

## Discipline-specific guidance for MSc EPIDEMIOLOGY thesis research

### ETHICS:

Each MSc student is expected to have complied with two types of ethics requirements:

1. Ethics training: completion of the on-line TCPS 2:Tutorial Course on Research Ethics (CORE) provided by the Interagency Advisory Panel on Research Ethics <http://www.pre.ethics.gc.ca/eng/home.html>. This requirement must be fulfilled in order to graduate. It is recommended that the certificate obtained on completion of the tutorial be submitted to the Student Affairs Office at the time of the first progress report.

The department also offers credit courses for a more in-depth study of research ethics and students are encouraged to consider these courses in selecting an elective course. (In 2019, these courses were listed as: PPHS 624 Public Health Ethics and Policy in the Fall semester and EPIB 625 Ethics of Human Research in the Winter semester.)

2. Thesis research: For research involving human subjects, ethics approval is required from one of McGill's Research Ethics Boards (REBs) or from the ethics review board of a McGill-affiliated institution (see <https://mcgill.ca/research/research/compliance/human> for the list of eligible institutions). It is recommended that each student request ethics approval for her/his own thesis research, even if the thesis research will be undertaken within a supervisor's research program which has already been approved. Such a request may be eligible for expedited approval. There is an obligation to renew ethics approval for a research project on an annual basis. All original ethics approval documents should be kept by the supervisor, with a copy of these documents kept by the student. (Note that ethics documents are *not* to be included in the thesis.)

### SUPERVISOR AND THESIS SUPERVISORY COMMITTEE:

Each MSc student must have a *minimum* of 2 McGill faculty on her/his thesis supervisory committee: 1 EBOH (approved) supervisor + 1 other McGill faculty member (preferably from EBOH). Other faculty or experts (as a co-supervisor or as a member of the committee) may be added, as needed, to provide sufficient supervision to the student. Student and supervisor should discuss the composition of the committee as early as possible in the development of the thesis research. If the composition of the thesis supervisory committee changes over time, the Student Affairs Office should be informed so that the student's file can be updated accordingly.

At an early meeting, the student, her/his supervisor, and other thesis supervisory committee members are encouraged to review all sections of the Letter of Understanding (attached as an Addendum to the Supervisor Nomination Form) so that respective rights and responsibilities are understood. The student and all members of the thesis supervisory committee should sign and submit this Letter of Understanding with the Nomination of Supervisor form before Feb 15th of their first year. Thereafter, all members of the thesis supervisory committee will also attest to the student's progress at subsequent progress milestones (in May and November).

## THESES:

In addition to the Thesis Components listed on the university website in 'Preparation of a Thesis' <https://mcgill.ca/gps/thesis/thesis-guidelines/preparation>, note the following for theses in our department:

### 1. Level of scholarship

The thesis must reflect the level of scholarship consistent with the degree program.

**For the MSc Epidemiology degree:** It is expected that the thesis will describe a methodologically rigorous research study which incorporates the epidemiological and biostatistical knowledge base mastered over the course of training in the program. This will generally include one (or more) specific hypotheses or research questions which will be investigated using either primary or secondary data, and a detailed analysis. Results will be interpreted thoroughly and prompt a discussion of the scientific contribution made in the context of past evidence and future implications of the research. While no specific research design is prohibited, students are advised to review their research protocol with their supervisor and thesis supervisory committee early in the program to ensure that the proposed research meets MSc program expectations. Additional advice can be obtained from the MSc Director and Advisor.

For MSc thesis research which includes field work (i.e. the student collects her/his own data for the thesis research), a rule of thumb is that data collection should be completed within six months, in order for there to be sufficient time to carry out the analysis and to write the thesis within the overall two-year timeline. Similarly, for MSc thesis research relying on secondary data, these data should be available or expected to be received within a reasonable timeframe, ideally by the end of the first year of the MSc degree program.

### 2. Contribution of Authors

For a traditional thesis, the student is the sole author and is clearly identified on the title page of the thesis. In the Acknowledgements section of the thesis, the role of any other person who assisted in the thesis research is described.

For manuscript-based theses, the student is the sole author of the thesis and the student's name is clearly indicated on the title page of the thesis. Included within the thesis are one or more manuscripts. It is expected that the student submitting her/his thesis will be the first author on all manuscripts included in the thesis. The contribution of the first author and each co-author should be detailed in the Contribution of Authors section of the thesis.

