

GRADUATE STUDIES PROGRAMME

2010-2011

Department of Pathology and Molecular Medicine

REGULATIONS and INFORMATION

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School of Graduate Studies and Research Calendar

<http://www.queensu.ca/calendars/sgsr/>

Tuition, Fees and Cost of Living

<http://www.queensu.ca/sgs/forstudents/prospectivestudents/tuition.html>

Registration Information for Returning Graduate Students

<http://www.queensu.ca/registrar/currentstudents/registration/regguides/regguidefw/courseselect/reginforeturngrad.html>

Registration Information for New Graduate Students

<http://www.queensu.ca/registrar/currentstudents/registration/regguides/regguidefw/courseselect/reginfonewgrad.html>

Supervisory Committee Assessment Form

http://www.path.queensu.ca/Education/PDF/student_assessment_form.pdf

Travel Reimbursement Forms

Application

http://www.path.queensu.ca/Education/PDF/Application_2010.pdf

Claim Form

http://www.path.queensu.ca/Education/PDF/Claim_Form_2010.pdf

THE PATHOLOGY GRADUATE PROGRAMME COMMITTEE

STRUCTURE

The Graduate Programme in Pathology is administered by the Graduate Programme Committee. The Committee consists of four members of the Department, one of whom is designated as Chair of the Committee and Coordinator of the Programme, plus the Head of the Department, and two graduate student representatives *ex officio*.

FUNCTION

The Committee makes recommendations to the Head of the Department on all aspects of graduate study. The Committee

- \$ is responsible for, and makes decisions on, admissions.
- \$ reviews individual student progress.
- \$ considers and makes recommendations in the circumstances of course failures.
- \$ advises the Head of the Department on problems arising between students and supervisors.
- \$ can if necessary, select a supervisory committee for a student in consultation with the supervisor.
- \$ serves as a component of the examining committee for a comprehensive examination.
- \$ makes recommendations on those students proposed by their supervisors to bypass the MSc and proceed directly to a PhD programme via the MiniMasters.
- \$ reviews membership of MSc/PhD and comprehensive examining committees.
- \$ recommends and rates students for scholarships and awards as requested by granting agencies and Queen's School of Graduate Studies.
- \$ has the authority to review and suggest improvements to the graduate programme.

FUNDING

STIPENDS

Supervisors undertake to ensure that sufficient funds are available for his/her graduate student to perform a minimum of two years of bench research in the case of a Master's degree and a minimum of four years of bench research for a Doctoral degree. The minimum stipends listed below will be comprised of internal and external awards received by the student as well as money provided through the supervisor's research grant.

MINIMUM REMUNERATION FOR GRADUATE STUDENTS

The following scale for remuneration of graduate students is effective from September 1, 2011 to August 31, 2012.

	MSc	PhD
Basic Stipend (No Competitive Award)	\$21,200	\$22,200
Recipient of Internal Competitive Award (Basic Stipend + 2.5% of Basic)	\$21,730	\$22,755
Recipient of Provincial Competitive Award (Basic Stipend + 5% of Basic)	\$22,260	\$23,310
Recipient of National Competitive Award (Basic Stipend + 10% of Basic)	\$23,320	\$24,420

- Most sources of your stipend (salary) are paid out monthly at the end of each month, although some awards may be paid out at the beginning of each term (January, May, September) and will cover a 4 month period.
- **Please check your contract carefully before signing off on it**, to ensure that you are being paid correctly. If you have questions, please see the Graduate Assistant or your Departmental Financial Assistant.
- Any T.A. money earned by a student **is not to be included** as part of their stipend.
- Supervisors may further supplement the above stipends.
- External monies earned by the student, outside of funds obtained by the supervisor, will not be deducted from the stipend.
- Under special circumstances, students may apply through School of Graduate Studies for support to meet additional financial needs.
- The scheme for remuneration for next year will be reassessed prior to July 1, 2010.
- Supervisors are not required to supplement external awards equal to or greater than \$25,000

COURSE REQUIREMENTS

Courses are chosen in consultation with the student supervisor. Courses that are counted toward satisfying a student's Programme requirements are designated "Primary Courses". Graduate courses acceptable to the Department must be of a high calibre and suitably directed towards the level of training required for the programme in which the student is registered. Students will not receive graduate credit for dual-numbered courses which they have taken as undergraduates.

A student entering the Master's or Doctoral Programme with an Honours degree from a Canadian University is required to take a minimum of four half courses at the 800 level taken over a period of two years.

1. Pathology 827 - Research Project in Pathology
2. Pathology 830/930 - Departmental Research Seminar Series
3. To be chosen by the student and supervisor
4. To be chosen by the student and supervisor

A student entering the Doctoral Programme in the Department with a Master's degree from another department or institution is required to take a minimum of two half courses at the 800 level.

1. Pathology 830/930 - Departmental Research Seminar Series
2. To be chosen by the student and supervisor

PhD candidates must also complete a comprehensive examination (see Comprehensive Examinations)

Pathology 827 - Research Project in Pathology

This course is taken in the first term by all incoming MSc students and those entering into the PhD Program without previously completing a MSc degree or the Mini-Master's process. Exemptions should be requested through the Course Co-ordinator and will be considered on a case by case basis. The course will normally be completed early in the second term, prior to the student's first Departmental seminar presentation, and will satisfy the one 1/2 course (Pathology) requirement.

Pathology 830/930 - Departmental Research Seminar Series

The requirements for this course will be satisfied by (1) regular attendance, and (2) scheduled presentations of their work, at the weekly seminar series (Tuesday 4:00pm).

Path 830 - Master's students will give 1/2 hour seminars in their first year and one hour (approx) seminars in the second year.

