

# PATHOLOGY AND MOLECULAR MEDICINE



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## GRADUATE PROGRAM MANUAL FOR STUDENTS

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### Department of Pathology and Molecular Medicine

Graduate Program Director:	Peter Greer, PhD Botterell Hall, 3 <sup>rd</sup> Floor Queen's Extension: 75081 <a href="mailto:greerp@queensu.ca">greerp@queensu.ca</a>
Graduate Program Assistant:	Amber Sarazin Richardson Laboratory, Room 201 Queen's Extension: 79558 <a href="mailto:dpmm-grad@queensu.ca">dpmm-grad@queensu.ca</a>
Student Representatives:	Tim Walker Botterell Hall, 3 <sup>rd</sup> Floor <a href="mailto:15tjw3@queensu.ca">15tjw3@queensu.ca</a>  Danielle Harper Botterell Hall, 3 <sup>rd</sup> Floor <a href="mailto:danielle.harper@queensu.ca">danielle.harper@queensu.ca</a>

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## **INTRODUCTION**

Welcome to the [Department of Pathology and Molecular Medicine](#)! This manual contains valuable information relating to your studies, from how to apply to the program, to what steps you will need to take to graduate. We hope that you will find this information helpful and that most of your questions can be answered here.

Good luck with your studies!

## **DEPARTMENTAL VISION**

We strive to be national leaders in advanced diagnostic services, employee success, student achievement and knowledge discovery.

## **DEPARTMENTAL MISSION**

Together, we proudly serve our regional community through the provision of expert laboratory and clinical services, education and research.

## **DEPARTMENTAL VALUES**

In our pursuit of excellence, we value people by practicing mutual respect, professionalism, teamwork, integrity, trust and accountability.

## **DEPARTMENTAL HISTORY**

**1895** A new “unit” of Pathology and Bacteriology is established, and Dr. Walter T. Connell becomes its first full-time Professor and Chair and is also appointed as the first pathologist at Kingston General Hospital. He establishes what is probably the fourth clinical laboratory in North America.

**1922** “The Pathological Unit” becomes officially “The Pathology Department” of Queen’s University and Kingston General Hospital and moves into its permanent home of the newly constructed Richardson Laboratory building, where it still resides.

**1951** The modern era of pathology at Queen’s University begins with the appointment of Robert H. More to the Headship of the Department. During his fifteen-year tenure, More markedly expands the faculty, develops research programs which use the new technique of electron microscopy, initiates the Graduate Program and establishes the first four-year residency program in General Pathology.

**1962** Two floors are added to Richardson Laboratory, significantly increasing departmental research space.

**1972** Dr. Nathan Kaufman, More’s successor, establishes a Cancer Research Group.

**1979** Dr. David Robertson becomes Head and, through the early 1980's, nurtures the development of what are to become internationally recognized research programs in neuropathology, hemostasis and cancer biology. He also initiates an Outreach Program for the delivery of laboratory diagnostic and directorship services to remote sites.

**1986** Dr. Robert Kisilevsky is appointed Head. He becomes an international leader in amyloidosis research and, during his five-year term, oversees significant growth in the Graduate Program and the introduction of pathology courses into the undergraduate Life Sciences program.

**1991** Dr. Paul Manley becomes Head and leads the expansion of the Laboratory Outreach program to multiple sites across Southeastern Ontario. During his eleven-year tenure, cancer and molecular hemostasis research programs expand markedly.

**2000** A Regional Forensic Pathology Unit is established.

**2001** Diagnostic Laboratory Genetics and Clinical Genetics services are consolidated in a new Division of Genetics.

**2002** Dr. Iain Young is appointed Head. He is responsible for growing graduate studies in the Department.

**2003** The department changes its name to the "Department of Pathology and Molecular Medicine" (DPMM) to reflect its leadership role in the application of the understanding of disease at a molecular level to diagnostic services, clinical care, education and research.

**2007** The Queen's Laboratory for Molecular Pathology is established.

**2009** Dr. Victor Tron is appointed Head.

**2014** Dr. Lois Shepherd is appointed interim Head following the departure of Victor Tron to St. Michael's Hospital in Toronto.

**2016** Dr. Alexander (Sandy) Boag is appointed Head.

**2021** Dr. David Berman is appointed Head.

## **APPLICATION PROCESS**

Applications are submitted online through the School of Graduate Studies' website at the following link: <https://eservices.queensu.ca/apps/sgsapp/>. In exceptional circumstances, paper applications are available upon request. Please email Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) to request a paper application or assistance with the online application process.

### **Deadlines**

Applications are accepted year-round. Start dates may be at the beginning of academic terms in September, January or May.

### **Finding a Supervisor**

It will be necessary for you to personally contact researchers by regular mail, e-mail or telephone in order to find a supervisor for your studies. It is recommended that you contact potential supervisors prior to submitting an application. Your application will be reviewed by the Graduate Program Committee (GPC) and the Department will not be able to commit to final acceptance of your application until you have found a suitable supervisor. The number of positions available to new graduate students is limited and not all research faculty will have space in their laboratories and/or funding for a graduate student at any one time. Faculty receive news of funding from granting agencies throughout the year. Also, students presently in labs defend their theses at different times, freeing up positions in different research areas.

The Graduate Program Assistant, Amber Sarazin, maintains files on all graduate studies applicants to the Department of Pathology and Molecular Medicine and these are available to researchers should they be seeking a new graduate student at any time. Files remain valid for one year following the date of the application.

Before accepting a position in any laboratory, it is strongly suggested that you not only interview with your prospective supervisor, but also speak with graduate students in that laboratory as well as other students within the Department.

Once a supervisor has agreed to offer you a position and has contacted our Departmental office, you will be recommended for acceptance to the School of Graduate Studies and Research. A list of supervisory eligible faculty is available on our website at the following link:

<https://pathology.queensu.ca/research>



## **FEES AND REGISTRATION**

### **Tuition**

For the most up-to-date information regarding current tuition rates and the cost of living in Kingston, please refer to the School of Graduate Studies website at the following link:

[SGSPA Registration & Fees](#)

### **Net I.D.**

Your NetID is your network identity at Queen's. It will be the "User ID" you need to sign on to the applications and services that are operated by ITSservices, such as email, Moodle course management system, SOLUS Student Center, MyQueensU Portal, QShare, Wiki, etc.

