



UNIVERSITY OF SASKATCHEWAN

Policies and Procedures

Graduate Programs in the Department of

Anatomy, Physiology, and Pharmacology

University of Saskatchewan

* This version of the handbook was updated in January 2023 and supersedes all previous versions.

Previous revisions

January 2023: 1) revised information timeline for grad students, modifying objectives for first (select AC) and four months (approve coursework and brief thesis project overview) in program (section 4.B,C and switched order of appendix A.1&2); 2) added that students should fill out the Progress Form with accomplishments since the APP grad program began (section 4.D and appendix A.3); and 3) modified instructions about progress report, emphasizing expected structure of general overview, followed by presentation and analyses of previous year's data (appendix A.3).

September 2022: 1) removed outdated BSc/MSc program information (section 2.1 and associated mentions); 2) modified Advisory Committee (section 3.C) to clarify our requirements compared to those of CGPS; 3) modified Examining Committee (section 4.E.4-8) to reflect CGPS changes enacted May 2022; and 4) updated Permission to Write report format (appendix A4) to provide a better overview of student's progress.

January 2022: 1) updated 990 presentation information (section 3.A.6); and 2) added academic misconduct information (section 3.A.11)

October 2021: 1) updated descriptions of Advisory Committee selection (section 3.C); and 2) updated Comprehensive Exam information to more clearly align goals of two different formats (section 6.B)

ANATOMY, PHYSIOLOGY, AND PHARMACOLOGY GRADUATE STUDENT HANDBOOK

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1. Introduction

Welcome to graduate studies in the Department of Anatomy, Physiology, and Pharmacology!

The purpose of this handbook is to provide you with basic information on the services available to you in your graduate program, as well as the duties and requirements that you will need to fulfill to complete your graduate degree in the Department of Anatomy, Physiology, and Pharmacology. The Department offers MSc and PhD graduate programs and has faculty and students with diverse research interests in the life sciences. You are expected to gain a detailed understanding of your area of research. Our graduate program consists of independent research as well as didactic work involving academic courses and reading of relevant literature. The didactic component is intended to provide a knowledge framework upon which your research is based. Nevertheless, your efforts in research training and preparation in your area of specialization are of paramount importance. In addition, every effort is made in the department to prepare you to teach and communicate scientific information.

Recently, the options for graduate programming in the Department have changed as a result of the merger of the Anatomy and Cell Biology, Physiology, and Pharmacology, Departments on July 1, 2018. These three departments had three separate, legacy graduate programs: Anatomy and Cell Biology, Physiology, Pharmacology. As of May 1, 2020, registration in legacy graduate programs was closed and all new students entering a graduate program will enter the Anatomy, Physiology, and Pharmacology (APP) graduate program. All students who were enrolled in a legacy program on May 1, 2020 had the option of transferring into the APP graduate program or remaining in their legacy program. The policies and procedures in this handbook are intended to apply to students in all four graduate programs currently administered by the Department of Anatomy, Physiology, and Pharmacology. Once the last student registered in a legacy programs graduates, the program will be officially closed by the College of Graduate and Postdoctoral Studies as no students can be admitted to them. Specific details germane to a legacy program are noted in the relevant section. Should legacy program students have questions about the requirements that apply to them, they should contact the Graduate Chair.

The departmental Graduate Program Committee develops policy and administers the graduate program. Immediate oversight for each student is provided by a faculty Supervisor and a faculty Advisory Committee. Direct financial support to graduate students is derived from a variety of sources. All aspects of the program, including conferral of degrees, are ultimately governed by the College of Graduate and Postdoctoral Studies, which sets or approves the policies and procedures that departments follow. The Policies and Procedures Manual of the College of Graduate and Postdoctoral Studies can be found at: <https://cgps.usask.ca/policy-and-procedure/index.php>.

2. How do I apply for graduate studies at the University of Saskatchewan?

There are two potential graduate training programs in the Department of Anatomy, Physiology, and Pharmacology:

1. **Master of Science (MSc):** This is a thesis-based program offered to students holding a four-year degree, or a Doctor of Medicine (MD) or Doctor of Dentistry (DDS) from a recognized university in an academic discipline relevant to the proposed field of study. In some cases, BSc students in the APP Honor's program can transfer their project results to the MSc program. The expected length of the program should not exceed 2 years.
2. **Doctor of Philosophy (PhD):** This is a thesis-based program offered to students holding a Master's degree, or equivalent, from a recognized university in an academic discipline relevant to the proposed field of study. The expected length of the program should not exceed 4 years.

Before applying for admission to graduate studies, prospective graduate students must first contact individual faculty members with research interests compatible with their own, to determine if that faculty member is willing to supervise the student. Information about the research interests of departmental faculty can be obtained from the Department web site (<https://medicine.usask.ca/app/>). When you contact your prospective supervisor, include your career goals, your academic credentials, and curriculum vitae. Once a supervisor has been identified and they agree to supervise your graduate program, you should access the

website of the College of Graduate Studies and Postdoctoral Studies (CGPS) (<http://www.usask.ca/cgps/>) where complete information on requirements and procedures for admission are available. Those international students who must meet English proficiency requirements should arrange for testing in their home country. Please note that international students are charged additional fees. Students with external scholarship support are encouraged to include this information with their application.

After you are accepted into the CGPS, you will need to register with the University of Saskatchewan and pay your tuition and fees. Complete information is available at the CGPS website: <http://grad.usask.ca/admissions/how-to-apply.php#Beforeyouapply>. Students in the MSc program need to register for APPY 994 and APPY 990. Students in the PhD program need to register for APPY 996 and APPY 990. You will need to register for additional courses throughout your graduate program according to your Program of Studies (see sections 4B and 6B below). Upon your arrival at the University of Saskatchewan, you should meet with the Anatomy, Physiology, and Pharmacology Graduate Assistant (app.grad@usask.ca), who will help you get settled in the Department.

3. Who is involved in my graduate program?

In addition to yourself, your graduate program involves your research Supervisor, your Advisory Committee members, the Department Graduate Chair, the Department Graduate Assistant, and staff in the 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 level, which operates within the regulations provided by the CGPS.

