



Department of Public Health Sciences

PhD Program Student Handbook

January 2018

Changes since November 2015 version:

Program contacts changes on page 2.

Timing of thesis submission in relation to defense date changed from 4 weeks to 5 in accordance with SGS regulations on page 11.

Note of Queen's academic integrity policy has been added to page 13 along with program's policy on plagiarism.

Changes since July 2016 version:

Mini-Master milestone completion for proposal and optional outline, page 4.

Mini-Master optional outline explanation, page 9.

On-site SGS Counsellors, pages 15 and 24.

Changes since November 2016 version:

Information for Graduate Students about Harassment and Harassment Protocols at Queen's University, page 23.

Progress Report frequency reduced to once per year in June, pages 13, 19, 37.

Overview

The PhD program in the Department of Public Health Sciences at Queen's University has been in existence since 2006. It was designed to build on our existing strengths and to provide doctoral level training in epidemiology. Research strengths on the department fall into three broad categories: Epidemiology and Population Health, Health Services and Policy, and Clinical Epidemiology. All three areas provide opportunities for obtaining a PhD in Epidemiology. This handbook describes the program, its requirements and milestones. Additional resources are listed in Appendix 1.

Objectives of the Program

The objective of the PhD program in epidemiology is to graduate individuals who are capable of functioning as independent investigators within the field of epidemiology in an academic (or equivalent) research position, or occupy a position of professional leadership in a health or health-related agency where research is an important function. The program's [Degree Learning Expectations](#) are available on the Queen's School of Graduate Studies website. Upon completion of the PhD, graduates will have acquired the following skills and abilities:

Coursework

Through coursework (1½ required courses), students demonstrate a mastery of theories, methodological concepts, and substantive knowledge integral to epidemiology and their area of specialization. Students may pursue additional elective courses to deepen their substantive area of expertise.

Comprehensive Exam

The Comprehensive Exam assesses students' scholarly qualifications for their degree as well as knowledge of their area. Students demonstrate their:

- in-depth knowledge in theoretical and applied epidemiologic and bio-statistical methods; and,
- an ability to apply that knowledge to their research area, which is broadly defined

Dissertation

Through the dissertation process, students demonstrate the ability to undertake epidemiologic studies including the ability to:

- critically appraise and synthesize biomedical literature surrounding epidemiologic topics and concepts;
- develop novel hypotheses or important, researchable questions that can be examined via epidemiological study;
- design practical epidemiological studies aimed at testing these hypotheses;
- write scientific protocols that summarize research plans and demonstrate an understanding of key methodological issues in epidemiology;

- collect primary or process secondary data, where the latter are not ‘research ready’ at the outset;
- analyze and interpret data; and
- understand the implications of findings within appropriate population health, health services/health policy, or clinical contexts.

Students also have opportunities to present their research in seminars and scholarly academic meetings. Students gain an ability to communicate scientifically, both in terms of publishing research findings in reputable biomedical journals, and by presenting research findings to their respective research communities.

Program Contacts

PhD Program Director: Patti Groome PhD pickettw@queensu.ca

PhD Program Administrator: Sue Preston epid@queensu.ca

Department Public Health Sciences website: <http://www.queensu.ca/phs/>

Time to Completion and Milestones

The Queen’s PhD in Epidemiology time to completion is four years with the possibility of an extension of up to 3 terms for students enrolled in September 2013 or later. This policy follows the standard Queen’s timeframe and session dates as outlined in the [School of Graduate Studies Calendar](#). The following table outlines milestone deadlines. Further detail about these milestones are provided later in this document.

PhD Thesis Time to Completion Schema and Milestones

Term	Year 1				Year 2				Year 3				Year 4			
	F	W	Sp	S	F	W	Sp	S	F	W	Sp	S	F	W	Sp	S
Comprehensive exam			X													
Thesis outline			X	X												
Thesis proposal				X		X										
Thesis defense																X
F=Fall term; W=Winter term; Sp=Spring Term; S=Summer Term.																

The thesis proposal outline is optional for students who have entered the PhD program after having completed a mini-masters. If these students choose to submit an outline, it would typically be done so during the spring semester of their first year in the PhD program.

The milestone for completion of the thesis proposal is in the fall semester of the second year of study for students who have entered the PhD program after having completed a mini-

masters. This is earlier than the deadline for the other PhD students, whose milestone is the spring semester of their second year of their PhD program.

Research Areas in the Department

Research areas that are congruent with faculty expertise can be described using three broad categories:

- **Epidemiology and Population Health:** Students choosing a project in this area apply epidemiologic methods and bio-statistical tools to the study of population health in terms of disease surveillance, determinants of health and disease, and the prevention of disease. Molecular epidemiologic methods, which are increasingly applied in the investigation of disease etiology and prognosis, are also covered. Substantive areas of faculty expertise among core faculty include cancer etiology, cancer control, mental disorders, developmental disabilities, injury, obesity and physical health, and public health.
- **Health Services and Policy Research:** Students choosing to work in this area apply epidemiologic principles to the study of the delivery of health services and the structure and performance of the Canadian health system. Research in this area involves the study of the structure and delivery of health services, approaches to policy analysis, program evaluation, and health economics. Substantive areas of faculty expertise among core faculty include integrated delivery systems, mental health service delivery, needs assessment, quality assurance, health economics, cancer services and survival, social support and disability, and community participation in health issues.
- **Clinical Epidemiology:** This research area prepares clinician researchers and non-clinicians who are planning a career in clinical research to be independent investigators in clinical epidemiology. Students apply epidemiologic and bio-statistical methods to areas such as evidence-based medicine, systematic reviews, clinical data related to diagnosis, therapy, and prevention, cost-utility analysis, clinical decision-making, measurement in clinical research, and clinical practice guidelines. Substantive areas of faculty expertise among core faculty include but are not limited to: clinical trials, emergency medicine, primary care, cancer care, and quality of life.

Program Components and Regulations

Participation in seminars and conferences

The Department of Public Health Sciences runs a weekly research seminar series attended by graduate students and faculty. Presenters include Department and University faculty, researchers from other institutions, and graduate students. This is an opportunity for students to gain breadth in their substantive knowledge and interact with faculty in the discussion of current research projects. Graduate students from epidemiology may also participate in the seminar series run by the several multidisciplinary research groups within the

Faculty of Health Sciences. In addition, students are encouraged to present their research at the annual Faculty of Health Sciences Research Trainees Conference. If appropriate, students will also be encouraged to present their research at relevant national and international conferences. Funding for attendance at conferences is at the discretion of the Supervisor, and some conference award funding is available through the School of Graduate Studies if the student is listed as a presenter and applies for the award before the conference date.

Coursework

In order to allow sufficient opportunity for both applied and independent study, the Doctoral program at Queen's requires a minimum of 1 ½ half courses: one full course in advanced research methods (EPID 901) and one half course in advanced biostatistics (EPID 823).

