MSc Supervised Projects

Guidelines and Requirements

HEC Montréal

Document prepared under the supervision of the MSc Program Director

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Introduction: MSc Supervised project stream

The MSc program's supervised project stream at HEC Montréal offers various options for students registered in a specialization to showcase what they learned in their classes. The main feature of the supervised project option is the "application" aspect that is inherent to projects. In fact, students who are preparing to choose the project they plan to complete must first understand that, within said project, they must demonstrate that they can apply a wide variety of knowledge acquired through their program. As a result, before presenting their project to a potential supervising professor, students must be ready to demonstrate how their project is an application of their graduate-level learning. For this reason, students cannot begin their supervised project before completing a minimum of 12 credits in the MSc program (see section 2.2).

1 Five ways to highlight your knowledge

The strength of the supervised project stream is the variety of methods at a student's disposal to complete a project that meets the requirements of the program. The five options can be grouped into two categories: supervised project within organizations and supervised projects at the university.

1.1 Supervised project within an organization: intervention mandate

The intervention implies assuming a mandate with actual and specific responsibilities. This mandate should be realistic and well defined and it should have clear deadlines and deliverables to ensure students don’t dissipate their efforts. It may be required that students observe, interview, perform a literature review or use other means to collect pertinent data for their project. The project may include performing a diagnostic, participating in planning and implementing management practises that are applicable to the context of the intervention, and formulating recommendations on a specific issue or developing control measures. Students may also document an industry's existing management practises or those that are recommended in the professional literature in order to compare them with those used by an organization. Such a diagnostic may lead to formulating recommendations.

In order to meet graduate program requirements, an intervention within an organization must include an analysis, an intervention, and, if possible, recommendations for the company's management team. Interventions must take place in large-scale Canadian or foreign companies that can provide students with adequate supervision. The intervention may require the use of support tools (observations, interviews, questionnaires, literature review, etc.).

A supervised project in the form of an intervention within an organization provides students with a rich learning opportunity in an organization, as these interventions do not consist of familiarizing oneself with working life without a specific mandate or through work that is either repetitive or that requires minimal qualification.

Students who wish to work on an intervention mandate within an organization must find the company themselves and validate the mandate with their supervising professor. Additionally,

during their intervention, students must follow up with their professor in order to validate the progress of their work.

The organization must appoint a supervisor whose professional qualifications are relevant to the supervised project and who is not related to the student. His or her role is to supervise the activities planned in the organization.

HEC Montréal's Career Management Services offers support to students wishing to intervene within organizations. Such students are invited to get a copy of the guide prepared by Career Management Services for more information. It is strongly recommended that students consult this guide that contains, in particular, invaluable information on intervening abroad.

1.2 Supervised projects within the university

Four types of supervised projects at the university are possible.

1.2.1 Large-scale case study[1]

A case study gives students the opportunity to further their knowledge of a particular management issue that is of interest to them. The case study must be comprehensive, which means it must cover several aspects of the main topic under study and use several sources of information. For example, students could be called upon to interview the main players involved in the situation, who will provide inspiration for the case study; to perform a press review; to obtain organizational or economic information; to analyze data or public documents; etc.

Depending on the nature of the case itself, case studies are generally divided into two sections: the **case**, intended for students, and **accompanying notes** that can be used by someone who wishes to use the case for teaching purposes (for example, presenting the case in class). The case itself is a detailed description of a situation in order to present a management issue to the reader. It can be an issue that has already been successfully resolved or a situation where the strategies applied failed. In some cases, it can be interesting to document a management situation that is currently being structured. The description must strike a proper balance between the data obtained and the material to be provided for readers to engage in an enriching discussion.

Accompanying notes are not a solutions key, but rather serve as support documentation for someone wishing to analyze the case or use it to stimulate discussion. An analysis of the issue and intervention strategies, relating to the different pertinent theoretical models, must be proposed. Accompanying notes can present several scenarios or solutions and must indicate the lessons to take away from this case.

Students are responsible for finding the issue on which to base the case study, identifying the main problem, and validating their work plan with their supervising professor.

[1] This section is inspired in part from Michel G. BÉBARD, Paul DELL'ANIELLO and Danielle DESBIENS, *La méthode des cas : Guide orienté vers le développement des compétences,* Boucherville (Québec) : Gaëtan Morin Éditeur, 2005, 98 pages.