A. Your role as a graduate student

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

1. demonstrating a commitment to research through diligent and conscientious lab and/or field work
2. maintaining a spirit of collegiality with peers, laboratory co-workers, and faculty
3. adherence to University regulations concerning work safety, biosafety, ethical treatment of research animals, and Academic Integrity (see <https://cgps.usask.ca/policy-and-procedure/conduct-discipline/academic-integrity.php>)
4. timely registration for courses and payment of fees owing
5. maintaining of appropriate academic performance (minimum 75% GPA in coursework)
6. attending and participating in the departmental seminar series (APPY 990). APPY 990 provides an interactive learning experience for our grad students to increase their oral presentation skills. All MSc students will give a 20-minute presentation once a year in the first two years of their MSc program. All PhD students will give a 20-minute presentation two of their first three years of their PhD program and a 45 min job talk after they receive Permission to Write. Apart from presentations, all students are required to register, participate, and submit student evaluations for 990 every year.
7. in consultation with Supervisor, establish members of Advisory Committee and arrange Advisory Committee meetings (minimum once/year) (see FAQ *How do I set up a committee meeting?*)
8. seeking advice from members of their Advisory Committee where appropriate
9. timely submission of scholarship applications/renewals and awareness/attendance to the stipend funding periods
10. timely submission of research proposal, annual progress reports, manuscripts, thesis, etc.
11. avoiding any examples of academic misconduct. The APP Grad Program has zero tolerance for plagiarism or other instances of academic misconduct, which may be grounds for expulsion from the program. For the USask policy that we follow, please see <https://governance.usask.ca/student-conduct-appeals/academic-misconduct.php>.

B. Your Supervisor's role

The 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 your research proceeds as effectively as possible. These resources include research operating funds, and access to research space and equipment as necessary. Additional clarification of roles can be achieved by filling out the Student-Supervisor Agreement (Appendix C) and filing it along with your Program of Studies.

C. 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. The Advisory Committee meets at least once each year to review and assess student progress and to offer advice. 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 Thesis Defenses.

The Advisory Committee consists of the following members (minimum of 3 for MSc, 5 for PhD), which should be selected through discussions among the Supervisor and student (and Graduate Chair, if desired), based upon ability of the selected researchers to effectively assist the student with research design, background, methods, and analysis. (Note that, compared to CGPS requirements, APP requires an additional faculty member to serve on the Advisory Committee.)

1. Supervisor - a member of the faculty of the CGPS (adjunct professors included). Any number of Co-Supervisors are counted as one member.
2. Advisory Committee Chair – a designate of the Department Graduate Chair who leads all meetings, but also actively engages with development and critique of the student's thesis (i.e., this is not just an administrative role). Must be Department of Anatomy, Physiology, and Pharmacology faculty, typically a senior member of the committee familiar with graduate student policies. The Department Graduate Chair can designate an Advisory Committee Chair anytime throughout the program of studies.
3. Additional Members - a minimum of 1 (for MSc) or 2 (for PhD) faculty members or Associate Members of the Department of Anatomy, Physiology, and Pharmacology. Must be members of the graduate faculty of CGPS, adjunct professors, or professional affiliates.
4. Cognate Member – a minimum of one for a PhD program. The cognate member cannot be a regular faculty member of the Department of Anatomy, Physiology, and Pharmacology (so Associate Members are ok), but must be a member of the graduate faculty of CGPS or else granted permission by the Dean, CGPS.

D. Anatomy, Physiology, and Pharmacology Graduate Chair

The Graduate Chair offers advice and information regarding Department and CGPS regulations to ensure consistency among Advisory Committees and among students within the Department. 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 Graduate Chair is responsible for ensuring chairing and recording the minutes for annual advisory meetings, qualifying and comprehensive exams, and defenses. The Graduate Chair also oversees administrative aspects of scholarship and stipend awards/distribution, graduate course offerings, TAs, and APPY 990. At the university level, the Graduate Chair acts as liaison between the Department and the CGPS.

E. Graduate Assistant

The Graduate Assistant acts as the graduate student resource person, providing advice and guidance on

procedures related to the Department, the graduate program, and CGPS requirements. The Graduate Assistant is responsible for helping to schedule meetings, exams/defenses, and for maintaining and submitting appropriate paperwork to CGPS, including theses and relevant information regarding scholarships. They can be contacted via email at app.grad@usask.ca.

F. The Department Graduate Committee

The Graduate Committee meets as necessary to make decisions regarding the Department's graduate program, including decisions on scholarship competitions. In some cases, decisions made by the Graduate Committee are submitted for approval to Department faculty. Members of the Graduate Committee include the Graduate Chair, the Graduate Assistant, three or four other Department faculty members, and two Student Representatives (ideally one M.Sc. and one PhD student).

4. Information for students in the MSc or PhD Programs

A. Program Objectives

The primary responsibility of the Department of Anatomy, Physiology, and Pharmacology toward its graduate students is the provision of an environment that fosters scholarly development and experience that will enable gainful employment or continued training at an advanced stage. Additionally, the Department has the responsibility of ensuring that its graduates will reflect credit upon the Department and on the University. Below you will find specific student objectives for the graduate programs offered in the Department of Anatomy, Physiology, and Pharmacology. A general description of learning outcomes are found in the College of Graduate and Postdoctoral Studies policy and procedure documents (<https://cgps.usask.ca/policy-and-procedure/governance-membership/degree-level-learning-outcomes.php>).

1. *MSc Student objectives:*

The overarching goal of the MSc program is to ensure that students are exposed to the scientific method and procedures/skills important in producing and publishing novel scientific information. Although publication at this level is not mandatory, demonstration of knowledge and skills necessary to take an experimental question to publication must be evident. To meet this goal, MSc students should:

- I. Develop a generalized knowledge base sufficient for designing, conducting, analyzing, and reporting of scientific experiments surrounding a well-defined experimental question/hypothesis.
- II. Obtain practical experience in laboratory skills necessary to address the proposed experimental questions/hypotheses.
- III. Develop proficiency in the collection, analysis, and presentation of data to aid in final publication.
- IV. Acquire experience with oral presentation of scientific information sufficient to enable preparation and delivery of reports or presentations at scientific meetings.

