Master of Science (MSc) Thesis

Guidelines and Requirements

HEC Montréal

Document prepared under the supervision of the MSc Program Director

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Foreword

The main purpose of this document is to provide guidelines for graduate students; however, academic supervisors, thesis directors and thesis jury members will also find it useful. These guidelines outline rather strict rules based on the Academic Rules and Regulations at HEC Montréal. However, in some cases, the guidelines offer flexibility to account for differences in theses (e.g., number of hours required to complete a thesis, or thesis length).

Students admitted to the MSc program must satisfy its requirements within a specific period of time. Although the maximum length of the program is five years, full-time students are expected to complete it within 16 to 20 months. This is a rigorous process, which means that students have to make choices. More specifically, we expect the students to work full-time on their theses once their course work is completed. They must demonstrate perseverance and maturity and be able to communicate their results clearly, accurately, concisely and coherently. The thesis presentation must meet the quality standards set out in the Guidelines for Writing an Academic Work at a Graduate Level. It is important to take the time to read the literature prepared by the MSc Office in order to avoid delays and misusing the allotted time before the submission deadline and evaluation.

These guidelines explain the nature of a thesis, the registration and evaluation conditions, the learning objectives of a thesis, and ethical issues. They also present the requirements pertaining to the production of the scientific outreach video initially submitted with the thesis.

These guidelines do not address agreements or implicit or explicit contracts between students and their research directors. Students should consult the MSc Supervisory Relationship - Implementation Guide for Professors and Students for additional information on these topics.
1 Definition

One of the main objectives of HEC Montréal’s MSc program is to teach students how to properly conduct research in their field of specialization. Several learning objectives of the program are linked to the production of the thesis. These will be measured by the jury upon evaluation of the thesis.

The thesis is also a key tool for the dissemination and democratization of scientific research. From this perspective, the outreach video that accompanies the thesis not only helps MSc candidates develop their publication skills, but also validates their oral communication skills, another objective of the program.

The thesis completion process may ultimately lead to doctoral studies, or more typically, to applied research or consulting work in various organizations. For students who choose the thesis stream, learning the research process is a key component of their program, above and beyond choosing an original topic, designing an innovative model, or processing and producing interesting results.

Thus, the rote application of a “tailor-made” model to data does not constitute a thesis. Rather, a thesis should at a minimum be the result of a keen motivation to choose and defend one model over other models available in the literature on the topic, and, ideally, validation of the robustness of the research results. Similarly, a simple theoretical exploration consisting essentially of a literature review and no empirical application, experiment or observation does not constitute a thesis. This exploration should be supplemented, for example, by a new concept or theoretical contribution, an analysis of primary or secondary data, or, in the absence of such data, computer models showing examples, illustrations or simulations. Different types of projects within certain parameters can serve as appropriate thesis material. One example will be addressed in the following paragraphs. Naturally, there are various types of theses depending on the field of study or discipline. For instance, a typical finance thesis differs from a marketing thesis.

2 Key steps in the scientific process of writing a thesis

By nature, research activities in the humanities and social sciences use a variety of approaches to completing a project. This guide lists the main steps for conducting scientific research using the hypothetico-deductive model. This approach usually begins with a theoretical exploration, followed by application to data, experiments or observations. While these steps are usually carried out in this order, other sequences are possible. The two main components of this process, theoretical exploration and empirical application, consist of the following phases:

2.1 Theoretical exploration

- Presentation of the issue under study and the manner in which it has arisen;
- Review of the ways in which the issue has been studied;
- Identification of the main contributions to the study of the issue (results and comparison of results);
• Identification and comparison of the models and procedures used;

• Proposal of a relevant research method to address the issue, or summary of a method of analysis.

2.2 Application, experiments and observation

• Hypotheses, measurements and observations;

• Collection and classification of data or observations;

• Data analysis: quantitative (statistical processing); qualitative (writing and case study); or applied (digital, simulation);

• Presentation of the method of analysis and results;

• Interpretation of results.

2.3 Conclusion

• Summary of results as related to objectives or study hypotheses;

• Presentation of study limitations;

• Presentation of the study’s main contributions;

• Analysis of strategic implications in the field of study, and possibilities of generalizing results.

Inductive or other types of approaches may also be used in writing a thesis. However, it is important to understand that regardless of the approach used, the aforementioned steps are mandatory to the learning process in which the student is engaged. With this in mind, irrespective of the approach they adopt, MSc students will be exposed to all the above steps as they progress through their program and must be able to demonstrate that they master them by the time they complete it.