The login is called your "NetID", and instructions on how to generate them can be found at:

[ITS – Getting Started](#)

You will need your Queen's student number to go through these processes.

If you don't have your Student number, please call the School of Graduate Studies office at 613-533-6100. We cannot provide you with your student number by email, due to confidentiality requirements.

### **Registration**

Registration is now completed online in SOLUS. Please refer to the following link for registration instructions for both new and returning students:

[Office of the Registrar - Registration](#)

## **HOUSING**

*Community Housing* manages the student rental properties owned by Queen's University. This includes two apartment complexes located at west campus - An Clachan and John Orr Tower - as well as a variety of apartments and houses around campus.

*Community Housing* also operates an Accommodations Listing Service where external landlords can post listings for student rental units. The Landlord Contract Program is also managed by *Community Housing*.

### **Location:**

*Community Housing* is located at 169 University Avenue at the corner of University and Clergy West. Paid parking is available underground at the Queen's Centre, entrance is off of Division Street.

### **Hours of Operation:**

Telephone reception 8:30 am to 4:30 pm. Open to Walk-in Customers from 9:00 am to 4:00 pm, Monday to Friday (excluding holidays).

They are open over the lunch hour.

Phone: 613-533-2501 Fax: 613-533-2196 Email: [community.housing@queensu.ca](mailto:community.housing@queensu.ca)

Familiarize yourself with what graduate student support systems Queen's has to offer:

<http://www.queensu.ca/sgs/>

## **FOR INTERNATIONAL STUDENTS**

Health Insurance: International students you & your dependents must sign up for UHIP **immediately** upon arrival, either in person at the Queen's University International Centre (QUIC), or online at:

<http://quic.queensu.ca>

Work Authorization Permit & Student Visas: This applies only to international students who have visa status for their graduate studies. It is important that you register with the Immigration Office as soon as you arrive, in order to obtain clearance to work and study in Canada. The Office requires evidence that you have adequate financial support to cover your studying and living expenses.

Queen's University International Centre (QUIC): <http://quic.queensu.ca/> Phone: 613-533-2604

Email: [quic@queensu.ca](mailto:quic@queensu.ca)

The Queen's University International Centre (QUIC) is a support service for all members of the Queen's community and through its activities promotes an internationally informed and cross-culturally sensitive learning environment.

They can help students with questions related to immigration or financial matters. You are invited to contact them or visit their comfortable setting on the first floor of the **Mitchell Hall, 208 (2<sup>nd</sup> floor)** at the corner of Union Street and University Avenue. Office hours are 8:30 AM - 4:30 PM, Monday to Friday.

## **AROUND CAMPUS**

### **School of Graduate Studies**

Queen's graduate students are thought-provoking, engaging, with an insatiable thirst for learning and strong scholars and researchers.

The School of Graduate Studies has a number of resources and acts as a gateway to others at Queen's for graduate students. These resources include:

- Providing information about how to register, find a place to live and more before arriving
- Linking you up with campus life and community services when you arrive
- Academic support workshops through the Expanding Horizons series, held throughout the year
- Assistance with awards and funding by administering the opportunities and ensuring graduate students receive payments in a timely fashion
- Assisting students and graduate programs with support for best practices in graduate supervision
- Providing policy guidance to students and graduate programs to change a students' status, explore student exchange opportunities and more
- Guiding students through the process of successfully completing their degree and graduating

#### **Location:**

Gordon Hall, Room 425  
74 Union Street  
Queen's University  
Kingston, Ontario, Canada K7L 3N6  
Phone: (1)-613-533-6100  
E-mail: [sgspa.reception@queensu.ca](mailto:sgspa.reception@queensu.ca)

#### **Normal Hours of Operation:**

Monday to Friday  
8:30 AM – 12 Noon, 1 PM - 4:30 PM

## **Libraries**

There are several libraries on campus <https://library.queensu.ca/locations/all>  
Including **Bracken Health Sciences Library** (Main Floor of **Botterell Hall**, 18 Stuart Street).

For more information on all the libraries on campus see the library website at: <http://library.queensu.ca>

### **Equity and Human Rights**

Please see the links below for information for graduate students about harassment and harassment protocols, and information for faculty regarding the response protocol should a graduate student report concerns about discrimination or harassment from a faculty member or staff member.

[Queen's Harassment and Discrimination Prevention and Response Policy](#)

[SGSPA Counselling & Advising Services for Graduate Students](#)

### **Campus Bookstore**

A not-for-profit corporation that endeavors to distribute required course material at the lowest possible price to students, while operating a comprehensive University bookstore for the Queen's community. The Campus Bookstore is located in **Clark Hall** on Queen's University Main Campus. Open regular hours from 9 AM to 6 PM, Monday to Friday, and, 10 AM to 5 PM on Saturday. Open 24 hour-a-day at <http://www.campusbookstore.com>.

### **Campus Computer Services**

- **The Queen's Managed Mobile Plans**  
The Queen's Managed Mobile Plans will remain a service of ITS and will operate as part of the [IT Support Centre](#) following the closure of the store.  
Visit the <https://www.queensu.ca/procurement/preferred-suppliers/mobile-technology> for detailed information on the available plans.
- **Personal IT Purchases**  
For Personal IT purchases visit the [Employee Discount page](#) of the Strategic Procurement Services website or the Campus Bookstore.
- **Computer Software**  
Visit the IT Services to learn about [available tools and software](#) and instructions on how to obtain it.

## **FUNDING**

### **Stipends**

Supervisors undertake to ensure that sufficient funds are available for their graduate students to perform a minimum of two years of bench research in the case of a Masters' degree and a minimum of four years of bench research for a Doctoral degree. The minimum stipends, as of September 1, 2024, are:

	<b>MSc</b>	<b>PhD</b>
Stipend with no competitive award	\$26,500	\$27,500
Stipend with internal competitive award (+2.5%)	\$27,163	\$28,188
Stipend with provincial competitive award (+5%)	\$27,825	\$28,875
Stipend with national competitive award (+10%)	\$29,150	\$30,250

- The portion of your funding that comes from your supervisor's research grants will be paid at the end of each month. All awards are 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 Program Assistant [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) or your Departmental Financial Assistant.
- Supervisors may further supplement the above stipends.
- Under special circumstances, you may apply through the School of Graduate Studies for support to meet additional financial needs.
- Supervisors are not required to supplement external awards equal to or greater than \$30,000

### **Teaching Assistantships**

There are a number of teaching assistant positions that may be offered to students throughout the year. Students will receive email notification of available positions and can contact Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) to inquire about TA opportunities associated with DPMM courses.

