



Master of Science in Epidemiology

Department of Public Health Sciences

Student Handbook

This handbook provides information on the Master of Science in Epidemiology program at Queen's University. This document covers information surrounding program structures, course offerings, faculty information, and general university-wide material and resources.

January 2018



Departmental Overview

What is now the Department of Public Health Sciences (formerly Community Health and Epidemiology) was established in 1968 to study the incidence of diseases in Canadian communities and to find ways to help reduce public health risks. Since then, the fields within the public health sciences have broadened considerably; department members conduct research and teach in areas as diverse as population health, clinical epidemiology, health policy, program evaluation, and biostatistics.

The mission of the Department is to advance scientific knowledge relevant to research in epidemiology, public health and biostatistics, and to participate in the dissemination and application of scientific knowledge to the solution of health, health care, and health system issues. To achieve this mission, the Department contributes to undergraduate medical and life sciences education in aspects of the public health sciences, and offers thesis-based Master and PhD degree programs in epidemiology, a practicum-based Master of Public Health, and a collaborative Biostatistics Master program. The goal of the doctoral program is to provide students with educational opportunities needed to acquire the knowledge, attitudes, and methodological skills necessary to participate in or lead applied or academic research in health services or epidemiology within the context of multi-disciplinary research teams.

Master of Science in Epidemiology Organization and Structure

The Master of Science in Epidemiology Program is a thesis-based degree lasting 24 months. It is offered by the Department of Public Health Sciences, overseen by Departmental Head, Dr. Will Pickett. The department is within the School of Medicine in the Faculty of Health Sciences, under directorship of Dr. Richard Reznick.

The Department of Public Health Sciences is regulated by The School of Graduate Studies. The Master of Science in Epidemiology program is under the direction of Dr. Harriet Richardson.

The goal of the program is to provide a common methodological foundation from which to conduct research in human populations across diverse health - related areas. The scope of the field of epidemiology is broad; it includes a range of content areas and methodologies. Depending upon their focus, students learn about various research designs, biostatistics, program evaluation, health economics, as well as how to design surveys or use administrative data. At Queen's our established strengths are in the areas of cancer, injury, obesity, disability, and mental health epidemiology as well as research in various health services contexts including public health, primary care, cancer care and critical care. We also have some emerging strengths in the areas of Northern health, Aboriginal health and global health studies.

Primary Faculty

The following faculty members hold their primary appointment in the Department of Public Health Sciences and contribute to the MSc Program as course instructors and/or thesis supervisors:

- **Dr. Kristan Aronson**
Professor, Cancer Care & Epidemiology, Queen's Cancer Research Institute

Research interests: *Cancer epidemiology; Environmental and occupational epidemiology; Meta-analyses; Quality of life.*

▪ **Dr. Heather Castleden**

Associate Professor, Queen's University

Research interests: *Systemic environment and health inequities in Canada by employing social justice, health equity, anti-colonial, and environmental racism frameworks in community-based participatory research.*

▪ **Dr. Bingshu Chen**

Associate Professor, Canadian Cancer Trials Group (CCTG), Queen's Cancer Research Institute

Research interests: *Survival analysis; Design and analysis of clinical trials; Epidemiology*

▪ **Dr. Colleen Davison**

Assistant Professor, Carruthers Hall, Queen's University

Research interests: *Child protection and the socio-ecological determinants of child health particularly in rural and remote regions; global and public health as they intersect with emergency medicine.*

▪ **Dr. Keyue Ding**

Associate Professor, CCTG, Queen's Cancer Research Institute

Research interests: *Design and analysis of clinical trials; Sequential analysis; Statistical quality control procedures; Change point detection and estimation; Statistical computing.*

▪ **Dr. Patti Groome**

Professor and PhD Program Director, Cancer Care & Epidemiology, Queen's Cancer Research Institute

Research interests: *Clinical epidemiology; Health Services research; Head and neck cancers; Prostate cancer.*

▪ **Dr. Duncan Hunter**

Associate Professor, Graduate Coordinator, and MPH Program Director Carruthers Hall, Queen's University

Research interests: *Health services research; Needs assessments.*

▪ **Dr. Ian Janssen**

Professor and Canadian Research Chair in Physical Activity and Sedentary Behaviour
School of Kinesiology and Health Studies, Queen's University

Research interests: *Surveillance of obesity; Causes and consequences of obesity in children and adults; Clinical measurement and classification of obesity.*

▪ **Dr. Ana Johnson**

Associate Professor, Abramsky Hall, Queen's University

Research interests: *Cost-Effectiveness Analysis; Uncertainty; Decision Analysis; HIV; Cancer; Orthopaedics; Hypertension.*

▪ **Dr. Will King**

Associate Professor, Carruthers Hall, Queen's University

Research interest: Cancer epidemiology; Environmental epidemiology; Molecular epidemiology; Reproductive outcomes.

- **Dr. Michael McIsaac**
Assistant Professor and Program Director MSc Biostatistics, Carruthers Hall, Queen's University
Research interests: Development and application of statistical methods for public health: Two-phase study designs and methods for analysis of incomplete data; Design and analysis of epidemiological studies of rheumatology and vasculitis.
- **Dr. Hélène Ouellette-Kuntz**
Associate Professor, Carruthers Hall, Queen's University
Research interests: Survey methods; Health inequities; Autism, Intellectual/developmental disabilities.
- **Dr. Paul Peng**
Professor, Queen's Cancer Research Institute
Research interests: Statistical models for survival data with a cure fraction; Novel statistical methods for analyzing data from case-cohort studies.
- **Dr. William Pickett**
Professor, Department Head, Carruthers Hall, Queen's University
Research interests: Child health; Injury control science; Pediatrics; Violence; Applied emergency medicine research.
- **Dr. Harriet Richardson**
Associate Professor, MSc Program Director, Cancer Care & Epidemiology, Queen's Cancer Research Institute
Research interests: Cancer prevention trial methodology, Describing, for the purpose of improving; family physicians' use of primary prevention strategies; Quality of life data from clinical trials.
- **Dr. Heather Stuart**
Professor, Bell Research Chair in Mental Health & Anti-Stigma, Abramsky Hall, Queen's University
Research interests: Psychiatric epidemiology: Community mental health research; Stigma.
- **Dr. Dongsheng Tu**
Professor, CCTG Clinical Trials Group, Queen's Cancer Research Institute
Research interests: Clinical trials; Resampling methods and applications of censored data; Meta-analysis; Biostatistical theory and methods.