The preparation of the outreach video synthesizes this approach in that it highlights the relevance of the research problem, the current knowledge in the field, the rigor of the approach, and the main results obtained, using language that is simple, clear and accessible.

3 General thesis information and guidelines

3.1 Workload

The thesis counts for 24 credits, including preparation of the outreach video. An uncredited research workshop must be followed before successful completion of 21 credits. This workshop consists mainly in registering the thesis topic and submitting a study plan.

Given the weight of a university credit by HEC Montréal, each credit should reflect 45 hours of work. Therefore, under proper conditions, it takes about 1,000 hours to complete a thesis, which
equals six to eight months of **full-time work**. “Under proper conditions” means that students are expected to be able to work on their thesis on a full-time basis and not take an inordinate amount of time to define or redefine their research topic. There should be no major impediment to their working on their thesis, such as problems using certain data analysis techniques or drafting a well-written text (construction, grammar, etc.).

### 3.2 Length

Although it is difficult to determine standards for the length of a 24-credit piece of work, a large percentage of successful theses are about 100 pages long. The body of the report usually consists of 60 to 80 pages. As the ideas contained in the work and the paper should be clear and concisely written, a thesis should rarely exceed 150 pages and most often contain around one hundred pages of text.

### 3.3 Traditional or by article format

The traditional way of presenting a thesis typically includes a brief introduction, literature review, methodology, presentation and analysis of results, discussion and conclusion chapters. However, a thesis can also be presented in the form of an article ready to submit for publication in a scientific journal. In this case, the article must be preceded by an introduction and a conclusion that put it in context. The student must be the lead author of the article, i.e. the sole or first author.

Students wishing to present their thesis in the form of an article must have the approval of their thesis director. Then, they must request the authorization from the MSc Program Office by completing and submitting the [Request for authorization to submit in the form of articles form](#). If a student is not the sole author of the article, he or she must obtain the authorization of all the co-authors by using the [Authorization by co-authors of an article included in a master’s thesis or doctoral dissertation form](#).

### 3.4 Language of the thesis

Regarding the language of the thesis, HEC Montréal follows the standards and rules of the Faculty of Graduate and Postdoctoral Studies at the University of Montréal. Thus, in French-language specializations, theses are usually written in French. However, students may request permission to write their theses in English if their mother tongue is not French or if they have spent most of their previous studies at a non-francophone university. In such cases, the student must request an authorization from the MSc Program Office, using the “Demande d’autorisation de rédiger un mémoire en anglais” form (in French only). The request has to be justified and supported by the student’s thesis director.

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1 This section is based on the *Guide de présentation des mémoires et des thèses* of the Faculty of Graduate and Postdoctoral Studies at the University of Montréal (July 2015). In French only.
Students enrolled in English-language specializations may write their theses in English without authorization, provided that their thesis director agrees.

A thesis by article is considered written in French if all the parts, except the article, are written in French. Thus, students who wish to write their theses by article in which the article itself is written in English, with the introduction and the conclusion written in French, do not need to request authorization.

3.5 The thesis

Students in the MSc Thesis track are automatically enrolled in the “activité mémoire” every term, including the summer term, until the term in which they submit the initial version of the thesis.

3.5.1 Preparation for Thesis Completion seminar and Business Research Ethics seminar

In their first term, students who have chosen the thesis track will be invited to enrol in the Preparation for Thesis Completion seminar. They will learn about the resources available to help them write their theses, as well as all the different steps to be completed along the way. Once they have completed this seminar, students are invited to choose their thesis topic and thesis director and to enroll in their research workshop.

To be authorized to enroll in the research workshop, the student must have completed the Preparation for Thesis Completion seminar, as well as the Research Ethics in Management seminar.

3.5.2 Thesis director

In choosing a thesis director, students also choose a research field, a methodology, and the person who will be providing them with moral support. The choice of a thesis director is therefore critical to the success of the student’s graduate studies.

Only an HEC Montréal professor may be selected as a thesis director. Only assistant, associate and full professors, as well as guest professors from HEC Montréal, are qualified to supervise MSc projects. However, under certain circumstances, a thesis may be supervised by co-directors. In exceptional cases, a co-director from outside the school may be selected. This request must be made during the registration of the thesis, not when the project is in midstream or nearing completion.

For additional information on the roles and responsibilities of professors and students in the supervisory relationship, please consult the MSc Supervisory Relationship - Implementation Guide for Professors and Students.