Any money earned as a teaching assistant is not included as part of your stipend and will be in addition to the minimum remuneration mentioned above.

### **Fellowship Opportunities**

Full-time students, who are registered and in good academic standing with Queen's, are eligible for a wide range of internal and external scholarships and bursary awards. You are encouraged to apply to competitions for which you are eligible. For those competitions that require a departmental ranking, you and your supervisor are responsible for submitting all appropriate documentation necessary for assessment/ranking. If this information is missing, the GPC will be unable to make an informed decision regarding your ranking status.

Notifications of bursaries/scholarships/fellowships competitions are e-mailed to all graduate students on an ongoing basis.

**OGS: Ontario Graduate Scholarship:**

Submit applications to Amber Sarazin. Departmental deadline is March 1<sup>st</sup>.

Application instructions can be found in the following link:

[Ontario Graduate Scholarship | School of Graduate Studies](#)

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

**NSERC:** [http://www.nserc-crsng.gc.ca/index\\_eng.asp](http://www.nserc-crsng.gc.ca/index_eng.asp)

**Canadian Blood Services:** [Canadian Blood Services Graduate Fellowship Program](#)

**OSAP: Ontario Student Assistance Program:** <https://www.ontario.ca/page/osap-ontario-student-assistance-program>

Additional information on scholarship opportunities can be found on the School of Graduate Studies website at: <https://www.queensu.ca/grad-postdoc/grad-studies/apply>

### **Internal Scholarships/Awards/Fellowships**

#### *Queen's Graduate Awards*

(Non-competitive)

\$ amount is variable, depending on Departmental allotment from School of Graduate Studies 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)

No application required. Departmental ranking of students from OGS competition is used to select nominees, which are submitted by the Department to the School of Graduate Studies.

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

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

#### *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. Availability of award is on a first-come first-serve basis.

#### *The Robert Kisilevsky Fund for Research Education*

(Non-competitive)

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.

\$ amount is variable.

#### *The Jeremy Nesheim Graduate Travel Fund*

(Competitive)

Established in memory of Dr. Jeremy Nesheim (B.Sc. 1991, Ph.D., 1998; University of Minnesota). The purpose of this Fund is to enhance graduate student support within the Department of Pathology and Molecular Medicine. The fund will support graduate student travel and expenses to an expert laboratory relevant to the student's field of study and recommended by the student's supervisor or conference travel. Preferably this should provide the student with experience outside Canada. The fund is not intended to

support bursaries or fellowships. Applications can be made at any time; presented to the Graduate Program Assistant, addressed to the Head of the Department. The application should include: i) a brief summary of the proposal (one page, double spaced); ii) details of where and why the candidate intends to visit; iii) an estimate of financial support required; iv) a statement of support from the student's supervisor.

### **Funding for Attendance at Scientific Meetings**

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

1. The School of Graduate Studies will provide \$300/academic year for this purpose. The student will notify the Graduate Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) of their intention to access this funding ahead of the conference; and will provide proof of attendance (registration receipt, agenda and abstract). The student will provide the Graduate Program Assistant with expense receipts to access reimbursement upon return from the conference.
2. The Department will also provide 50% of the remaining costs, to a maximum of \$500. On return from the Conference the student (or supervisor) will provide the Graduate Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) with the original supporting receipts (including any boarding passes) associated and work with them to complete a reimbursement claim. Abstract and conference agenda are also required for the reimbursement claim.
3. Students registered in the Collaborative Graduate Program in Cancer Research (CGPCR) (see page 12) are eligible for additional funds to support expenses associated with conference travel (see page 12 for more details).

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.



## **COURSES AND RELATED INFORMATION**

### **Registration**

Registration is currently completed online in SOLUS. Certain courses require instructor permission and/or have prerequisites and will be designated as such in SOLUS. To make changes to course registrations or to add a course after the start of the semester, an Academic Change Form is presently required. This form can be found at the following link: <https://www.queensu.ca/grad-postdoc/forms>

The Graduate Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) can provide help with this process.

### **The Collaborative Graduate Program in Cancer Research**

Students whose thesis will focus on any area of cancer research should consider joining the Collaborative Graduate Program in Cancer Research (CGPCR) which is administered in collaboration with the DPMM Graduate Program. The CGPCR provides the student with an additional degree recognition of expertise in Cancer Research that will appear on your transcript. DPMM students enrolled in the CGPCR will be required to satisfy the academic requirements of the DPMM graduate program; must pursue a thesis project in any area of Cancer Research; complete one or more designated Cancer Research recommended courses, generally as one of the electives of their DPMM Program of study, and must participate in the Cancer Research Seminar Series, which will expose students to examples of cancer research and practice in broad areas.

MSc and PhD students in the CGPCR are eligible to apply for designated Cancer Program funding for travel to conferences and for merit awards in recognition of publication or presentation success. Further information on the Cancer Program is available [here](#). Application for entry to the CGPCR can be made by providing the Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) with the application form provided [here](#).

### **Degree Requirements**

Courses are chosen in consultation with your supervisor. Courses that are counted toward satisfying your Program requirements are designated as “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 program in which you are registered. Graduate credit will not be awarded for dual numbered courses taken as undergraduates unless approved by the Graduate Program Director for the combined BSc/MSc degree.

A student entering the Masters or Doctoral Program with an Honours BSc 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 Program after completing a Masters' degree from Queen's or another Canadian University is required to take a minimum of two half courses at the 800 level:

1. Pathology 827 - Research Project in Pathology\*
2. Pathology 830/930 - Departmental Research Seminar Series\*

\*Pathology 827 and Pathology 830/930 are required courses that begin in the first term of registration in the program. However, students should not register on SOLUS until the beginning of the semester in which the course will be completed – the second semester for Pathology 827; the fifth semester for Pathology 830; and normally the seventh semester of Pathology 930 (taken only by students entering directly into the PhD program).