Path 930 - Students transferring to the PhD Program via the Mini-MSc route will give their first PhD seminar in the 2nd year of their PhD Program, and a further seminar in their 4th year (often their exit seminar). Direct entry PhD students, and those in the PhD program after completing a Master's degree, will give 1 hour seminars in their first and third years and an exit seminar in their final year.

Only one mark will be assigned, based on the average of the student's first two seminars. If a grade has been submitted for Path 830, a second grading for Path 930 is unnecessary

Students are required to describe their progress in the programme to their Supervisory Committee prior to their Departmental seminar presentation. It is the student's responsibility to organize this meeting. A summary of their research results (normally 3 pages) should be circulated to the committee one week prior to the meeting. The student will give a 15-20 presentation and this will be followed by questions and discussion (See Supervisory Committee Meetings).

ONLINE COURSES

QACS 799 - All students with proposed thesis work involving the use of experimental animals must attend "Introduction to Animal Care" at the first available opportunity (the course is available online at the beginning of each term, by Animal Care Services). This is compulsory and is in addition to the course requirements given above. Although it is a non-credit course, it must be entered on the student registration form to receive recognition. Students should advise the Graduate Assistant if they are not required to take the course, ie. their work will not involve experimental animals.

SGS 804 - A non-credit online tutorial in Human Research Participant Protection (CHRPP) – (<http://www.chrpp.ca/homepage/QUEENS>) is required by the School of Graduate Studies, and will provide a certificate confirming completion.

PHYG 801, SGS 801, MICR 809/909 - although very useful courses, and suggested for all graduate students, **cannot** be used as credit courses toward either an MSc or PhD degree.

COURSE FAILURE

In primary courses, the student must attain a minimum of second class standing (65%). In cases where the student does not achieve 65%, the student's supervisory committee may recommend to the Graduate Coordinator that the student:

- (a) repeat the examination within one year after original examination, or
- (b) repeat the course, or
- (c) take a substitute

If such a recommendation is not made, and subsequently approved by Division I, the student is asked to withdraw from his/her programme.

CHANGES IN REGISTRATION, STATUS AND COURSE WORK

Changes in status of program of study (e.g. part-time on-campus versus off-campus), and course deletions and additions are recorded on **an Academic Change Form**, initialled by the Course Coordinator; signed by the Supervisor and Department Head; and submitted to the Graduate School for approval.

Of note: Change of addresses cannot be accepted from students via e-mail. Legally, a signature is required. Please fax or mail changes of address to the Grad School or bring to the Department.

GRADUATE STUDENT SUPERVISION

SUPERVISORS

It is understood that the primary supervisory role rests upon the student's supervisor and that the supervisor has the responsibility of overseeing the student's day-to-day progress, of directing research and of advising the student on a variety of academic matters.

CO-SUPERVISORS

Sometimes it is useful for a student to have two co-supervisors; for example, when the thesis topic spans two disparate fields the particular expertise of each co-supervisor would be helpful. In such cases, one of the co-supervisors must be designated as the major supervisor (indicate this on the financial and supervisory statement) and will take primary responsibility for the student, especially in dealings with the graduate office. Students with co-supervisors should discuss the details of collaborative research (see page 25) with each of their supervisors. In cases of co-supervision, it may be appropriate to have an additional member on the supervisory committee. This decision should be made on an *ad hoc* basis.

SUPERVISOR'S ABSENCE

If a graduate supervisor leaves the University, or is absent on sabbatical leave, or is required by the University to perform other duties that would impair effective supervision, the supervisor must make formal written arrangements for an interim supervisor to act as both an academic and research advisor for the student. Copies of this written arrangement must be given to both the student and the graduate office to be put in the student's file.

CHANGE OF SUPERVISOR

The initial selection of a supervisor is usually considered a permanent arrangement by the student and professor. If, however, the student and the professor do not work well together, or find that their research interests are not compatible, a request to change supervisors may be made in writing to the Graduate Programme Committee. In all cases, it is recommended that the student discuss proposed changes with all members of his/her supervisory committee and with the Graduate Coordinator before a formal request for change is made.

SUPERVISORY COMMITTEES

Each student will have a supervisory committee. Under ordinary circumstances, the members of the supervisory committee act as supplementary (or complementary) advisors, and monitor the student's academic progress. In exceptional circumstances, the committee will act as a first "adjudicating" body in settling a disagreement between student and supervisor. The membership of supervisory committees (for students new to their program) will be reviewed and approved by the Graduate Programme Committee annually in November.

Formation

Supervisory committees must be formed within the first term of the student's graduate study and are chosen by the supervisor in consultation with the student. The members of the supervisory committee must be listed on the student's Financial and Supervisory Statement each year. The Graduate Programme Committee may recommend changes if the committee structure is unsatisfactory (see below).

Composition

For an MSc. student, the supervisory committee consists of the supervisor and at least two other members. It is recommended that one committee member be from a different research group either inside or outside the Department.

For a PhD student, the supervisory committee consists of the supervisor, and at least two other members of which one must be from within the Department. In some circumstances, a student may have a committee member from outside Queen's. In such cases, a request must be made in writing to the Graduate Program Committee, stating reasons for the request and qualifications of the proposed committee member.

SUPERVISORY COMMITTEE MEETINGS:

The first meeting of the supervisory committee will normally take place in conjunction with the Path 827 research proposal presentation. However, students are encouraged to meet with members of their committee prior to this to discuss their Path 827 writing assignments.

Scheduling Supervisory Committee Meetings Meetings will take place in advance of, or concurrently with, specific requirements of the programme. It is the responsibility of the student and supervisor, to schedule and document these meetings. These meetings will occur concurrently with presentation of the Path 827 Research Proposal, or will precede departmental seminar presentations, requests to advance into the PhD program by way of a Mini-Masters, preparation for the PhD comprehensive exam, and requests to proceed to writing MSc or PhD theses. The student must prepare a written summary of research progress (usually 3 pages) to be distributed to the supervisory committee members at least five working days prior to these meetings. The supervisor will keep copies of these research summaries and copies will also be submitted, along with the committee report (see below), to the graduate office for the student's file. Students or supervisors may also call a supervisory committee meeting any time to address academic problems or difficulties with the research programme.