1.2.2 Specific research mandate

This type of project involves taking ownership of a research mandate that includes real and specific responsibilities and a well-defined deliverable. The terms of the mandate must be set in advance with the professor-researcher responsible for the research project and the mandate itself must be clearly defined and have clear deadlines. It must allow students to increase and integrate the knowledge they gained through their program or introduce them to a more specialized aspect of their field of study. It may require students to do a literature review, program, or collect and analyze data.

For example, a research mandate could involve:

- reviewing, analyzing, and summarizing literature pertinent to a particular field;
- participating in the creation or processing of a database;
- estimating or adjusting a model according to empirical data;
- developing tools to collect or analyze data (questionnaires, interview guidelines, etc.);
- adapting a study to other data or environments.

Before starting a specific research mandate, students must find a professor in charge of a research project that may interest them. After acquainting themselves with the research project, students must prepare and validate a work plan with the professor in charge.

1.2.3 Expert opinion

Expert opinions provide students with the opportunity to improve their knowledge of a professional or managerial issue of particular interest. Expert opinions can focus on the analysis of proposed regulations (for example, analysis of an exposure draft in accounting) or on a specific management issue. For the latter, expert opinions are similar to completing a consultation mandate.

The main characteristic of an expert opinion resides in the fact that students' reports focus on a specific issue that is closely related to the practise of a profession. Once the issue has been determined, students will have to express their opinion on possible solutions based on a review of pertinent literature. Students can also interview experts in their chosen field and observe current practises.

Before beginning an expert opinion project, students must find a professor to supervise their work. After identifying the professional issue on which they will base their project, students must prepare and validate a work plan with their supervising professor.

1.2.4 Entrepreneurial project

Student entrepreneurs may also use their business creation venture as a supervised project, provided that the entrepreneurial project is conducted by an experienced mentor who will stimulate his thinking and will validate the relevance of its actions. Typically, this mentor will be

appointed by a support structure such as Accélérateur Banque Nationale – HEC Montréal[2] (Web site in French only). To that end, students must apply to the Accélérateur, go through the selection process and be selected. Students must also find a professor, ideally from their specialization, who will accept to be their director. In order to meet the requirements for the supervised project, students must participate in all the Accélérateur's activities and submit a report as agreed upon with their professor, in the timeframe prescribed by the program.

Given the Accélérateur's schedule of activities, students choosing the entrepreneurial project must register for the supervised project in the Fall semester.

1.3 Important

Although there is a relatively vast array of admissible supervised projects, not all types of projects apply to all specializations. Students can consult the table in Appendix 1 for a list of appropriate projects for each MSc program specialization.

Students are also invited to regularly consult the professor in charge of their project or the academic supervisor of the specialization in which they are enrolled to obtain additional information on the terms relating to the completion of a supervised project in their field of study.

2 Supervised project requirements

2.1 Project length

The supervised project earns students 9 credits of graduate studies. To meet the requirements of the MSc program, students should expect to work a total of 405 hours to complete all steps pertaining to their project.

2.2 Prior education

Since the supervised project consists of applying knowledge acquired during the MSc program, students must have completed a certain number of courses in the program before starting their project. In general, students must have completed a minimum of 12 course credits in their program to be able to register for a project. Before doing so, students are asked to consult the academic supervisor for their specialization to validate their academic path. Alternatively, some specializations offer courses to prepare students to work on their project.

2.3 Registering for the supervised project

[2] Other incubators and support structures are possible, but it is important that the student may resort to the accompaniment of an experienced mentor who adopt a structured approach to support the approach of the student.

Before registering for the supervised project, students must first find a professor who will agree to be their director and supervise their project. Once the professor has agreed to supervise the project, students must fill out the Approval of a credited supervised project form. The form must be signed by the student, the supervising professor, the supervisor in the field (when applicable), the MSc specialization academic advisor, and, finally, the MSc program director.

Once the form has been signed, the Administrative Office will register the student.

IMPORTANT: Supervised projects cannot begin until the Administrative Office has registered the student. This registration attests to the fact that the project is truly "supervised", i.e. that HEC Montréal commits to supervising the student during the course of the project. For example, internships cannot be recognized as an intervention mandate *a posteriori*. In addition, a student who has not registered his subject would not be covered by assurances from the School, in the pursuit of its activities related to his supervised project.

