access to the data at all times.

☐ Both Student and Supervisor(s) understand that the provisions of the University’s Intellectual Property Policy pertaining to work done while a graduate student, as well as the guidelines around publication and access to research data, remain in place even after the Student is no longer attending the University.

☐ The Student is responsible for understanding the meaning of academic integrity at the University of Saskatchewan and ensuring it is applied to all their work.

☐ The Supervisor(s) and the Student will adhere to the University’s policies and procedures related to the conduct of research, including any necessary human ethics review procedures, and animal care ethics, that must be completed.

☐ Where the Supervisor(s) is/are a member(s) of the University of Saskatchewan Faculty Association (“USFA”), the provisions of the USFA collective agreement will apply to the Supervisor(s).

☐ The following are optional points to be discussed if relevant. Please review the following points and click the box to acknowledge that it was discussed.

☐ The Student must complete appropriate courses on the use of animals or humans in research. Any other mutually agreed upon responsibilities:
Part 6 | Timelines and Completion

Please review the following points, and click each box to acknowledge that it was discussed.

Progress Report forms are to be submitted at least once per 12-month period. More frequent updates may be necessary. The Advisory Committee and the Supervisor(s) must jointly complete this form.

The maximum time period, including course work, examinations, research, thesis writing and defence (if applicable) permitted for the Student’s graduate program is ___ years (please consult your specific program regulations as set by the College of Graduate and Postdoctoral Studies). It is anticipated that the Student should complete the graduate program within ___ years.

The following are optional points to be discussed. If relevant, please review the following points, and click the box to acknowledge that it was discussed.

☐ Student commitments for other duties such as non-degree research, teaching and teaching assistantships, or other responsibilities, should not delay efforts to complete the graduate program.

☐ Any other mutually agreed upon responsibilities:

Part 7 | Funding

Please review the following points, and click each box to acknowledge that it was discussed.

☐ The Student will seek opportunities for scholarships appropriate to their program, aided by the Supervisor(s).

If relevant, please review the following points, and click the box to acknowledge that it was discussed.

☐ The student will receive $____ per month for (duration) from (source) subject to satisfactory progress in program requirements.

☐ Any other mutually agreed upon responsibilities:

Part 8 | Safety

If relevant, please review the following points, and click the box to acknowledge that it was discussed.

☐ The Student will be subject to appropriate safety courses or requirements at the University of Saskatchewan, including those pertaining to workplace and fieldwork protection, hazardous materials, radioisotopes, laboratory and environmental waste management, or others.
The Supervisor(s) and Student will seek input and direction from safety officers or other appropriate personnel within their unit if further training is required.

Part 9 | Privacy and Confidentiality

Please review the following points, and click each box to acknowledge that it was discussed.

☐ If confidential information is provided to a student in the program, the student will not disclose the confidential information to any third parties, except as required by law or as permitted by agreement pursuant to which the confidential information was shared.

☐ The U of S Freedom of Information and Protection of Privacy Policy applies to the Student’s program along with provincial and federal legislation.

Part 10 | Professional Development

Please review the following points, and click each box to acknowledge that it was discussed.

☐ Opportunities for the Student to attend suitable conferences and present scholarly work will be sought.

☐ Professional development programs, such as effective writing courses, teaching training, academic integrity, and workshops on research grants and career opportunities will be encouraged.

☐ Sources of funding for Student travel should be investigated and applied for.

☐ Any other mutually agreed upon responsibilities:

Part 11 | Vacation

Please review the following points, and click each box to acknowledge that it was discussed.

☐ Graduate students are entitled to a minimum of 2 weeks vacation per year in addition to weekends, statutory holidays, and university closures. Vacation time will be scheduled at times that are mutually agreed upon by the student and supervisor(s).

☐ Where program requirements necessitate working during weekends, statutory holidays, or university closures, alternate time off will be provided as mutually agreed.

☐ Students receiving funding with a service requirement may not take vacation at a time that causes disruption to the service requirement unless approved by the person/unit in charge of the service.
Part 12 | Other

Any other mutually agreed upon responsibilities:

The Student and Supervisor(s) have reviewed and understand these guidelines.

By checking this box, you agree that you have read and understood this form, and that the information provided within is true and accurate to the best of your knowledge.

student signature

Date: ________________

supervisor signature

Date: ________________

Copies of these signed guidelines will be kept by the Supervisor(s) and the Student, the unit (in the Student’s file), and the College of Graduate and Postdoctoral Studies.
15.8 VLAC 990 SYLLABUS

Large Animal Clinical Sciences
VLAC 990 Seminar Series Conference - syllabus (2019-2020)

Course coordinators
Dr. Cheryl Waldner, LACS Graduate Co-Chair, cheryl.waldner@usask.ca
Dr. James Carmalt, LACS Graduate Co-Chair, james.carmalt@usask.ca
Jackie Gabriel, LACS Graduate Program Coordinator, jackie.gabriel@usask.ca

Course description:
VLAC 990 is the departmental seminar course for graduate students enrolled in MSc (project and thesis) or PhD degrees. All graduate students must register in the fall and winter terms (Term 1 and 2) each year of their program. Attendance is mandatory for all graduate students, as it is in most other departments at WCVM.