Your Presentation to your Committee The student begins with a short presentation (20 minutes max.). This presentation should briefly re-introduce the project to the Committee, give the hypothesis and experimental goals, the experimental progress to date and the future plans and milestones. The Committee will then ask questions and give you feedback and make suggestions. Normally these meetings run approximately 90 minutes.

SUPERVISORY COMMITTEE REPORTS

A Supervisory Committee Assessment Report must be filed with the Departmental graduate office after each committee meeting, summarizing the student's academic and research progress and plans for the future. The student file will be checked for Supervisory Committee Assessment Reports (1) prior to allotting Queen's Graduate Awards and (2) prior to a student's defence. Students with no recent documentation will not be eligible to receive a Queen's Graduate Award. Those students preparing to defend will not have their defence committee members approved unless such documentation exists.

On each report, the student's progress to date must be indicated as "Satisfactory", "Conditional" or "Unsatisfactory".

"Satisfactory" indicates that the student has received a passing grade on graduate courses and that the thesis research is progressing well and on schedule.

"Conditional" indicates that, due to course failure or lack of research progress, the student is not performing at a level that would allow the planned programme to be completed successfully within the expected period. In such cases, another committee meeting must be held within four months to further evaluate the student's progress and to assess any conditions imposed at the previous meeting. In some cases this follow-up meeting might have to be delayed for up to eight months if a course has to be taken. At this second meeting the student's progress must be deemed "Satisfactory" or a further meeting must be held within two months to further evaluate the students' progress. At this time only a "Satisfactory" or "Unsatisfactory" rating can be given. Student's receiving a second consecutive "Unsatisfactory" rating will be asked to withdraw from the programme

An "Unsatisfactory" rating indicates that the student is not performing at the expected level. Within two months, the student must have another Committee meeting to determine his/her continuation in the programme. At this time, a student receiving a second "Unsatisfactory" rating will be asked to withdraw from the programme.

All "Conditional" and "Unsatisfactory" ratings from committee meetings will be brought to the attention of the Graduate Programme Committee which may recommend further courses of action to the student and/or supervisory committee. A copy of this report should be made available to the student.

SCHOLARSHIPS, AWARDS, BURSARIES, ETC

Students are encouraged to apply to competitions applicable to them. For those competitions that require a departmental ranking, the student and supervisor are responsible for submitting all necessary documentation necessary to assessment/ranking. If that information is missing, the Committee is unable to make an informed decision regarding the student's status.

Notifications of bursaries/scholarships/fellowships are e-mailed by the Graduate Assistant to graduate students on an ongoing basis.

The following sites are also useful:

The Queen's School of Graduate Studies Calendar:

<http://www.queensu.ca/calendars/archive/2009-10/sgrs/index.htm>

COS Funding Opportunities

<http://www.cos.com>

Ontario Graduate Scholarship

<http://www.osap.gov.on.ca>

Application deadline November 1 each year (earlier Departmental deadline)\$ 15,000

CIHR

<http://www.cihr-irsc.gc.ca/e/193.html>

NSERC

http://www.nserc-crsng.gc.ca/index_eng.asp

Other suggestions: Heart & Stroke Foundation, National Cancer Institute, Canadian Blood Services, Canadian Breast Cancer Foundation

Of particular note to Pathology Graduate Students:

Internal Scholarships/Awards/Fellowships

Queen's Graduate Awards (non-competitive)

\$ Variable, dependent on allotment from Graduate School and any awards already held by student.

Graduate Entrance Tuition Award (GETA) (for domestic students only) (competitive)

The award is given to one new, incoming graduate student with an average of at least 80% (or equivalent) in each of the last two years of study.

\$ Value is equivalent to one year's domestic tuition fee and is paid directly to the student's fees account.

McLaughlin, Bracken and other named Queen's Fellowships (competitive)

(~\$10,000) - deadline in March of each year

No application required. Departmental ranking of students is submitted to the Graduate School.

Eligibility: have applied for at least one external award for which student is qualified; be registered full time; have attained an over 80% average in each of last two years.

Thesis Completion Funding

Eligibility: PhD student in 5th year. Provides financial assistance to PhD students who are in the final stages of writing their thesis. Apply in Spring.

The Robert Kisilevsky Fund for Research Education (\$ variable)

This endowed fund supports a bursary program for full-time PhD students in the first year of their program in the Department of Pathology and Molecular Medicine. The bursaries are one-time awards, *paid in September*, which are provided in addition to any other support received by students from either their supervisors or other sources. The bursary is **not a competitive award** and all PhD students will receive one during their first year *of full-time studies. Students joining collaborative programs are eligible to receive the award once they have identified Pathology and Molecular Medicine as their home department.*

The Jeremy Nesheim Graduate Award (competitive)

The purpose of this Fund is to enhance graduate student support within the Department in the subject area of Hemostasis and Thrombosis and/or Vascular Biology. The fund will support graduate travel and expenses to an expert laboratory relevant to the student's field of study and recommended by the student's supervisor.

Preferably this should provide the student with experience outside Canada. The fund is not intended to support bursaries or fellowships. Applications are due the 2nd week of October. Information available from the Graduate Assistant

FUNDING OF ATTENDANCE AT SCIENTIFIC MEETINGS

Students are encouraged to submit papers, relating to their work, to appropriate scientific meetings. Only those students attending meetings to present graduate research performed in the Pathology Department at Queen's will have access to funding to defray costs of travel, etc. Please retain all expense receipts including boarding passes.