2. *PhD Student objectives:*

In addition to meeting the main goal and specific objectives of the MSc program stated above, the major goal of the PhD program is to develop students into trained problem-solvers. This will include the development of a broadened knowledge base beyond their primary research focus and a mature understanding of the process of scientific inquiry sufficient to enable the assessment and constructive criticism of the work of others. Publication of at least one first-authored paper in a reputable, peer-reviewed journal is strongly recommended for completion of the PhD degree. Given an experimental question in any scientific field, a PhD student should be able to:

- I. Find relevant information to create/rationalize a hypothesis that will address the experimental question.
- II. Seek out relevant information/resources concerning methodology necessary to adequately test the hypothesis.
- III. Design, perform, and overcome/circumvent problems associated with experimentation.

- IV. Analyze, interpret, and discuss the results in the context of the current literature leading to publication.
- V. Obtain familiarity with the process of scientific reporting sufficient to enable the independent preparation of manuscripts for journals, applications for research grants, and technical reports.

B. Within the first month of starting your program

1. You and your Supervisor should meet to decide on your Advisory Committee members and identify some of the academic courses you feel that you need. Departmental course requirements for the MSc program are 9 credits at the graduate level. Additional courses can be taken from any academic unit on campus as deemed appropriate to the students' specific program of studies. Students entering the PhD program directly with a completed Master's degree or transferring from the MSc program require an additional 3 credits at the graduate level. Students transferring into this APP program from, or wishing to stay in, one of the three legacy programs (Anatomy and Cell Biology, Physiology, Pharmacology) are subject only to those individual legacy program requirements (legacy Anatomy and Cell Biology require 3 additional credits, legacy Physiology and legacy Pharmacology do not require additional credits). Any student may be required to take additional course work if the Advisory Committee deems it appropriate.
2. Coursework will include:
 - A list of academic courses that fulfill the credit requirements for your program and are relevant to your thesis project and/or career objectives.
 - Graduate Research (APPY 994 for MSc or 996 for PhD or legacy equivalents) and Graduate Seminar (APPY 990) courses. See section 3.A.6 for details of APPY 990, which provides an interactive learning experience for our grad students to increase their oral presentation skills.
 - Additional requirements, such as Introduction to Ethics and Integrity (GPS 960) and UCACS Education and Training Program (Ethics and Integrity in Human Research GPS 961; Ethics and Integrity in Animal Research GPS 962).
 - Laboratory Safety, Biosafety, Radiation Safety and Ethics courses, as required.
 - Students may also elect to complete non-credit courses offered by the CGPS, such as Academic Preparation for International Graduate Students (GPS 981); Thinking Critically: Professional Skills for Global Citizens (GPS 984); or Introduction to University Teaching (GPS 989). A full list of courses is available at https://catalogue.usask.ca/?subj_code=GPS&cnm=. These courses have no credit or fees, but require registration. Registration in these courses is limited to current graduate students in a degree program and graduate students are encouraged to participate in these courses. The courses will appear on students' official transcripts.

C. Within the first 4 months of starting your program

1. Write a very brief research proposal (see Appendix A.1: FAQ, *what should I include in a research proposal?*).
2. Prepare your first APP Grad Progress Form (see Appendix D, but use updated form on <https://medicine.usask.ca/students/graduate-programs/anatomy-physiology-and-pharmacology.php#GeneralInformation>). On the form, check the Program of Studies box and, among other blanks that you should complete, list courses required for your individualized research program and ethics courses/approvals. Instead of writing a progress report at the end of the form, include your brief research proposal.
3. Arrange and hold your first advisory committee meeting, the main objective of which is to have your Program of Studies approved by your committee (see Appendix A.2: FAQ *How do I set up a committee meeting?*). Email the form to your Advisory Committee members a week prior to the meeting. At this meeting, the committee will provide advice on coursework, but you should briefly discuss your proposed research, sometimes with a brief oral presentation. With committee approval, the form is submitted to the Graduate Chair and Graduate Assistant, who will submit it to CGPS.

D. Each year of your program:

1. Maintain your registration in the program, pay tuition and fees.
2. Call an Advisory Committee meeting. It is a requirement of your graduate program to have at least one Advisory Committee meeting each year (typically in May/June). Call extra Advisory Committee meetings as deemed necessary. It is the responsibility of the student and the Supervisor to call the meeting (see FAQ *How do I set up a committee meeting?*). At least **5 working days** prior to meeting, provide your Advisory

Committee and the Graduate Assistant with an APP Grad Progress Form (see Appendix D, but use updated form on <https://medicine.usask.ca/students/graduate-programs/anatomy-physiology-and-pharmacology.php#GeneralInformation>) (Also see *FAQ: What should I include on my annual progress report?*). The Supervisor should review the form, including the written progress report (last section of form), before it is submitted to your committee. **Include on the form all progress since your entry into the APP program** (previous accomplishments can be listed on the form, but need to be clearly marked that they were before you started your grad program). At this meeting, you will normally be expected to give a short (*e.g.*, 20 min) presentation on your research progress. This presentation should provide a brief overview of your research but should focus on those issues that require input from your committee members. Remember that your committee members have already received and reviewed your progress report.

E. In the final year of your program (see <https://cgps.usask.ca/policy-and-procedure/Academics/defence.php#82EXAMININGCOMMITTEE>)