2.4 Language of the supervised project report

Regarding the language for the supervised project, HEC Montréal follows the standards and rules of the Faculty of Graduate and Postdoctoral Studies of Université de Montréal. Thus, supervised project reports are usually written in French. However, students may request permission to write their report in English if their mother tongue is not French or if they have spent most of their previous studies at a non-francophone university. For a supervised project in an organization, the report may be written in English if it is part of the deliverables to be presented to the company for which English is the working language. Students enrolled in an English-language program do not have to ask for such an authorization.

2.5 General evaluation criteria

The supervised project stream necessarily leads to the preparation of a report to be evaluated by a jury composed of two professors. Generally, the report must clearly demonstrate that students can apply the knowledge acquired in the Master's program. This may be evaluated by different means, but the most frequently used criteria pertain to the clarity and rigour of argumentation, the quality of the presentation, and the conciseness of the report.

The focus of the evaluation is mainly on the quality of the work produced rather than on the length of the report, which can vary according to the type of project chosen and whether or not the report includes a formal presentation to a jury.

The jury must make one decision among the following:

a) Accept the report and assign it a letter grade.

b) Return it to the student and allow him to correct it and present it one more time, within one (1) month of the date on which he was informed of the jury's decision (major corrections).

c) Reject it.

2.6 Learning assessment

The MSc program offers a coherent learning process geared toward the fulfilment 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;
- Communicate effectively; and
- Adopt socially responsible behaviour.

A project of the magnitude of a supervised project can provide a relatively well-informed evaluation of what the student has learned. Once the supervised project evaluation has been completed and the work 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.

3 Administrative aspects

3.1 Roles of students and supervising professors

Only assistant, associate and full professors, as well as guest professors from HEC Montréal are qualified to supervise MSc projects. However, a professor from another university may act as a co-director provided that the other co-director is a professor from HEC.

The following describes the **students**' responsibilities for all types of supervised projects. In general, students must:

- find a professor to supervise their project;
- follow up with their professor in order to validate the progress of their work.

Some student responsibilities are specific to the chosen type of supervised project:

- For interventions within organizations, students must find an organization and get approval for the mandate from their professor. Students must also find a contact person to supervise their work within the organization.
- For large-scale case studies, students must identify the situation that will be the focus of the analysis.
- For research mandates and expert opinions, students are responsible for defining their topic and having it validated by their professor.

The following statements describe the responsibilities of professors supervising any type of supervised project. In general, professors must:

- define the student's project precisely;
- follow-up with the student during the project;
- specify expectations;
- set deadlines;
- ensure steps relating to confidentiality and ethical conduct for research involving human subjects, when necessary;
- define the evaluation criteria that will be used.

Some of the professors' responsibilities are specific to the type of supervised project:

- For interventions within organizations, professors are responsible for designing and clarifying the mandate with the student and the contact person within the company. Professors must also ensure the chosen company is sufficiently large to allow for a Master's level mandate.
- For large-scale case studies, professors are responsible for helping students define and clarify the context of the case study.
- For research mandates and expert opinions, professors must formulate and clarify the mandate or subject that will be the focus of the student's work.

Students should consult the guidelines MSc Supervisory relationship - Implementation guide for professors and students for additional information on the supervisory relationship.

3.2 Student remuneration

For supervised projects within an organization, students may receive a remuneration (salary or bursary) for the work they do during their project. The student and the company come to an agreement on this payment.

The work done for a supervised project within the university may also be remunerated. When arrangements are made for a student to receive a remuneration, it is strongly recommended that the terms of the compensation be stated in a formal agreement between parties before starting the supervised project.

3.3 Notifying the Research Ethics Board of a supervised project

When completing the Approval of a credited supervised project form, students must respond to questions that determine the type of approvals to receive from HEC Montréal's Research Ethics Board (REB).

Depending of their answers, students must either:

- fill out the Research project approval online form provided by REB and wait to receive the ethical approval certificate before starting the research; or
- fill out the Research not requiring approval from the Research Ethics Board form.

It is imperative that these steps be taken before starting the supervised project. The REB will not issue a notice of compliance *a posteriori*, i.e. once data collection has begun.