Learning objectives:
• To obtain skills and experience developing and delivering a scientific abstract presentation to a multidisciplinary audience within an allotted time.
• To acquire skills and training in areas indirectly related to research or residency that are necessary for a full academic development.
• To develop cross-disciplinary training, awareness and communication skills, and provide the opportunity for students to broaden their network through interaction with other LACS students and faculty.

Course Delivery and attendance:
LACS will sponsor two, full-day research seminars in December and April (specific dates to be determined). Student attendance is mandatory at both events for the full day. In the event that students have a scheduled graduate level class or assessment, they will be excused from the seminar for that period of time, provided they have advised the graduate programs coordinator of the conflict prior to the seminar. Clinical residents will be excused from their clinical activities in order to attend the seminar. Students will present at one seminar per year, and take an active role in evaluating other student presentations at the seminar in which they do not present. Some students will be asked to co-chair the abstract session.

Credits:
This is a non-credit course. A pass will be awarded if the student:
  a) attends both seminars in each year of their program*
  b) presents a satisfactory or outstanding presentation once per year
  c) submits a satisfactory abstract not exceeding the word limit defined below 21 days prior the seminar at which they present

* We understand that conflicts do occur. MSc students will be allowed one excused absence during their program; PhD students will be allowed 2 excused absences during their program. Whether or not an absence is considered “excused” is at the discretion of the Graduate Chair, Department Head, and Supervisor. Some examples of an excused absence include death in family, or illness verified by doctor’s certificate. Unacceptable absences include too busy, need to study, other research activities planned on the seminar day, unwillingness to travel to Saskatoon (if off-site student). Attendance at each event will be taken. Students must be in attendance at the beginning and end of the seminar day to be given an attendance credit.

Students who have submitted their thesis to an external examiner before the seminar day will be exempt from presenting; otherwise they will present in the term that they are scheduled (generally – senior students will be expected to present in T1/December, junior students T2/April). All students must attend the
VLAC 990 seminar that take place before their final oral exam (defence). Interns will present (generally T2) once, and must attend both conferences.

**Student Presentations:**
The presentation will be up to 12 minutes in length followed by up to 3 minutes of questions from the audience. Presentations will be timed, and students running overtime will be stopped. Types of presentations permitted:

- **Research** - students are generally expected to present material directly related to their research project. For more senior students, the results of one or more experiments are to be presented, including sections for background/justification for research, objectives, methods including statistical analyses, results, and conclusions (including limitations), acknowledgements, and references. New students who have not yet progressed far enough in their research to be able to report results may, at the discretion of their supervisor, present their research proposal. This type of presentation should include: background/justification for research, objectives, proposed methodology, anticipated results, and anticipated pitfalls and/or limitations. This type of presentation can only be presented once and must be followed up with a research presentation the following year.

- **Clinical case report or series** – At the discretion of their supervisor, clinical residents (project MSc students) may present a case report or case series on a topic related to their clinical training. This would typically only be appropriate for clinical residents who have previously presented their research and have minimal new information or results to present.

Interns are required to attend and volunteer to participate in judging but not to present.

**Submission of titles:**
The Graduate Program Coordinator will request the title from all presenters about 2 months before the conference date. In anticipation of this, please discuss an appropriate title with your supervisor early in the semester. Once submitted, the title cannot be changed because promotional material will be prepared.

**Written abstracts:**
Three weeks prior to the seminar date, all students presenting will submit a short abstract pertaining to their presentation to the LACS Graduate Chair following the “Instructions for Abstracts”.

The goals of preparing an abstract are twofold: first to provide the opportunity for students to develop abstract writing skills, and second, to help organizers schedule presentations and prepare evaluations. The title of the abstract must be the same as the presentation. All co-authors/collaborators should be listed. Sources of funding, and other acknowledgements should be included but are not included in the word count limit.

Format: Abstracts are to be prepared as per the format indicated in “Instructions for Abstracts” that will be available on the VLAC 990 course site on PAWS. Please adhere exactly to the posted instructions for word count, format and content. The due date for abstracts is firm. Late abstracts will not be accepted. This policy is consistent with that for large scientific meetings.

