



Institute of Medical Science  
UNIVERSITY OF TORONTO

# MSc Thesis and Examination Guidelines

**Please note:** All fully and accurately completed defense documentation must be submitted to the IMS a minimum of **six (6)** working weeks prior to the examination date.

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## Eligibility to Defend

Students are advised to read the [Master of Science Program Requirements](#) section of our website to ensure they are eligible to proceed to defense.

In addition to the requirements listed there, you must also:

- Be knowledgeable in your specific field.
- Produce a thesis that is roughly the equivalent of one full research manuscript in a peer-reviewed scientific journal and that meets IMS thesis standards as set-out in these guidelines. Publication is encouraged.
- Check that you have been credited for MSC1010H (or MSC1010Y) on your academic history on ACORN. Course completion is indicated by a CR on the academic history/transcript. If you have not been credited for this course, please get in touch with the IMS Curriculum Officer ([cc.medscience@utoronto.ca](mailto:cc.medscience@utoronto.ca)).
- Check on [ACORN](#) to make sure you have been correctly enrolled and credited for all your courses.
- Hold a Final PAC Meeting
- Ensure that you are registered.

STUDENTS MUST MEET ALL THE ABOVE REQUIREMENTS PRIOR TO DEFENDING.

## Timeline Recommendations

A [timeline for MSc degree completion](#) is available on the IMS website.

Writing and defending your MSc thesis takes an average of 5.5 months (3 months for writing, 1 month for thesis proofing and review, and a minimum of 6 weeks for processing your defense package). To ensure timely completion, we recommend that you:

- Review the MSc defense guidelines thoroughly by the second PAC meeting or by the end of your first year in the program.
- Discuss the process with your supervisor and PAC members by the second PAC meeting.
- Send a draft of your thesis to your supervisor and PAC members to review and set deadlines for return of comments. Allow one month for review of the final thesis draft.
- Schedule all PAC meetings well in advance.
- Use the [MSc Thesis Defense and Program Completion Checklist](#) provided in these guidelines.
- Contact the Graduate Program Assistant, MSc ([msc.medscience@utoronto.ca](mailto:msc.medscience@utoronto.ca)) if there are any questions or concerns about the defense or thesis.

## Fees and Bursaries in the Final Year

The Office of Student Accounts levies your student fees. For comprehensive information on fees in your final year, visit [Final Year Fees](#) on the SGS website and for inquiries please visit the [Student Accounts](#) website.

MSc fees are levied on a semester basis. You are considered a registered student until you submit your final thesis post defense to the School of Graduate Studies (SGS) online thesis repository. Once you have submitted your thesis online with the approval of your supervisor or thesis modifications sub-committee chair, your fees for any upcoming sessions will be canceled.

Allow yourself enough time post defense to complete minor corrections or minor modifications as recommended by your exam committee. **Failure to complete corrections or modifications by the degree recommendation deadline will result in having to pay an additional semester's fees.**

If you have exceeded the funded cohort for your program (2 years for the MSc degree), you may apply for the [SGS Master's Completion Bursary](#). This bursary is available to students beyond the funded cohort who still have a small amount of work outstanding, due to unanticipated factors that are beyond their control. Details and eligibility requirements are available on the [SGS website](#).

## **Confidentiality and Intellectual Property**

Industrial support of research may limit the communication of research findings. This may affect your MSc thesis and defense. Refer to the [Guidelines for Faculty of Medicine Graduate Students and Supervisors in the Context of Commercialization of Inventions based on Thesis-Related Research](#) if necessary.

## **The Thesis**

The supervisor and Program Advisory Committee (PAC) are responsible for guiding the student about thesis content and research completion. The supervisor and PAC should be prompt in reviewing, correcting, and editing thesis drafts. Make sure that your supervisor and PAC review each part of your thesis as you write. This process will help you to make corrections and changes early and help you to maintain continuity throughout the writing process. Peer-reviewed publication is recommended.

The research content of an MSc thesis is roughly equivalent to one full research manuscript in a peer-reviewed scientific journal. This varies by discipline. Some research consists of one large study (i.e. a clinical trial) that may result in one major publication; other research programs may generate the equivalent of several publications. You are expected to be knowledgeable in your specific field and also to have a general knowledge base. Thesis work will reflect an original contribution to new knowledge, and you should have demonstrated an appropriate level of scholarship in your chosen field.