These courses have prerequisites from among the Queen's Master's level courses (or equivalents from other Universities). Therefore, students entering Doctoral studies in epidemiology who do not have Master's degrees in epidemiology or a closely related discipline with the required prerequisites will need to meet appropriate pre-requisite requirements prior to enrolling in the PhD coursework. The specific requirements are determined on a case by case basis by the PhD Program Committee. In addition to required courses, students may be encouraged to take additional elective courses, as deemed appropriate by their Supervisor. Students are expected to complete formal course work within eight months of admission into the program.

Courses involve formal evaluation procedures that are provided to the student in advance via a course outline. The outline specifies the goals and objectives for the course, recommended texts, a schedule of sessions, and methods for student evaluation. Normally, students are graded on some combination of written submissions (proposals, papers, or assignments), oral presentations, exams, and class participation.

Collateral and supporting departments

In addition to courses offered within the Epidemiology program, graduate students may augment their plan of study by auditing or electing to take courses from other Departments with permission of the instructors and space permitting:

- Faculty of Health Sciences including its graduate programs, the Department of Biomedical and Molecular Sciences, The School of Rehabilitation Therapy, and The School of Nursing;
- Faculty of Arts and Science such as through Geography (e.g., Spatial Analysis, Issues in Population Analysis, The Geography of Health and Health Care) and Mathematics and Statistics.
- School of Policy Studies (e.g., Health and Public Policy in Canada; Economic Analysis of Health Policy).

Comprehensive Examination Procedures

The purpose of the Comprehensive Exam is to assess students' scholarly qualifications for their degree. Students will be evaluated for their in-depth knowledge in theoretical and applied epidemiologic and selected bio-statistical methods.

Students will be expected to prepare for the comprehensive examination through self-directed study. Faculty consultation will be encouraged, as appropriate.

The exam will be taken after all coursework has been completed in June of year one. It will contain a written and an oral component. Specific content and format will be chosen by the Comprehensive Examination Committee.

The committee will evaluate both written and oral components of the exam. If a student does not perform satisfactorily, a remedial program of study will be recommended by the Examination Committee and the Graduate Education Committee will be notified of the expected course of action.

The student will be allowed two attempts to pass the examination. If a student does not pass the examination on the second attempt, and barring any extenuating circumstances, the Comprehensive Examination Committee will recommend to Graduate Studies that the student be required to withdraw from the program.

Format

i) Written Examination (3 hour in-class open book written examination)

The first part of the written examination is designed to test competence in the concepts, principles, methods and content of epidemiology and the ability to apply these concepts and principles critically. See Appendix 2 for a list of core competencies.

Students should bring a calculator and reference materials. Details on the format and content of reference materials will be provided one month prior to the exam.

ii) Oral Examination (approximately 1.5 hours)

The oral exam is based on a scientific article selected from the substantive area (broadly defined) of each individual student. It is not intended as an examination of their knowledge of the substantive area, but rather to allow them to apply core epidemiologic and bio-statistical principals to a research area where they have some background and interest. Students will be provided with the chosen article two weeks in advance of the oral exam. The exam will test their critical appraisal of that article, their ability to apply epidemiologic principles to a specific topic, and their ability to conceive of and design an appropriate 'next steps' study in the area.

Evaluation

For the written component, a response template will be prepared by the examining committee prior to the examination. Each question will be marked by a minimum of 2 committee members.

For the oral component, the examining committee will work from a list of question topic areas and record key points that the student makes for grading purposes. All committee members will attend the oral examination and provide evaluations.

Students must achieve a minimum of grade of 75% on each of the two components. Students receiving less will be required to re-sit that portion of the exam.

Substantive Areas

Students will identify a substantive area based on the broad PhD program categories described above and general key words *broadly* describing the disease, risk factors/exposures, and populations relevant to their research area. The purpose of identifying a substantive area is to allow the students to apply core epidemiologic concepts to a general research area where they have some expertise and interest. The substantive area will be confirmed with each student prior to the committee's choosing the scientific article for their oral exam.

Supervision

The Supervisor and thesis committee have a major role in the intellectual development of students that is in addition to the formal requirements of the PhD program such as coursework and comprehensive exams.

Supervisor

Doctoral students enter the program with a Primary Supervisor who is a member of the Department and has designated School of Graduate Studies and Departmental authority to supervise PhD candidates. At the time of acceptance into the program, the Primary Supervisor will have indicated a willingness to guide the student through the entire program, including course work, comprehensives and the thesis. The Primary Supervisor, along with the student through fellowship/scholarship applications, is also responsible for organizing funding for four years. The Primary Supervisor acts as a mentor and role model for the student, and encourages the intellectual development and critical judgment of the student through activities of critical thinking such as engagement in methodological discussions, review of manuscripts, journal reading, grant review and writing, etc. The School of Graduate Studies' [Guide to Graduate Supervision](#) offers graduate students, faculty, and other departmental members the guidelines needed to foster productive working relationships between supervisors and graduate students.

By virtue of being a member of the Primary Supervisor's research group, students interact much more intensely with their Primary Supervisor than with other faculty. However, through interactions with research groups and participation in the life of the Department, doctoral students also have extensive contact with core faculty members.

Thesis Supervisory Committee

A Thesis Supervisory Committee is established by the Primary Supervisor in consultation with the student at the point of drafting a thesis outline (see Thesis Process and Requirements). The Committee will consist of at least one additional faculty member selected to provide expertise within methodological and/or substantive areas relevant to the student's research. Depending on their degree of involvement, this person may be designated Co-Supervisor rather than Thesis Committee member. Thesis outlines and committee membership will be reviewed by the PhD Program Committee. Once approved, a thesis proposal will be written and presented to the Department for approval.

The Thesis Committee should meet with the student once per term (three times per year) to review progress. A written accounting of these meetings should be prepared by the student and Primary Supervisor and reviewed by all Committee members.

Either the Primary Supervisor or the Co-Supervisor MUST be a faculty member who is a core member of the Department and who holds a PhD in Epidemiology or in a related discipline. For the purpose of this document, a 'related discipline' is defined as one in which the conduct of observational health research on humans is integral to the profession.

Thesis Process and Requirements

Independent and original research and the preparation of a thesis are essential core elements of Doctoral studies. Therefore, all Doctoral students must complete a research project that culminates in a thesis that is based on original research of publishable quality. The breadth and depth of the thesis must meet normative expectations of a PhD in Epidemiology. The design choices and analytic methods that can be used are wide in scope reflecting the diverse nature of the discipline. Appendix 3 contains an outline of this scope with a view to providing transparency about this aspect of the degree expectations. The thesis process emulates the conventional process of a grant submission and involves three major milestones with progress towards these reviewed each term:

The thesis proposal outline is optional for students who have entered the PhD program after having completed a mini-masters. These students may choose this option if they want the perspective of additional faculty members (as they would have only received feedback from two examiners during their mini-masters defense versus the four or five faculty that would typically review a PhD thesis outline). If these students choose to submit an outline, it would typically be done so during the spring semester of their first year in the PhD program.