1. Call a Permission-to-Write meeting. The purpose of the Permission-to-Write meeting is to survey the structure and content of the thesis as a unified piece of work. The Advisory Committee needs to be provided with a standard Permission-to-Write document and APP Grad Progress Form at least **5 working days** before the meeting. The Supervisor should review the Permission-to-Write document and progress form before they are submitted to your Advisory Committee. For details on what to include in the document, see *FAQ: What should I include in my Permission to Write report?* At the meeting, you will normally be expected to give a short (less than 20 min) presentation on the proposed structure and content of your thesis, and then answer questions from the Advisory Committee.
2. After PhD students have received "Permission to Write", they need to work with the APPY 990 course coordinator to schedule a "job talk" presentation of ~45 minutes. This talk should emphasize their career path and future career goals, specifically highlighting how their grad student experience has set them up to succeed in their future career. This needs to happen prior to the defense of the PhD thesis and **does not apply to MSc students**.
3. Write your thesis (see *FAQ: How should I format my thesis?* and the CGPS website <https://cgps.usask.ca/onboarding/thesis-roadmap/thesis-roadmap.php>) and review recent theses from the Department available through CGPS (<https://harvest.usask.ca/handle/10388/381>).
4. Once your Supervisor has provided feedback on the written thesis and has approved it, the document is submitted to Advisory Committee members for reading and approval. Please allow the Committee at least 2 weeks for MSc and 4 weeks for PhD to review the thesis. This interaction is also an appropriate time to finalize discussion of who will be the potential external examiners (see #5 below) for the defense.
5. External examiners participate in the examination of theses to provide an assessment of the quality of the graduate research that is independent from the Advisory Committee. The student will not have any formal or informal communication with the external examiner until the date of the defense. For an MSc defense, the external examiner is called an "arm's length examiner" and can be any faculty member at the UoFS (even within APP, if deemed appropriate) with relevant background to evaluate the thesis. This MSc external examiner is approved by the APP Grad Chair. For a PhD defense, the External Examiner with relevant background to evaluate the thesis needs to be from outside USask, as per CGPS guidelines, and is approved by CGPS.
6. After feedback from Advisory Committee members (written and/or verbal) has been incorporated into the thesis, and each Committee member has individually advised the Committee chair that the thesis has met their approval*, the thesis needs to be submitted to the Graduate Assistant, who will manage the thesis for the defense. (*CGPS requires a majority of the Committee to recommend approval, but APP recommends all Committee members approve before moving forward to defense.) At this point, the Graduate Assistant also needs to know the list of potential external examiners for the defense (ranked #1-2 for MSc; ranked #1-3 for PhD), as approved by the Advisory Committee. Importantly, the defense can be scheduled no sooner than 2 weeks after the external examiner for an MSc student has received the thesis and no sooner than 4 weeks after the External Examiner (and University Examiner, see #7 below) for a PhD student has received the thesis, giving the external examiner sufficient time to read the thesis before the defense.
7. For PhD defenses of students who began the program after May 2022, the Graduate Assistant will also select someone from APP (including Associate Members) on a rotating basis, preferring those with relevant expertise, to serve as the University Examiner, who serves as an additional "outside" member of the Examining Committee. APP recommends that University Examiners should only ask questions or participate in the defense when other members of the Examining Committee need their help or if the

- University Examiner feels something important is missing from the defense questioning or discussion.
8. Defend the thesis. On the day of their defense, students will give a brief (less than 20 min) summary of their thesis. This presentation is open to anyone. After their presentation, the examining committee convenes with the student for the oral defense of the thesis. The oral defense can be open to the public, or can be closed, including only the student, advisory committee members and the external examiner. Open defenses are encouraged. The decision to have an open or closed defense lies with the student. Our PhD defenses will have someone act as the Grad Chair designate for the Examining Committee Chair. This is officially a non-voting position, so we implement the following. The AC Chair runs the defense, and then when votes for the thesis go around, any of the AC members who agrees with the majority assumes this position (removing his/her vote) and signs the appropriate paperwork as Examining Committee Chair.
 9. After successful defense of the thesis, students should be prepared to edit the final version of the thesis as directed by committee members and the external examiner. The normal recommendation is to allow either 2 or 6 weeks for the student to make the appropriate changes to the thesis. For full list of potential outcomes, consult CGPS guidelines.
 10. Once the recommendations of the thesis examining committee have been met and the final version is approved by the Supervisor, students who have met all other graduate program requirements must apply to graduate online through their PAWS account, on or before the second week in April to receive their degree at Spring Convocation, and on or before the third week in September to receive their degree at Fall Convocation. Students are responsible for ensuring the final copies of the electronic thesis submitted to the CGPS and members of their Advisory Committee meet all regulations as posted on the CGPS website. The student should work closely with their Advisory Committee and with the Graduate Assistant in order to ensure all necessary documents have been received in Anatomy, Physiology, and Pharmacology and in the CGPS office. Following the thesis defense, students will receive a *Convocation Checklist*. Students are strongly advised to pay close attention to this useful information.
 11. Graduate!

5. *Transfer from an MSc program to a PhD program*

CGPS regulations regarding transfer from an MSc program to a PhD program state the following: Transfer from an MSc program to a PhD program should take place after the end of the first year and no later than the end of the second year in the program. Recommendation to transfer from an MSc program to a PhD program must be initiated through a formal meeting of the student's advisory committee that forwards its recommendation through the academic unit to the CGPS. The following conditions must be met:

1. The student shows great promise both in terms of academic accomplishments and in potential for research. The student has completed at least 9 credit units and has achieved a high-academic standing (>80% GPA) in these 9 credit units.
2. There is evidence of good writing and oral communication ability.
3. There is evidence the student has requisite research skills and knowledge to be able to successfully complete a PhD dissertation.
4. The student has successfully completed the PhD Qualifying Examination (see section 6 below) prior to being recommended for transfer.

Once permission to transfer is given, a new Program of Studies form must be submitted.

6. *Qualifying and Comprehensive Examinations*

Students in the MSc program are not required to take a qualifying or comprehensive examination.

A. *Qualifying Examination*

This exam is used for MSc students wishing to transfer to a PhD program as outlined above (section 5). The Qualifying Examination is designed to test the student's general scientific knowledge, familiarity with the scientific literature in his or her area of interest, and suitability for study at the PhD level. It has both written and oral components. The written component is a formal proposal for the PhD research project. It must be given to members of the Advisory Committee a minimum of one week beforehand, and should contain the following components:

- A. Descriptive Title, Name, and Date
- B. Background
- C. Specific Aims
- D. Rationale
- E. Preliminary Results (those data gained while in the MSc program)
- F. Proposed Research Plan and Methodology
- G. Significance

The oral component includes a 15 – 20-minute oral presentation of the proposed research plan and methodology. This is followed by questions from members of the Advisory Committee. Questioning by the Advisory Committee is designed to determine whether the student has a sufficient command of the area of research interest to ensure that there is a high probability of success at the PhD level.

If the student fails the qualifying examination on the first try, a second examination can be undertaken within three months. However, a second failure disqualifies the student from transferring to a PhD program or continuing in a PhD program.