### 3. Number and content of manuscripts in a manuscript-based thesis

For manuscript-based theses, the minimum number of manuscripts for an MSc thesis is one. The content of this manuscript would normally be expected to be consistent with what is considered a full-length research article in a peer-reviewed journal (i.e. not a commentary, letter to the editor, editorial, brief communication, viewpoint, etc.). Student and supervisor should discuss the number of manuscripts emanating from the thesis research early on in developing the scope of the thesis research.

#### 4. Body of the thesis for manuscript-based theses

For manuscript-based theses, there can be more than one manuscript in a chapter. For example, in the Results chapter, there can be more than one manuscript. Bridging text between manuscripts or chapters is needed to ensure that all results form a cohesive whole. Each manuscript should be formatted for its intended journal, from title page through to references, including tables and figures. Appendices to any manuscript may appear together with the manuscript or in an appendix to the thesis -- this consideration depends on the appendices' value to the research results, their size, and their potential to distract the reader/examiner from the overall flow of the thesis. Keep in mind that references from each manuscript must be collated together for the References or Bibliography chapter which includes all references from all chapters in the thesis. To accommodate references in manuscripts which may be in different formats for different journals, the references in the References or Bibliography chapter are usually in alphabetical order.

### NOMINATION OF EXAMINERS (MyThesis)

MSc Thesis students must notify GPS of their intent to submit their initial thesis at least 8 weeks before their expected date of submission using the myThesis form available here. Before completing this form, please refer to the guidelines below.

#### EXTERNAL EXAMINER

The external examiner must be a scholar of established reputation and competence but not necessarily in the precise field of the thesis research. The choice of an external examiner is normally from within the University and may be within or outside the department. Where it is not possible to nominate external examiners from within McGill, an external examiner from outside the university may be nominated. The Program Committee designate will validate the appropriateness of the proposed choices.

**Check that each nominated examiner has no conflict of interest (e.g. check PubMed to rule out co-authored work with your supervisor or any member of your thesis supervisory team).**

In order to minimize any real or perceived conflicts of interest, the Department will contact the external examiner once approved to secure his/her commitment to evaluate the thesis. The student or supervisor should NOT contact any of the proposed external examiners.

In addition to completing their Intent to Submit Thesis page on myThesis, students in the EBOH department must also e-mail justification\* for each proposed examiner and a copy of the abstract to the Student Affairs Office (SAO) at [gradcoord2.eboh@mcgill.ca](mailto:gradcoord2.eboh@mcgill.ca).

\* Include pertinent and detailed information on each nominated examiner. Saying a person '... is an expert in epidemiology' is insufficient!

## Recommended format and content for abstract

All abstracts should be submitted using a standardized format and include the following elements:

- Title
- Student name
- Structured abstract (Background, Objective, Methods, Results, Discussion, Conclusion)

Also...

- Epidemiologic research design is clearly stated.
- Abstracts should include quantitative results (if applicable and congruent with research design).
- Abstracts should not be written as manuscript abstracts.
- Abstracts with grammar or spelling errors will be sent back to students.
- Abstracts written in the future tense will be sent back to students.

**MSc EPIDEMIOLOGY Thesis degree program SUGGESTED TIMELINE:**

Semester	Courses	Credits	Other activities	Milestones
Fall Year 1				
	EPIB 601	4		
	EPIB 607	4		
	EPIB 613	1		
	PPHS 602	3		<b>12 credits completed</b>
			Dept seminars	
			Thesis workshop	
Winter Year 1				
			February 15	Nomination of Supervisor Form
	EPIB 603	4		
	EPIB 605	1		
	EPIB 621	4		
	elective	3		<b>12 credits completed</b>
			Research ethics approval	
			On-line ethics tutorial	Complete now!
			May 15	Tracking Form
			Dept seminars	
			September 1	Research Protocol
				<b>Completion of 24 course credits</b>
Fall Year 2				
			November 15	Tracking Form
			Dept seminars	
			Thesis workshop	
			3MT	
Winter Year 2				
			May 15	Tracking Form
			Dept seminars	
			Thesis workshop	
			2 months pre-thesis submission	Nomination of Examiners Form
				<b>Completion of thesis</b>
Summer Year 2				<b>THESIS SUBMISSION</b>