1) Outline

Students are required to submit a three-page (maximum) single-spaced outline, signed by all members of their thesis committee no later than 15 months into the program. It is submitted to the PhD Program Committee for formal review and feedback. The submission is to be via email to epid@queensu.ca. The PhD Program Committee will review the outline at its bi-monthly meeting with the student and his/her supervisor in attendance. Written feedback

will also be provided and put in the student's file. The outline must be received two weeks prior to that meeting.

It is expected that students be working with their supervisory committee throughout their first 15 months to develop their project. The purpose of the outline is to provide a mechanism to obtain constructive feedback prior to embarking on full scale proposal. The content of the outline should be minimal regarding study design, methodology and analysis with the goal being to provide enough information for an assessment of the appropriateness and feasibility of the project. It is a two page sketch of the intended project that includes:

- Title
- Background and rationale
- Empirical objectives
- Study design and methods
- Data management and analysis strategy
- Ethical considerations
- Feasibility issues (e.g. ability to access required data)
- Timeline for proposal development and project completion (can be an appendix)
- Appropriateness for a PhD in Epidemiology re: depth and scope, originality, use of epidemiologic study design principles and advanced analysis
- Contributions of the student
- References (outside page limit)
- Dated names and signature(s) of thesis committee members (outside page limit)

The PhD Program Committee members will review the outline and discuss its merits with the student and supervisor at the committee's regular bi-monthly meeting. The discussion will focus on three questions:

- Is the proposed study adequate and appropriate for a PhD thesis?
- Is the project manageable in the timeframe and expectations of the PhD program?
- Are there any methodological concerns that the student will need to consider in writing a complete proposal?

If an outline is not deemed to be thesis-worthy, the PhD Program Director will meet with the Thesis Committee and the student to develop a remedial action plan. Otherwise, comments and suggestions are to be taken under advisement to assist the student in conceptualizing and preparing the full thesis proposal.

2) Thesis Proposal and Defense

The student will write a thesis proposal to be submitted to the PhD Program no more than 21 months into the program. The submitted proposal must be approved by the Primary Supervisor and all committee members. Approval can be demonstrated by having the document signed before submission or submitting the document electronically with a statement indicating approval which is copied to the Primary Supervisor and all committee members. The submission is to be via email to epid@queensu.ca.

The thesis proposal should be polished and of comparable quality to what would be submitted for *internal review prior to an extramural grant application* with a recognition that the proposal may not represent all details of the final project as these may change as funding is obtained and/or the project starts to roll out. In particular, the proposal needs to be presented *at a time when changes are still possible and welcomed by the student and his/her committee*. The program recognizes that some changes could occur post-proposal acceptance. As such, if they think it is necessary, the student and his/her team have the opportunity to inform and get advice/approval of fundamental changes that occur during the finalization of the project planning / funding process from the proposal examiners and/or the PhD Program Committee.

The proposal should be at such a stage that the thesis supervisors have had a chance to have full input. The purpose of the review by the department is to provide input over and above that possible by the supervisors to maximize the chance that the final dissertation will be acceptable to external reviewers.

As such, and as stated above, the proposal presented should be a ‘near final draft’, which means that the project plan is mature, coherent but not necessarily fully realized on details such as final confounder identification, fully defined analysis plan, or inclusion of any minutiae such as fine details about data processing or variable capture. The proposal is required to have finalized objectives, a solid rationale, a clear conceptual framework, defensible variable definitions, coherent progression of the plan to address the objectives, a reasonable analytic approach using appropriate methods, the right team in place, a complete assessment on feasibility, originality, and adequate scope for a PhD.

The proposal will be of 12 to 15 pages single spaced ideally following the standard format used by the Canadian Institutes of Health Research. If the thesis has multiple parts that do not fit conveniently within the CIHR format, the student should submit a shorter proposal following this format that describes the primary epidemiologic component of the thesis along with a summary of no more than 7 pages that describes the overall context and other components.

An oral presentation and defense of the thesis proposal will take place in a Departmental forum including:

- the PhD candidate
- the Department Head (or delegate),
- two reviewers (assigned by the PhD Program Director),
- the thesis committee members, and

- all interested students and faculty (closed sessions are possible in the presence of extenuating circumstances)

The student's supervisor should inform the program administrative assistant and director that the student is ready to defend and of potential dates at least four weeks prior to defense date. A form for this purpose is provided in Appendix 4. In order to facilitate the identification of appropriate reviewers the student must submit a brief abstract describing the proposed research. The supervisor may suggest appropriate reviewers. The program director, with the assistance of the administrative assistant will identify and schedule reviewers. The proposal should be delivered to reviewers at least 10 full working days from the date of the proposal submission.

The main purpose of the defense is to allow faculty members an opportunity to determine whether the thesis project, if successfully completed, would satisfy PhD program requirements, or whether modifications should be made. Secondly, the presentation (which should be of 15-20 minutes in length) provides students with a more formal opportunity to communicate their thesis to a multi-disciplinary audience, field questions, and receive constructive feedback. Students other than the candidate being examined are also given the opportunity to ask questions.

After a 15-20 minute presentation, all faculty and the student will remain to determine if the proposal can (a) proceed, (b) proceed with recommended modifications and/or conditions, or (c) not proceed. A record of this decision is kept in the student's academic file. If a recommendation is made that the student "not proceed," the Supervisor must present a remedial plan of action to the PhD Program Committee within six weeks of the defense date.

3) Ethics Certificate

Students are required to obtain an ethics certificate for their thesis projects from the Queen's University Health Sciences Research Ethics Board. Applications for Ethics clearance is through an online system called ROMEQ. The Research Ethics Board meets most months to review submissions. See <http://www.queensu.ca/ors/researchethics/REB.html> for submission and meeting dates.

3) Thesis Examination

Once the research for the thesis is completed satisfactorily, the thesis will be written and revised according to suggestions from the Thesis Committee. Students are encouraged to take advantage of other Queen's resources such as the [Writing Centre](#) and the School of [Graduate Studies' Dissertation boot camp](#) as well as online resources: [Thesis Formatting and Other Resources](#); [Prepare for your oral examination](#); [Final Submission](#) . Note that SGS policies and regulations may change from what is contained herein. All students are expected to check that website for up to date regulations regarding submission: www.queensu.ca/sgs/home

All graduate theses MUST conform to the minimum style and form requirements as detailed in the SGS General Forms and Theses. Two types of thesis documents are permitted:

1) traditional thesis; and 2) manuscript-based thesis. Further information is available on the Queen's School of Graduate Studies website.

