COMMUNITY HEALTH AND EPIDEMIOLOGY
MASTER’S THESIS - CH&E 9000
GUIDELINES

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Introduction

The purpose of this document is to provide students and faculty with a set of guidelines for completing the Master’s thesis. These guidelines follow the thesis process from beginning to end. In addition to these guidelines, students and faculty are encouraged to refer to the Faculty of Graduate Studies website for information on Theses and Defences.
http://www.dal.ca/faculty/gradstudies/currentstudents/thesesanddefences.html

Students and faculty are also encouraged to refer to the Faculty of Graduate Studies Regulation IX.
Thesis Supervisor and Supervisory Committees in the Graduate Academic Calendar.
http://academiccalendar.dal.ca/

Definition of the Master’s thesis

The thesis should be a detailed and careful study of an aspect of community health or epidemiology research within the realm of activity being undertaken in the Department. It should include a careful formal review of relevant literature and is usually based upon the analysis of either primary data (collected by the student with the guidance of the supervisor, or by the supervisor) or, more commonly, secondary data (e.g., Maritime SPOR, Health Data Nova Scotia, Atlantic Regional Data Centre, Stats Can, Atlee Perinatal Database). The exact nature of the thesis should follow from the primary research question, which is most often framed as a testable hypothesis, and for which the student has received
guidance and approval by the Supervisory Committee. The thesis should reflect the student’s competence in the development, implementation and reporting of a research project, and it should be of suitable quality and scope for submission to a peer-reviewed scholarly journal.

**Steps in thesis development and approval**

The timelines included herein pertain to target dates for full-time students. Part-time students are to develop an appropriate timeline in consultation with the Graduate Programs Director. Student progress will be reviewed annually by the Graduate Programs Director. Each of the following steps will be elaborated later in this document.

1. Choice of thesis topic and Supervisory Committee
2. Thesis proposal
3. Thesis proposal defence
4. Ethical Review
5. Thesis
6. Thesis defence
7. Submission of the Master’s thesis to the Faculty of Graduate Studies

1. **Choice of thesis topic and Supervisory Committee**

Students should choose a general topic area and Thesis Supervisor during their first year of graduate study. Initial discussion of ideas for the thesis should occur during Departmental seminars and during coursework.

Supervision, guidance and approval of the thesis proposal and the thesis are to be carried out by a thesis Supervisory Committee consisting of a Thesis Supervisor and at least two committee members, or two co-supervisors plus two committee members. The Supervisory Committee is responsible for supervision of the thesis research, and approval of the thesis proposal and thesis, according to Faculty of Graduate Studies and Departmental Guidelines.

The Thesis Supervisor should be selected by the student. Selecting a Thesis Supervisor can be a challenging process and the student must thoroughly evaluate all of their options. The selection of a Thesis Supervisor is largely based on common substantive interests that, in turn, help build the thesis. It is also important to consider the quality of the interpersonal relationship between the student and potential Supervisor. The student should perform due diligence in finding the ‘right’ Supervisor – according to their expectations, experiences of other students with this Supervisor, and so forth. The Supervisor and student may wish to establish a contract that outlines expectations and goals for completing the thesis, as well as determining authorship on potential publications or other uses of the defended thesis/data.

The Thesis Supervisor must have a PhD or an MD + Master’s degree level of academic training, plus a primary/joint appointment (or, in exceptional circumstances, a cross-appointment) in the Department of Community Health and Epidemiology. The Supervisor must also be a member of the Faculty of Graduate Studies (through CH&E), and must have a track record of successful supervision or co-supervision of CH&E students. In the case of cross-appointed faculty, only those faculty members with extensive, successful supervisory/co-supervisory experience will be considered eligible to be “solo” Supervisors. Where this is unclear or disputed, the final decision on eligibility will be made by the Graduate Programs Committee. On the other hand, it is possible for an individual who is not a primary/joint appointee in
the Department of Community Health and Epidemiology, to be a co-supervisor, providing that the other co-supervisor meets all of the eligibility requirements. Please see Faculty of Graduate Studies Regulation IX. Thesis Supervisor and Supervisory Committees in the Graduate Academic Calendar. http://academiccalendar.dal.ca/

Committee members are to be selected by the student in consultation with his/her Thesis Supervisor(s). Committee members must be (or must become) members of the Faculty of Graduate Studies (they can contact the Graduate Programs Assistant for information and help with this application). Ideally, committee members should have an appointment (primary/joint, cross or adjunct) in the Department of Community Health and Epidemiology. Committee members are responsible for timely guidance and advice on the thesis research, as well as evaluation and approval of the thesis proposal and the thesis.