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

### **Pathology 827- Research Project in Pathology**

This course is taken by all MSc students or those directly entering into the PhD program. Exceptions may be made with permission of the Graduate Program Committee (GPC). The student and supervisor will first establish a supervisory committee consisting of the supervisor and two other faculty members; neither of which needs to hold a primary Pathology appointment. The GPC Director (Peter Greer [greerp@queensu.ca](mailto:greerp@queensu.ca)) and Graduate Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) must be informed of the composition of the supervisory committee by the student by the beginning of the 5<sup>th</sup> week of study.

The first part of the course will involve three essays, each based upon a key research paper (not a review article) provided to the student by the supervisor. These research papers should highlight central themes related to the research program of the students' thesis work. Supervisors are requested to provide each of these three papers at least six weeks prior to the respective essay due date (see below). The student will evaluate each research paper, read the related literature and write a concise summary essay for each of these research papers using the format of a News and Views article in Nature. Please read several of these in Nature to get a clear idea of the style and format <https://www.nature.com/nature/articles?type=news-and-views>

These essays should consist of a concise summary paragraph that cites the subject paper, followed by an overview of the field to provide appropriate context, a brief description and critical assessment of the work, and most importantly, a discussion of its relevance/significance to the field and what it means in terms of future directions. Include one concise figure capturing the key points of the work. The essay will be a

maximum of 5 double spaced pages (Times Roman, 12 font, 1 inch margins all around; not including figures and references). Be sure to properly cite the primary literature in a reference list using the format of Cancer Research or a comparable format which includes complete titles.

On the due dates for these three essays (7<sup>th</sup>, 13<sup>th</sup>, 19<sup>th</sup> week of study), the student will email an electronic copy of your essay (Word file) and the subject research article (PDF file) to the course coordinator ([greerp@queensu.ca](mailto:greerp@queensu.ca)). The coordinator will email these to each member of the supervisory committee along with an essay evaluation form. Committee members will send their completed evaluations to the coordinator, who will tabulate the marks and send the feedback and an averaged mark back to the student. In addition to carefully considering feedback provided in these evaluations, students are encouraged to discuss that feedback with supervisors, committee members and the course coordinator to assist in refining their writing skills in subsequent assignments. The objective of these essays includes developing skills in scientific writing and critical evaluation of published research papers, as well as beginning to build a bibliography of relevant literature to draw on in future writing commitments.

The last components of the course are a written research proposal and an oral presentation. The ideas for this proposal will be developed in consultation with the supervisor. Students may solicit verbal feedback from their supervisors on drafts of this proposal, but supervisors should not directly edit these drafts. In the case of students intending to graduate with an MSc degree, this proposal should be developed as the foundation of your eventual thesis research. However, for direct entry PhD students, or those who intend to convert to the PhD stream, it is understood that this proposal might be largely an exercise and may or may not closely conform to your eventual PhD thesis research project. The written research proposal is due the 26<sup>th</sup> week of study. It is to be written in the form of a grant proposal and will have a cover page with proposal title, student name and names of supervisory committee members; and the following sections: 1) One-page summary/abstract with hypothesis and bullet point aims; 2) Background, concluding with restated hypothesis and list of experimental aims; 3) Description of experimental aims and approaches, including preliminary data and discussion of observed or expected outcomes and potential caveats; and 4) Significance and future perspectives. The maximum length of this document will be 10 double spaced pages (Times Roman, 12 font, 1 inch margins all around), including the one-page summary/abstract, but not including cover page, figures or references). An oral presentation of this proposal to the course coordinator and supervisory committee will take place around the 30<sup>th</sup> week of study. The student will give a 20-minute presentation. The presentation will be followed by a discussion period of ~ one hour.

Students will be evaluated on their three essays (20% each), the written research proposal (20%) and their research proposal presentation/discussion (20%). Do not register for the course until the beginning of the term in which it will be completed (normally January for students starting in September).

### **Path 830/930 - Departmental Research Seminar Series**

The requirements for this course will be satisfied by regular attendance, and scheduled presentations of your work, at the weekly seminar series (Tuesdays at 4:00 PM).

Path 830 – Masters' students will give 30-minute seminars in their first year, and 60-minute seminars in the second year. Students enrolled in the combined BSc/MSc program will present once, in their third MSc semester. Registration will take place at the beginning of the semester, in which the course will be completed (normally January for students starting in September).

Path 930 - Direct entry PhD students, and those in the PhD program after completing a Masters' degree, will give one hour seminars in their first and third years. Registration will normally take place at the beginning of the seventh semester, in which the course will be completed. 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. PhD students will be offered a chance to give an exit seminar in their final year.

Only one mark will be assigned, based on the average of the first two seminars. If a grade has been submitted for Path 830, a second grading for Path 930 is unnecessary. However, evaluations are solicited from attending faculty to rank presentations for consideration for seminar awards, which are given to the best seminars of the year (first year student, second year MSc student, PhD student).

### **Online Courses**

#### **[QACS 799 Introduction to Animal Care](#)**

All students with proposed thesis work involving the use of experimental animals must take “Introduction to Animal Care” at the first available opportunity (the course is available online at the beginning of each term - offered by Animal Care Services). This 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 Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) if they are not required to take the course, i.e. their work will not involve experimental animals.

#### **[SGS 804 Research Ethics Education](#)**

A non-credit online tutorial in Human Research Participant Protection (CHRPP) is required by the School of Graduate Studies and will provide a certificate confirming completion.

### **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 [Academic Integrity Policy](#) should be read carefully to familiarize yourself with its contents and implications.

### **Course Failure**

In primary courses, a minimum of second class standing (65%) must be attained. In cases where a minimum of 65% is not achieved, your supervisory committee may recommend to the GPC Director that you:

- (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, you may be asked to withdraw from the program.

### **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](#), initialed by the Course Coordinator; signed by the Supervisor and Department Head; and submitted to the School of Graduate Studies for approval.

\*\*\*Change of addresses cannot be accepted from 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 your supervisor, and that your supervisor has the responsibility of overseeing your day-to-day progress, directing your research and advising you on a variety of academic matters. While not obligatory, it is recommended that the supervisor and student develop a formal “Letter of Understanding” at the beginning of the degree that details preferred mechanisms of contact, regularity of meetings, structure-of the supervisor-student relationship and time in the lab expectations. The [Graduate Supervision Policy](#) approved by Senate in January 2022 provides a detailed description of the roles and responsibilities of the Supervisor, Student, Supervisory Committee Members and the Departmental Graduate Program Committee, as well as links to related resources.