Once the student, on advice of the committee, judges that the thesis is ready to defend, the thesis must be submitted to the Department five weeks prior to defense. Also check the SGS website for up to date requirements regarding submission. The Primary Supervisor should inform the PhD Program of the upcoming defense including examiner suggestions no less than two months prior to final submission. The form for this request is provided in Appendix 4. According to School of Graduate Studies and Research policies, thesis examination committees for all doctoral programs include:

- The Dean of the Graduate School (or delegate) – Chair
- Head of the Department (or delegate)
- Supervisor and Thesis Committee members
- At least one faculty member from the Department
- At least one faculty member from another Department
- An examiner from outside of Queen's University

Prior to the examination, examiners are asked to complete a confidential report. If two or more of the examiners indicate that the thesis is not ready for defense, then the student is given the option of postponing. Otherwise, the thesis goes forward to oral defense. See the [Queen's School of Graduate Studies Calendar](#) "General Regulations" section for further details.

At the opening of the oral defense, the student provides a brief presentation (approximately 20 minutes), followed by the formal examination. Questions are asked, in turn, by the examination committee, beginning with the External examiner. Exams will normally take about two hours. At the close of the examination, the candidate leaves the room and the Examination Committee votes on one of three outcomes:

- **Passed** – a thesis is passed if it is acceptable in its present form or pending minor revisions. This means that no substantive changes are required.
- **Referred** – a thesis is referred if it is not acceptable in its present form, but could be acceptable pending major revisions. A thesis is referred if it requires changes such as rewriting a chapter, reinterpreting data, correction to calculations or additional research in order to attend acceptable standards of coherence and scholarship. A re-examination of the thesis may be required.
- **Failed** – A thesis is failed if it is unacceptable to the discipline even with major modifications. If the committee returns two or more votes showing failure, the committee will advise the student that they will be required to withdraw on academic grounds.

Student Orientation, Progress and Problems

The PhD Program Director through the PhD Program Committee is responsible for coordinating the activities of the PhD and for reviewing student progress. This program reports to the Department's Graduate Education Committee. The GEC takes an active role in the PhD

program, advising the Graduate Program Director on all curriculum, policy, and administrative functions relating to the graduate programs in the Department. Terms of reference for the operation of the GEC are included in the Department's policy manual and information on the Faculty of Health Sciences Graduate Council procedures can be found [here](#).

To help orient students to the program, the Graduate Program Director organizes an orientation session for incoming students during the first term to ensure that they understand program policies, major milestones, and to obtain student representation on Departmental committees.

Student progress is reviewed systematically once per year by the PhD Program Committee. A form for this purpose is provided in Appendix 4. This active monitoring assesses student progress according to the student's goals and timelines, the timelines established by the program, satisfactory completion of course requirements and comprehensive examinations, and quality of the research presented. Specifically, student progress is deemed satisfactory if the student: 1) passes all courses; 2) passes the comprehensive exam and 3) meets thesis milestones. Student progress will be deemed unsatisfactory if the student 1) does not pass all courses; 2) does not pass the comprehensive exam; and/or 3) fails to meet thesis milestones. **Unsatisfactory progress will be reviewed by the PhD Program Committee and recommendation for withdrawal of the student may be made to the GEC after two unsatisfactory reports. If a report is not submitted it will be deemed to have been negative.** In particular, the program will closely monitor student progress in order to ensure a four year completion time. Students have access to all of the regular appeal processes through the School of Graduate Studies and Research.

In general, when problems occur, students are encouraged to approach their Supervisor first. If the student feels that this is not possible or appropriate, then they are encouraged to discuss issues with the PhD Program Director. Further advice is available in the School of Graduate Studies [Graduate Student Handbook](#) and in the [Faculty of Health Sciences Graduate Council procedures](#). Supervisors are also encouraged to approach the PhD Program Director when they think a student is having difficulty, if they perceive a student is not progressing through the major milestones at an appropriate pace, or if they wish a collegial forum for discussion and advice. The purpose of this review is to act early to identify and document the problem(s), brainstorm solutions, and set out a plan of action.

Students and supervisors are free to approach the PhD Program Director at any time. In situations of some urgency, special meetings of the PhD Program Committee are convened. The PhD Program Director may also ask a Supervisor to present a student's situation to the PhD Program Committee if they appear to be having difficulty (for example, in coursework). In these cases, the presentation serves to identify whether or not a problem exists, the extent to which the Supervisor is aware of the problem, and to develop an action plan if warranted.

Students are expected to be aware of and adhere to Queen's academic integrity policies. Academic integrity is constituted by the five core fundamental values: honesty, trust, fairness, respect and responsibility. Queen's students, faculty, administrators and staff all have responsibilities to support and uphold the fundamental values of academic integrity. This policy can be found at: http://www.queensu.ca/calendars/sgsr/Academic_Integrity_Policy.html

Note that it is this PhD program's policy to keep a record in the student's file of any acts of plagiarism.

Accommodation of Graduate Students with Disabilities

Students in the PhD program in the Department of Public Health Sciences with documented physical, mental or intellectual disabilities are able to access accommodations as is true of all students at Queen's University. University administrators, faculty, staff and other students are expected to support, to the point of undue hardship, all reasonable individualized and appropriate accommodation plans that preserve the program's academic standards and adhere to the principles of academic integrity. For the roles and responsibilities associated with accommodation (students, faculty and staff) visit: [Graduate Student Handbook](#)

For the policy click the following link:

http://www.queensu.ca/calendars/sgsr/Accommodating_of_Graduate_Students_with_Disabilities.html

Student Wellness Services provides a welcoming, confidential and integrated service that is responsive to the needs of students be it health services, counselling services, disability services or advice on maintaining or improving your overall well-being. For a full listing of services visit:

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

Additionally, the School of Graduate Studies has two embedded counsellors who provide individual counselling to graduate students. [On-Site SGS Counsellors](#)

Residency Regulations

The School of Graduate Studies and Research recommends that students pursue their studies on a full-time basis and be full-time on campus for some part of the degree program in order to become fully involved in a field of study and to be in contact with members of the Department and their fellow students. However, the School of Graduate Studies has no formal requirements for the length of residence.

Part-time studies

Students will normally be accepted into the program on a full-time basis. The School of Graduate Studies expects that students who are registered in full-time programs maintain this status throughout. Requests for change in status from full-time to part-time are possible, but must be approved by both the Department, and by the School of Graduate Studies. Such requests normally will not be approved until after the student has completed a period of eligibility (12 terms for Doctoral students). After this time, Graduate Studies will support a transfer from full-time to part-time status according to the relevant regulations.

Financial support

Funding for PhD students comes from a variety of sources, including Queen's University, research and teaching assistantships, and external studentships. The School of Graduate Studies and Research requires that doctoral programs guarantee a minimum stipend of \$18,000 (in 2014-15) annually for four years of a student's program and our program strives to increase this minimum amount to \$25,000. The student's stipend can come from a combination of teaching assistantships (TAs), research assistantships (RAs), internal awards (i.e., Queen's Graduate Awards), and external awards. Each PhD student is guaranteed one TA position for a single term course in their second year. One of the conditions under which a Supervisor can accept a doctoral student is that appropriate funding has been prearranged with the Supervisor expected to underwrite at least half of the cost. One source of funding is supervisors' operating grants, which permit requests for PhD student funding. Students entering the doctoral program require high academic standing which makes them competitive in seeking scholarships and fellowships from provincial and federal government organizations as well as other external agencies. Potential faculty supervisors can work collaboratively with prospective candidates to identify internal and external sources of funding prior to acceptance.