B. Comprehensive Examination

In APP (and all legacy programs), all students in a PhD program are required to pass a Comprehensive Examination. As stated by CGPS, the comprehensive exam seeks “to determine whether the student has a mature and substantive grasp of the field as a whole”. In APP (and all legacy programs), the comprehensive exam requires students to communicate ideas from a) their primary thesis project (or closely-related area for grant proposal) at a graduate level and b) a selected list of contemporary topics in biomedical sciences (see #3 below) at an advanced undergraduate level, such as the level taught in ACB325 (Advanced Cell Biology) or NEUR404 (Advances in Neurophysiology and Neuropharmacology). The guidelines regarding the comprehensive examination are detailed below. Any questions regarding the comprehensive exam that remain after reading this handbook should be directed to the Graduate Chair.

In all cases, the comprehensive examination will be given by the Advisory Committee and/or additional examiners at the discretion of the Advisory Committee. The examining panel will be chaired by the Chair of the Advisory Committee. In addition to the student's Supervisor(s), additional Examiners will be chosen as appropriate for the selected topics; they are typically also members of the student's Advisory Committee, but any member can be replaced by another member with a better background on the specific topics chosen for the exam. Regular members of the student's Advisory Committee that are not Examiners are encouraged, but not required, to attend the comprehensive exam meeting.

The examination should be conducted after all course work has been completed and research is well underway. The examination should be taken about 18 months after the student's start date in the PhD program and no later than one year prior to the final completion of the program. Sufficient time should be allotted in case there is need for a re-examination. The student may choose (in consultation with their Supervisor) to be examined in one of two formats. 1) In the ***strictly oral*** examination format, the student is tested on topics of their thesis project and biomedical topics from readings provided by each Examiner. 2) In the ***grant proposal*** examination format, a combination of writing and oral formats is used to help the student learn how to write a grant, while also testing knowledge of biomedical topics embedded within the grant proposal itself. Once the exam format has been selected, the student must meet with their Advisory Committee to finalize details of their exam (see below). After finalizing details, the student will have 4 weeks to prepare for the strictly oral comprehensive examination or to submit the grant proposal. If there are extenuating circumstances, a student can request extensions to this time for Advisory Committee approval.

The student must stop lab work during this time and concentrate on preparing for the examination. In general, the comprehensive exam will consist of two rounds of questions from the Examiners. Each Examiner will have 15 minutes per round to ask questions of increasing difficulty. If the student is unclear what the Examiner is asking, then the student should ask for clarification.

Following the comprehensive exam meeting, the examining panel assigns a grade of Fail, Pass, or Excellent for the written and/or oral components. Specifically, a Fail would indicate that the student did not communicate ideas a) from their primary thesis project (for strictly oral format) or from the primary topic of the grant proposal at a graduate level; or b) from the list of contemporary topics in biomedical sciences at an advanced undergraduate level. In the event of a failure, the student must retake the comprehensive examination in those aspects where performance is judged to be inadequate. The second attempt must take place within six months following the first examination. In the event of a second failure to demonstrate the required knowledge in all topics tested, the student will be required to discontinue and exit the PhD program.

1) STRICTLY ORAL FORMAT (at least 4 weeks out of lab)

This format is an oral exam. The student works with the Supervisor and the Advisory Committee to decide upon the 3 contemporary biomedical topics to be tested on (see #3 below), in addition to the student's primary thesis topic. A week after the topics are chosen, the clock starts on the 4 week deadline for the oral examination. Therefore, within a week of choosing exam topics, each Examiner (including the Supervisor, who is the Examiner of the thesis research topic) is expected to provide to the student, in writing, the subtopic(s) within the greater topic category selected (e.g., cell signalling within the broader topic of cell biology) that the student needs to study. No more than 15 published papers, or 3 book chapters, or some lesser combination of these options will be assigned per Examiner (each book chapter is considered the equivalent of 5 published papers). Examiners can exceed the reading assignment maxima only with permission of the Advisory Committee. While studying each topic, students should check in with the assigned Examiner to address any questions that may arise about the scope of the information that they will be examined on. Therefore, the Examiner needs to make time for one or a few meetings to clarify this with the student. If there are any delays on the part of an Examiner to fulfill their responsibilities to the student, as outlined above, the student can ask for approval by the Advisory Committee of an extension to the 4 week deadline for the oral examination.

2) GRANT PROPOSAL FORMAT (at least 5 weeks out of lab)

This format includes both written and oral components. The written component (hereafter called Grant) will be completed in the format of an NSERC Discovery Grant application (Research Proposal, Research Summary, and Budget). The research topic of the Grant should be within the broader area of the student's primary thesis project (e.g., an area that the student might pursue as a postdoctoral fellow), but should **not** be directly related to the thesis research. Prior to Grant preparation, the student identifies 3 potential Grant topics, summarizing each in 1 page with Title, Hypotheses, and Objectives, also highlighting 2 biomedical topics (see #3 below) that will be incorporated into each Grant topic. This process typically spans a couple of weeks. These 3 Grant topics are submitted to the Advisory Committee, which approves 1 of the 3, and then the clock starts on the 4 week deadline for Grant submission.

During Grant preparation, the student should consult the Supervisor primarily, but also Advisory Committee members, other assigned Examiners, or even the Graduate Chair, on the art of grant writing. Specifically, these people need to help the student to understand the key components of an effective funding proposal, including the specific structure of the Discovery Grant. The student will also be directed to examples of well-written successful NSERC Discovery Grants (e.g., via the USask's DG repository). However, no direct intellectual input on the Grant is allowed from any faculty members. The submitted Grant should contain ~40-60 references. ***If the Examiner desires***, each Examiner can suggest no more than 5 (total) review papers and/or book chapters that might help the student prepare the Grant and/or focus on specific questions of the 2 selected biomedical topics. Alternatively, each Examiner can opt to ask questions on the assigned biomedical topics based upon papers that the student has already independently incorporated into their Grant. Examiners can exceed the reading assignment maxima only with permission of the Advisory Committee.

For the grant proposal format, the comprehensive exam meeting should be scheduled at least **5 working days** after the grant proposal was submitted to the examining panel, so the grant proposal format requires at least 5 weeks of student focus outside of lab work from approval of grant topic to oral examination. Each

Examiner will assess the submitted Grant on such features as the logical flow of ideas, scientific methodology, experimental design, hypothesis formulation and testing, and statistical analysis. At the start of the oral exam, the student is required to present a brief (15 minute) summary of the Grant. Questions during the oral component of the comprehensive examination will be based on a defense of the Grant application, including knowledge of background information on the 2 biomedical topics incorporated into the proposal.