By May 1 of first year (and no less than six weeks before the formal presentation of the thesis proposal) the student must submit the Thesis Topic and Supervisory Committee form, listing the topic of the thesis research, and the proposed members of the Supervisory Committee, to the Graduate Programs Assistant.

The Graduate Programs Director will review the proposed Supervisory Committee to ensure that it meets membership guidelines. The Graduate Programs Director may also ask Departmental faculty to provide comments or suggestions to the student on the composition of the Supervisory Committee (e.g., on the match between the Supervisory Committee composition and the proposed topic). Students are required to update the Thesis Topic and Supervisory Committee form if any changes are made to the committee.

2. Thesis proposal

Structure of the thesis proposal

The MSc thesis proposal is a formal document describing the objectives, relevant background literature, the research plan and proposed data analysis for the Master’s thesis. The purpose of a thesis proposal defence is two-fold: (1) to get approval in principle from the Department and the supervisory committee to undertake the proposed project, and (2) to obtain constructive feedback to improve the research project. The thesis proposal should:

- Clearly define the topic to be studied, and its relevance
- Formally review the current state of science on the topic
- Identify the specific research questions to be addressed
- Present a defensible plan to answer the research questions
- Outline appropriate methods for analysis of data
- Briefly discuss key strengths and limitations of the proposed work/methods

The thesis proposal document should consist of the following:

- **Introduction (1-2 pages):** Clearly define the topic to be studied, relevance of the project
- **Review of Literature (5-10 pages):** Briefly review current state of knowledge
- **Objectives (1 page):** Identify the specific research question(s) to be addressed
- **Methods (5-10 pages):** Clearly present a plan to answer the research question(s), who the subjects will be, how data were/will be collected, the instruments used, and the methods of analysis, key strengths and limitations
- **Appendices:** Append instruments and forms, as appropriate
The preparation and approval of the thesis proposal is an important safeguard to the student. A high quality thesis proposal familiarizes the student with the topic, and provides a comprehensive plan for conducting the thesis research. The thesis proposal also provides an important tool for the Supervisory Committee to evaluate the feasibility of the proposed research. When approved, the thesis proposal serves as an agreement among the student, the Supervisory Committee, and the Department of Community Health and Epidemiology for completion of the project.

In order for this to be a valuable experience, the student should defend the thesis proposal at a stage when the research questions have been fully defined, and the appropriate methodology to answer these questions has been developed, but prior to collecting any data or actually commencing the project. The more developed the methodology, the easier it will be for others to provide the student with concrete suggestions for improvement, and give approval in principle to continue.

Timelines (please see also Checklist for Proposal Defence)

Every full-time student is generally expected to make a formal presentation of his or her thesis proposal to the Department of Community Health and Epidemiology by the end of October in the second year of graduate study, provided that this timeframe is supported by the Supervisory Committee. A date for the thesis proposal defence is selected by the student and the supervisory committee, in consultation with the Graduate Programs Assistant. The student should schedule a meeting with the Supervisory Committee within six weeks of scheduling the thesis proposal defence, to ensure that all committee members have a clear idea of the research plan, and to obtain their consent to proceed to the proposal defence. The issues of feasibility, cost, time, and ethics should be considered with the committee.

Please note that students are to avoid scheduling thesis proposal defences during August to allow prioritization of thesis defences (in advance of the graduation-related deadline) and to help ensure faculty availability at proposal defences.

At least two weeks prior to the anticipated proposal defence, at the time the student books the thesis proposal defence, the student must submit to the Graduate Programs Assistant the Ready to Defend Proposal form. This form will have been signed by the committee members, attesting that they have met within the last six weeks, and that they agree that the proposal is ready to defend. At the same time as this form is submitted, the student also provides the Graduate Programs Assistant with a synopsis of the proposal, the requested date for the presentation and an electronic copy of the thesis proposal. A copy of the thesis proposal should also be provided to all Supervisory Committee members at least two weeks prior to the proposal defence.