Students must choose a thesis director before completing 21 credits. A student’s candidacy will be terminated if, after the student has completed 21 credits, no professor has agreed to supervise the student’s thesis.
3.5.3 Enrolling in the research workshop, registering the thesis topic and submitting a study plan

Students should not wait to complete all their courses before beginning their research. Because the thesis is the in-depth application of the knowledge acquired in the MSc program, students should have started their course work before choosing a research subject. Students may not write their theses before beginning their courses.

Once the student and a professor have agreed to work together, it is time to choose a thesis topic. Students must confirm their choice of a thesis director and their topic by completing the thesis topic registration form. Registering the thesis topic is the first deliverable required for the research workshop, and so must be done in the same term as the student enrolls in the research workshop.

Full-time students will typically enrol in the research workshop in their second term. Depending on their progress, they may enrol in the workshop in a later term, but must have done so before completing 21 credits.

Students must register their thesis topic via HEC en ligne. The student must indicate the title of the thesis and provide a brief description of its objectives, hypotheses and methodology. Through HEC en ligne, students can track the status of their thesis at all times. They are advised by email of any decision on their registration of topic.

Students must register their thesis topic before beginning to write it. They may not begin collecting data for their thesis before registering the topic and submitting an application to the Research Ethics Board, if required.

Aside from registering their thesis topic, students must also produce a study plan in cooperation with their thesis director. This lets them plan their thesis process by dividing it up into major steps and suggesting a realistic timetable.

Submitting this study plan is the second and final deliverable for the research workshop. Consequently, students must submit their study plan in the same term as they enrol in the research workshop, as stipulated in ZoneCours.

3.6 Thesis submission and evaluation

3.6.1 Initial thesis submission

The thesis is complete when the director and the student determine that they are ready to submit it. The outreach video must also be submitted with the document. Students are invited to consult the MSc website to find out the procedure for their initial thesis submission.

If the jury requests major corrections (see section 3.6.2), the student will have to, once the corrections are completed, repeat the submission process. The corrected thesis and/or outreach video will be re-submitted to the jury for evaluation.
3.6.2 Evaluation and grading

After a thesis is submitted, a jury is set up to evaluate it. The MSc Program Office is responsible for choosing a Chair/Rapporteur as well as an examiner to join the director (or co-director) in forming a jury. The Chair/Rapporteur and the examiner are usually chosen from the list provided on the Authorization to submit a Master’s thesis form. The thesis director is responsible for suggesting possible jury members and for checking that they are available, before the student submits this form.

One fundamental principle at the core of the thesis evaluation process is that examiners must bring a fresh perspective to the process and be competent to assess the topic in collaboration with the thesis director. As far as the evaluation of a thesis is concerned, the examiner does not have to be from another university, although this may be appropriate in some cases. To be considered “external” to the thesis, the examiner should simply not have been involved in determining the topic or the writing stage of the thesis. It follows then that examiners become involved only at the evaluation phase, at which time the Program Director, after discussion with the academic supervisor, designates them to provide a fresh perspective and an external opinion, according to the aforementioned principle.

The evaluation of the thesis aims to determine if the student possesses research skills and can clearly and concisely present the results of his or her work. The jury usually includes the following criteria in its evaluation:

- Candidate’s aptitude for research as demonstrated by the thesis: outline, methodology, quality of demonstration, validity of written report, references, etc.;
- Contribution to the advancement of knowledge in the field;
- Independence;
- Quality of language used.

The outreach video evaluation aims to assess the student’s ability to communicate orally in a professional and efficient manner. In its evaluation criteria, the jury normally includes:

- Contents of the presentation: elements of scientific discourse, scientific and social relevance;
- Presentation: spoken communication, body language, linguistic elements and visual support;
- Level of interest raised and respect of imposed deadlines and rules

The jury must make one decision among the following:

a) Accept the thesis and assign it a letter grade, and accept the outreach video; the jury may then request minor corrections, to be made by the student within one month. These corrections may not affect the grade, which is assigned to the thesis version initially submitted.

b) Return it to the student and allow him or her to correct it and present it one more time, within six months of the date on which he or she was informed of the jury’s decision (major corrections).
c) Reject it, which excludes the student from the MSc program.

In other words, the jury evaluates and grades the thesis as initially submitted, rather than the hypothetical version after these minor corrections. Only theses submitted with major corrections are re-evaluated.

With respect to the evaluation of the outreach video, no grade is attributed to the video and neither the quality nor the conformity are considered in the thesis grade. However, the video must be judged satisfactory by the jury members. In the event of an adverse judgment, the student must re-submit a video. The student has one month to comply with the committee’s requests. The correction of the video is considered to be a minor change to the thesis.

After all the jury members have received the thesis and the video, a period of one month is usually considered sufficient time for them to reach a decision, report to the MSc Program Office and advise the candidate accordingly.