Space and Computer Facilities

It is the responsibility of the primary supervisor to request and/or allocate each full-time doctoral student his or her own work-space and computer. These are usually located in the research environment of the supervisor. Students have access to a variety of software applications used in epidemiologic research through the supervisor's purchased software (**SAS, SPSS, STATA, Epi-Info**). Site licenses for the most common data management and analysis software used in epidemiologic research can be purchased through Queen's University Information Technology Services with student discounts.

Students are provided with a computing account that affords them access to Queen's server and network for e-mail, internet, library, and archival resources. Some of the department's affiliated research groups are linked to the Queen's network through Kingston General Hospital or other computing networks.

Queen's Information Technology Services maintains a number of computing sites on campus. Students can use computers in these sites for e-mail, internet, or to run certain site-licensed software. The Department provides computer lab sessions on SAS programming corresponding to biostatistics teaching in one of these computing labs located at Jeffrey Hall. Students working on geographic analyses also have access to the Geographic Information Systems computing laboratory through the Department of Geography.

Bracken Library also has a Centre for Health Education Electronic Resources (CHEER) which provides students with access to over 100 workstations.

Conflict of Interest

If a member of the faculty has a close relationship with a student (family or close friendship) and is required to teach that student, the faculty member will provide detailed answer keys/instructions for all tests and assignments to another faculty member so that they may mark that student's work. Said faculty member will also recuse themselves from membership on the comprehensive exam committee for that student.

Appendix 1 Central Resources and Services

Thesis Completion

Format of Thesis

Your thesis must adhere to the requirements and formatting standards that apply for traditional style theses and manuscript style theses. Departments may augment these standard requirements as appropriate. Information on thesis formatting, copyright and final e-submission to Q-Space can be found here: <http://www.queensu.ca/sgs/thesis-formatting-other-resources>

Thesis Examining Committee- Oral Examination

The oral examination may be open (public) or closed as decided by the student and his/her supervisor. Examiners are selected for specific roles and their expertise; they are tasked with providing a fair assessment of the thesis and the oral examination. See: <http://www.queensu.ca/sgs/preparing-your-oral-examination>

Progressing to Degree Completion

Research Ethics Approval

Any research project involving human subjects regardless of whether the project is supported by grant funds must receive approval from one of the Research Ethics Boards (REB) prior to the start of the data collection. The approval process takes time. Students must have completed the online module on Ethics for research involving human subjects prior to submitting the research proposal to the appropriate REB. Research associated with the Health Sciences and Affiliated Teaching Hospitals must be submitted to the [HSREB](#) and non-health sciences submit to the General Research Ethics Board (GREB). If you are uncertain of whether ethics is required, consult with your supervisor or the appropriate ethics office.

For the online module: <http://www.queensu.ca/ors/researchethics/cchrp.html>

For information about the General Research Ethics Board including the schedule of meetings:

<http://www.queensu.ca/ors/researchethics/GeneralREB.html>

For information about the Health Science Research Ethics including the schedule of meetings:

<http://www.queensu.ca/ors/researchethics/REB.html>

Animal Care

The University Animal Care Committee is responsible for the review and approval of all protocols proposing the use of animals in research, teaching, or testing at Queen's. If your research involves the use of animals (any species) then you must complete the course in animal care (QACS 799). For registration and content information go to: <http://www.queensu.ca/uvet/training/WEBCTtraining.html>

Annual Progress Report

An annual progress report describes your achievements to date, your academic goals for the next year, what supports need to be in place to accomplish your goals, and whether there have been unanticipated delays. Continuing and satisfactory progress is required to be in 'good standing'. Annual progress reports are mandatory for students in PhD programs and strongly recommended for student in research-based (doctoral-stream) Master's programs. Reports must be discussed with your supervisor. Note that the PhD program in the Public Health Sciences requires students to submit a form once a year in June. They are submitted to the graduate assistant at epid@queensu.ca and copied to the supervisors. The copy stands in for a signature.

Tips for completing the annual report:

<http://www.queensu.ca/sgs/sites/webpublish.queensu.ca.sgswww/files/files/faculty%20-%20supervision/SGS-Tips-Annual-reports-May2012.pdf>

Dissertation Boot Camp

The School of Graduate studies hosts two Dissertation Boot Camp events throughout the year. The primary aim of the 5-day Boot Camp is to write and to make substantial headway on your thesis. Advice and tips about writing, one-on-one consultation and snacks and lunch are provided. For details and how to register go to: <http://www.queensu.ca/sgs/dissertation-bootcamp>

Three Minute Thesis (3MT)

The 3MT is a university wide competition for Master's students (thesis or research project) and doctoral students in which participants present their research and its wider impact in 3 minutes or less to a panel of non-specialist judges. This is an excellent opportunity to develop strong communication skills and convey the significance of your research work.

<http://www.queensu.ca/3mt/home>

Student Academic Success Services

These services include thesis writing support in small groups covering topics of interest to the participants, learning strategies for graduate students, and through the writing centre graduate students can get assistance with academic writing and one-on-one consultations. SASS works with students in all disciplines and provide specialized support for English language learners.

<http://sass.queensu.ca/>

Tips & Resources Webpage

Queen's School of Graduate Studies have many valuable resources and events in place to assist you in progressing toward degree completion. Take advantage of the many services available to you during your time at Queen's. Click the link below for details.

<http://www.queensu.ca/sgs/current-students/resources>

Policies and Regulations

[Note: for a complete listing please go to: http://www.queensu.ca/calendars/sgsr/General_Regulations.html. A subset of graduate policies is provided below]

Academic Integrity Policy

Academic integrity is constituted by the five core fundamental values: honesty, trust, fairness, respect and responsibility. Queen's students, faculty, administrators and staff all have responsibilities to support and uphold the fundamental values of academic integrity.

http://www.queensu.ca/calendars/sgsr/Academic_Integrity_Policy.html

Accommodation of Graduate Students with Disabilities

Queen's University is committed to providing accommodation for graduate students with disabilities. University administrators, faculty, staff and other students are expected to support, to the point of undue hardship, all reasonable individualized and appropriate accommodation plans that preserve the program's academic standards and adhere to the principles of academic integrity.