**Evaluations:**
All student presentations will be formally evaluated by a team of LACS graduate student and faculty judges. Evaluation forms will be reviewed by the faculty member in charge of each session before returning to each student.

**Tentative schedule**
Each seminar will open with two keynote lectures on topics of interest for all students. The organizing committee will assign the senior LACS graduate students to present in December. The remaining graduate students and interns will present in April.
### Proposed schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td>Registration</td>
<td></td>
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<tr>
<td>8:45-9:00</td>
<td>Grad chair</td>
<td>Welcome and introductions</td>
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<tr>
<td>9:00-9:30</td>
<td>TBD</td>
<td>Keynote 1</td>
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<tr>
<td>9:30-10:00</td>
<td>TBD</td>
<td>Keynote 2</td>
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<tr>
<td><strong>10:00-10:15</strong></td>
<td><strong>Break</strong></td>
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</tr>
<tr>
<td>10:00-10:15</td>
<td>Student 1</td>
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<tr>
<td>10:15-10:30</td>
<td>Student 2</td>
<td>TBD</td>
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<tr>
<td>10:30-10:45</td>
<td>Student 3</td>
<td>TBD</td>
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<tr>
<td>10:45-11:00</td>
<td>Student 4</td>
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<td>11:00-11:15</td>
<td>Student 5</td>
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<tr>
<td>11:15-11:30</td>
<td>Student 6</td>
<td>TBD</td>
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<tr>
<td>11:30-11:45</td>
<td>Student 7</td>
<td>TBD</td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>Student 8</td>
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<tr>
<td><strong>12:00-1:00</strong></td>
<td><strong>Lunch – provided</strong></td>
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<tr>
<td>1:00-1:15</td>
<td>Student 9</td>
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<td>1:15-1:30</td>
<td>Student 10</td>
<td>TBD</td>
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<td>1:30-1:45</td>
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<td>1:45-2:00</td>
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<td>2:30-2:45</td>
<td>Student 15</td>
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<tr>
<td>2:45-3:00</td>
<td>Student 16</td>
<td></td>
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<tr>
<td><strong>3:00-3:15</strong></td>
<td><strong>Break</strong></td>
<td>Judges complete evaluations</td>
</tr>
<tr>
<td>3:15-3:30</td>
<td>Department head</td>
<td>Awards and concluding remarks</td>
</tr>
</tbody>
</table>

**Remote students:**
Students who do not normally reside in Saskatoon are expected to attend in person. Due to the length of the program, it is not feasible to videotape the seminar enabling remote access.

**Session coordinators:**
Two students will be asked to chair the morning and afternoon sessions of each conference. Volunteers are encouraged. Please contact the LACS Grad Program Coordinator and/or graduate Chair if interested.

**Seminar announcements:**
The LACS Graduate Programs Coordinator will post notices regarding the seminar date and keynote topics on College bulletin boards.

**Expectations of graduate students:**
- Select a topic in consultation with your supervisor early in the academic year.
- Prepare a presentation using PowerPoint using your own materials.
- Review your presentation with your supervisor at least one week prior to your seminar date to allow for changes if necessary.
- Ensure that the presentation can be delivered within the time allotted (12 minutes). Most scientific presentations given at conferences have strict time limits, and you will be evaluated based on your ability to stay within the allotted time. While presenting styles differ, a good rule of thumb is to prepare one slide per minute.
• Bring the presentation to the seminar on a flash drive. The use of personal laptops will not be permitted. If using videos, check presentation after uploading to ensure the video opens.
• Be prepared to answer questions from the audience following your presentation (up to 3 minutes).
• If you are a new student or have developed a new presentation, have a practice presentation with friends and colleagues prior to your seminar to refine your delivery and content.
• Review and consider the comments given in peer-evaluations.
• Provide positive and constructive criticism to your peers using the evaluation sheets provided.
• Sign the attendance log. Advise Jackie Gabriel prior to the seminar if you are unable to attend. Obtain a doctor’s note if you are ill and cannot attend the seminar.

Expectations of supervisors:
• Review your student’s topic and presentation prior to their seminar. Provide coaching and ensure the presentation is appropriate for the audience and can be delivered in the time allotted.
• Attend the seminars at which your students present, and as many other seminars as you can. Faculty support for students is greatly appreciated and builds collegiality, even if the presentations are on topics outside your discipline.
• Evaluate student presentations on forms provided. Review the evaluations provided to your student by others and coach on ways to improve the content and delivery.