### **Co-Supervisors**

Sometimes it is useful for 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 primary supervisor (indicate this on the financial and supervisory statement) and will take primary responsibility for your academic supervision, especially in dealings with the graduate office. Students with co-supervisors should discuss the details of collaborative research 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 in consultation with the Graduate Program Director.

### **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. Copies of this written arrangement must be given to both to you, as the student, and the Graduate Program Assistant to be put in your student file.

### **Change of Supervisor**

The initial selection of a supervisor is usually considered a permanent arrangement. If, however, you and your supervisor do not work well together, or find that your research interests are not compatible, a request to change supervisors may be made in writing to the Graduate Program Committee. In all cases, it is recommended that you discuss the proposed changes with all members of your supervisory committee and with the Graduate Program Director 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 your academic progress. In exceptional circumstances, the committee will act as a first "adjudicating" body in settling a disagreement between you and your supervisor. The membership of supervisory committees (for students new to their program) will be reviewed and approved by the Graduate Program Committee.

### **Formation**

Supervisory committees must be formed within the first term of graduate study and are chosen by the supervisor in consultation with you. The Graduate Program 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. Supervisory committee members may 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. Supervisory committee members may be from a different research group either inside or outside the Department. In some circumstances, students 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 with your supervisory committee will normally take place in conjunction with the Path 827 research proposal presentation. However, you are encouraged to meet with members of your committee prior to this to discuss your Path 827 writing assignments.

### **Scheduling Supervisory Committee Meetings**

Supervisory committee meetings documenting progress in the program must take place annually. It is the responsibility of you and your supervisor, to schedule these meetings; ideally, they should occur concurrently with each programmatic milestone. The first will take place concurrently with presentation of the Path 827 Research Proposal. Others will precede requests to advance into the PhD program by way of a Mini-Masters, preparation for the PhD comprehensive exam, requests to proceed to writing MSc or PhD theses, and following departmental seminar presentations. In advance of these meetings, you must prepare a written summary of research progress and future plans using the [Annual Progress Report form](#) (see below). This is to be distributed to the supervisory committee members at least five working days prior to these meetings. Upon the conclusion of the meeting, a signed copy of this report will be submitted to the Graduate Program Assistant for your student file. You or your supervisors may also call a supervisory



committee meeting any time to address academic problems or difficulties with your research program. The Committee must meet at least once a year.

### **Your Presentation to Your Committee**

Your supervisory committee meeting will typically begin with a short presentation (20 minutes max.) unless scheduled immediately after a departmental seminar where your committee members have seen your progress. This presentation should briefly re-introduce your project to the committee, give the hypothesis and experimental goals, the experimental progress to date and the future plans and milestones. The committee will ask questions and give you feedback and make suggestions. Normally these meetings run approximately 30-90 minutes depending on the agenda. The committee must meet at least once a year.

### **Annual Progress Reports**

An Annual Progress Report form must be filed with the Departmental Graduate Program Assistant after each committee meeting, summarizing your academic and research progress and plans for the future. This form is available on the departmental web site. [Annual Progress Report form](#)

Your student file will be checked for these Reports (1) prior to allotting Queen's Graduate Awards and (2) prior to a defence. If no recent supervisory committee documentation is present, you will not be eligible to receive a Queen's Graduate Award. Defence committee members will also not be approved unless such documentation exists.

On each report, your 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 program 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.

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 program. At this time, a student receiving a second "Unsatisfactory" rating will be asked to withdraw from the program.

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

## **PhD COMPREHENSIVE EXAMINATIONS**

### **Aims**

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

### **Timing**

Student will take the PhD comprehensive normally within 24 months of entering the PhD program.

### **Procedure**

The PhD comprehensive exam will be based upon a written document entitled “PhD Comprehensive: Written Report” (see below) that is based upon the students PhD thesis project. A twenty-minute presentation of this proposal will be followed by an oral examination of approximately 90 minutes.

### **Timeline**

Six weeks prior to the proposed exam date, the student and supervisor will provide the Graduate Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) with a proposed date of the defence, the names of three suggested external examiners (from outside the Department of Pathology and Molecular Medicine but within Health Sciences; listed in order of preference), and the comprehensive proposal topic/title. Once the list of potential external examiners is approved by the Graduate Program Committee, the Graduate Program Assistant will approach these individuals in the order specified along with the members of the supervisory committee to arrange a specific date/time for the oral examination and confirm the details with everyone involved.

At least ten working days prior to the defence date, the written proposal must be circulated to all members of the Comprehensive Examining Committee. Examiners will advise the Graduate Program Assistant at least three days prior to the oral examination if the written proposal is a "Fail". You will be informed whether the oral examination should proceed based on the written component of the proposal.

### **Composition of the Committee**

The committee will be comprised of the Supervisory Committee and one additional examiner, with a faculty member of the Graduate Program Committee serving as the Chair.

## **Evaluation Process**

### **Written Component**

Any concerns regarding the written component of the PhD Comprehensive must be reported by examiners to the Graduate Program Assistant 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 will not take place. The Graduate Program Director will inform the candidate that the exam is postponed, and a resubmission of the proposal will be requested. If there is no response from any committee member, it is assumed that all examiners consider the written component a "Pass", and the student will be informed that the exam will proceed.

### **Oral Examination**

The Chair (Graduate Program Director or delegate) is 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 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, 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 student will be asked to leave the room while the Examining Committee members discuss the students' performance. The examining committee will decide to assign a pass or fail grade. Two or more negative votes by the examining committee will result in failure of the PhD Comprehensive examination. 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 greater than 70% for each component of the exam is deemed as a passing grade.

At the conclusion of this discussion, the student will be invited back and informed of the decision.

The decision of the examining committee will be forwarded to the School of Graduate Studies and Research.

### Format of the 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 (approximately 250 words); Introduction and Background Literature relevant to the thesis; Experimental Progress by the applicant to date; Hypothesis and Specific Objectives; Proposed Research Aims; Detailed Experimental Plan; Discussion; Figures & Legends; and References (must include titles and full literature citations).
- The length of the document should be 20 double-spaced pages (excluding Title Page, 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, and submitted or draft manuscripts arising directly from the students work may be appended.
- While manuscripts submitted for publication may be appended, the completion of sufficient work for a publication is not a prerequisite.
- You must indicate in the report where/when significant work related to the progress was done by others (eg. Data in Figure 2 was generated by John W. Booth).
- You should not need to be absent from laboratory work for the purpose of writing the PhD comprehensive for longer than two weeks.