For the roles and responsibilities associated with accommodation (students, faculty and staff) visit: [Graduate Student Handbook](#)

For the policy click the following link:

http://www.queensu.ca/calendars/sgsr/Accommodating_of_Graduate_Students_with_Disabilities.html

Appeal of an Assigned Grade in a Graduate Course

Most graduate departments have a procedure compatible with that of the School of Graduate Studies whereby any graduate student wishing clarification about, or who is dissatisfied with, an assigned grade in a graduate course, can appeal that grade. When departments do not have their own procedure, a graduate student follows the steps outlined in the SGS policy; see

http://www.queensu.ca/calendars/sgsr/Appeal_of_an_Assigned_Grade_in_a_Graduate_Course.html

Off-Campus Study

Subject to the residency requirement of the program of study, students registered in a master's or a doctoral program may be permitted to study at another approved university, institution, library or laboratory. To do so requires program approval, the submission of a request for Full-time off-campus registration, and approval by the School of Graduate Studies.

http://www.queensu.ca/calendars/sgr/Off_Campus_Study.html

Time Limits for Completion of Programs and Extensions

While Master's programs are designed and approved to be completed in one year (3 terms) or two years (6 terms) and doctoral programs are designed and approved to be completed within four years (12 terms) of initial full-time registration there are many reasons why additional time may be required. This regulation describes the standard timeframe for program completion and the process for extending the timeframe:

http://www.queensu.ca/calendars/sgr/Time_Limits_for_Completion_of_Programs.html

For extensions of the standard time limit for program completion see:

http://www.queensu.ca/calendars/sgr/Extension_of_Time_Limits.html

Appeals Against Academic Decisions

In the event that academic problems arise, efforts should always be made to deal with them early and by informal means. There are however situations in which informal resolution is not possible and formal processes need be pursued. If a resolution is not reached then the student may appeal the decision on procedural grounds if they exist. Refer to:

http://www.queensu.ca/calendars/sgr/Appeals_Against_Academic_Decisions.html

Withdrawal on Academic Grounds

A department may recommend that a student be required to withdraw on academic grounds when academic performance including progress is unsatisfactory. There are several circumstances that may lead to such a serious recommendation. These circumstances, the process, and procedures for appeal are described in the policy found at:

http://www.queensu.ca/calendars/sgr/Withdrawal_on_Academic_Grounds.html

Professional Skills Development for Graduate Students

Expanding Horizons

The School of Graduate Studies, in partnership with student service providers at Queen's, offers *Expanding Horizons* - a series of workshops and seminars to support the academic, personal, and professional success of graduate students. Graduate students are encouraged to participate according to their needs and interests, and may attend as many workshops/seminars as desired. A planning guide assists by recommending when students might benefit most from certain workshops, see: <http://www.queensu.ca/exph/workshop-series/planning-guide>

For complete details on *Expanding Horizons* visit:

<http://www.queensu.ca/exph/workshop-series>

Career Services

Career Services provides career education and employment support services at Queen's for undergraduate and graduate students in all disciplines. A comprehensive range of services are offered including drop-in career advising, supporting graduate students in making informed decisions about career options, job search strategies, and CVs/resumes . For a full description of services see:

<http://careers.queensu.ca/>

Centre for Teaching and Learning

The Queen's Centre for Teaching and Learning (CTL) offers a wide array of programs and services that are designed to meet the teaching and learning needs of students, post-doctoral fellows, staff, and faculty members.

<http://www.queensu.ca/ctl/index.html>

Advising and Counselling Services

Academic Counselling, Confidential Advising

The Associate Deans in the School of Graduate Studies are available to graduate students who wish to talk about any academic issue they have. The Associate Deans will offer advice and lay out options to manage the specific issues. These meetings are in confidence and actions are only taken with the student's consent. To make an appointment please contact the Administrative Assistant at: sgsasst@queensu.ca

Peer Advising (Society for Graduate and Professional Students, SGPS))

The Student Advisor program provides advocacy and support for graduate and professional students. The program's primary goal is to assist SGPS members negotiate their many roles as students, researchers, teachers, employees and colleagues. Services are strictly confidential.

<http://www.sgps.ca/services/advisors.html>

Student Wellness Services Student Wellness Services provides a welcoming, confidential and integrated service that is responsive to the needs of students be it health services, counselling services, disability services or advice on maintaining or improving your overall well-being. For a full listing of services visit:

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

Additionally, the School of Graduate Studies has two embedded counsellors who provide individual counselling to graduate students. [On-Site SGS Counsellors](#)

School of Graduate Studies on-site Counsellor

This service is part of HCDS and provides an additional access point for graduate students to counselling services. Located in the School of Graduate Studies, graduate students have access to individual counselling services, group programs and various health and wellness events. Strict standards of confidentiality or upheld. Visit: <http://www.queensu.ca/sgs/sgs-counsellor>

https://biology.queensu.ca/default/assets/File/2017-10-10_Info%20for%20Graduate%20Students%20about%20Harassment%20and%20protocols.pdf

Other Services and General Resources

Queen's University International Centre (QUIC)

QUIC is a support service for all members of the Queen's Community and through its activities promotes an internally informed and cross-culturally sensitive learning environment. The centre offers support for international students in finding housing, it provides a relaxing and welcoming space for conversation, and provides information about study permits, visas, health insurance coverage, taxes and living in Kingston.

Visit : <http://quic.queensu.ca/>

Queen's Libraries

Students can access library materials on-site or via the internet with a Queen's netID. In addition, students can book study space, borrow materials from other libraries, seek advice on searching for the information you need, and access information about copyright, open access and scholarly communications. For service descriptions visit: <http://library.queensu.ca/services/overview>

Guidelines to Intellectual Property

These guidelines are intended to support your study and research at Queen's and to provide you with a general overview of what intellectual property is, what you should know, and how to find out more. You will find practical guidance about issues associated with intellectual property (IP) including patents, copyright and ownership of IP.

<http://www.queensu.ca/sgs/sites/webpublish.queensu.ca.sgswww/files/files/Students/Intellectual%20Property%20Guidelines%20at%20Queens%202013.pdf>

Guidelines to Graduate Supervision

Understanding roles, responsibilities and expectations is important in graduate study and effective communication is essential to ensuring a shared understanding. The development of strong working relationships helps to promote an excellent graduate experience. This guide provides best practices, advice and general information to assist in forming and maintaining good student-supervisor relationships and references resources that may be helpful in the pursuit of a graduate degree.

<http://www.queensu.ca/sgs/sites/webpublish.queensu.ca.sgswww/files/files/Students/13-0360%20Graduate%20Supervision%20Handbook.pdf>

Handbook for International Students

This handbook provides valuable information and resources that will help students find what they need upon arrival and throughout their stay in Kingston. Sections include student services, academic life, housing, money matter, cross-cultural transition, and community and recreation.

<http://www.queensu.ca/sgs/sites/webpublish.queensu.ca.sgswww/files/files/Students/13-0360%20International%20Students%20Handbook-reduced.pdf>

School of Graduate Studies (SGS) Website

The SGS website links you to the many programs and resources available. For information about funding, events, profiles of graduate students and much more visit the SGS website: <http://queensu.ca/sgs/>

Appendix 2 Core Competencies for PhD Epidemiology Students

Students are able to conduct each of these activities or to have at their command specific types of information that they can use in solving problems.

Research Ethics

Understand the concepts of human subject protections and confidentiality, and awareness of particular issues relevant to the study of specific populations.

Apply this understanding as evidenced in the design and conduct of their research.