### 3.6.3 Final submission and thesis publication

After the jury’s evaluation and completion of the required corrections, if applicable, the student must submit a final copy. The step-by-step procedure is presented on the MSc website.

By nature, a master’s thesis contributes to our collective knowledge and as such, is indexed and publicly distributed by HEC Montréal. However, a student may request a confidentiality status or a delay in publication for his or her thesis:

- **Confidentiality:** the confidentiality status guarantees that neither the document itself, nor its description (author, title, summaries, etc.) will be made public, by any means, until the end of the confidentiality period. This status is granted for a maximum of one year, renewable once. At the end of the confidentiality period, the document will be processed according to the provisions of the Authorization to index, reproduce and distribute a dissertation or a thesis form, unless the student requests the renewal of the status at least 30 days in advance. The student must have serious grounds to request the confidentiality status, such as a commercial confidentiality agreement or a patent application. To request the confidentiality status, the student must fill out the Confidentiality status for a thesis or dissertation form and obtain his or her thesis director’s consent as well as the consent of the MSc Program Office.

- **Delay in publication:** A delay in publication guarantees that the document itself will not be made public before the end of the embargo period, but its description (author, title, summaries, etc.) will be. The delay in publication is non-revocable and may last 6 months, 1, 2 or 5 years. At the end of this period, the document will be processed according to the provisions of the Authorization to index, reproduce and distribute a dissertation or a thesis form. The student must have serious grounds to request a delay in publication, such as a publisher’s requirement. To request a delay in publication, the student must fill out the Delay in publication for a thesis or dissertation form and obtain his or her thesis director’s consent as well as the consent of the MSc Program Office.
3.6.4 Learning assessment and continuous improvement of program

The MSc program offers a coherent learning process geared to the fulfillment of well-defined goals and objectives. The program’s specific learning objectives are intended to enable students to:

- Acquire in-depth knowledge of a specialization within the administrative sciences;
- Master the scientific approach necessary to conduct research in the administrative sciences;
- Demonstrate critical analysis skills;
- Work independently to complete a major work;
- Effectively communicate; and
- Demonstrate ethical and professional behaviour.

A project of the magnitude of a thesis can provide a relatively well-informed evaluation of what the student has learned. Once the thesis evaluation has been completed and the thesis has been graded, the jury is required to assess various aspects of the student’s learning by filling out an evaluation grid based on the MSc program learning goals and objectives. The learning assessment process is not intended to demonstrate a student’s good performance, but to ascertain whether the program has met its predetermined learning objectives, and, if not, to find ways to better meet these targets. This process promotes the program’s continuous improvement, and is therefore an essential component for maintaining the quality of the MSc program.

4 Ethical considerations in research

HEC Montréal has an Ethics in Research Policy that is implemented through its Research Ethics Board (REB) to fulfill the requirements of the school’s three main granting agencies, the Social Sciences and Humanities Research Council of Canada (SSHRC), the Canadian Institutes of Health Research (CIHR) and the Natural Sciences and Engineering Research Council of Canada (NSERC).

The REB is responsible for evaluating all research projects involving human subjects that are conducted by students in the MSc program. The REB must ensure that the individuals participating in such research projects are doing so on a volunteer basis, have given their consent to be involved, and, above all, have received all the information they need to make an informed decision.

To find out whether the approval of the REB is needed before beginning a research project, students are asked to answer the following three questions when registering their thesis topics:

2 This section is based on the Research Ethics Board website.
• Q1: Does your research involve collecting information from one or more individuals by means of one or more tools such as a self-administered questionnaire, interview, discussion group, etc.?

• Q2: Does your research involve consulting documents that are not in the public domain or containing personal data?

• Q3: Does your research involve consulting “non-anonymous” databanks containing data that are not in the public domain and personal data?

If the answer to any of these questions is yes, the student must obtain the REB’s consent before starting to collect data. Further information on the REB’s approval process can be found on the REB’s website.

If none of these conditions apply, the student must fill out the Research not requiring approval from the Research Ethics Board form and submit it with his or her thesis.

5 Plagiarism

All students should be familiar with the Academic Rules and Regulations, the Regulation regarding the intellectual integrity of students and the sanctions at page 4 of the Regulation. In some cases, students may also be subject to the Policy for the Responsible Conduct of Research.
The first version of this document was prepared by Professor Robert Lévesque in 1991. Thereafter, the document was successively amended by:

- Professor Claude Laurin (2012),
- Professor Anne Bourhis (2014), and
- MSc Program Director (2016, 2017 and 2018).