1. The Department will provide on a first-come-first-served basis \$300/academic year for this purpose.

A Conference Travel **Application** should be completed as early as possible and must be submitted to the Graduate Assistant prior to attendance at the meeting.

http://www.path.queensu.ca/Application_2010.pdf

A Conference Travel **Claim Form** should be completed upon return from the conference and submitted to the Graduate Assistant.

http://www.path.queensu.ca/Claim_Form_2010.pdf

2. The Department will provide 50% of the remaining costs, to a maximum of \$500, assuming that the Supervisor matches this. On return from the Conference, a Travel Expense Report should be completed online and submitted to the Departmental Financial Assistant (Maria Dickson) with the original supporting receipts (including any boarding passes) in Richardson Labs.

Note: Students who have left the Department by the time the Conference takes place are eligible for travel funds, providing the abstract was submitted while they were enrolled as a full-time graduate student in the Pathology Department at Queen's University.

TEACHING ASSISTANTSHIPS

The following Teaching Assistantships are available:

PATH 499 Student tutor (maximum 6)
 CANC 499 Student tutor (maximum 6)
 PATH 499 Administrative TA (1)
 CANC 499 Administrative TA (1)
 PATH 425 Administrative TA (1)
 CANC 330 Administrative TA (1)
 PATH 310 TA (2-4)

Information on remuneration can be obtained from the Graduate Assistant .

Please Note:

Full-time students employed as teaching assistants are limited to a maximum of ten hours per week (average) in this capacity. Students wishing to exceed these levels should consult with their supervisor and graduate coordinator. Under no circumstances is the student permitted to register as full-time while maintaining more than 30 hours work per week elsewhere.

Foreign students are required to take English proficiency testing provided by the University prior to assuming the responsibility of Teaching Assistant.

EXAMINING COMMITTEES

Defence committees *will not* normally be comprised of the supervisory committee members. Other members whose expertise is appropriate should be given preference. To aid the Graduate Studies Committee in choosing defence committee members, the names of the supervisory committee members will be provided at the same time as the suggested defence committee members.

Please note: For examiners to be chosen from another Department, preference will be given to faculty who are NOT cross-appointed to the Department of Pathology and Molecular Medicine. If the student submits only cross-appointees as suggested external examiners, the Graduate Studies Committee may choose to recommend different examiners.

MINI-MASTER'S / COMPREHENSIVE DEFENCE COMMITTEE STRUCTURE

The Committee will normally be comprised of :

Chairperson:

A member of the Graduate Program Committee

Ensures that the conduct of the examination is fair and that the questions posed to the candidate are appropriate

Members: **

- (1) a faculty member whose primary appointment is in another Department;
- (2) two Departmental faculty members, with preference being given to those with a prime appointment is in Pathology and Molecular Medicine.

**The three examiners will be chosen, if possible, from a list of examiners provided by the student/supervisor

The supervisor is encouraged to be present and may ask questions but is not considered as an examiner.

MSc AND PhD THESIS COMMITTEE STRUCTURES

Master's Degree

Chairperson:

This individual is chosen by the Graduate Assistant.

Members:

- (1) A Delegate of the Head of the Department,
- (2) The supervisor and/or co-supervisor,
- (3) A Faculty member from the Department,
- (4) A Faculty from another Department within the Faculty of Health Sciences

An external examiner is not required but may replace the Departmental member following the advice of the supervisor and approval by the Departmental Graduate Studies Committee. In such cases, the supervisor takes responsibility for arranging reimbursement of the expenses of the external examiner.

Doctoral Degree

Chairperson:

This individual is appointed by the Chairman of Division I.

Members:

- (1) A delegate of the Head of the Department,
- (2) the supervisor and/or co-supervisor,
- (3) A Faculty member from the Department of Pathology
- (4) A Faculty member from another Department in the Faculty of Health Sciences
- (5) an external examiner from outside Queen's University. External examiners may now choose not to be in physical attendance for the oral examination, and to conduct their questions through Skype, videoconferencing or teleconferencing.

(See <http://queensu.ca/calendars/sgsr/Thesis.html#101180>)

MINI-MASTER'S THESIS

Acceleration into the PhD Programme via the Mini Thesis Route

CRITERIA

Acceleration into a PhD programme without completing the Master's thesis is reserved for students who meet the following criteria:

- have completed at least one term, full time, and have completed at least two graduate courses or equivalent
- \$ have made the request following one term of enrolment (4 months) and prior to the end of the 5th term of study (20 month).
- \$ have an undergraduate honours degree with a minimum upper second class standing or equivalent.
- \$ have had an overall first class average in graduate courses completed. A student need not have completed all course requirements before applying for Mini-Master's but must satisfy them prior to completion of their graduate degree
- \$ have demonstrated the ability to perform original research.
- \$ have shown the ability to prepare research results in written form, poster form, or for oral presentation.
- \$ failure to complete the Mini-Master's requirements within the 24-month time limit will preclude enrolment as a PhD student until such time as the deficiencies have been cleared.

PROCEDURE

Between the 3rd to 5th terms of study:

- The student and supervisory committee meet to approve the student's request to transfer into the PhD Programme via the Mini-Master's thesis route. This meeting and approval of the supervisory committee must be documented with a Supervisory Committee Assessment form.
- The supervisor writes a letter to the Coordinator of Graduate Programme indicating (a) the student's request; (b) a brief justification outlining the student's qualifications; and, (c) a sentence indicating the Supervisory committee's knowledge and support of the request.

- The documents outlined in points 1 to 4 below are forwarded to the Graduate Assistant for submission to the Graduate Studies Committee. **No application fee is required**
 1. Letter of support from the supervisor (as above)
 2. Outline of student's current and proposed research
 3. Completed paper application for the PhD degree programme
 4. Two letters of reference from the application package
 5. Transcript (unofficial)

No later than 40 working days after the approval to proceed via the Mini-Master's route has been confirmed in writing by the School of Graduate Studies and Research, the Mini-Master's candidate will defend a written research report and proposal in an oral examination to an examining committee.