Cross Appointed Faculty

In addition to the aforementioned individuals, there are numerous faculty members who provide instruction to the Master of Science in Epidemiology students through the mandatory, core courses and/or elective offerings, and thesis supervision:

Name	Title	Department	Email
Susan Bartels	Associate Professor	Dept. of Emergency Medicine	susanbartels@gmail.com
Rick Birtwhistle	Professor	Dept. of Family Medicine	richard.birtwhistle@cspc.queensu.ca
Rob Brison	Professor	Dept. of Emergency Medicine	brisonr@kgh.kari.net
Steve Brooks	Assistant Professor	Dept. of Emergency Medicine	brookss1@kgh.kari.net
Ian Casson	Associate Professor	Dept. of Family Medicine	ian.casson@dfm.queensu.ca
Jenn Carpenter	Associate Professor	Dept. of Emergency Medicine	carpentj@queensu.ca
Stevenson Fergus	Associate Professor	School of Kinesiology and Health Studies	ferguss@queensu.ca
Jennifer Flemming	Assistant Professor	Dept. of Medicine	flemmij@hdh.kari.net
Sudeep Gill	Associate Professor	Dept. of Internal Medicine	gills@providencecare.ca
Michael Green	Professor	Dept. of Family Medicine	michael.green@dfm.queensu.ca
Timothy Hanna	Assistant Professor	Dept. of Oncology	tim.hanna@queensu.ca
Daren Heyland	Professor	Dept. of Internal Medicine	dkh2@queensu.ca
Diane Lougheed	Professor, Service Chief	Dept. of Medicine	mdl@queensu.ca
Mary Ann McColl	Professor	School of Rehab. Therapy	mccollm@queensu.ca
Jenny Medves	Professor	School of Nursing	jennifer.medves@queensu.ca
Heather Murray	Associate Professor	Dept. of Emergency Medicine	HM9@queensu.ca

Susan Phillips	Professor	Dept. of Family Medicine	susan.phillips@dfm.queensu.ca
Mark Rosenberg	Professor	Dept. of Geography	rosenber@queensu.ca
Dallas Seitz	Associate Professor	Dept. of Psychiatry	seitzd@providencecare.ca
Tanveer Towheed	Professor	Dept. of Medicine	tt5@queensu.ca
Joan Tranmer	Professor	School of Nursing	tranmerj@kgh.kari.net
Kim Turner	Associate Professor	Dept. of Anaesthesia	ket1@queensu.ca
Maria Velez	Assistant Professor	Dept. of Obstetrics & Gynecology	maria.velez@queensu.ca
Ray Viola	Associate Professor	Dept. of Palliative Med	rav@post.queensu.ca
Karen Yeates	Associate Professor	Dept. of Nephrology	yeatesk@queensu.ca

Research

Research is pursued by faculty members in a wide variety of areas: epidemiology, clinical trials, biostatistics, health services research, health policy, public health, and health economics. Within these broad disciplines, specific content strengths include: the study of cancer, injury, disabilities, psychiatry, health care utilization, and social determinants of health. Opportunities in many of these areas are strengthened by formal affiliations with the following research groups:

- [Centre for Health Services and Policy Research](#)
- [Cancer Care & Epidemiology, Queen's Cancer Research Institute](#)
- [Kingston, Frontenac, Lennox & Addington Public Health Unit \(KFLA Public Health\)](#)
- [CCTG Queen's Cancer Research Institute](#)
- [ICES Health Services Research Facility](#)

Degree Requirements

Through a combination of coursework and independent research, students will gain skills to communicate scientifically, describe trends and patterns of disease incidence and prevalence, critically review scientific literature related to epidemiology; apply epidemiological and analytic methods in the design of research; collect, analyze and interpret health data; conduct a study; and write and defend a thesis.

To complete the requirements for the program, students must complete:

Fall, year 1

- Completion of Introduction to Epidemiology (EPID 801) and Introductory Biostatistics (EPID 821)
- Completion of one elective course
- Choose a thesis supervisor

Winter, year 1

- Completion of Intermediate Epidemiology (EPID 804) and Intermediate Biostatistics (EPID 822)
- Completion of one elective course
- Submit Thesis Outline – last working day in February

Spring/summer, year 1

- Submit Thesis Proposal – last working day in June
- Present Master's Thesis Proposal – July

Fall/winter, year 2

- Master's Thesis research
- Supplementary electives (optional)

Spring/summer, year 2

- Completion of Master's Thesis Research
- Thesis Defense (EPID 899) – June/August

* Complete a Human Research Ethics (CORE) online tutorial ([SGS 804](#)) before starting work on thesis. This online course is a mandatory requirement for all graduate students conducting research involving human subjects.

Mandatory Courses

EPID 801: Introduction to Epidemiology

This course deals with the design and analysis of research in Epidemiology. Topics include: measures of health status; risk factors and associations between them; study design including descriptive, analytical, experimental, and theoretical approaches; validity issues; critical appraisal; sources of data; and data collection and management.

Three term-hours, plus 1 1/2 hour tutorial, Fall. Instructor: W. Pickett.

EPID 804: Intermediate Epidemiology

This course deals with advanced methods and issues in the design, conduct, analysis and interpretation of epidemiologic studies. The content focuses on observational study design and analysis, and builds on epidemiologic principles presented in EPID 801. Data analysis will emphasize the application and interpretation of statistical concepts in epidemiologic research.

Three term-hours, Winter. Instructor: W. King. PREREQUISITE: EPID 801.