3) TOPIC LIST FOR BOTH FORMATS

All students will be examined on their area of research specialization.

Approved additional contemporary biomedical topics to select from:

| | | |
|--------------------------------|----------------------|--------------|
| experimental design/statistics | molecular biology | cell biology |
| neuroscience | imaging | anatomy |
| developmental biology | evolutionary biology | pharmacology |
| physiology | | |

Students also have the option of proposing an ad hoc topic. Advisory Committee approval is required for this topic at the meeting to arrange the comprehensive exam.

7. *Information on scholarships and graduate student stipend funding*

The following list identifies the most common sources of stipend funding for graduate students in Anatomy, Physiology and Pharmacology, although they are not the only sources. Eligibility, stipend amounts (minimum of \$18,000 for 2 years at the MSc level and \$21,000 for 4 years at the PhD level), and application procedures for these and other sources of stipend funding are available on the CGPS website (<https://grad.usask.ca/funding/scholarships.php#Majoruniversityscholarships>). Details of **the funding for each graduate student should be clearly described in the Graduate Student-Supervisor Agreement (Appendix C) that is signed and filed with your program of studies with CGPS. The Department will not admit students until funding required for student stipend and operating funds for the project are secured.**

- a. NSERC/CIHR – Eligible APP students, upon consultation with their supervisors, **must apply** for these federal grants. The CGPS provides a \$6,000 annual award for holders of NSERC-PGS and CIHR scholarships.
- b. U of S Dean’s scholarships, including International Dean’s scholarships, are open to new students with a GPA of 85% or better. Students are nominated by faculty or the Department.
- c. College of Medicine Graduate Awards program (CoMGRAD) – Eligible APP students **must apply** for CoMGRAD to be eligible for APP devolved scholarships (see next listing). Also, CoMGRAD funding can be used as matching funds or top-up if other external awards are also granted.
- d. U of S Awards - open to all graduate students. Requirements for U of S Scholarships and Fellowships include a minimum 80% GPA. A call for applications from the Graduate chair is sent out to graduate students in the spring of each year.
 - i. APP Devolved Scholarships
 - ii. GTF – Graduate Teaching Fellowships
 - iii. GTA – Graduate Teaching Assistantships
- e. College Awards – open to graduate students in the College of Medicine. Eligibility varies between awards. These awards are administered through the Vice Dean Research office, and a call for applications is made each year.
- f. Research grants of supervising faculty – In some cases, student stipends arise solely from research grants.

8. *Teaching opportunities*

Graduate students, particularly those in the PhD program, are offered the opportunity to participate in teaching or to serve as demonstrators in laboratory sessions. To this end, the Department offers Graduate Teaching Appointments each year to students. It is understood that graduate students should be encouraged to TA, provided that they are making satisfactory progress in their thesis research endeavors. All graduate students are encouraged to discuss TA opportunities for a coming academic year with their supervisor and graduate chair in the spring. TA assignments will be made in May or June of each year.

Participation as a Graduate Teaching Appointee will bring the student into direct contact with undergraduate students and afford an appreciation of the problems associated with the administration of courses. Individuals are typically offered teaching in specific courses within their general area of competence. The duties and approximate hours of the appointment will be outlined in writing in a letter of offer for casual employment (PSAC). These duties may include attendance at lectures and meetings of course committees. Employees will complete and submit time sheets reporting actual hours worked.

Students who wish to obtain more extensive teaching experience may wish to apply for a Graduate Teaching Assistantship or a Graduate Teaching Fellowship (see Section 7.) A maximum of 12 hours/week may be spent in teaching. Duties assigned to students holding Graduate Teaching Appointments will be in accordance with College of Graduate and Postdoctoral Studies guidelines. Teaching assignments will be determined by the Department Head.

9. *Time in program, leaves of absence*

Official program time limits (maximum) are five years for the MSc program, and six years for PhD programs. However, typical completion times are two years for an MSc and four years for a PhD. This time is measured from the beginning of the first term of registration for work which is included in the Program excluding any periods of approved leave. Typically, May 1st following graduation for the MSc/BSc combined program, or May 1st, September 1st or January 1st for MSc and PhD programs.

Leaves of absence are available to students for compassionate, medical, or parenting reasons (See parental leave policy - Appendix B). Reasonable accommodation is normally made. Leaves of absence from CGPS are normally granted in four-month blocks only, to coincide with the registration terms (Sept. 1 to Dec. 31; Jan. 1 to Apr. 30; May 1 to Aug. 31). Maternity, adoption and parenting leave may be granted for 8- or 12-month blocks. See Appendix B for parental leave funding opportunities.

Requests for leaves should be discussed as early as possible with supervisors so that appropriate accommodations can be made prior to the beginning of the leave. Requests should be made in writing by the student for a minimum leave of four months to a maximum leave of twelve months. The Dean of the CGPS will consider any petitions arising from students whose request for leave has been denied by the supervisor or academic unit. The leave period is not included in the time period for completion of the degree, and tuition fees are not assessed during the leave. While a student is on leave, all supervisory processes are suspended. Financial support offered to the student as a full-time, fully qualified student is not available to students on leave. Every possible accommodation should be made, however, in assisting the student to delay for the period of the leave, rather than having to decline offers of financial assistance. Letters of support in this regard will be sent to external funding agencies. Additional information regarding registration, fees, and funding for students on leave may be obtained from CGPS.

Appendix A: Frequently Asked Questions (FAQ)

- A.1 **What should I include in my research proposal?**
- A.2 **How do I set up a committee meeting?**
- A.3 **What should I include in my annual research report?**
- A.4 **What should I include in my Permission to Write Report?**
- A.5 **How should I format my thesis?**
- A.6 **Going to conferences – who pays?**

A.1 *What should I include in my research proposal?*

The following is a suggested format for the research proposal – this can be modified as needed to adapt to different research questions and approaches. The total length should be determined by the needs of a specific proposal, but usually it is very brief, since it will likely change as you progress through your thesis.