Approximately six to eight weeks prior to defense

- The supervisor and student agree upon a list of suitable examiners (their specific areas of expertise should be pertinent to the content of the proposal), as well as a suitable time frame. This information as well as the topic of the Mini-Master's thesis is submitted to the Graduate Assistant.
- When the Departmental Graduate Studies Committee approves the list of examiners, the Graduate Assistant arranges a specific date and time for the examination that is mutually convenient for the participants.
- The student should ensure that the necessary audio/visual equipment is available

At least 10 working days prior to the defense:

- The student submits the Mini-Master's thesis to each member of his/her examining committee (along with the necessary administrative forms provided by the Graduate Assistant).

The Graduate Assistant sends a PASS/FAIL form to the Chair that is signed by the members of the committee on completion of the defense. This is returned to the Assistant for submission to the Chairperson of Division I.

PREPARATION OF THE WRITTEN REPORT

- The written report (Mini-Master's thesis) should outline the background of the thesis project, the work done to date, and the proposals for development of the research into a doctoral thesis.
- The format of the mini-thesis should be as follows: Title Page; Abstract (approx 250 words); Introduction and background literature relevant to the thesis; Experimental Progress by the applicant to date; Hypothesis and Specific Objectives; Proposed Research / Detailed Experimental Plan; Figures & Legends; References must include titles and full literature citations.
- The length of the Mini-Master's thesis should be 20 double-spaced pages excluding Figures, Tables and References. It should be in Times New Roman font 12 and have 1 inch margins all around.

- The Mini-Master's thesis should be complete in itself. However, material such as publications submitted or draft manuscripts should be appended.
- While manuscripts submitted for publication may be appended to the Mini-Master's thesis, the completion of sufficient work for such a publication is not a prerequisite for submission of a Mini-Master's thesis. The timetable for the Mini-Master's thesis decision is such that many students may have had time to display exceptional initiative and competence in the laboratory, but not necessarily to have accumulated sufficient results for a publication.
- A student must indicate in the Mini-Master's thesis where/when significant work related to the progress was done by others.
- A student should not need to be absent from laboratory work for the purpose of writing the Mini-Master's thesis for longer than two weeks.
- Examples of Mini-Master's theses written by successful candidates are available to the student upon request from the Graduate Assistant to assist the student with content and format of the document.

EVALUATION PROCESS

Written Component

The Graduate Assistant will provide each examiner with an "Evaluation of the Written Report" form. Any concerns regarding the written component of the Mini-Master's thesis must be reported by examiners to the Coordinator of Graduate Programme at least five working days prior to the oral examination date. If two or more examiners independently give a 'fail' decision to the written component, the oral exam does not take place. The Coordinator informs the candidate that the exam is postponed and a resubmission of the proposal is requested.

Oral Examination

Chairs are provided with a document outlining the procedures for conducting an examination. The role of the Chair is that of an impartial observer who, for the student's benefit, will ensure that the examination proceeds fairly. The Chair may pose a few relevant questions but is not part of the evaluating group. The exam will begin with a presentation by the student on their research proposal that **may not exceed 20 minutes**. This will be followed by a round of questions lasting a maximum of 20 minutes per examiner. The supervisor may also be invited to ask up a couple of questions but will be limited to 5 minutes. Questions will primarily relate to the background of the project, hypothesis and specific experimental aims, research progress, technical aspects of the proposed experiments, and the theoretical basis for expanding the project to a PhD. The question period for the Mini-Masters oral exam should normally proceed no longer than 60 minutes. The student is expected to provide evidence of familiarity with the pertinent background and techniques, show a good understanding of the project, the results to date and the future research proposal, and provide evidence that the project offers promising lines for extension.

At the end of the examination, the candidate will be asked to leave the room while the examining committee members discuss the performance of the candidate. The examining committee will decide if the student will be recommended for direct advancement to the PhD program or not. Two or more negative votes by the examining committee will result in failure of the Mini-Master's examination. The decision of the examining committee shall be forwarded to the School of Graduate Studies and Research. Students who pass their Mini-Master's examination will be allowed to transfer to the doctoral program. Students who do not pass the Mini-Master's examination will be allowed to complete the MSc thesis, according to Graduate School regulations.

PhD Comprehensive Oral Examination:

For students who have successfully completed the Mini-Master's defense, the Mini-Master's thesis document forms the written basis of the PhD comprehensive exam, and the oral exam consists of a second round of questions lasting a maximum of 10 minutes per examiner. This round of questions will normally focus more on the background literature with an expectation that the student has developed sufficient understanding of the field to discuss the overall relevance of their project, and the significance of possible outcomes. Students may be invited to speculate more broadly about future directions and significance to the field. Expectations of examiners should take into account the period of time the student has been in the program at the time of this exam, which will normally be less than 24 months.

For students entering the PhD program directly from a BSc, or after completing an MSc, the PhD comprehensive exam will be based upon a written document entitled "PhD Comprehensive: Written Report". For these students,

At the end of the examination, the candidate will be asked to leave the room while the examining committee members discuss the performance of the candidate. The examining committee will decide if the student passes or not. Two or more negative votes by the examining committee will result in failure of the PhD Comprehensive examination. The decision of the examining committee shall be forwarded to the School of Graduate Studies and Research.

PhD COMPREHENSIVE EXAMINATIONS

AIMS

The purpose of the PhD Comprehensive exam is to test student's knowledge of their research area. This knowledge should range from an in-depth comprehension of the specific details of their proposed PhD project to a general knowledge of the wider research area. This general knowledge base should enable the student to comprehend and discuss the broader implications of their research.