### **Before writing your thesis**

- Review SGS guidelines for the preparation and formatting of the thesis on the [Producing Your Thesis](#) section of the SGS website
- Pay particular attention to the copyright instructions and formatting requirements for electronic submission
- Familiarize yourself with the requirements for electronic submission outlined on the [SGS website](#)
- Consult previously completed theses in the IMS office or U of T library. You can view theses online at [Theses Canada](#) or [T-Space](#) - the online thesis repository.

### **Contributions of Others to your Project**

Discuss this with your supervisor. Acknowledge others properly in the thesis, but also be ready to defend work by others used in your thesis. Clearly state your own contribution in the thesis, either in a "Contributions" section at the front of the thesis, or at the start of each chapter.

## **Research Included in MSc thesis**

Your MSc thesis should only be composed of work completed while enrolled in the MSc program. It must not include work completed in previous degrees or employment.

## **Multiple Publications Generated During Your Research**

If they are related to your main hypothesis, you may present publications as separate chapters in the thesis. If they are not directly related to your main research, you may add publications as an appendix in the thesis. However, be ready to answer questions raised from such work.

Two commonly used formats are:

- If the methods are similar, put them together, then present results as separate chapters.
- If different methods are used, include only general information in the Methods chapter and present detailed methods in separate chapters.

## **Which comes first: Publication of the research, or defense of the thesis?**

Talk to your supervisor about this and come to an agreement early on in your program. Your supervisor has a vested interest in prompt publication. You have an interest in a timely degree completion. Meet with a Graduate Coordinator if there is disagreement over this.

## **Thesis Preparation Guidelines**

### **Electronic Thesis Preparation and Submission**

Electronic theses and dissertation (ETD) instructions and templates are available through the SGS website [here](#).

Theses will normally be released to T-Space 5-6 weeks after a student's convocation; release may be delayed for up to two years by submitting a 'Restrict Thesis Release Date' form to the IMS office (form is available at: <http://www.sgs.utoronto.ca/Documents/restrict-thesis-release.pdf>). The form must be accompanied by the rationale for why the student is requesting that the thesis release be restricted.

Please note that these requests do not get approved for future publication reasons alone, as this is the case for the majority of IMS students. Generally requests are granted approval for patent/intellectual property related reasons. Submit this form and rationale in writing to the IMS Thesis and Examination Officer (if applicable).

Full instructions on online submission are available on the SGS website [here](#).

For questions related to the electronic submission of your thesis, please contact SGS at [\*\*sgs.masters@utoronto.ca\*\*](mailto:sgs.masters@utoronto.ca)

### **Format**

Your thesis may be prepared in a continuous "traditional format", with an in depth Literature Review, Aims/Hypotheses, detailed Methods section, data presented in a central Results section and a Discussion that describes the plausible range of interpretations for your work, followed by the Conclusions and Future Directions.

Alternatively, you may choose a “paper format”. In this case, your thesis work is organized as a series of self-contained chapters (each containing a focused Introduction, Methods, Results, Discussion/Conclusion), similarly reformatted for consistency and framed by an in-depth Literature Review, Aims/Hypotheses, and General Discussion, Conclusions, and Future Directions chapters.

The decision as to which format to use is best made early in the writing process, in consultation with your supervisor. In general, the choice depends upon the stage you are at in the preparation of publications and whether your thesis is most readily viewed as one continuous work or a set of discrete, but related studies that together tell your story.

### ***Abstract***

The central hypothesis, rationale and research aims should be clearly and explicitly laid out, along with interpretation of the results for each component of your experimental work. State what you have found rather than “results will be discussed.” Keep technical jargon and discussion of background to a minimum. Endeavour to explain the findings and their significance at a level that is understandable to someone working outside your field of interest. **The limit for a master’s thesis abstract is 150 words.**

### ***Acknowledgments***

In this section you should acknowledge and thank your lab, family, friends or any other people who may have helped you along the way.