EPID 821: Introductory Biostatistics

This course introduces basic statistical concepts, principles and techniques essential for community health and epidemiologic research. Topics include descriptive statistics, probability distribution, estimation, hypothesis testing, simple linear regression, correlation and measure of some and nonparametric methods. Three term-hours, plus 1 1/2 hour tutorial, fall; every year. Instructor: M. McIsaac. Tutorial instructors: A. Day and J. Zhang-Salomons. PREREQUISITE: Permission of the Instructor.

EPID 822: Intermediate Biostatistics

This course deals with the commonly used statistical methods proven useful in health services research and the epidemiologic analysis of the relationship between traits, exposures or treatments and diseases or other medical outcomes. The course emphasizes the statistical modelling approach with topics including multiple regression, analysis of variance and covariance, reliability of measurements, analysis of categorical data and logistic regression.

Three term-hours, Winter. Instructors: B. Chen, M. McIsaac and P. Peng. PREREQUISITE: EPID 821 (or permission of Instructor)

Elective Courses

EPID 802: Foundations in Public Health

This course provides an overview of theoretical and conceptual foundations of public health. It examines the social determinants of health and population health approaches to promote and protect health. It instills in students an understanding of the historical achievements, core values and ethical frameworks that guide public health action. Three term-hours, Fall. Instructor: C. Davison.

EPID 803: Public Health System in Canada

This course provides an overview of the public health system in Canada including the provision of health care services. The first section of the course describes how health services are financed, organized and delivered in Canada. The second section of the course shows how finances and legislation influence the development of health policy. Three term-hours, Winter. Instructor: D. Hunter

EPID-806: Applied Research Methods for Program Planning and Evaluation

This course provides an overview of social research methods and tools to assist students to complete the "evidence to action" program planning and evaluation cycle. Topics covered include: defining the issue, using surveillance data, engaging the community, conducting a stakeholder analysis, survey methods, handling qualitative data, building logic models, choosing indicators, communicating the results, taking action. Three term-hours, Winter. Instructor TBD

EPID 807: Health Economics

This course is designed to provide students with an introduction to economic concepts and analysis relevant to health, health care and health care systems. Topics include: health as an economic variable; health production models: uncertainty in health and its effects; the behaviour and influence of various participants (health care providers, patients, government) on health care utilization and health status. No prior economic background is required, although, students must have basic quantitative skills. Three term hours, Fall. Instructor: A. Johnson

EPID 810: Controlled Clinical Trials

This course will cover material relevant to the design and conduct of controlled clinical trials. Design topics will include methods used to achieve unbiased results with improved precision, such as adequate sample size, randomization, blinding, pre- and post-stratification, cross-over designs, placebos and the counting of relevant events. Attention will be given to the problems of conducting multi-centre clinical trials. Topics covered will include drafting of protocols, design of data forms, logistics of data flow, methods of follow-up, data management and quality control, periodic reporting, final data analysis and the production of final reports. Ethical issues and the role of randomized trials in clinical investigation will be discussed. Three term hours, Winter. Instructor: H. Richardson.

EPID 815: Independent Study

This course is designed for individual students interests that are not covered by existing courses offered in the Department. Normally, this will take the form of a closely supervised reading course in the area of a graduate instructor's expertise but may also include practical field experience. The proposed study must be approved by the appropriate instructor and Program Director, the Coordinator of Graduate Studies and the Head of the Department.

EPID 817: Foundations of Cancer Control

This course is intended for graduate students, clinical fellows and postdoctoral fellows who are engaged or interested in cancer research. This course will provide students with training in the fundamentals of epidemiologic methods in cancer research and with knowledge of how epidemiology could contribute to better understanding of cancer etiology and control in human populations. The course will focus on

concepts and methodological issues central to the conduct of epidemiologic studies of cancer etiology and control. Topics will include: an introduction to basic epidemiologic concepts, biologic concepts central to the investigation of cancer, study design, clinical epidemiology, and cancer control and prevention. Three term hours, Fall. Instructor: H. Richardson. Not offered 2017-18.

EPID 823: Advanced Methods in Biostatistics

An advanced course in the theoretical issues and analytical practices in epidemiology and biostatistics. Major topics include the life-table method, demography and confounding and its solution. Detailed design and analysis of cohort, case-referent and experimental studies shall be performed. Multifactor techniques including log-linear logistic and Cox's proportional hazards models will be discussed in detail. Three term hours, Winter. Instructor: D. Tu. PREREQUISITE: EPID 821 or equivalent

EPID 828: Infectious Diseases

This course provides an introduction to the principles of infectious disease prevention and control relevant to public health practice. The course focuses on the etiology, history, societal impacts, and determinants of infectious diseases of major public health importance. There is an emphasis on modern prevention and control efforts that can be applied at the local, national and international levels. Not offered 2017-18.

EPID 829: Foundations in Global Health

Students will be exposed to various global health concepts and be trained to work through potential solutions in a public health context. The course will be taught through formal lecture, seminar and small group learning and online modules. The course be taught through formal lecture, seminar and small group learning, and online modules. Topics may include: health, public health, and development; Aboriginal health; health systems and policies; Canada's role in global health and social justice; and special populations. Three term hours, Fall. Instructor: C. Davison.

EPID 831: Chronic Disease Epidemiology

This course will provide an overview of the epidemiology of some of the leading non-infectious causes of morbidity and mortality in Canada and will highlight the key methodological considerations for the study of each disease or health problem. Three term hours, Fall. Instructor: H. Richardson. PREREQUISITE: EPID 801 AND EPID 821 or equivalents with permission of course coordinator.

EPID 832: Mental Health/Critical Inquiry

This course will provide students with in-depth substantive knowledge about the evolution of health issues that have shaped policy and mental health services. Three term hours, Winter. Instructor: H. Stuart. PREREQUISITE: EPID 801 or permission of course instructor.

EPID 833: Issues in Military and Veteran Health Research

Students are exposed to health issues associated with military experience that includes both veterans and military families. As a weekly webinar, the course will include presentations from Canadian subject matter experts who will contextualize military mental and physical health needs and introduce theoretical and

methodological approaches to conducting applied health research among this population. Three term hours, Fall, every year. Instructors: S. Belanger.