### 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 defence 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 your written document. Candidates are encouraged to approach individual members of their comprehensive examination committee in the two weeks prior to their oral defence 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 your performance following the examination. These comments are available to you.

You 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 you and the GPC Director. The form attests that you have 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 will be submitted to the School of Graduate Studies. 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 PhD Comprehensive Exam

- The Chair will inform you of the results of the Comprehensive examination immediately following the completion of the oral defence.
- The Chair's copy of the comprehensive proposal and any required documentation are to be returned to the Graduate Program Assistant or GPC Director.
- A letter will be 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 to be filed with your student records.

Failure of the PhD Comprehensive Exam

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 the School of Graduate Studies that you withdraw from the Graduate Studies Program.

Annual Progress Report

The student will provide the supervisor with an Annual Progress Report at the time of the PhD comprehensive, unless one has already been completed in that academic year. The supervisor will complete that report based on progress in that year as presented in the PhD comprehensive examination. Signatures will be collected on this Annual Progress Report from members of the supervisory committee and the student; and the completed form will be submitted to the Graduate Program Director.

## **MINI-MASTER’S THESIS**

### **Criteria**

Acceleration into a PhD program without completing the Masters 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 (A) 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:

You and your supervisory committee meet to approve the request to transfer into the PhD Program via the Mini-Master’s thesis route. This meeting and approval of the supervisory committee must be documented with an Annual Progress Report form. The supervisor writes a letter to the Graduate Program Director indicating (a) your request; (b) a brief justification outlining your 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 Program Assistant for submission to the School of Graduate Studies. No application fee is required

1. Letter of support from the supervisor (as above)
2. Outline of current and proposed research
3. Completed paper application for the PhD degree program
4. Two letters of reference using the forms provided in 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, you will defend a written research report and proposal in an oral examination to an Examining Committee.**

#### Composition of the Committee

The Committee will be comprised of one external examiner (from outside the Department of Pathology and Molecular Medicine but within the Faculty of Health Sciences), the supervisory committee members and the supervisor. A faculty member of the Graduate Program Committee will act as the Chair.

#### Approximately six weeks prior to your defence

You and your supervisor will provide the Graduate Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) with a tentative title of the Mini-Masters Thesis, a proposed date(s) of the defence, and the names of three suggested external examiners in order of preference. Their specific areas of expertise should be pertinent to the content of the proposal. Once the list of potential external examiners is approved by the Graduate Program Committee, the Graduate Program Assistant will approach these individuals in the order specified, as well as the members of the supervisory committee to arrange a specific date/time for the oral examination and confirm the details with everyone involved.

#### At least 10 working days prior to the defence:

You must submit your Mini-Master's thesis to each member of your examining committee (along with the necessary administrative forms provided by the Graduate Program Assistant).

The Graduate Program Assistant will send a PASS/FAIL form to the Chair, which will be signed by the committee members on completion of the defence. This is to be returned to the Graduate Program Assistant.

#### 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 and Detailed Experimental Plan; Discussion; 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 Title Page, 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.
- You must indicate in the Mini-Master's thesis where/when significant work related to the progress was done by others (eg. Data in Figure 3 was generated by Tammy Fay).
- You 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 upon request from the Graduate Program Assistant to assist as a template for the content and format of the document.

### Evaluation Process

#### *Written Component*

The Graduate Program 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 Graduate Program Assistant 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 Graduate Program Director will inform the candidate that the exam is postponed, and a resubmission of the proposal will be requested.

#### *Oral Examination*

Chairs (Graduate Program Director or delegate) are provided with a document outlining the procedures for conducting an examination. The role of the Chair is that of an impartial observer who 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 of your 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-Master's oral exam should normally proceed no longer than 90 minutes. You are 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, you will be asked to leave the room while the examining committee discusses your performance. The examining committee will decide if you 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.

Those who pass their Mini-Master's examination will be allowed to transfer to the doctoral program, which will take place at the beginning of the next semester. Students who do not pass the Mini-Master's examination will be allowed to complete the MSc thesis, according to School of Graduate Studies regulations.

## **THESIS DEFENCE EXAMINING COMMITTEES**

### **Mini-Master's Defence Committee Structure**

The Mini-Master's Committee will normally be comprised of:

- Chairperson (a faculty 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)
- One Additional Examiner (a faculty member with no conflicts of interest with the trainee or supervisor – COI as described below)
- The supervisory committee

The additional examiner will be chosen, if possible, from a list of examiners provided by the student/supervisor. No member of the examining committee can be in conflict of interest with the candidate.

### **MSc Thesis Defence Committee Structure**

- Chairperson (this individual is chosen by the Graduate Program Coordinator)
- Delegate of the Head of the Department
- Supervisor and/or co-supervisor
- Internal Examiner (Departmental faculty member)
- Internal/External Examiner (a faculty member whose primary appointment is outside of Pathology and Molecular Medicine but within the Faculty of Health Sciences)

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

Examiners will be chosen, if possible, from a list of examiners provided by the student/supervisor. No member of the examining committee can be in conflict of interest with the candidate.

### **PhD Thesis Defence Committee Structure**

- Chairperson (Chosen by GPC)
- Delegate of the Head of the Department
  - Not a voting member if merged with the Chair
  - Asks questions and suggests revisions to the thesis
- Supervisor and/or co-supervisor
- Internal Examiner (Departmental faculty member)
- Internal/External Examiner (a faculty member whose primary appointment is outside of Pathology and Molecular Medicine but within the Faculty of Health Sciences)

- External Examiner (from outside Queen’s University). External Examiners may choose not to be in physical attendance for the oral examination, and to conduct their questions through videoconferencing or teleconferencing)

Examiners will be chosen, if possible, from a list of examiners provided by the student/supervisor. No member of the examining committee can be in conflict of interest with the candidate.