Recognize ethical issues and follow ethics guidelines

Causation and Causal Inference in Epidemiology

Causal reasoning/inference in epidemiology

Concepts of disease transmission and the epidemiologic triangle

History of Epidemiology

Understand the general history of the development of epidemiology, including the major epidemiological studies of selected diseases.

Classical studies in epidemiology

Contribution of Epidemiology

Contributions of epidemiology to public health, medicine, and policy

Branches of epidemiology

Basic knowledge of the leading public health problems

Identify leading causes of death

Identify major chronic and infectious diseases, descriptive epidemiology and risk factors.

Know the principles of screening and of surveillance systems, including understanding the concepts of validity and reliability of screening tests and be able to calculate associated measures and

Know the types of surveillance systems and approaches used in disease surveillance

Understand the global, cultural, and social context of health problems and how these influence the conduct, interpretation, and dissemination of research and intervention studies.

Sources of public health data
Disease classification systems

Problem Conceptualization

Review and critically evaluate the literature (be familiar with different approaches to reviewing and synthesizing the literature)

Synthesize available information.

Identify meaningful gaps in knowledge.

Formulate an original and key hypothesis or statement of the research problem.

Literature Review

Assess published work for major sources of bias

Conduct a meta-analysis and a systematic review

Descriptive Epidemiology

Produce the descriptive epidemiology of a given condition, including case definition, calculation of the primary measures of disease morbidity and mortality, and appropriate comparisons by person, place and time.

List the strengths and limitations of descriptive studies.

Identify data from existing national and international sources.

Obtain health status indicators from available sources of data

Compare health status indicators across communities

Standardize rates

Calculate standard epidemiologic measures (prevalence, incidence, etc) and confidence intervals

Screening

Understand principles of screening and disease prevention

Calculate and interpret sensitivity, specificity, PPV, NPV

Study Design and Conduct

Understand the characteristics of main analytic study designs (randomized controlled trial, cohort study, case-control study, cross-sectional)

Design a study using any of the main study designs

Understand the advantages and limitations of each design for addressing specific problems, as well as the practical aspects of their uses, including trade-offs. This understanding will be reflected in selecting the most appropriate and efficient design for a designated problem.

Identify and minimize sources of bias; describe both the direction and magnitude of the bias and the effect of potential biases on the measures of association.

Use basic population sampling methods.

Plan a survey

Create a survey/questionnaire

Precision and Validity in Epidemiologic Studies

Understand external and internal validity

Understand sources of bias / threats to internal and external validity

Understand precision and the role of random error

Calculate sample size, detectable effect and study power

Data Analysis

Understand descriptive statistics and be able to create descriptive tables

Hypothesis testing

Conduct categorical data analysis

Analysis of variance

Examine data for the presence of confounding and interaction (effect modification), identify their presence and manage them appropriately.

Understand and be able to apply regression models to epidemiologic data, including: linear regression, logistic regression, proportional hazards model).

Data Collection and Monitoring

Use methods of measurement – design data collection forms assessing both exposures and outcomes; determine the validity of the instrument; identify the presence and magnitude of measurement error; adjust for measurement error when appropriate data are available.

Monitor the conduct and progress of data collection; develop, implement and assess quality control measures.

Understand confounding and effect modification

Measures of Effect and Impact

Calculate and interpret measures of relative risk and population attributable risk

Data Management

Create data files appropriate for analysis; carry out the steps needed to create new variables, clean the data sets, etc

Interpretation

Interpret the research results, make appropriate inferences based on results, and recognize the implications of the research results

Interpret findings in a causal framework



Appendix 3 Epidemiologic Concepts, Activities and Competencies

Epidemiology is one of the sciences underlying and supporting public health, and it is a broad and exciting field that “provides logic and structure to the analysis of health problems” (p. 2, Webb and Bain Essential Epidemiology). Rothman defines Epidemiology as: *the study of the distribution of health-related states and events in populations... Other sciences, such as clinical medicine, are also directed toward the study of health and disease, but in epidemiology the focus is on population distributions.*” (Rothman 3rd ed. p. 32) As such, epidemiologic studies contribute evidence for the design of prevention programs, clinical practice, legislation, and public health interventions aimed at improving the health of the community. This document attempts to describe epidemiologic research areas that fall within the three research areas encompassed by our program: population health, health services and policy, and clinical epidemiology.

A PhD in epidemiology should include design and measurement principles, and critical interpretation of epidemiologic studies as evidence for public health issues. Focus on measurement issues and understanding of elements that contribute to rigorous internal validity in human health issues are key features of a dissertation. Epidemiologic methods can be applied to all substantive health problems. Other approaches can complement epidemiology, or inform the epidemiologic approach.

In this list that attempts to describe the scope of epidemiologic endeavours, we see health research information from cellular and animal studies, case reports, qualitative studies, non-systematic scoping reviews, needs and gap analyses as *informing* the epidemiologic research agenda and its conceptual frameworks. These approaches in and of themselves do not constitute epidemiologic research.

A. Health Problem

- a. Descriptive epidemiology
 - i. Disease definition
 1. Disease classification systems
 - ii. Disease frequency, morbidity and mortality
 - iii. Disease risk factors
 1. Relative risk
 2. Population attributable risk
 - iv. Global, cultural and social context of health problems
- b. Disease surveillance
 - i. Types of surveillance systems and approaches (e.g., acute disease surveillance versus chronic disease surveillance)
 - ii. Existing data sources local, national, international
 - iii. Rate standardization for comparisons across person, place, time
 - iv. Etiologic studies
- c. Healthcare surveillance approaches
 - i. Process evaluations for quality, accessibility, continuity, efficiency, acceptability
 - ii. Benchmarking

- iii. Small area variation studies
- B. Current Knowledge
 - a. Systematic literature review
 - b. Critical appraisal
 - i. Study validity
 - ii. Precision
 - iii. Significance
 - c. Meta-analysis
 - i. Cochrane Collaboration
 - d. Causal inference
 - e. Identify meaningful gaps
- C. Study objectives and hypotheses
 - a. Conceptual frameworks / disease models
 - i. Pathophysiologic disease mechanisms
 - ii. Socio-behavioural mechanisms
 - iii. Community program / system level mechanisms
 - iv. Natural history of disease
 - v. Prognosis
 - vi. Access and/or quality of care models
 - b. Hypothesis or research problem identification
- D. Study design and conduct
 - a. Design options (including advantages, strengths, limitations)
 - i. clinical and population case series
 - ii. cohort
 - iii. case-control
 - iv. cross-sectional
 - v. measurement studies
 - vi. variations on traditional designs (e.g., case-cohort, case-only)
 - vii. designs adopted from other disciplines (e.g., mixed methods, instrumental variables design)
 - b. Data sources
 - i. Primary sources
 - ii. Secondary sources
 - c. Study population
 - i. Identification
 - 1. Sample size estimation, detectable effect, study power
 - 2. Sampling methods
 - ii. Recruitment
 - iii. Follow-up
 - d. Issues and choices in study conduct
 - i. Influence of cultural / social context on study design and conduct
 - ii. Data collection / capture (face-to-face, telephone, mail, internet, other)
 - iii. Variable selection and definitions