EPID 836: Qualitative Research Methods

Qualitative research seeks to understand how and why people perceive and interact with the world around them. This course introduces graduate students to the nature and scope of qualitative research methods with respect to data collection and analyses in the social and health sciences, giving them theoretical and practical foundations to build on.

Three term hours, Winter. Instructor: H.Castleden. EXCLUSION; GPHY886

Courses offered Outside the Department for MSc program

Students in the past have completed electives within the listed departments. Any electives taken within other departments require approval from the MSc Program Director.

EPID 899: Master's Thesis Research

The thesis required for completion of the Master of Science in Epidemiology Program should be a scholarly work in which the student demonstrates scientific proficiency in a designated field of study *using skills acquired through the program*. **Thesis supervision** is provided by a Primary Supervisor who is a member of the Department and has designated School of Graduate Studies and Departmental authority to supervise MSc candidates. Co-supervisors and advisors may be sought as needed. The Primary Supervisor will be responsible for securing the approval of the Program Director with respect to the composition of the Thesis Supervisory Committee (any co-supervisors and/or advisors or lack thereof).

The Primary Supervisor/Thesis Supervisory Committee (if applicable)'s role is to advise and direct the student with respect to methods, subject matter, scope, timing, etc. This involves consultation with the student on all aspects of the thesis, arranging meetings (a Minimum of three per term), reading, commenting on drafts and approving the thesis outline, proposal and thesis.

The Primary Supervisor will ensure a record is kept of the meetings that are held and their outcome. The Primary Supervisor will ensure all required documentation is received by the Graduate Assistant according to set timelines for outlines, proposal and theses. This documentation will include names of recommended potential reviewers.

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.

Four documents must be submitted in sequence to meet the thesis requirement for the MSc in Epidemiology program:

- an outline due no later than the end of February of the first year (see Outline) ,

- a research proposal due no later than the end of June of the first year (see Thesis Proposal and Presentation)
- an ethics certificate for the thesis project due no later than October 31 of the first year (see REB)
- the thesis document due no later than August 31 of the second year (see Thesis Document and Defense)

Outline

Students are required to submit a two-page, single spaced outline of their thesis project signed by the Primary Supervisor and other members of the Supervisory Committee (if applicable) **no later than February 28** of their first year. The submission is to be via email to epid@queensu.ca.

The outlines will be reviewed by a panel of faculty members designated each year by the Program Director. The purpose of the review is to provide useful feedback to the student and Supervisor/Committee prior to embarking on the full-scale proposal and to render an assessment of whether the project, as outlined, is thesis-worthy. The reviews will be sent to the student and Supervisor/Committee. A copy will be kept on the student's file.

More specifically, the review panel will be asked to comment on whether:

1. the project is likely to be manageable within the timeframe and expectations of the two-year MSc program,
2. the project, if completed as outlined, is adequate and appropriate for an MSc thesis,
3. there are any methodological or other issues that could pose a problem for a successful proposal defence.

The outline is intended to provide an overview of the intended project with respect to the following:

1. Title
2. Purpose (~ ¼ page)
3. Background and Rationale (~ ¼ page)
4. Empirical Objectives (~ ¼ page)
5. Study Design and Methods (~ ¾ page)
 - a. Data management and analysis strategy
6. Ethical Considerations (~ ¼ page)
7. Feasibility Issues (e.g. access to the required data) (~ ¼ page)
8. Timeline for Proposal development and Project Completion noting key dates (additional ½ page)
9. References (additional ¼ page)
10. Name(s) and Signature(s) of Supervisor/Committee Members & Date (additional ¼ page)

Mini-Master's: Department of Public Health Sciences

(Adapted from the FHSGC Manual 2015)

May 2017

Eligibility:

Students registered in a Master's program at Queen's University, with first-class standing, and who show exceptional promise in their research may be considered for promotion to a doctoral program in the same Program, without completion of the Master's degree. Promotion to a doctoral program requires the recommendation of the Program, the approval of Council and the approval of the SGS. Students admitted to a doctoral program by the mini-master's route may not revert to the master's program within the same Program. In exceptional circumstances, the student may, after withdrawal from the doctoral program, seek readmission to the master's program in the same Program, or make application for admission to a master's program in another Program, through the normal application procedures.

Promotion into a doctoral program without completing the Master's thesis is reserved for students who meet the following criteria:

1. Must have completed at least one term, full time, and have completed at least two graduate courses, or equivalent.
2. Must complete all course requirements for both the Master's and Doctoral degree prior to graduation.
3. Should have an undergraduate honours degree with a minimum upper second class standing or equivalent.
4. Must have an overall first class average in graduate courses completed.
5. Must meet Program criteria for demonstrating promise and ability at research. This may take the form of oral or written presentation as well as letters of support from faculty familiar with the student's progress.
6. Must apply to Council following one term of enrolment (4 months) and prior to the end of the fifth term of study (20 months). All requirements for completion of the mini-master's must be satisfied by the end of the sixth term.

1. Procedure for Application and Approval:

The student will meet with the supervisor, the supervisory committee and the Graduate Coordinator or delegate to agree upon whether he or she should apply to the Ph.D. program without completing the Master's thesis. During this meeting the ramifications of the transfer to the doctoral program are to be clearly defined for the student.

The following documents are required for submission to the SGS:

- Updated transcript (internal transcript acceptable)
- A brief justification outlining the student's qualifications for admission (to be completed by the Graduate Coordinator or delegate)
- Letter of support from the supervisor
- Outline of student's current and proposed research.

- Completed application package for admittance to the doctoral program, including a decision sheet for acceptance into the Ph.D. program, “pending successful completion of the mini-master’s”.

The application will be forwarded to the Chair of Council. The Chair will either approve the application, thereby accepting the student into the Ph.D. program pending successful completion of the mini-master’s examination, or, in the case where he/she queries the qualifications of the student, have the application forwarded to Council for discussion. Both the Graduate Coordinator (or delegate) in the student’s Program, and the supervisor must attend the Council meeting when the application is discussed.

No later than 40 working days after the approval to proceed via the mini-master’s route has been confirmed in writing by the SGS, the mini-master’s candidate will defend a written research report and proposal in an oral examination to an examining committee.