TIMING

Students undertaking the Mini-Master's route to the PhD programme will take the PhD comprehensive exam immediately after successful completion of the Mini-Master's defense. Student's entering the PhD programme directly from a BSc program or after completing a MSc degree will take the PhD comprehensive within 18 months of entering the PhD programme.

PROCEDURE

For students entering the PhD program directly from a BSc, or after completing an MSc, the PhD comprehensive exam will be based upon a written document entitled "PhD Comprehensive: Written Report" (see below).

Timeline

Approximately three months prior to defense, the student will arrange a supervisory committee meeting to discuss his/her progress in course work and research. One week in advance of this meeting, the student will provide the members of their supervisory committee with a three page summary of his/her research.

At the meeting, a Supervisory Committee Assessment Report (available at the back of the handbook) will be signed by all the supervisory committee members, indicating that the student's progress in the program is satisfactory. This should be submitted to the Graduate Assistant for the student's file.

Approximately six weeks prior to the estimated date of the defence, the names of the suggested examination committee members, the proposed time frame and the comprehensive proposal topic/title should be submitted to the Graduate Assistant for approval by the Pathology Graduate Studies Committee. Once the defence committee is approved, the Graduate Assistant will arrange a specific date/time for the oral examination and confirm the details with everyone involved.

At least two weeks prior to the defense date the written proposal must be circulated to all members of the Comprehensive Examining Committee. Each member will advise the Graduate Coordinator at least three days prior to the oral examination whether the written proposal is a "Pass" or "Fail". The student will be informed whether the oral examination should proceed based on the written component of the proposal.

EVALUATION PROCESS

Written Component

The Graduate Assistant will provide each examiner with an "Evaluation of the PhD Comprehensive: Written Report" form. Any concerns regarding the written component of the PhD Comprehensive must be reported by examiners to the Coordinator of Graduate Programme at least three working days prior to the oral examination date. If two or more examiners independently give a 'fail' decision to the written component, the oral exam does not take place. The Coordinator informs the candidate that the exam is postponed and a resubmission of the proposal is requested.

Oral Examination

Chairs are provided with a document outlining the procedures for conducting a PhD Comprehensive examination. The role of the Chair is that of an impartial observer who, for the student's benefit, will ensure that the examination proceeds fairly. The Chair may pose a few relevant questions but is not part of the evaluating group.

The oral exam will consist of a 20 minute presentation by the student, followed by two rounds of questions totaling a maximum of 90 minutes. Normally this will consist of a first round of questions lasting up to a maximum of 20 minutes per examiner, followed by a second round lasting up to a maximum of 10 minutes per examiner.

At the end of the examination, the candidate will be asked to leave the room while the examining committee members discuss the performance of the candidate. The examining committee will

decide if the student passes or not. Two or more negative votes by the examining committee will result in failure of the PhD Comprehensive examination. The decision of the examining committee shall be forwarded to the School of Graduate Studies and Research.

In the event of a tied vote, committee members are asked to provide a percentage mark for each component of the examination. In these circumstances, an average mark of >70% for each component of the exam is deemed as a passing grade.

FORMAT OF PHD COMPREHENSIVE: WRITTEN REPORT

- The written report should outline the background of the thesis project, the work done to date, and the proposals for development of the research into a doctoral thesis.
- The format of the PhD comprehensive should be as follows: Title Page; Abstract (approx 250 words); Introduction and background literature relevant to the thesis; Experimental Progress by the applicant to date; Hypothesis and Specific Objectives; Proposed Research / Detailed Experimental Plan; Figures & Legends; References must include titles and full literature citations.
- The length of the document should be 20 double-spaced pages excluding Figures, Tables and References. It should be in Times New Roman font 12 and have 1 inch margins all around.
- The PhD comprehensive document should be complete in itself. However, publications, submitted or draft manuscripts may be appended.
- While manuscripts submitted for publication may be appended, the completion of sufficient work for such a publication is not a prerequisite.
- A student must indicate in the report where/when significant work related to the progress was done by others.
- A student should not need to be absent from laboratory work for the purpose of writing the PhD comprehensive for longer than two weeks.

Examples of PhD Comprehensive reports written by successful candidates are available to the student upon request from the Graduate Assistant to assist the student with content and format of the document.

NATURE OF STUDY AREAS AND CONTENT OF QUESTIONS

An issue that causes PhD candidates frequent concern is the scope of questions that they might expect to be asked during the oral defense of their written comprehensive proposal. While there is no simple answer to this question, questions will relate to the theoretic or practical content of the proposal or will concern matters that are deemed to be related and pertinent to the main topic of the proposal, as outlined in the introduction of their written document. Candidates are encouraged to approach individual members of their comprehensive examination committee in the two weeks prior to their oral defense to enquire into specific areas that the committee members may feel especially worthy of questions. This advice may, in some instances, take the form of a reading list of subject areas or pertinent references.

Each member of the Examination Committee is required to submit to the Department a brief written evaluation of the candidate's performance following the examination. These comments are copied to the student.

The candidate may appeal decisions made by the comprehensive examining committee through the normal protocols outlined in the Queen's University School of Graduate Studies and Research Calendar (Section 8.9 Review of Academic Decisions).

To monitor and assess the fairness of the comprehensive process, the School of Graduate Studies requires two forms to be completed.

Form A: PhD Comprehensive Examination

This form is to be completed and signed by the Student and Coordinator. The form attests that the student has been provided with the appropriate information concerning the Department's procedures, timing of the examination and the criteria used to judge the outcome of the exam. The original is to be retained by the Department. A copy should be submitted to the Graduate School prior to the student's comprehensive examination. If the comprehensive examination is held in two parts, the form needs only to be submitted prior to the first part.

Form B: PhD Comprehensive Examination Confidential Report

This report allows each participant (chairperson, candidate, examiner & supervisor) an opportunity to comment on the conduct of the examination in light of the approved procedures. All originals are to be submitted directly to the Dean, School of Graduate Studies, by each participant of the examination committee as well as the candidate immediately following the comprehensive or qualifying exam.