3. Thesis proposal defence

All proposal defences will take place in the CH&E Classroom, and the student must defend in person, rather than remotely. If there is a single Supervisor, he/she needs to participate in the defence in person. If there are two co-supervisors, one may participate remotely. Among other committee members, one can participate remotely. Remote participation is typically by telephone.

Thesis proposal defences are usually chaired by the Graduate Programs Director; however, the defence chair can be any CH&E faculty member who is not a member of the defending student’s Supervisory Committee.
The thesis proposal defence presentation should be a minimum of 20 minutes and a maximum of 30 minutes in length, so as to allow ample time for discussion within the 60-90 minute overall timeframe of the proposal defence. A suggested breakdown of the presentation time allotment is as follows:

- Introduction (3 minutes)
- Review of Literature (5 minutes)
- Objectives (3 minutes)
- Methods (9 minutes)

Note that the discussion of methods should take up close to one half of the presentation time. It is here that faculty will be able to provide the student with constructive feedback, as well as judge the student’s readiness to conduct the project.

**Approval of thesis proposal**

Immediately after the thesis proposal defence, the Supervisory Committee, thesis proposal defence chair and interested faculty meet *in camera* to discuss comments and suggestions about the thesis proposal. The Supervisory Committee decides whether they Approve – no revisions; Approve – minor revisions; Approve – major revisions; or do Not Approve. The Supervisory Committee has sole authority to accept or reject the proposal, although concerns expressed by other faculty will be considered and conveyed to the student. Students should be given oral feedback immediately following the presentation. *It is the responsibility of the Thesis Supervisor to communicate via email (or letter) to the student the issues raised by faculty, and the recommendations made by the Supervisory Committee, in a timely fashion (within one week of the proposal defence).* A copy must be sent to the Graduate Programs Assistant.

If the proposal is Approved – minor revisions, the required revisions are to be clearly communicated to the student, and must be completed within a stated time period – usually two to four weeks after receiving the comments from the Supervisor. If the proposal is Approved – major revisions, the required revisions and suggested time frame are to be clearly communicated to the student.

If the Supervisory Committee does not approve the thesis proposal, the student can prepare a new/revised proposal, and make a second formal presentation. Students are limited to two attempts to obtain approval of a thesis proposal.

The approval decision will be recorded on the Proposal Defence Decision form and submitted to the Graduate Programs Assistant after the proposal defence. For students who are required to make major revisions, the supervisor must provide an email or letter to the student (copied to the Graduate Programs Assistant) when the revisions have been successfully completed.

**4. Ethical review**

Thesis research involving human subjects must be reviewed and approved by a Research Ethics Board. At Dalhousie, reviews are coordinated through the Office of Research Services, Henry Hicks Academic and Administration Building. Application guidelines and submission deadlines are available on the Research Ethics Office website: [http://www.dal.ca/dept/research-services.html](http://www.dal.ca/dept/research-services.html). Students should allow six to eight weeks for processing. Please note Ethics Approval renewal/update is required on an annual basis.
If the thesis research is being done at a hospital, or involves hospital patients or employees, reviews must be done through the respective Health Authority; review from the Dalhousie Research Ethics Board is then not required.

- The Nova Scotia Health Authority Research Ethics Office is located on the 1st Floor of the Centre for Clinical Research and forms are available on their website http://www.cdha.nshealth.ca/discovery-innovation/ethics

- IWK Ethics Office is located on the 8th Floor of the IWK http://www.iwk.nshealth.ca/research

In projects where the underlying study has already been approved, it is usually advisable to submit a study amendment or addendum to the relevant Ethics Board, indicating the student’s role in the study.

Upon approval by the Dalhousie or the Health Authority ethics board, a copy of the approval letter must be sent to the Graduate Programs Assistant.


**Tips**

In all cases, the Research Ethics Board’s Guidelines for Submission must be read CAREFULLY before completing the application. Also, reviews go more smoothly if the headings found in the guidelines are used.