2. Procedure for Examination of the Research Proposal of the candidate for the Mini-Masters:

The candidate must prepare a written report that normally should not exceed 10 pages in length, single spaced (excluding Figures, Tables and References), clearly delineating the background of the research project, the work done to date, and the proposal for development of the research into a doctoral thesis.

This report will be submitted to an examining committee composed of the following members:

- Chairperson (Head Delegate: MSc or PhD Program Director)
- Two faculty reviewers (1 internal department member and 1 internal/external faculty member; cross-appointee or adjuncts)

The Mini-Masters Oral Examination Form will contain a signature line for the candidate indicating that the candidate has been informed of the make-up of the Committee and that there are no conflicts.

An oral examination will be held normally no later than 2 weeks (10 working days) after submission of the written report to the members of the examining committee. At the examination, the candidate will present a 15-25 minute talk on his/her research report and proposal. This talk will be followed by an oral examination. Questioning or comments of the examining committee will primarily relate to the background of the project, what the student has accomplished, and the basis for expanding the project.

- In the event that the Mini-Master’s Oral Examination takes place in the candidate’s third semester of the program, prior to the conduct of any research, the student’s understanding of basic and intermediate concepts in epidemiology and biostatistics will also be evaluated in the form of open-ended questions by the examiners.
- In the event that the Mini-Master’s Oral Examination takes place in the candidate’s fifth semester of the program, and the student will be presenting preliminary research results, the primary questioning will be around the student’s understanding of the epidemiologic and statistical methods used to conduct the research and the basis for expanding the project.

The examination should normally last no longer than 1.5 hours. The primary examiners will be the two assigned faculty reviewers and the Chairperson. The Supervisors may also ask questions, but it is not an expectation. The order of questioning will be: 1) internal/external reviewer (~20 minutes), 2) internal reviewer (~15 minutes), chairperson (~15 minutes), Supervisor(s) maximum of 5 minutes each (but not mandatory).

At the end of the examination, the candidate will be asked to leave the room while the examining committee members discuss the performance of the candidate. The examining committee will decide if the student will be recommended for promotion to the Ph.D. program or not. Two or more negative votes by the examining committee will result in failure of the mini-masters examination. The decision of the examining committee shall be forwarded to the SGS.

Students who pass their mini-master's examination will be allowed to transfer to the doctoral program in the following September, January or May. Council members will be informed at the next Council meeting of the promotion. Students who do not pass the mini-masters examination will be allowed to complete the M.Sc. thesis, according to SGS regulations.

Proposal

Students are required to submit a written proposal no later than the end of June of first year for Full-Time Students; as per plan of study for Part-Time Students. They are also required to present the proposal to the Department; see The Proposal Presentation section below for submission of Thesis Proposal Scheduling Form.

The proposal should mirror what is expected by most granting agencies and as such should be 12 to 15 pages excluding references and appendices. It should be in 11 or 12 size font and 1.5 or double-spaced.

Anatomy of a Thesis Proposal

- Title Page with Document Date and Name(s) and Signature(s) of Supervisor/Committee Members (1 page not included in count)
- Purpose (~1/4 page)
- Background and Rationale (~6 to 8 pages)
 - Literature Review
- Empirical Objectives (~1/4 page)
- Study Design and Methods (~5 to 6 pages)
 - List of data sources and variables
 - Data management and analysis strategy
 - Strengths and Limitations
- Ethical Considerations (~1/4 page)
- Feasibility Issues (e.g. access to the required data) (~1/4 page)
- Timeline for Project Completion including key dates (1 page)
- References (as needed; not included in count)
- Appendices (as needed; not included in count)

Submitting the Proposal

The submitted proposal must be approved by the Primary Supervisor and all committee members (if applicable). 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 Presentation

A week or two BEFORE submitting your proposal (~mid-August), complete **with your supervisor** the attached Thesis Proposal Scheduling Form and submit it in hard copy or electronically to the Graduate Assistant (epid@queensu.ca). Scheduling of the proposal presentation will be finalized once the proposal document is submitted. The proposal date cannot be sooner than 10 full working days from the date of the proposal submission.

Students will present their submitted proposals to faculty and students during a 15-20 minute formal presentation. The purpose of the presentation is to allow faculty members the opportunity to determine whether the thesis project, if successfully completed, would satisfy Departmental requirements, or whether modifications are necessary. Secondly, the presentation provides students with a formal opportunity to communicate their thesis to a wide audience and receive constructive feedback and questions.

The Head of the Department/the Program Director or a designate will chair the session and at least one faculty member will serve as the designated reviewer. The chair and designated reviewer will receive the proposal 10 working days in advance of the presentation date. They will review the proposals in detail and prepare comments and questions.

Ethics Certificate

Students are required to obtain an ethics certificate for their thesis projects from the Queen's University Health Sciences Research Ethics Board no later than October 31st of second year for full-time Students; as per plan of study for Part-time Students. Applications for Ethics clearance is through an online system called [ROMEO](#). The Research Ethics Board meets most months to review submissions. See <http://www.queensu.ca/traq/human-ethics/hsreb/2017-hsreb-submissionmeeting-dates> for submission and meeting dates.

Thesis Document and Defense

Students are required to submit a written thesis no later than August 31st of second year for full-time Students; as per plan of study for part-time Students. They are also required to defend the thesis at an oral presentation to the Department; see The Thesis Submission section below for submission of Thesis Scheduling Form (~mid-August).

A thesis supervisor's main responsibility is to ensure the thesis is written according to Departmental standards. 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 (see: <http://www.queensu.ca/sgs/dissertation-bootcamp>) as well as online resources:

Thesis Formatting and Other Resources <http://www.queensu.ca/sgs/thesis-formatting-other-resources>
Prepare for your oral examination <http://www.queensu.ca/sgs/preparing-your-oral-examination>
Final Submission <http://www.queensu.ca/sgs/final-submission>

All graduate theses or dissertations MUST conform to the Minimum style and form requirements as detailed in the [General Forms of Theses](#). Two types of thesis documents are permitted: 1) traditional thesis; and 2) manuscript-based thesis.