### ***Contributions***

Explicitly state the contributions of technicians, trainees, collaborators, faculty mentors and funding sources to the experimental work, analyses and writing of the thesis. Be precise, inclusive and accurate. A listing of the specific contributions of others is presented as a separate section immediately following Acknowledgments. Images, data and text taken, or adapted from material on the web, papers, or books, require attribution and cannot be used without permission from the copyright owner.. More information on copyright issues and a template for preparing copyright letters of permission are available on the [SGS website](#).

### ***List of Abbreviations***

All but universally accepted abbreviations, such as units of measure, should be listed and should be explained in the thesis text on the page where they are first used. For guidance on what abbreviations need not be listed, consult the [Council of Science Editors Manual for Authors, Editors, and Publishers](#) (available on-line through the UofT Libraries) for the instructions to authors provided by respected journals in your discipline.

### ***List of Figures and List of Tables***

Figure titles should be short and self-explanatory.

### ***Literature Review***

The Literature Review is a scholarly review of the background to your research question. It frames your work with reference to the history of your research question, relevant theories and the clinical picture, if appropriate. Concepts and terminology that are used in your research should be explained and you should provide a review of technologies, approaches and analytical methods that you use. Where there are gaps in the literature that your thesis addresses, point these out and mention how your thesis work will resolve

them. The relevant literature should all be covered in this first section so that the Discussion need not introduce new literature (unless it is extremely recent).

### ***Research Aims and Hypotheses***

Strive for clarity. Research aims frame the general over-riding purpose of the project. Hypotheses are testable postulates about the nature of relationships in your field of study. State hypotheses explicitly and summarize the arguments behind them. For most theses, specific research questions are a series of experimental steps you take to test the hypotheses. Make sure that research aims, hypotheses and specific research questions are clearly aligned. In qualitative research theses, aims, hypotheses and key issues of research design typically emerge only through engagement in the field of study. Differences between hypothesis-driven investigation and qualitative research can give rise to confusion, and particularly so when mixed method approaches are used. If in doubt, students should consult with the PAC for guidance on appropriate framing of the thesis research aims and structure, early in the writing process.

### ***Methods***

These should be described in sufficient detail as to allow someone else to reproduce your work. If a novel technique is described, this section should be quite extensive. If the thesis is prepared in a paper format, a consolidated General Methods section can be used to provide the necessary detail.

### ***Results***

If you are preparing a paper format thesis, simply follow instructions to authors and norms common to respected journals in your field for each chapter of your experimental work. If you are using the traditional format, you may find it useful to provide more interpretation of the results than you would in a shorter manuscript. This will help lead the reader through this extended section. Subheadings that indicate the “bottom line” for each set of related experiments are useful in the paper format and essential in a traditional Results section.

Figures should be embedded in the Results section and should not be placed at the end of the chapter. All figures require a legend and remember to include error bars. By skimming the figures and legends, a reviewer should get a clear sense of the results in your thesis.

### ***General Discussion***

A general Discussion is required in both traditional and paper format theses. In the paper format, discussion sections within individual chapters deal with results germane to experiments described in each chapter. In contrast, the Discussion addresses the thesis as a whole. A bit of repetition is inevitable. However, the depth of analysis in this section goes beyond your specific experiments and findings. This section should address the broader issues raised by your work. In the Discussion you need to discuss how the discrete parts of your work fit together. Explicitly discuss the hypotheses, how your work has supported them and in what ways it has not. Were your aims realistic? If not, why not? What were the limitations of your approach? What has your work revealed that is novel? How is it novel? Does it conform or not to the literature in your field (the literature you have covered in your literature review)? In a traditional thesis, the single Discussion section covers both the interpretation of particular experimental results and these larger, contextual issues.

## ***Conclusions***

This section should clearly state the “bottom line” of your findings, including a reappraisal of your hypotheses in light of your findings - i.e., whether your work supported or refuted your original hypotheses. This section can also speculate on the implications of your findings.

## ***Future Directions***

This is the fun part of your thesis! Where would you take this research program were you to continue in the field over the next 6 months, 2 years, or 10 years? What are the most important questions that emerge from your work and review of the field? How would you address them?

## ***References***

All references cited in the thesis and all published sources identified in the Contributions section must be listed. In general, cite primary sources whenever possible. If using a secondary source, make this clear (e.g. “reviewed in....”). It is recommended that you use the (Author, Year) style of referencing in your thesis so that examiners can easily follow your sources. This can then easily be changed to numbered referencing when you upload your final thesis (post defense) to SGS. Double-check to ensure that references in the list are cited in the text and, conversely, that all citations in the text are listed in the References section. Missing citations or references are a red flag to reviewers.