Please note that students requiring ethical review cannot proceed with their thesis research until that review has been completed. In such cases, it is essential for the student to submit the thesis proposal for ethical review as soon as possible after the thesis proposal defence.

**5. Thesis**

*Structure of the thesis*

The Master’s thesis may be structured in one of two ways; please see 5.1 (Standard format) and 5.2 (Publication format) below.

Regardless of whether the thesis is in Standard or Publication format, the following order is to be followed:

Preliminary Pages (numbered with lower case Roman numerals):
- Title Page *(required)*
- Dedication Page (optional)
- Table of Contents *(required)*
- List of Tables (if applicable) *(First entry in Table of Contents)*
- List of Figures (if applicable)
Abstract (required)
List of Abbreviations and Symbols Used (if applicable)
Glossary (optional)
Acknowledgements (optional)

Main Pages (numbered with Arabic numerals):
- Body of Text – divided into chapters

Final Pages (continuation of Arabic numerals):
- Endnotes (optional)
- Bibliography (required)
- Appendices (optional) (Final entry in Table of Contents)

(Note that the order of the Bibliography and Appendices may be reversed for consistency with discipline practice.)

The Faculty of Graduate Studies provides samples of the Thesis Title Page on their website.
http://www.dal.ca/faculty/gradstudies/currentstudents/thesesanddefences/format.html

In order to use published materials in the thesis, the student must obtain written permission. A sample letter is available on the Faculty of Graduate Studies website.
http://www.dal.ca/content/dam/dalhousie/pdf/fgs/thesesanddefences/copyright_release_request.pdf

5.1 Traditionally, the Master’s thesis takes the form of a book with a number of chapters. These chapters include, but are not limited to:

- Introduction
- Literature Review and Rationale
- Research Question(s)/Hypotheses/Objectives
- Methodology or Methods
- Results/Analysis
- Discussion/Conclusions

5.2 Alternatively, a thesis may be structured as an article (or two) suitable for peer-reviewed publication. The publishable article(s) would be substituted for the Methodology and Results/Analysis chapters. All other components of the thesis structure remain the same, i.e., with a chapter each for the Introduction, Literature Review and Discussion/Conclusions.

All other details regarding the thesis should be negotiated with the Supervisory Committee (and the Graduate Programs Director, as necessary).

Timelines (please see also Checklist for Thesis Defence)

The thesis should be defended by the end of the second year of study, but only when all members of the Supervisory Committee agree that the student is ready to defend. In order to schedule a thesis defence, the student must have already submitted a relatively complete draft of the thesis document to the Faculty of Graduate Studies for pre-approval of formatting.
http://www.dal.ca/faculty/gradstudies/currentstudents/thesesanddefences/format.html.
A student must schedule the defence with the Graduate Programs Assistant at least six weeks prior to the proposed defence date. The student is responsible for ensuring that the proposed defence date/time is suitable for all Supervisory Committee members.

When scheduling the defence, the student must submit the following to the Graduate Programs Assistant:

- completed Ready to Defend Thesis form
- nearly final draft (following initial FGS format check) of the thesis document (must also be submitted to all committee members)
- one-page synopsis of the thesis
- names of three potential external reviewers (see “External reviewer” section below)

This timeframe allows for a number of events to take place: time to secure an external reviewer, four weeks for the external reviewer to evaluate the thesis, and at least a week for the student to address the external reviewer’s requested changes before the thesis defence. A paper copy of the thesis is placed on display in the Department for two weeks prior to the thesis defence.

There are four different choices of deadlines for students to submit approved theses to the Faculty of Graduate Studies; mid to late August (for October convocation), early December (for May convocation, to avoid paying fees for winter term), early April (for May convocation) and late April (for October convocation, to avoid paying fees for summer term). Students should refer to the Faculty of Graduate Studies website for the exact dates.  
http://www.dal.ca/faculty/gradstudies/currentstudents/thesesanddefences/submission.html
Please note that the (Departmental) deadline for a thesis defence is no less than two weeks prior to the target Faculty of Graduate Studies deadline. This timeframe allows the student to make the changes that were recommended at the thesis defence.