Departmental Standards for the Manuscript Style:

Theses presented in the manuscript format must include at least one manuscript that is a full (as opposed to "brief" or "short") original research article. Manuscripts included as chapters may be review, methodological or empirical (quantitative/ qualitative) papers. The number of manuscripts included in this thesis format and their length/breadth is left to the discretion of the candidate and their committee. It is not necessary for the candidate to have published the manuscript(s) prior to the thesis defence, or even have submitted the manuscript(s) for publication at that time. Additional/supplementary Methods and Results that are not covered in the manuscripts, but are important to the overall thesis presentation, may be (optionally) added in a separate chapter. Alternatively, these may be added in an Appendix.

1. **Choice of Manuscript Style:** Candidates wishing to adopt the manuscript style should indicate their intentions at the outline and/or proposal stages of their thesis project. This requirement will assist the Department in providing the best possible advice to the candidate at an early stage of the thesis project. Students (in consultation with their supervisors) are free to change the format of their thesis to either of the approved options (general or manuscript formats) at any stage of thesis development, irrespective of what was initially planned or proposed.
2. **Co-authorship:** The statement of co-authorship is mandatory. Its purpose is simply to provide the reader with a clear description of the candidate's contribution to each manuscript contained in the thesis. In situations where multiple authors are involved in the preparation of the manuscript(s), the role that each author took in the development/ writing of the manuscript(s) must be described. This statement should be endorsed by the candidate and their supervising committee. The primary author on at least one manuscript must be the candidate. Manuscripts on which the supervisor or another person is first author may be included in the thesis (to accommodate collaborative research settings). However, the candidate is expected to have made a substantial contribution to each manuscript included. This contribution must be outlined in the "Co-authorship" statement. All co-authors will be required to have signed the PERMISSION OF CO-AUTHORS FORM before the defence.
3. **Standards for Examination:** Upon examination, the overall thesis document will be subject to the traditional standards of the department. This will include assessment of whether the thesis document is a coherent piece of work, and that the same breadth of information as is required for the traditional format is conveyed. Theses written in the manuscript form will be subject to the policies of the Graduate School upon examination. Three outcome categories for theses are available: passed, referred, or failed. The manuscripts contained in the thesis will not be examined based upon a peer-review standard. This means that each manuscript does not have to be of publishable quality in order for the thesis to obtain a pass rating. The outcome of the thesis defence will not be influenced by a journal's decision to accept or reject the manuscript(s) for publication.

4. **Structure of Thesis:** The thesis must be structured according to the following outline.

NOTE: The same style of referencing must be used throughout. This may require that a manuscript written for a particular journal be modified for inclusion in the thesis.

Page numbers provided are only a guide section/chapter length will vary across projects.

Title (as per SGS directions)

Co-Authorship

Acknowledgements

List of Tables

List of Figures.....

Chapter 1 Introduction

subsections as needed

References.....

Chapter 2 Literature Review or Title of Manuscript (if a Manuscript, start Abstract on next page otherwise start Introduction after Chapter title).

Abstract (if Manuscript format used for literature review)

Introduction.....

Methods

Results

subsections as needed

Discussion.....

subsections as needed

Suggestions for Future Research.....

References.....

Chapter 3 Title of Manuscript:

Abstract

Introduction.....

Methods

subsections as needed

Results

subsections as needed

Discussion.....

Conclusions.....

References.....

Chapter 4 General Discussion and Conclusions

Summary of Findings.....

Limitations.....

 subsections as needed

Implications.....

References.....

Appendices.....

 Appendix A: Ethics Certificate

 Appendix B: as needed.....

Thesis Defence

Details of the thesis defence procedure are contained in the [School of Graduate Studies Calendar](#). When the student is ready to defend, he/she must submit a completed Thesis Defence Scheduling Form to the Departmental Graduate Assistant (a minimum of **four weeks** prior to the proposed defence) to allow time for scheduling of the examining committee. Supervisors will make suggestions on possible internal and external examiners. The Program Director will review the list and the Graduate Assistant will contact potential examiners to determine their availability. The Graduate Assistant will fill out a *Master's Oral Thesis Examination Form* with the details of the examining committee. This form must be signed by the student's supervisors and the Department Head and delivered by the student to the Graduate Assistant **10 working days** prior to the defence. Students are also responsible for distributing thesis copies to the examining committee (one for each supervisor, one for the Department Head, one for the internal examiner, one for the external examiner and one for the Chair) after they have delivered the form to the Graduate Assistant office.

NOTE: A PDF copy of the thesis **must be submitted to the School of Graduate Studies** (thesis@queensu.ca) following the same deadlines outlined in the reference material.

Supervisors are responsible for ensuring that the [correct formatting](#) has been used in the thesis.

Academic Information

Academic Advisors

If students have not already acquired a supervisor at the time of initial registration into the program, they will be assigned to a faculty member who will function as their academic advisor. The first job of the academic advisor/supervisor is to assist students in developing a plan of study to meet their learning objectives. It is expected that students will meet with their academic advisors/supervisors on a regular basis (Minimum 2-3 times per term) to discuss their progress, and identify or resolve problems. The second

job of the academic advisor is to help the student select an appropriate thesis supervisor who will oversee their thesis work. Once a thesis supervisor is chosen, the academic advisor's job is complete and the thesis supervisor takes over this role. Thesis supervisors may be chosen at any time, but must be in place before the close of the first academic term. Often an academic advisor will become the student's thesis supervisor. Students are encouraged to take the initiative when setting up meetings with their academic advisors, since they are the best judges of when they require advice and support.

Student Orientation, Progress and Problems

The MSc Program Committee under the leadership of the MSc Program Director through is responsible for coordinating the activities of the MSc and for reviewing student progress. This program reports to the Department's Graduate Education Committee. The GEC takes an active role in the MSc 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 in their [manual](#).