3.4 Deadlines

Once registered for the supervised project, students have a maximum of two terms to submit their report for evaluation. Students must consult the Web site for additional information on the submission process, including the required documents.

If the report is not submitted before the end of the second term of the supervised project's registration, students can request an extension from their project supervisor and the Program Administrative Office (Help Center). This extension gives students one additional term. If the extension is granted, the Administrative Office will register the student who will be responsible for paying ensuing fees. Students who do not submit their supervised project within the stipulated deadline will receive a "failed" grade for the project.

Appendix 1: Admissible types of supervised projects by specialization

	Intervention within an organization	Case study	Research mandate	Expert opinion	Entrepreneurial project
Business Analytics	X	X	X		X
Global Supply Chain Management	X	X	X		X
International Business	X	X	X	X	X

Appendix 2: Examples of supervised projects in the form of interventions within organizations[3]

International Business

- Microfinance: an evolving industry—controversy, impact, and legitimacy
- XYZ Group: a strategic diversification dilemma
- Export-Québec's strategy to integrate SMEs into interprovincial commerce
- The ecological building industry: from Quebec to the United States
- Analysis of the business climate in Russia
- XYZ's internationalization process
- Foie gras in North America: a challenge for XYZ
- Germany's fashion industry: XYZ's marketing plan

Business Analytics

- Optimizing breaks and work stations in optimization models for schedule planning in XYZ's call centres
- Design and optimization of XYZ's logistic network
- Advanced staff planning

Accounting-Control-Audit

- Audit report: informational contribution of identifying the lead auditor
- Should SMEs adopt IFRS?
- Developing an activity-based costing system at XYZ hospital
- Organizational factors and accounting decisions relating to fixed assets for first-time implementation of IFRS in Canada
- Fraud in the construction industry: a proposed control measure for auditors
- Auditor-auditee relationship: an emotional issue
- XYZ's barriers and facilitators to energy efficiency projects: A case study
- Mapping the risks of a professional sports club: The case of XYZ club

Management Control

- Benchmarking the average cost per student in Quebec universities
- Strategic alignment of organizational control measures: A literature review
- Cost management in the bistro restaurant industry
- Impact of environmental factors on management control components within Quebec SMEs
- Management of residual materials at Jean-Talon Market
- XYZ's budgetary process: diagnostic and benchmarking
- XYZ association's dashboard: Measuring success of its strategy
- Qualitative analysis of XYZ ministry's budgetary process

[3] For confidentiality reasons, the names of organizations have been changed for all intervention mandates.

Organizational Development

- Elaboration of an employee handbook and a guide to welcome and integrate new employees
- Elaborating a performance management program for a consultancy firm
- Reviewing existing recognition practises at XYZ hospital
- Revising XYZ's leadership skill set framework
- Elaborating XYZ's process to identify professional and technical talent
- Candidate experience at XYZ
- Assessment of a team building activity at XYZ
- Developing a coaching program at XYZ Bank

Applied Economics

- Creating regional portraits of entrepreneurship in Quebec
- Green economy: a developing industry

Applied Financial Economics

- Investing in information technology and human capital: Impact on productivity
- Impacts of a monetary policy crash on disaggregated dynamics
- XYZ Bank's role in the Belgian mergers and acquisitions market
- Operational risks of pension funds
- The anomaly of accounting adjustments in Canada

Finance

- Review and analysis of corporate evaluation practises for insider takeover offers in Canada
- Feasibility study of an investment fund company in Senegal
- Empirical test of the Leland model on Canadian companies
- Stress testing credit risks for client portfolios of XYZ, a Moroccan company
- STV Bank VS SHV Bank: A comparative study in North America
- Integrating a factors model at XYZ
- Case study: Analyzing stock market impacts of a debt announcement for companies listed on the Toronto Stock Exchange
- Analyzing the performance of hedging strategies according to currency trends

Management in the Context of Social Innovations (previously: Organizational studies)

- XYZ: Social and solidarity economy
- Urban sustainable tourism in Buenos Aires

Operations Management

- Automating the distribution of stretcher-bearers at XYZ hospital by implementing an information system
- XYZ's corporate diagnostic and design of a new layout
- Proposal and implementation of a project planning and management tool in a civil engineering firm
- Improving productivity of the "non-conveyable" zone of XYZ's distribution centre
- Improving and standardizing XYZ's contract management processes