See [MSc Thesis & Exam FAQs](#) for additional information.

## **Final Program Advisory Committee (PAC) Approval**

A final PAC meeting must be held with a **full practice examination** to prepare the student for defense. The final PAC meeting must include a 20-minute slide presentation by the student, and a question and answer period where PAC members pose questions that would be typical of those asked during a final defense. Prior to the final PAC meeting a final draft of the thesis must have already been circulated for review. At the final PAC meeting the supervisor and PAC members must approve the written thesis for submission to the IMS.

At the end of the meeting, the PAC members vote on the student’s readiness for defense and complete all pages of the PAC report form, **including the final page** indicating:

- The committee has reviewed the thesis. The student’s final thesis draft has been read and proofed by all committee members. It is acceptable, in terms of content, quality of writing, and presentation. The thesis is ready for presentation at an MSc Examination.
- The committee has tested the student’s presentation and oral defense. The student’s presentation of the thesis was well-organized, comprehensive and focused. The student’s ability to field questions related to the background and significance of research, general knowledge, and specific issues related to the thesis has been appropriately tested.
- The committee has tested the student’s general and specific knowledge related to research. The student has completed appropriate graduate courses for degree completion. The minimum degree requirements have been met. The student’s basic scientific knowledge has been appropriately tested and is acceptable for thesis defense.



**Please ensure that all the boxes have been checked and that all PAC members are in agreement with the evaluation, as attested to by the chair of the PAC meeting.** If the PAC is unable to attest to the above three questions, then it will not be considered the final meeting and an additional PAC meeting must be held until the student is able to meet these requirements.

At the final PAC meeting, the PAC members can help recommend eligible examiners for the MSc Oral Examination.

## Defense Scheduling

*Your MSc defense package must be submitted for IMS approval a minimum of six working weeks prior to the proposed examination date - **remember to build in this time when settling on the exam date with your committee.***

Additionally, please note the following scheduling limitations:

- The defense may start no earlier than 9am and no later than 3pm, Monday through Friday.
- The defense may only take place on days that the University is open. Please visit the [SGS sessional dates calendar](#) for holidays and University closures.
- The University is closed for approximately 2 weeks during the winter holidays. These 2 weeks **do not** count toward the minimum 6 working weeks' notice needed to schedule the defense.
- Defenses are not permitted one full week prior to the official University closure date for the winter holidays nor in the first 3 business days after the University officially opens in January. Dates vary from year to year.
- Exams held remotely due to COVID-19 protocol are booked through the IMS Zoom account (where available) or other arrangements are coordinated through the Supervisor.
- In-person exams are booked by IMS in the Medical Sciences Building (subject to room availability); alternative examination room details must be included with the examination package.
- In order to be eligible for the next round of convocation, students must defend a minimum of one week prior to the final date for receipt of degree recommendations for their desired convocation cycle as listed in the [SGS sessional dates calendar](#). Please note that SGS sessional dates vary from year to year.

Allow yourself sufficient time after your defense to complete all proscribed changes to your thesis in time for degree recommendation deadlines. It is advisable to hold your defense at least one month prior to the degree recommendation date for your desired convocation cycle (November or June, or March *in absentia* if requested).

We know it can be challenging to get your examiners around a table for your defense. The following tips can help you schedule your defense date with greater ease:

- Not all PAC members need to be present at the MSc defense. Check [voting quorum](#) instructions outlined later in this document.
- All members of the Examination Committee can participate and vote via virtually (e.g. by Zoom, MS Teams or teleconference) if necessary, provided they are on the line for the entire duration of the defense.

- [Doodle](#) (a free online scheduling tool) may prove useful to facilitate scheduling. However, offering too many options can be counter-productive. It may be helpful to **schedule times with your supervisor and one PAC member first**, before scheduling via doodle with your other examiners and PAC member(s).
- Approach potential examiners well in advance, before their schedules book up. Your supervisor is responsible for contacting examiners and confirming their willingness and availability to participate.
- Include all Administrative Assistants (for all exam committee members) in your correspondences.