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 regularly by the MSc Program Committee. The committee assesses student progress in relation to the student's goals and timelines, the timelines established by the program, satisfactory completion of course requirements, and quality of the research presented. Specifically, student progress is deemed satisfactory if the student: 1) passes all courses; 2) meets thesis milestones. Student progress will be deemed unsatisfactory if the student 1) does not pass all courses; and/or 2) fails to meet thesis milestones. Unsatisfactory progress will be reviewed by the MSc Program Committee and recommendation for withdrawal of the student may be made to the GEC after two unsatisfactory reports. In particular, the program will closely monitor student progress in order to ensure a two-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 MSc Program Director. Further advice is available in the School of Graduate Studies [website](#) and in the [Faculty of Health Sciences Graduate Council Procedures](#). Supervisors are also encouraged to approach the MSc 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 problem(s), brainstorm solutions, and set out a plan of action.

Students and supervisors are free to approach the MSc Program Director at any time. In situations of some urgency, special meetings of the MSc Program Committee are convened.

The MSc Program Director may also ask a Supervisor to present a student's situation to the MSc 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.

Academic Dishonesty

All registered graduate students should be aware of the seriousness of academic dishonesty in a graduate setting and the possibility of expulsion from the program for any of the listed offences. Submitting any written work (either in draft or final form) in whole or in part that is authored by someone else, or using direct quotations or large sections of paraphrased material in a project, research report, thesis, or other scholarly publication without appropriate acknowledgment is considered Academic Dishonesty. An expanded discussion, including definitions of Academic Dishonesty and Plagiarism can be found at [Academic Integrity](#)

Students are encouraged to consult their course instructors regarding appropriate use of materials if in doubt about how their use may relate to academic dishonesty. If a course instructor, teaching assistant or supervisor identifies a case of Academic Dishonesty; the steps outlined below will be followed. There will be no exceptions to the policy.

Policy on Plagiarism

The Department of Public Health Sciences Policy on Plagiarism applies to any submitted work in any registered course a student is taking while registered as a graduate student, or a student thesis outline, thesis proposal and/or final thesis or practicum project.

Should a student's submitted work be found to contain any evidence of plagiarism (unreferenced work from other papers, books, articles, websites, including and not limited to figures, text, tables, lists, conclusions, etc.), the following action shall be taken:

- The student will receive a grade of zero for the submitted work in which the infraction is found. The final grade in the course will be computed using the method specified by the instructor in the course outline.
- A note will be placed in the student's file indicating that academic dishonesty has occurred. Should the student be found to have committed academic dishonesty on a second occasion, the department will seek to have the student expelled from the program.
-

Appeal of an Assigned Grade in a Graduate Course

Any student wishing clarification about, or who is dissatisfied with, an assigned grade in a graduate course should first discuss the matter with the course instructor, who will review the work in question. This discussion should take place within 14 days of the grades being available. If the instructor agrees to change a grade, a change of grade form shall be processed in the usual way.

If the instructor confirms the original grade, and if the student is still dissatisfied, then the student should appeal to the Department Head or Graduate Coordinator in the department, stating clearly the grounds on

which the grade should be raised. If the Head or Graduate Coordinator believes the grounds to be reasonable, then the Head or Graduate Coordinator should initiate a review of the grade.

If the Head or Graduate Coordinator does not agree to a review of the grade, then the student has the right to formally request a review of the grade through the Dean of the School of Graduate Studies. The Dean will forward the request to the Head or Graduate Coordinator in the department, who will conduct a review of the grade.

The grade determined by means of the review shall be recorded as the final official grade, irrespective of whether it is identical to, or higher or lower than, the original grade. The Head or Graduate Coordinator will inform all parties, including the Dean of the School of Graduate Studies, of the result of the review.

Further appeal of an assigned grade can be made only on the basis of a specific procedural error or errors made in the departmental grade review procedures. This would be done through convening the Academic Appeal Board of the School of Graduate Studies.

Financial and Funding Information

The Department provides individual funding packages for full-time students (years 1 and 2) in the program, based upon the student's academic standing and on the sources of money available each year. These packages are funded through a combination of external awards, internal university awards, departmental awards, teaching assistantships, graduate research assistant fellowships, and research assistantships.

Students are expected to apply for internal and external awards as part of these packages if they are eligible. Generally, Minimum eligibility for awards is an 80% average over the past two years (or twenty courses) of study. Qualified first-class candidates (over 80% average) are automatically considered for nomination for internal Queen's Fellowships and Graduate Awards once they are accepted into the program. The Department coordinates these applications, as well as those for external awards and assists students in their preparation.

Students may also receive departmental funding from their supervisors in the form of graduate research assistant fellowships. Supervisors may request a reasonable contribution of work from students whom they are supporting. The department may also request a reasonable contribution of work from any student who is receiving more than half of their funding from central departmental awards. Research Assistantships not related to the student's thesis work are also available. These vary according to the availability of positions and are advertised through email to all current students. A limited number of teaching assistantships are available to second year students. Announcements about these positions are sent to all students in the summer of first year and applications are reviewed based on academic standing and relevant experience.

Full-time students are allowed to work an average of ten hours per week on non-thesis related projects, including teaching assistantships.

For detailed and up to date information on available Awards and Scholarships visit the [School of Graduate Studies website](#).

Departmental Student Involvement Opportunities

Students Representation on Departmental Committees

Students play an important role in the administrative life of the Department and are represented on key Departmental Committees. One of the first tasks each year is for students to choose their representatives for:

- **Departmental Committee**
The Departmental Committee provides a broad forum for communication and discussion for all members of the department. One student from each cohort will be elected by their peers to bring forward questions, comments, concerns and suggestions of the class at monthly departmental meetings.
- **Graduate Education Committee (GEC)**
The Graduate Education Committee is an advisory committee of the department and functions to coordinate its teaching programs, namely: PhD Epidemiology, MSc Epidemiology, MSc Biostatistics, Undergraduate Life Sciences. The committee ensures that these programs follow the administrative policies and procedures of both the University and the Department. The Committee also provides communication between each program, the department and the School of Graduate Studies and coordinates those activities that are common to all programs.
- **Sub-Committees, Special Committees and Task-Forces**
From time to time students will be asked to sit on sub-committees, special committees and task forces struck in response to specific policy or procedural issues.
- **Student Business Meetings**
Student representatives will arrange regular meetings of the student body to provide a forum for general communication and discuss matters of departmental business. All full-time and part-time students are encouraged to attend.
-

Home of the Master of Science in Epidemiology Program



Departmental administrative staff are based in Carruthers Hall and will be happy to show students where equipment is located, how it is operated and how to gain access. All students will be provided with access to office services including fax, phone, courier, supplies, printing and photocopy; some of which may be accessed on a cost recovery basis.