Enrolment limit: none

Academic dishonesty
The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.
All students should read and be familiar with the Regulations on Academic Student Misconduct (https://secretariat.usask.ca/student-conduct-appeals/academic-misconduct.php) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals https://secretariat.usask.ca/student-conduct-appeals/academic-misconduct.php
For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: https://secretariat.usask.ca/student-conduct-appeals/academic-misconduct.php#IXXIAPPEALS

In terms of the VLAC 990 seminar series, potential academic dishonesty is likely to be in the form of plagiarism. Therefore, new material is expected to be presented annually, rather than the delivery of materials from a previous VLAC 990 seminar. Moreover, do not copy a presentation or content from others without acknowledgement. This includes using your supervisor’s work or tables and figures from publically available sources such as the internet or journals.
MEMORANDUM

TO: Potential Participants of the Rabies Immunization Program

FROM: Barb Welland, WCVM Dean's Office

RE: WCVM Rabies Program

Attached is a copy of the Rabies Immunization Policy as approved by the WCVM Faculty, along with a copy of the Declaration of Intent Form.

Please indicate your intent regarding the program by filling out the Declaration of Intent Form and returning it to me as soon as possible.

Your cooperation is appreciated.

Attachments
**WCVM Rabies Immunization Policy**

**Purpose**

The WCVM Rabies Immunization Policy is designed to ensure that all faculty, students and staff of the WCVM working with animals and animal tissues have the opportunity to be protected from exposure to rabies.

**Policy**

All faculty, students and staff at the WCVM must be immunized against rabies or accept liability by signing an appropriate release.

Rabies immunization will be available to all WCVM personnel.

**Responsibilities**

1. The Dean, Department Heads, the Director of the Veterinary Medical Centre, supervisors of WCVM research animal holding facilities and research project supervisors are responsible within the area under their jurisdiction for:
   
   a) Compliance with this policy.

   b) Advising all personnel of the hazards of rabies as it applies to their position.

   c) Ensuring that all personnel complete the Rabies Declaration Form indicating whether or not they wish to be vaccinated against rabies.

   d) Notifying the Dean’s office whenever a new appointee or a person with a change of duties under his/her supervision requires immunization under this policy.

   e) Strongly encouraging persons to be immunized against rabies at the time of hiring, or at the initiation of a project which may expose the individual to the disease.

2. Under the supervision of the University Occupational Medical Advisor, the immunity (titre) of personnel included in the rabies immunization program will be regularly assessed and those requiring re-immunization will be designated.
WCVM RABIES IMMUNIZATION PROGRAM

DECLARATION OF INTENT

Rabies is a viral infection of many organs, especially the nervous system, which is almost 100% fatal. The virus may be present in saliva, tears, urine, and tissues and is spread by contamination of the broken skin by these sources. The best treatment is prevention by pre-exposure immunization.

At WCVM, the service and research areas are considered to be at higher risk for rabies exposure. If you fall into this category, we strongly suggest that you consider the rabies immunization program.

I, ________________________________, Department of ________________________________, do hereby declare that I have read the above and have been informed of the potential risk/hazards of rabies exposure. Please indicate below if you wish to take part in the WCVM Rabies Vaccination Program:

Yes

No

I also understand, that should I participate in this Program, that my rabies related medical information will only be shared with those involved in operating and administering the Rabies Program.

________________________________________  ____________________________________________  __________________________
(Work Phone) (Signature) (Date)

If you wish to participate, complete the following information.

My record has been added to VetNet* □
*This must be complete prior to submitting the form. Please see your department Administration for assistance

Health Card Number ______________________ Province _____________

Date of Birth ___________________________________________________________

Usask E-mail _____________________________________________________________

CFOAPAL* __________________________________________________________________
* A CFOAPAL is only required by those in PDS, CWHC or outside agencies
Please provide your rabies immunization history by answering the following to the best of your knowledge:

1. I have previously been immunized against rabies. Yes No

2. If you answered yes to Question 1, complete the following:
   a) **Primary Series:**
      Dates
      Administered:
      i) 
      ii) 
      iii) 
      Location (i.e. College/University, City, etc.) - 
      Type (Human Diploid, Hamster Kidney, etc.) (if known) - Lot # (if known) -

   b) **Boosters:**
      i) Date Administered -
         Location (i.e. College/University, City, etc.) - 
         Type (Human Diploid, Hamster Kidney, etc.) (if known) - Lot # (if known) -
      ii) Date Administered -
          Location (i.e. College/University, City, etc.) - 
          Type (Human Diploid, Hamster Kidney, etc.) (if known) - Lot # (if known) -
      iii) Date Administered -
           Location (i.e. College/University, City, etc.) - 
           Type (Human Diploid, Hamster Kidney, etc.) (if known) - Lot # (if known) -

   c) **Titres:**
      i) Date Drawn -
         Titre Level -
      ii) Date Drawn -
          Titre Level -
      iii) Date Drawn -
           Titre Level -

Please return this form to Barb Welland (barb.welland@usask.ca) or mail to WCVM 3103. Thank you.