- Schedule and queue management at XYZ's call centre
- Management of public transport between the airport and downtown: A case study in the context of Montreal
- Diagnostic of stock management of medical supplies in XYZ hospital's care units

Human Resources Management

- Implementing an investigation and analysis procedure of workplace accidents in a SME
- Completing a pay equity exercise in a high tech company
- Restructuring of the written media industry: What are the impacts on working conditions and on the dynamics of labour relations?
- Critical analysis of the implementation of a performance assessment system at XYZ
- Implementing a virtual and intentional community of practise among union consultants: the case of XYZ union
- Intervention project within an organization: Analyzing XYZ's workforce planning process
- Diagnostic and mobilization action plan at XYZ
- Survey of collective bargaining practises in Quebec's private sector

Financial Engineering

- Analysis and study of the Canadian volatility index: VIXC
- A predictive model of buying intentions of virtual goods
- Analysis of provincial bond issuers' credit profile
- A Canadian financial institution's management of credit and counterpart risks after the 2007-2010 financial crisis
- Feasibility study of an investment fund company in Senegal
- Calculation of the credit valuation adjustment of an interest rate swap between Canadian companies
- Contingent convertible debt: pertinence of a research project
- Integrating XYZ within ABC Capital

Business Intelligence

- Incremental modelling for the acquisition of wireless services
- Segmenting members of a loyalty program based on their "electronic communications clic" profile
- Predictive models applied to a cultural industry: cinema
- Analysis of XYZ's business practises
- Improving evaluation methods of personal credit limits
- Strategy, implementation and maintenance of mobile analytics
- Analytic support for the valuation of a loyalty program
- A study of secondary market pricing schema of concert tickets
- Modelling the prescription of two specialized medicine drugs in Canada

Global Supply Chain Management

- Reducing inventory costs and improving inventory systems at XYZ
- Improving the contract management activities dashboard: A project feasibility study at XYZ
- XYZ's collection process improvement project

- Supply chain performance improvement project at XYZ
- Internal transport network optimization mandate at XYZ
- Localization strategy for a European warehouse
- Process analysis to improve inter-hospital transport activities
- Cost optimization for XYZ's "Transport logistics, storage, and customs" department

Management

- A junior manager's coaching experience in the field of social economy
- Strategic environmental assessment of shale gas: social impacts and social responsibility
- MBA programs: an evolving sector? Focus on France and the United States
- Quality of life in XYZ's work place: a reflexive portrait in the Fall of 2012
- Exploring managers' survivor syndrome in the context of downsizing
- Intervention in the implementation of the United Nations' mandate in Liberia
- France Telecom: Management as a possible culprit
- Measuring the benefits of Canadian space exploration: an innovation viewpoint

Marketing

- Determining variables that influence a Google AdWords paid referencing campaign
- Implementing a private label: a mandate for XYZ
- Analysis and recommendations relating to XYZ's moment of truth
- XYZ Canada: social media strategy
- A study of the insurance market in cultural and leisure organizations
- Brand communication at the centre of society's issues
- A study of customer satisfaction in a seniors' residence
- Anti-counterfeiting strategies in the Swiss watch-making industry: reviewing the literature and building a model applicable to China

Strategy

- Strategic direction and performance measure in a non-profit organization
- Positioning a new entrant in Quebec's capital risk sector
- Assessment of a new business line within the XYZ's ABC division
- Strategic community involvement: Connecting business goals and social issues
- From decision dependency to control: Governance transformation that lead to success for XYZ
- SME consultancy: The case of a regional office
- Competitive intelligence and strategic analysis of the French fixed and mobile communications market
- Review of XYZ foundation's "enterprise" program

Information Technology

- Selection and implementation of a new project management process at XYZ
- Adjustment of key performance indicators for outsourced IT services
- Risk assessment for information technology companies in the context of compliance
- Reviewing digital project management methodology
- Development and proof of concept of a business process management methodology in a changing context

- Proof of concept of a prototyping approach: Case study of a rail transport company
- Proof of concept for XYZ
- Conceptual framework of the development of interactive solutions characterized by the use of social media or social CRM

The first version of this document was prepared by Professor Claude Laurin in 2010. Thereafter, the document was successively amended by:

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