More specifically, the following equipment and facilities are available for student use:

- A photocopy machine is also located in the student common room. All students will be provided with a photocopy code which is required in or to use the machine; cost recovery will be on a per-page basis.
- Supplies: Interdepartmental envelopes area available at no charge.
- A small kitchen is available for student and faculty use. It is equipped with a microwave and sink.
- Computers: Students are required to have their own computers. In order to facilitate group work and allow for students to access desk space in the common rooms, laptops are ideal. There is communal computer available for use in the student common room; these computers are equipped with internet access, word processing, SAS and SPSS software. SAS licences are available, free of charge, on the IT Services website. [IT Services - SAS](#)
- Wireless: Carruthers Hall is equipped for wireless communication so that students may check their emails and work on the web from their workstations, classroom, and common room.
- Lockers and desk space are available to all students on the 3rd floor of Carruthers Hall.
- Keys for the Carruthers Hall and student rooms are available from the Graduate Assistant. A \$20 cash deposit is required which will be returned when keys are handed in.

Access to Email and Computer Accounts

All Public Health Sciences students are required to obtain a Queen's student e-mail account. The computer help desk phone number is: 613-533-6666.

Programs and Services Offered at Queen's

Athletics and Recreation Centre

The Athletic and Recreation Centre is a hub of activity on campus. This facility offers a number of opportunities and locations for students to contribute to and enhance/maintain their health. The Athletic and Recreation Centre provides students, faculty, staff and community members with a selection of eating establishments, a student run café, a small market stocked with fresh produce and meat and a prescription dispensing, fully supplied pharmacy. All of these amenities are situated alongside the 24, 500 sq. ft. of cardiovascular and strength-training space, pool, racquet courts, gymnasiums, exercise, dance and spin studios and combative rooms.

Health, Counseling and Disability Services

Health Services

Health Services provides confidential, student-centred health care. The staff is made up of family physicians and registered nurses with a special interest in the health issues of students. Students are free to arrange appointments at the health centre during the workweek, provided they have not opted out of the health coverage provided by the university.

Health Services is located in the LaSalle building at 146 Stuart St. Appointments can be scheduled by calling 613-533-2506 and are able to be booked at the following times:

Monday - 9:00 am to 4:30 pm

Tuesday - 9:00 am to 7:30 pm

Wednesday - 9:00 am to 4:30 pm

Thursday - 9:00 am to 7:30 pm

Friday - 9:00 am to 3:00 pm

Counselling Services

Counselling Services is committed to providing services that respect the dignity and values of all people inclusive of age, gender, ethnicity, physical qualities, sexual identity and ability.

Some reasons why students seek counselling:

- Abuse and assault issues
- Academic engagement or direction
- Substance use
- Anxiety and mood problems
- Coping with grief or loss
- Relationships

- Eating/body image difficulties
- Self-harm
- Homesickness/loneliness
- Self-confidence and self-esteem issues
- Sexuality and sexual orientation
- Stress
- Transition to university
- Social functioning
- Dealing with racism

Students are urged to seek guidance and assistance before the issue escalates and becomes more difficult to handle.

To make a counselling appointment, please call 613-533-6000 ext. 78264 or stop by, in person, to the LaSalle building at 146 Stuart St. Appointment times fall within 9:00 am – 4:30 pm Monday through Friday.

Additionally, The School of Graduate Studies has dedicated on-site counsellors. *(Harriet, I am checking this out with Colette. When I attempted to go to this section on the SGS website, I was denied access.)*

[Information for Graduate Students about Harassment Protocols and Response Protocols](#)

Disability Services

The mission of the Disability Services group is to promote educational equity for students with disabilities, and to assist those students in pursuing a university education.

The Disability Services group assists students by:

- Facilitating access to information, services, space and activities
- Promoting autonomy
- Providing advocacy and support
- Recommending accommodations
- Educating the Queen's community about the ways in which the above objectives may be supported and empowered

Registration and Documentation

In order to become registered with Disability Services, students must provide documentation and information from a registered health care professional on their disability. This documentation should include a diagnostic statement and a description of functional limitations, in particular those that have an impact on performance in a university environment. All documentation must be on the practitioner's official letterhead, indicating name of practitioner, professional credentials, address, phone number, date and signature.

The registration process includes a meeting with an advisor and this appointment can be booked by contacting Disability Services by phone: 613-533-6467, email: hcds.dso@queensu.ca or in person: LaSalle Building, 146 Stuart St, first floor.

Please visit <http://www.queensu.ca/hc/ds/students/registration.html#new> for the complete registration process for new students.

Accommodations Offered by Disability Services

Upon documentation receipt, an advisor will review it and work with you to create an appropriate individualized accommodation plan that may include:

- Special examination arrangements
- Use of computers for exams and an adaptive technology lab and equipment loan
- Special classroom arrangements
- Alternate formats for course material

DEPARTMENT OF PUBLIC HEALTH SCIENCES

MSc Thesis Proposal Scheduling Form

Student Name	
Student Number	
Supervisors	
Thesis Title	
Thesis Proposal Submission Date	
Presentation Week w/o	
Presentation Week w/o	
Presentation Week w/o	
Faculty Reviewer (Suggestion #1)	
Faculty Reviewer (Suggestion #2)	
Faculty Reviewer (Suggestion #3)	

Primary Supervisor Signature: _____

Student Signature: _____

Program Director Signature _____

DEPARTMENT OF PUBLIC HEALTH SCIENCES

MSc Thesis Defence Scheduling Form

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

Primary Supervisor Signature_____

Student Signature_____

Program Director Signature_____

<http://www.queensu.ca/sgs/sgs-habitat-staying-well>