External reviewer

All thesis defences include the involvement of an external reviewer. The external reviewer must be external to CH&E and (whenever possible) to Dalhousie University. He or she must hold a PhD or MD/Master’s, must have had no prior involvement in the thesis, and should not be a close personal friend of the Supervisor, committee members, or the student. The role of the external reviewer is to provide peer review comments on the final thesis document, and to pose questions to be asked at the thesis defence. The external reviewer may attend the thesis defence in person or by phone; however, such direct participation is not required. In most cases, the thesis defence chair will ask the external reviewer’s questions on his/her behalf.

Names of three potential external reviewers are to be suggested by the Supervisory Committee (often with input from the student). Neither the Supervisor/committee members nor the student are permitted to contact or correspond with potential externals (e.g., to check on their willingness to review). Rather, the names of the three potential external reviewers are submitted to the Graduate Programs Assistant at least six weeks prior the thesis defence. The Graduate Programs Assistant selects the external reviewer from these potential candidates. This procedure adds a level of transparency to the external review process. It is up to the Graduate Programs Assistant to contact the external reviewer, to send the thesis document and review guidelines, and to receive comments and questions from the external reviewer regarding the thesis. The comments should be received one week prior to the defence, allowing the student to make appropriate revisions. The identity of the external reviewer is
not revealed to the student or the committee until after the student’s presentation at the thesis defence.

6. Thesis defence

All thesis defences will take place in the CH&E Classroom, and the student must defend in person, rather than remotely. If there is a single Supervisor, he/she needs to participate in the defence in person. If there are two co-supervisors, one may participate remotely. Among other committee members, one can participate remotely. Remote participation is typically by telephone.

Thesis defences are usually chaired by the Graduate Programs Director; however, the defence chair can be any CH&E faculty member who is not a member of the defending student’s Supervisory Committee.

A typical thesis defence lasts about 1.5 to 2 hours, and follows the following format:

- Student presentation (20-30 minutes)
- Questions from the external reviewer
- Questions from the supervisor and committee members
- Questions from CH&E faculty members
- Questions from all others in attendance

Approval of thesis

Immediately following the thesis defence, the Supervisory Committee and Departmental faculty members attending the defence will meet in camera to discuss the outcome. The Supervisory Committee may recommend to Approve as submitted; Approve upon specific corrections being made; Reject but with permission to re-submit a revised thesis for re-examination; or Reject outright. The decision of the Supervisory Committee is to be recorded on the Thesis Defence Decision form, and submitted to the Graduate Programs Assistant. The Supervisory Committee has sole authority to accept or reject the thesis, although they will take into consideration the comments provided by the external reviewer and by faculty members.

If revisions are required, the Supervisory Committee will establish the timeline for revisions (generally up to one month), and how the revisions will be reviewed. It is the responsibility of the Thesis Supervisor to communicate by email (or letter) to the student (copied to the Graduate Programs Assistant) the required revisions, in a timely fashion (within one week following the defence). Minor revisions will usually be reviewed and approved by the Thesis Supervisor; major revisions should be referred back to the entire Supervisory Committee. The Supervisor will withhold signature of the Thesis Approval Form (see Step 7 below) until all required revisions have been accomplished.

Rejection of the thesis should be reserved for exceptional circumstances. Normally, the Supervisory Committee will not recommend that the student defend the thesis until it is ready. If the Supervisory Committee does reject the thesis, that committee must recommend what options, if any, are available to the student if he/she wishes to complete the MSc Program. Rejection with permission to re-submit generally requires re-submission of a thesis within a one-year timeframe. These recommendations must be approved by both the Graduate Programs Director and the Department Head.
7. Submission of the Master’s thesis to the Faculty of Graduate Studies

Following the format check (see Timeline in step 5), the successful thesis defence and completion of any required changes, the formal thesis submission to the Faculty of Graduate Studies involves 1) on-line submission of the final thesis document, and 2) provision of a paper copy of each of the following Faculty of Graduate Studies forms: Thesis Approval Form, Dalhousie Thesis License Agreement, and, if applicable, Student Contribution to Manuscripts.

http://www.dal.ca/faculty/gradstudies/currentstudents/thesesanddefences/submission.html