1. Background information
The literature review should outline the relevant literature framework into which your work will fit. This review should essentially set up and provide a rationale for the experimental hypothesis (*i.e.* what you are setting out to demonstrate).
2. Experimental hypothesis and summary of rationale for the hypothesis
A hypothesis is a proposed, falsifiable explanation, made on the basis of limited evidence, as a starting point for further investigation. For example: **Estrogen maintains bone density**. Rationale for this hypothesis would be published studies that show a relationship between estrogen and bone density. A test of the hypothesis would be to manipulate estrogen and evaluate bone density. A prediction of the hypothesis would be that if you blocked estrogen, then you would lose bone density (a hypothesis should never be written as a prediction).
3. Objectives – how you will address your hypothesis
4. For each objective
 - a. Rationale for experiment, and experimental hypotheses, if appropriate
 - b. Design of experiment, including suitable control groups, sample sizes
 - c. Proposed methods, including statistical analysis, power calculations if possible
 - d. Anticipated results
 - e. Anticipated problems and proposed solutions
 - f. Proposed timeline
5. Actual results, if available
6. Interpretation of any actual results

A.2 *How do I set up a committee meeting?*

In consultation with your Supervisor, you are responsible for deciding when you should have an Advisory Committee meeting. Remember that you are required to have at least one meeting each year to review your progress (typically May/June), although you can hold as many meetings per year as is deemed necessary. **All** scheduling should be done by the Department graduate assistant. Please refrain from scheduling your own meetings as this can lead to confusion among committee members and the Graduate Assistant. When you have decided to have a meeting, contact the Departmental Graduate Assistant and provide the approximate dates (usually a 2-week window) and an agenda for the meeting. The Graduate Assistant will schedule the meeting when all or most of your committee members can attend and will find an available room. Suggested agendas are:

- For the first meeting (before 4 months; Program of Studies meeting):
 - Introduction of student
 - Introduction of research topic (be prepared to present a brief introduction and summary of the proposed research)
 - Proposed coursework
 - Source of research and stipend funding
 - APP Grad Progress Form (check “Program of Studies” box)
- For annual meetings
 - Research progress
 - Progress in coursework
 - Stipend funding
 - APP Grad Progress Form (check “Annual Progress” box, and update dates of all such meetings)
- All reports should follow the format detailed in the APP Grad Progress Form

A.3 *What should I include in my annual progress report?*

The annual progress report is the last section of the APP Grad Progress Form, available from the Graduate Assistant and online. The report should begin with a general, but concise overview of the thesis project, then focusing on the specific progress made in the past year, as they relate to the hypothesis tested. Relevant data from previous years can be briefly summarized, but the target length of the report is 5 pages, not including figures, graphs, tables, timeline, and references. Previous years’ progress reports can be emailed to your AC to remind them of a more detailed explanations of previous relevant data. Please ensure that you also have filled out completely the rest of the form, including among other things all previous Advisory Committee meetings, coursework (including Ethics), conference presentations, publications, career goals, and suggestions for Grad Program improvements (please remember that the form should represent your accomplishments/progress *since starting the APP program*).

1. Abbreviated literature review (1 page)
Start with a paragraph summarizing your full thesis project, then focus on the specific rationale for experiments presented in that year’s Annual Research Progress Report.
2. Thesis hypothesis and Objectives/tests of hypothesis (max ½ page)
Again, focus on that year’s results.
3. Results/Discussion
Clearly present your progress on each objective achieved during the past year (only briefly repeat previous results if they are needed to understand your results in the past year), briefly discuss results, and indicate whether a manuscript of your work is being drafted or submitted. It’s best to embed figures/graphs/tables within the body of text, so that written results are near the data presented.
4. An updated timeline towards completion of degree
5. Literature cited

A.4 *What should I include in my Permission-to-Write report?*

The Permission-to-Write (PTW) meeting allows the Advisory Committee to survey the completion and quality of the student’s coursework, publications/presentations, thesis data, and structure of the thesis as a unified piece of work. With this in mind, the PTW meeting should include the Annual Progress Report Form, but instead of the Research Progress Report (last section of the form), the following PTW document should accompany the form:

7. A 1-2 page Abstract of thesis (this is the best way to communicate the accomplishments of your thesis)
8. A list of thesis objectives and hypotheses (even if somewhat redundant with abstract, these should be clearly written in bullet points)
9. A table of contents formatted appropriately for a thesis, including an indication of which chapters are published, which are submitted, and which have not yet been submitted for publication
10. A 1-2 page summary for each proposed chapter, each of which should include
 - a. the rationale, specific objectives, and hypotheses for that chapter (very briefly if already included in (2) above);
 - b. a **summary** of the most significant findings for each chapter, illustrated with 1 to 3 pertinent figures with complete figure legends (*i.e.* NOT all the figures for each chapter);
 - c. List of all figures/tables in that chapter; and
11. A final summary statement indicating whether the overall objectives/hypotheses of the thesis have been addressed.

Remember that you really want the PTW document to communicate effectively that you have collected sufficient data to properly test your hypothesis and address your study aims. You also want to be sure to communicate effectively to your committee what you feel are your major contributions to the research field.

A5 How should I format my thesis?

Theses must follow a consistent editorial format. You should consult the CGPS guidelines (available at <https://cgps.usask.ca/onboarding/thesis-roadmap/thesis-roadmap.php>), and review recent theses from the Department available through CGPS (<https://harvest.usask.ca/handle/10388/381>).

Normally the order in which the items are presented in the thesis is as follows:

1. title page,
2. abstract,
3. "permission to use the thesis",
4. table of contents,
5. list of tables,
6. list of figures, and
7. list of abbreviations.
8. The body of the thesis
 - a. Introduction that gives in 1-2 paragraphs an overview of the rationale for the project
 - b. Literature review, which should outline the relevant literature framework into which your work will fit. This review should in essence set up and provide a rationale for the experimental hypothesis (*i.e.* what you are setting out to demonstrate)
 - c. Hypothesis and objectives. Remember, a hypothesis is a proposed, falsifiable explanation, made on the basis of limited evidence (never write a hypothesis as a prediction).
 - d. The next portions of the thesis present your research, in one of two formats:
 - i. If you have published much of your research, you may wish to use these publications as the individual chapters of your thesis. Within the thesis, each publication (or 'data chapter') therefore has its own introduction, materials and methods, results and figures/tables, and discussion section.