- iv. Questionnaire / data collection instrument design / data processing
- v. Measurement quality
 - 1. Quality control strategies
 - 2. Assess for measurement error
 - 3. Correct for measurement error if possible
- e. Research ethics
 - i. Confidentiality
 - ii. Informed consent
 - iii. Issues in special populations
 - iv. Data privacy and protection
- f. Analyses
 - i. Descriptive - univariate
 - ii. Bivariate
 - 1. Categorical
 - 2. Continuous
 - 3. Survival
 - 4. Longitudinal
 - iii. Hypothesis testing
 - iv. Assess for presence and/or control of confounding and effect modification
 - 1. Stratified analyses
 - 2. Multivariable regression
 - 3. Comparative effectiveness / outcomes research
 - a. Pragmatic trials
 - b. Instrumental variables / natural experiments
 - c. Propensity scores
 - v. Predictive / prognostic modelling
 - 1. Variable choice and transformations
 - 2. Missing data imputations
 - 3. Calibration and discrimination
 - 4. Shrinkage for optimism in the estimates
 - 5. External validity
 - vi. Measurement development and validation
 - 1. Factor analysis and other item reduction strategies
 - 2. Reliability assessment
 - 3. Internal validation
 - 4. External validation
 - vii. Advanced methods and methods (e.g., hierarchical regression, time dependent and longitudinal analyses, structural equation modelling)
- g. Interpretation of effect estimates
 - i. Assess effect of possible biases, assess internal validity
 - ii. Interpret results
 - 1. Precision
 - 2. In relation to conceptual / causal framework

- 3. In relation to clinical / public health significance
 - iii. Assess external validity
 - iv. Put in context of what else is known
 - v. Identify next steps
- E. Knowledge dissemination and translation
 - a. (consider) Integrated knowledge translation
 - b. Oral and written scientific reports
 - c. Plain language / accessible reports
 - d. Relevance of research findings in relation to other knowledge and sociocultural norms
 - e. (when appropriate) Advocate for action informed by research findings or influence subsequent research
- F. Intervention research
 - a. For primary prevention of disease or risk reduction
 - i. Community trials
 - b. For secondary prevention - disease detection (screening)
 - i. Test characteristics (validity, reliability)
 - c. For tertiary prevention - disease treatment
 - i. Randomized controlled trials
 - ii. Other comparative effectiveness designs
 - d. For healthcare programs and service delivery
 - i. Program/service trials
 - ii. Technology assessment
 - iii. Community trials
 - iv. Quasi-experimental designs (pre-test/post-test, time series)
 - v. Epidemiologic designs (cohort, case-control, cross-sectional)
 - vi. Mixed methods
- G. Specialization based on level of prevention
 - a. Etiologic epidemiology
 - b. Public health-related epidemiology
 - c. Clinical epidemiology
 - d. Health services research
- H. Exposure-specific areas of specialization
 - a. Environmental epidemiology
 - b. Epidemiology in war and disasters
 - c. Genetic epidemiology
 - d. Molecular epidemiology
 - e. Nutritional epidemiology
 - f. Occupational epidemiology
 - g. Social epidemiology
- I. Disease-specific areas of specialization
 - a. Cancer epidemiology
 - b. Cardiovascular disease epidemiology
 - c. Chronic respiratory disease epidemiology

- d. Infectious disease epidemiology
- e. Injury epidemiology
- f. Mental health epidemiology
- g. Perinatal epidemiology
- h. Reproductive epidemiology

NOTE: Epidemiologists often work in multidisciplinary teams that can include: biostatisticians, health care professionals, basic molecular and genetic scientists, health economists, medical geographers, kinesiologists, psychologists, sociologists and others

Appendix 4: PhD Program Forms

Thesis Proposal Presentation Scheduling Form (attached)

Thesis Defense Scheduling Form (attached)

Progress Report Form (attached)



**Department of Public Health Sciences
PhD Thesis Proposal Scheduling Form**

Student Name		
Student Number		
Thesis Title		
Supervisors		
Proposal Submission Date		
Presentation Date (Suggestion #1):	<input type="checkbox"/> am	<input type="checkbox"/> pm
Presentation Date (Suggestion #2):	<input type="checkbox"/> am	<input type="checkbox"/> pm
Presentation Date (Suggestion #3):	<input type="checkbox"/> am	<input type="checkbox"/> pm
Faculty Reviewer (Suggestion #1):		
Faculty Reviewer (Suggestion #2):		
Faculty Reviewer (Suggestion #3):		
Faculty Reviewer: (Suggestion #4):		
Faculty Reviewer: (Suggestion #5):		

Primary Supervisor Signature _____

Student Signature _____

Program Director Signature _____



**Department of Public Health Sciences
PhD Thesis Defense Scheduling Form**

Student Name:	
Student Number:	
Thesis Title:	
Supervisors:	
Confirmed Submission Date:	
Presentation Date (Suggestion #1):	<input type="checkbox"/> a.m. <input type="checkbox"/> p.m.
Presentation Date (Suggestion #2):	<input type="checkbox"/> a.m. <input type="checkbox"/> p.m.
Presentation Date: (Suggestion #3):	<input type="checkbox"/> a.m. <input type="checkbox"/> p.m.
External Examiner (Suggestion #1) + email:	
External Examiner (Suggestion #2) + email:	
External Examiner (Suggestion #3) + email:	
Internal/External Examiner: (Suggestion #1):	
Internal/External Examiner: (Suggestion #2):	
Internal/External Examiner: (Suggestion #3):	
Internal Examiner: (Suggestion #1):	
Internal Examiner: (Suggestion #2):	
Internal Examiner: (Suggestion #3):	

Primary Supervisor Signature _____

Student Signature _____

Program Director _____

Department of Public Health Sciences

PhD Program Term Progress Report - to be completed once per year in June. Once fully completed by the student and supervisor(s), please submit via email to epid@queensu.ca copying your primary supervisor. This method will stand in for signatures.

Student Name:

Student Number:

Year in Program:

Supervisor(s) Names:

Thesis Committee Membership:

Milestone completion dates or planned completion dates:

Comprehensive exam

Outline presentation

Thesis proposal presentation

Thesis submission

To be completed by the student:

Please describe your progress over the last year. Comment where applicable on progress in research, data collection, analysis and/or writing of dissertation. Please report on papers submitted or published, conferences, presentations, grant applications and/or professional development. Please indicate if there is anything that has hindered your progress over the last year.

Please outline your specific goals for the next year.

Respond, if you wish, to the evaluation given below.

To be completed by the supervisor(s) and/or committee members (teaching should not be evaluated in this report):

Comment on the student's progress in the last year.

Are the proposed goals for the next month reasonable and compatible with timely degree completion?

If delays or obstacles to progress have been reported, please comment on remedial action.

November 2017