ON COMPLETION OF THE ORAL EXAMINATION

- The Chair informs the candidate of the results of the Comprehensive examination immediately following the completion of the oral defense.
- The Chair's copy of the comprehensive proposal and any required documentation are returned to the Graduate Assistant or Coordinator.
- A letter is sent from the Department to the School of Graduate Studies and Research detailing the date and outcome of the comprehensive examination.
- Copies of the written comprehensive proposals and written documentation of the outcome of the examinations are filed with the student's records.

FAILURE OF THE COMPREHENSIVE EXAMINATION

Failure at the first attempt of the written proposal will require review and resubmission of the proposal within one month. Failure at the first attempt at the oral comprehensive examination may be followed by a re-examination within three months. Normally, failure at the re-examination results in a recommendation to Division I of the Graduate School that the student withdraw from the Graduate Studies Programme.

MSc AND PhD THESIS

FORMAT

<http://www.queensu.ca/sgs/forstudents/NewCurrentStudents.html>

Click on Completing your degree

- The length of Master's thesis should not be in excess of 100 pages, excluding references but not figures, and that of a PhD thesis 175 pages, also excluding references (with titles). Under exceptional circumstances, students will be permitted to exceed the upper limit. This will be discussed in advance with the Graduate Studies Committee with reasons for the request.
- The style and format of the thesis should follow that of a typical paper in a standard medical science journal, such as **The Journal of Clinical Investigation** or the **Journal of Biological Chemistry**. References in the text are usually cited numerically, but may also be cited by author and listed in the bibliography alphabetically. The titles must be included in the list of references. IUB abbreviations are to be used throughout.
- The Methods section should be written in the style and format of a typical paper in a standard scientific journal with any modifications of methodology identified. Detailed procedures may be included in an Appendix, if desired.
- Results should be stated with no discussion. However, sufficient commentary should be included so that experiments are linked together and the rationale for the experimental procedure is clearly defined.
- The Discussion should be an interpretation of the results, relating to the current literature in the field. A certain amount of speculation is allowable.
- Students are encouraged to seek input from their Supervisory Committee during the writing of their thesis.

PROCEDURES FOR SUBMISSION OF THESIS - (MSc/PhD)

The scheduling and administrative procedures described in this section are very important to ensure the smooth planning and execution of the thesis examination process. Please keep in mind that other commitments and/or vacations of faculty and/or staff involved, may prevent completion of your documentation if arrangements are left to the last minute!

1a. For a MSc thesis defence, the following should be completed approximately 6 weeks prior to the defence date.

The supervisor shall provide the Graduate Assistant with several potential names for members of the Examination Committee. These will be submitted to the Departmental Graduate Committee for approval. The Graduate Assistant will advise the supervisor of the Graduate Committee's decision. The supervisor will then contact the potential examiners and obtain commitments from the nominated members to serve as examiners and to attend the oral thesis examination as scheduled. The supervisor and student submit to the Graduate Program Assistant:

- the thesis title.
- the members of the Examining Committee Committee.
- The chosen date and time

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1b. For a PhD thesis defence, the following steps should be completed approximately 8 weeks prior to the defence date.

The supervisor shall provide the Graduate Assistant with several potential names for members of the Examination Committee, as well as the thesis title and the time frame in which the defence should be scheduled. This information will be submitted to the Departmental Graduate Committee for approval. The Graduate Assistant will advise the supervisor and student of the Graduate Committee's decision and proceed to schedule the defence. The student and supervisor will be advised of the committee composition.

For both MSc and PhD defences:

2. A final copy of the thesis is approved by the supervisor before the student makes copies for the examiners (including the Chair). It is the responsibility of the student and supervisor that the thesis follows the format required by the Department and the School of Graduate Studies.
3. The **Oral Thesis Examination Form** (online) may be completed by either the Graduate Assistant or the student, and then signed by the Supervisor and the Department Head (the Co-ordinator may sign in place of the Head).
4. Printing/copying costs can be reduced by printing examiners' copies in black and white, and providing a PDF copy to enable them to see the photographs / figures in colour.
5. **Ten working days prior to the defence date for an MSc defence, or 25 working days before for a PhD defence.**
 - the **Oral Thesis Examination Form**, and for PhD theses only - a copy of the thesis, are taken to the Graduate School by the student.
 - All other copies of the thesis are distributed to the committee members by the student.
6. The student lets the Grad Assistant know whether to order coffee or juice, and ice water for the defence.
7. It is the student's responsibility to arrange the booking of audio/visual equipment and ensure they have a working knowledge of it.

MSc/PhD THESIS EXAMINATION PROCESS

Please refer to the following site for the current Graduate School information:

<http://www.queensu.ca/sgs/forfacultyandstaff/helpingstudents/healthsciencethesisresources.html>

- An Evaluation Form from the Graduate School is sent to each member of the Examination Committee for completion and return prior to the oral defence. The form indicates, based on the examiner's evaluation of the thesis submitted, whether or not the oral examination should proceed.
- At the beginning of the oral examination, the student leaves the room briefly while the Committee decides whether the defence should go forward. This is followed by a 20-25 minute presentation by the student, followed by the examiners' questions. The candidate again leaves the room while the committee discusses its evaluation.
- The Chairperson (1) discusses the outcome of the examination with the candidate and supervisor immediately following the defence, and (2) reports the outcome in writing to the Graduate School.
- The Registrar of the Graduate School notifies the student (copy to Department) of the completion of the degree requirements only after submission of four unbound copies of the thesis, which have been revised (if required) as recommended by the Thesis Examining Committee, and finally approved by the supervisor/committee. Tuition fees are charged up to the date of receipt of the thesis copies.