A few important points:

1. The references from each of the data chapters should **not** be included at the end of each chapter but be collected together in one common

- bibliography at the end of the thesis.
2. Normally, methods common to different chapters should not be repeated in each chapter but included only once, and then cited as appropriate for subsequent chapters.
 - ii. If you have not published your work, you may elect to use a more traditional thesis format, with one common material and methods section, several results subsections.
 - e. A general discussion chapter is required following the last data chapter (i, above) or results section (ii, above). You will need to present a coherent discussion of all of your work in one common discussion, which needs to be more in-depth and insightful than a simple summary of the discussions of each of the data chapters, for example.
 - f. Conclusions, future directions
 - g. Bibliography
 - h. Appendices

A6 Going to conferences – who pays?

Your attendance and presentation of your research results at local, national and/or international scientific conferences is strongly encouraged. Normally, decisions on whether you will attend a particular conference are made jointly between you and your supervisor. It should be made clear in these discussions whether part or all of your expenses (*e.g.*, registration, travel, accommodation and meals) will be paid through your supervisor's research grants, including how and when these expenses will be paid and/or reimbursed. Usually, the supervisor is expected to pay for student conference-related expenses. In addition, travel awards are available from CGPS or from the College of Medicine. For information on these, contact the graduate assistant.

Appendix B: Parental leaves

The Tri-Agencies, CGPS, and College of Medicine all have procedures for graduate students wishing to take a parental leave during their program. Also, parental leave application procedures vary depending on funding source and university admin structure, so please work closely with your supervisor to identify the appropriate process and address any bureaucratic issues that arise.

Tri-Agency paid maternity/parental leave for students and postdoctoral fellows: The Tri-Agencies will provide maternity/parental leave supplements within 12 months following a child's birth or adoption to eligible students and postdoctoral fellows who are paid out of agency grants and who are the child's primary caregivers. The supplement paid to the grant recipient will be based on the students' and/or postdoctoral fellows' current salary/stipend from the grant for up to 12 months to cover the leave period. The most up-to-date information is available here: https://www.nserc-crsng.gc.ca/NSERC-CRSNG/policies-politiques/Wleave-Fconges_eng.asp.

CGPS: for the most up-to-date information regarding policies on parental leaves from CGPS, please see: <https://students.usask.ca/graduate/appeals-leaves-extensions.php>.

College of Medicine: for the most up-to-date information regarding policies on parental leaves from the College of Medicine, please contact the Assistant Dean of Graduate Studies at ovdr.grad@usask.ca.

Appendix C: Student-Supervisor Agreement (SSA)

(to ensure updated form, go to <https://medicine.usask.ca/students/graduate-programs/anatomy-physiology-and-pharmacology.php#GraduateDegreePrograms>)



UNIVERSITY OF SASKATCHEWAN

College of Graduate
and Postdoctoral Studies

GRAD.USASK.CA

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.
- It's anticipated that the discussion between Student and Supervisor(s) while completing this form will contribute to a healthy relationship, but completion of this agreement is not mandatory. This agreement is not a required element of a graduate student's program.
- 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

- a. 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
- b. 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

2.1 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:

2.2 *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:

2.3 *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.
- Sources of funding for Student travel should be investigated and applied for.
- Professional development programs, such as effective writing courses, teaching training, academic integrity, and workshops on research grants and career opportunities will be encouraged.
- 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

student printed name

Date: _____



supervisor signature

supervisor printed name

Date: _____



supervisor signature

supervisor printed name

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.

Appendix D: APP Grad Progress Form



APP Grad Progress Form

Anatomy, Physiology, & Pharmacology



UNIVERSITY OF
SASKATCHEWAN

College of Medicine

(to ensure updated form, go to <https://medicine.usask.ca/students/graduate-programs/anatomy-physiology-and-pharmacology.php#GraduateDegreePrograms>)

| | | | |
|--|--|--|---|
| Current Date | | Date of Initial Registration | |
| Student Name | | | |
| Student Number | | Program | MSc <input type="checkbox"/> PhD <input type="checkbox"/> |
| Committee Membership | | | |
| Supervisor(s) | | | |
| Committee Chair | | | |
| Regular Member(s) | | | |
| Cognate Member | | | |
| Committee Meetings | | | |
| Purpose of Today's Meeting | | | |
| <input type="checkbox"/> Initial Program of Studies Meeting | <input type="checkbox"/> Transfer to PhD | <input type="checkbox"/> Comprehensive Exam | |
| <input type="checkbox"/> Annual Progress Meeting | <input type="checkbox"/> Qualifying Exam | <input type="checkbox"/> Permission to Write | |
| Student Timeline Progress | | | |
| Initial POS Meeting | | Transfer to PhD | |
| | | Qualifying Exam | |
| | | Comprehensive Exam | |
| Annual Progress Meetings (list dates of all previous meetings) | | | |
| Funding | | | |
| Source (to add line item, move mouse to lower-left of textbox below and click "+") | Amount | Time Period | |
| | | | |
| Program of Studies | | | |
| Coursework | Proposed | | |
| | In Progress | | |
| | Completed/Grade | | |
| Ethics Coursework | Proposed | | |
| | In Progress | | |
| | Completed | | |
| Publications (Journal articles, book chapters, and other full-length publications, provide full citation) | | | |
| | | | |
| Conference Presentations (Meeting presentations, posters and published abstracts, provide full citation) | | | |
| | | | |
| Other Relevant Activities (Awards [name, date, value, do not include scholarships], teaching experience [course, year, contact hours]) | | | |
| | | | |
| Additional Information (Leaves of absence/interruptions [date and type of leave], career plans) | | | |
| | | | |
| Suggestions for Improvement of our Graduate Program | | | |

Research Project Report

1. *Background (max 1 page): Start with a paragraph on your full thesis project, then focus on the specific rationale for experiments presented in this year's Annual Research Progress Report.*

2. *Thesis Hypothesis and Objectives/ tests of hypothesis (max 1/2 page), again focusing on this year's results.*

3. *Results/Discussion: Present your progress on each objective achieved during the past year (only briefly repeat previous results if they are needed to understand your results in the past year), briefly discuss results, and indicate whether a manuscript of your work is being drafted or submitted.*

4. *Appendices (not factored into 5 page limit): Provide figures/ graphs/ tables, a brief updated timeline for thesis completion (doing experiments, writing up, etc.), and Literature Cited.*