### Conflict of Interest

No member of the examining committee can be in conflict of interest with the candidate. Conflict of interest is defined as a personal or family relationship with the candidate and/or vested interest in the thesis or research for personal or financial gain. Further the Chair, External Examiner, and at least one other examiner must be ‘arms-length’ to the candidate (e.g., must not have a prior supervisory relationship, must not have co-authored with or co-presented with the candidate). Provided the conditions above are satisfied, members of a candidate’s supervisory committee are eligible to be thesis examining committee members. Further, the supervisor must be arms-length from the external examiner (i.e., does not hold a current grant with nor has published with the external examiner within the past five years).

## **THESIS FORMAT (Research streams)**

Once the student and supervisor have agreed that the majority of the experimental work is complete, a committee meeting should be scheduled where the student provides the Supervisory Committee members with an outline of the proposed thesis including the selected format. At this time committee members will determine if the research is of sufficient quality to begin writing of the thesis. This meeting will often take place after the second PATH 830/930 seminar and will include completion of an Annual Progress Report.

It is recommended that students review thesis guidelines with their supervisor in order to choose the best format for their work. The supervisor should be kept updated on thesis writing progress and the supervisor must be given ample time to review the entire thesis BEFORE submission to SGS in preparation for the oral defence.

PLEASE NOTE: PhD theses must not exceed **175** pages and MSc theses must not exceed **100** pages (not including title page, abstract, table of contents and other Roman numeral numbered pages, references and appendices), unless specific approval by the **departmental GPC** is granted.

### **Thesis Format**

The SGS allows theses to be formatted in either Traditional or Manuscript format. Note: The School of Graduate Studies (SGS) sets minimum submission and formatting standards for all theses submitted and these standards cannot be set aside (including margins, font size and line spacing). Please consult the SGS website for these mandatory details [Thesis Formatting and Other Resources | School of Graduate Studies and Postdoctoral Affairs](#). This resource also includes E-Thesis templates and a guide with detailed instructions for general forms of theses.

***Layout for TRADITIONAL form of thesis:***

Title Page

Abstract (not more than 350 words)

Statement of Co-Authorship (if necessary)

Acknowledgments

Table of Contents (including bibliography, appendices, etc.)

List of Tables

List of Figures and Illustrations

List of Abbreviations

Chapter 1: Introduction – brief summary of the research problem (not more than 3 pages)

Chapter 2: Literature Review (**normally** no more than 25 pages for MSc and 40 pages for PhD)

Chapter 3 to 5: Body of Thesis (Materials and Methods; Results; Discussion)

Chapter 6: Summary (including Future Directions)

Bibliography or References

Appendices

The formal section, "Statement of Co-Authorship", should delineate the candidate's contribution to the knowledge within the thesis, and should describe the contribution of co-authors (if any) to be discerned.

***MANUSCRIPT form of thesis:***

The manuscripts included need not be published or accepted for publication at the time of the thesis defence, but this format is generally intended for use when 2 or more manuscripts acceptable to the field with the student as first author/co-first author have been generated prior to the thesis defence. Publication or acceptance for publication of research results before presentation of the thesis in no way supersedes the University's judgment of the work at a thesis defence. Results that the student wishes to include in the thesis that do not fit within a particular manuscript may be included in appendices. In this format, references used within each chapter will be cited at the end of that chapter.

If the Manuscript format is chosen the following criteria must be met in addition to those designated by the SGS:

- this format is only acceptable for theses with 2 or more manuscripts
- a preprint formatted version of the manuscript must be used rather than reprint so that the formatting throughout the thesis is consistent
- majority of the manuscripts must have the PhD candidate as either first or co-first author
- inserted reprints will not be accepted
- students who have collaborated on a manuscript may each include it in their own thesis.
- chapters composed with multiple authors/contributors should be preceded by a statement in which the student clearly identifies the contribution of each author to the manuscript
- reference formatting will be consistent throughout the thesis, will include the title of the citation and references will be placed at the end of each manuscript/chapter

***Layout for Manuscript form of thesis:***

Title page

Abstract (not more than 350 words)

Statement of Co-Authorship (if necessary)

Acknowledgments

Table of Contents (including bibliography, appendices, etc.)

List of Tables

List of Figures and Illustrations

List of Abbreviations

Chapter 1: General Introduction – brief summary of the research problem (not more than 3 pages)

Chapter 2: Literature Review (**normally** no more than 25 pages for MSc and 40 pages for PhD)

Chapter 3 to n: Manuscripts

Chapter n + 1: Summary of thesis work (including Future Directions)

Appendices

The formal section, "Statement of Co-Authorship", should delineate the candidate's contribution to knowledge, and should describe the contribution of co-authors (if any) to be discerned. This information shall be included in more detail at the beginning of each chapter relating to a coauthored manuscript.

### **Thesis Submission and Defence**

**\*\*Please note that there is a "Completing Your Degree" webpage on the SGS website that you should read though:**

[Degree Completion & Resources | School of Graduate Studies and Postdoctoral Affairs \(queensu.ca\)](https://www.queensu.ca/graduate-studies/degree-completion-resources)

This resource includes guidance on preparation for the oral examination and the final submission process.

### **Procedures for Thesis Submission (MSc)**

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!

For an **MSc** thesis defence, the following should be completed approximately 6 weeks prior to the defence date:

The supervisor shall provide the Graduate Program Assistant with several potential names for members of the Examination Committee. These will be submitted to the Departmental Graduate Program Committee for approval. The Graduate Program Assistant will advise the supervisor of the Graduate Program 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. You and your supervisor will need to submit to the Graduate Program Assistant:

- Thesis title
- List of nominees for the Examining Committee (see page 28)
- Timeframe

A final copy of your thesis must be approved by your supervisor before you make copies for the examiners (including the Chair). It is your responsibility to ensure that the thesis follows the format required by the Department and the School of Graduate Studies.

The Oral Thesis Examination Form ([found here](#)) can be completed by either you or the Graduate Program Assistant, and then signed by your Supervisor and the Department Head (the Graduate Program Director may sign in place of the Head).

**TEN (10) WORKING DAYS prior to the defence date**, a signed Oral Thesis Examination Form must be submitted to the School of Graduate Studies, and you must submit a PDF copy of your thesis to each member of your Examining Committee (unless they request a hard copy). Some examiners may prefer receiving a Word copy to make it easier for adding comments and suggested edits using Track Change.