DEPARTMENTAL THESIS PRODUCTION REIMBURSEMENT POLICY

The Department of Pathology and Molecular Medicine will provide funds to defer the costs associated with production of PhD, MSc and Mini-MSc theses. A maximum of \$100 or \$200 is available for MSc or PhD theses, respectively. In order to take advantage of this, the student must provide the Graduate Assistant with receipts or invoices specifying the number of pages and the photocopying rate. Rather than printing colour photos/figures for examiners' copies, students can supply the examiner with a PDF copy of the thesis so that he/she can refer to the colour images. Students are strongly encouraged to take advantage of Queen's Printing Services or cost effective commercial photocopying services. Reimbursements will not be provided for the use of Departmental photocopiers.

STUDENTS SHOULD REQUEST THAT THEIR THESIS PUBLICATION BE DELAYED, DEPENDENT UPON MANUSCRIPT PUBLICATION. IF THIS ISN'T DONE, SUBMITTED MANUSCRIPTS CAN BE ACCESSED ONLINE

FINAL SUBMISSION OF THESIS

<http://www.queensu.ca/sgs/forstudents/NewCurrentStudents/completingyourdegree/finalsubmission.html>

Includes: Restriction of Thesis
 Submission of Copies of Thesis for Binding
 Electronic Submission to QSPACE

STUDENT GRIEVANCE AND MEDIATION PROCESS

A student who is dissatisfied with his/her progress, or feels that the commitments of the supervisor are not being fulfilled, should call a meeting of the supervisory committee to discuss the problem.

In cases of problems associated with supervision or conflicts between graduate students, supervisors and/or advisory committee members, the procedures for mediation outlined below should be followed.

- It is advised that resolution of the issue be sought first through informal Departmental and School of Graduate Studies and Research channels. Thus, discussion of the problem should occur first between the student and supervisor and/or supervisory committee.
- If the issue cannot be resolved at this level, one or both parties should consult the Graduate Coordinator to seek possible resolution. The Graduate Coordinator will consult with the Head of the Department if the issue needs to be dealt with by the Graduate School.
- If a satisfactory resolution is not reached, assistance can be requested of the Dean or Associate Dean(s) of the School of Graduate Studies and Research. In consultation with the person(s) seeking advice, the Dean may elect to appoint an advisory committee to help resolve the issue. All consultations in the Departmental and School of Graduate Studies and Research channel are kept confidential and no direct action will be taken without the prior consent of the person(s) seeking advice.
- Resolution of the issue can also be sought through the University's Grievance Procedures, which include informal, administrative and formal channels. The Queen's Senate Statement on Grievance, Discipline and Related Matters and the University's Grievance and Appeal Procedures document should be consulted.

WITHDRAWAL FROM THE PROGRAMME

For students who withdraw for reasons other than unsatisfactory reports or failure of an examination, a letter and academic change form from the student and a letter from the supervisor detailing the reasons for withdrawal must be sent to the Graduate Coordinator. A student who requests a temporary absence (inactive status) due to medical reasons may make an application to the Graduate School for a fee waiver. Each case is assessed on its own merit.

COLLABORATIVE RESEARCH GUIDELINES

PREAMBLE

Queen's University has explicit guidelines concerning intellectual property and the publication of research results. The purpose of this section is therefore to draw the supervisors' and students' attention to issues which may need to be considered with respect to data "ownership" and authorship.

It is stressed that this section is by no means comprehensive in its treatment of possible situations in which researchers may find themselves. Many situations may need to be dealt with on a case-by-case basis. Readers are referred to the aforementioned documents as well as the Code of Research Ethics, all of which were published as Supplements to the Queen's Gazette, and which deal with these issues more comprehensively.

OVERVIEW

Publication of results is a basic and integral part of research. Thus, graduate students are expected to publish results from their thesis research in the scientific literature. Since thesis research is almost always supported through the supervisor's research grant, and is normally a collaborative effort involving student and supervisor, some form of joint authorship is always (except in the most unusual circumstances) appropriate on all papers resulting from the thesis research. Incoming graduate students are encouraged to discuss such joint authorship arrangements with their supervisor at the outset of their graduate programme.

GUIDELINES

These guidelines reflect the general procedures followed by many professors and are listed below to form the basis for discussion between student and supervisor.

- The supervisor has a right to the originals of both the raw data and any analyses on which the thesis is based. The student may have a copy of these.
- The graduate student is usually first author on all publications arising directly from his/her thesis research - exceptions to this may occur when the majority of ideas, data analyses or writing are provided by the supervisor or other researchers; or, a significant amount of additional research or analysis is required to produce publishable results. In cases of multiple authorship, the supervisor will make the final decision regarding order of authorship.
- The supervisor is always co-author on all publications arising from the thesis research except in most unusual circumstances.
- Students employed as research assistants for data collection or analysis should not expect joint authorship unless they have made significant original contributions to the research programme.
- Supervisors have the right to write up and take first authorship on papers based on any

material in the thesis or arising from the thesis and not submitted for publication within one year of the thesis defense (or sooner, if necessary; e.g. material needs to be submitted for publication before a grant application deadline). Since the student will be co-author on such papers, thesis material may be used directly without infringing on the student's copyright.

- Supervisors are advised to discuss at the outset with their students issues related to intellectual property. It should be recognized that, in accordance with Queen's University policy, intellectual property is owned by the creators. However, the University retains a royalty-free irrevocable right to use for educational and research purposes any intellectual property created by a student in relation to her/his research activities.

ACADEMIC DISHONESTY

Academic dishonesty, including plagiarism and falsification of data, is considered an extremely serious offence by this Department and the University. The School of Graduate Studies document on academic dishonesty should be read carefully to familiarize yourself with its contents and implications.

<http://www.queensu.ca/sgs/forstudents/policiesprocedures.html#dishonesty>