Necessary 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. The Department will cover up to \$200 for thesis printing and related costs (please keep all your receipts and submit them to the Graduate Program Assistant).

For an in-person thesis defense, it is your responsibility to arrange the booking of audio/visual equipment and ensure you have a working knowledge of it. The Graduate Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) will assist with this. If the defense is held remotely, add details of platforms acceptable and who will send the links.

An Evaluation Form from the School of Graduate Studies needs to be completed and forwarded to the Graduate Program Assistant (at least 3 days prior to examination date) by any member of the Examination Committee who feels that the defence should **NOT** go ahead. It is understood that if said form is not submitted, the Examiner feels the defence should go ahead.

At the beginning of the oral examination, you will leave the room briefly while the committee decides whether the defence should go forward. This is followed by a 20-minute presentation by you, followed by the examiners' questions. You must then leave the room again while the committee discusses its evaluation.

The Chairperson (1) discusses the outcome of the examination with you and your supervisor immediately following the defence, and (2) reports the outcome in writing to the School of Graduate Studies.

The Registrar of the School of Graduate Studies will notify you (copy to Department) of the completion of your degree requirements only after submission ([uploaded to QSpace](#)) of your revised thesis, as required by the Thesis Examining Committee, and finally approved by the supervisor/committee. Students should consider "embargoing" their final thesis submission if any of the data is unpublished. This will restrict access in QSpace for up to five years.

Tuition fees are charged up to the date of receipt of the thesis copies.

### **Procedures for Thesis Submission (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!

For a **PhD** thesis defence, the following should be completed approximately 6 weeks prior to the defence date:

The supervisor shall provide the Graduate Program Assistant with several potential names for members of the Examination Committee. These will be submitted to the Departmental Graduate Program Committee for approval. The Graduate Program Assistant will advise the supervisor of the Graduate Program 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. You and your supervisor will need to submit to the Graduate Program Assistant:

- Thesis title
- List of nominees for the Examining Committee (see page 28)
- Timeframe

A final copy of your thesis must be approved by your supervisor before you make copies for the examiners (including the Chair). It is your responsibility to ensure that the thesis follows the format required by the Department and the School of Graduate Studies.

The PhD [Oral Thesis Examination Form](#) may be completed by either you or the Graduate Program Assistant, and then signed by your Supervisor and the Department Head (the Graduate Program Director may sign in place of the Head).

**TWENTY-FIVE (25) WORKING DAYS prior to the defence date**, a signed Oral Thesis Examination Form must be submitted to the School of Graduate Studies along with a PDF copy, and you must also submit a PDF copy of your thesis to each member of your Examining Committee (unless they request a hard copy). Some examiners may prefer receiving a Word copy to make it easier for adding comments and suggested edits using Track Change.

Necessary 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. The Department will cover up to \$200 for thesis printing and related costs (please keep all your receipts and submit them to the Graduate Program Assistant).

For an in-person thesis defense, it is your responsibility to arrange the booking of audio/visual equipment and ensure you have a working knowledge of it. The Graduate Program Assistant Amber Sarazin DPMM Graduate Studies [dpmm-grad@queensu.ca](mailto:dpmm-grad@queensu.ca) will assist with this. If the defense is held remotely, the School of Graduate Studies recommends ZOOM or Microsoft Teams. You must notify all participants which platform will be used and send the links. For more details please consult the School of Graduate Studies [Procedures for Holding Thesis Examinations Remotely](#).

An Evaluation Form from the School of Graduate Studies needs to be completed and returned at least 7 days prior to examination date, otherwise the defence may need to be postponed or cancelled.

At the beginning of the oral examination, you will leave the room briefly while the Committee decides whether the defence should go forward. This is followed by a 20-minute presentation by you, followed by the examiners' questions. You must then leave the room again while the committee discusses its evaluation.

The Chairperson (1) discusses the outcome of the examination with you and your supervisor immediately following the defence, and (2) reports the outcome in writing to the School of Graduate Studies.

The Registrar of the School of Graduate Studies will notify you (copy to Department) of the completion of your degree requirements only after submission ([uploaded to QSpace](#)) of your revised thesis, as required by the Thesis Examining Committee, and finally approved by the supervisor/committee. Students should consider “embargoing” their final thesis submission if any of the data is unpublished. This will restrict access in QSpace for up to five years.

Tuition fees are charged up to the date of receipt of the thesis copies.



## **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 approach the Graduate Program Director ([greerp@queensu.ca](mailto:greerp@queensu.ca)) to assist in calling 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 channels. Thus, discussion of the problem should occur first between you and your supervisor and/or supervisory committee.
- If the issue cannot be resolved at this level, one or both parties should consult the Graduate Program Director to seek possible resolution. The Graduate Program Director will consult with the Head of the Department if the issue needs to be dealt with by the School of Graduate Studies.
- If a satisfactory resolution is not reached, assistance can be requested of the Dean or Associate Dean(s) of the School of Graduate Studies. 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 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 [Student Academic Appeals Policy](#) document should be consulted.

## **WITHDRAWAL FROM THE PROGRAM**

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 Program Director. A student who requests a temporary absence (inactive status) may make an application to the School of Graduate Studies for a fee waiver, stipends will not be distributed during a temporary absence. 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 your 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 [SGSPA Research Resources](#), as well as the [Code of Research Ethics](#) which deal with these issues more comprehensively.

### **Overview**

Publication of results is a basic and integral part of research. Thus, you are expected to publish results from your 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 you and your 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 program.

### **Guidelines**

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

- Your supervisor has a right to the originals of both the raw data and any analyses on which your thesis is based. You may have a copy of these.
- You will usually be first author on all publications arising directly from your thesis research exceptions to this may occur when the majority of ideas, data analyses or writing are provided by your supervisor or other researchers; or, a significant amount of additional research or analysis is required to produce publishable results. In cases of multiple authorship, your supervisor will make the final decision regarding order of authorship.
- Your supervisor is always co-author on all publications arising from your 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 program.
- Supervisors have the right to write up and take first authorship on papers based on any material in your thesis or arising from your thesis and not submitted for publication within one year of your thesis defence (or sooner, if necessary; e.g. material needs to be submitted for publication before a grant application deadline). Since you will be co-author on such papers, thesis material may be used directly without infringing on your copyright.

Supervisors are advised to discuss with you at the outset 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.