## Members of the MSc Examination Committee

Student and supervisor should discuss and agree on who should be on the examination committee. The supervisor (**not the student**) is responsible for contacting the Examiners and confirming their willingness and availability to participate, and for:

- (i) the Examiner/Chair to attend the exam to question the student and chair the examination, and
- (ii) the Examiner/Appraiser to provide a written appraisal before the examination and attend the exam to question the student

These Examiners both need to be confirmed **before** submission of the MSc Examination Package.

The MSc Oral Examination committee should consist of 4 voting members including the Examiner/Chair who acts as an examiner and as the exam chair.

**Minimum quorum is four (4) voting members – at least two (2) of these MUST be external to the PAC. If quorum is not met the exam cannot proceed and will be cancelled or rescheduled.**

The committee is composed of:

1. Supervisor(s) (mandatory)
2. Program Advisory Committee Member (mandatory)
3. Additional Program Advisory Committee Member (optional but common)
4. Examiner and Chair who will attend the exam to question the student and will also chair the examination (mandatory) – *see below for restrictions and roles*
5. Examiner and Appraiser who will write an appraisal of the MSc thesis and attend the exam to question the student (mandatory) – *see below for restrictions and roles*

**Note:** All University of Toronto examiners attending the MSc Examination **must hold current a graduate faculty appointment** with the School of Graduate Studies (SGS). Please ask your potential examiners to confirm their current SGS status before submitting your [MSc Examination Package](#). Internal examiners cannot attend the examination without a current SGS appointment and having one or more faculty with an expired appointment could jeopardize your exam.

Please contact the IMS Office in advance if you wish to have a non-voting member attend (for example a third PAC member). This requires the approval of the student, supervisor, and IMS Graduate Coordinator.

You can determine the graduate faculty status of a proposed University of Toronto examiner by checking with:

- (a) the examiner
- (b) the [SGS Faculty Listing](#)
- (c) the [IMS Faculty Directory](#)

**If in doubt, consult the IMS Office.**

## Restrictions for Choosing Examiners

### *Examiner/Chair*

The Examiner/Chair must be:

1. A **current IMS member** with some expertise in the field.

The Examiner/Chair must have an active graduate appointment at IMS. If an Examiner without an IMS appointment is chosen, the supervisor must identify an IMS faculty member to serve separately as the Chair. This additional faculty member will only assume the role of Chair and does not have to read the thesis nor participate in the questioning.

2. ‘**Arms-length**’ to both the supervisor and the student and have no other perceived or actual conflict of interest

### Arms-length criteria:

- they **must not** be from the supervisor’s **primary academic department**. In the case of larger departments such as the Department of Medicine, Surgery or Psychiatry, they cannot be from the same division as the supervisor.
- they cannot have had any collaborations with the supervisor in the last 6 years on research papers or reviews
- they should have no other perceived or actual conflict of interest.

Conflict of interest is as defined by CIHR (<http://www.cihr-irsc.gc.ca/e/46378.html>).

- If the supervisor and an examiner appear together on a grant, that is a collaboration.
- If the supervisor and an examiner appear together on a paper with one of them as first or senior author, that will be deemed a collaboration.
- If, however, the supervisor and an examiner appear together as middle authors on a multi-author paper then the extent of the apparent collaboration needs to be explained.

### *Examiner/Appraiser*

The Examiner/Appraiser must be either:

- (a) A UofT [School of Graduate Studies Faculty Member](#) with expertise in the field, meeting the same ‘arms-length’ criteria as the Examiner/Chair, or
- (b) A graduate faculty member from another university with expertise in the field, meeting the same ‘arms-length’ criteria as the Examiner/Chair.

If an external Examiner/Appraiser is chosen, the student must include the examiner’s CV in the MSc Examination Package.

## Important Notes

Joint publications can easily be searched in [PubMed](#) and should be checked carefully by the student and supervisor before submission of the examination package to IMS.

Any collaborations, conflicts of interest (including shared academic departments) and/or issues with faculty appointments, can cause significant delays to the examination approval process, and may result in the need to replace the examiner and/or submit a new examination date.

## Examiner Roles

### *The Examiner and Chair*

The Examiner/Chair will **attend the exam to question the student** and will also **chair the examination**. ***This responsibility must be communicated to the proposed examiner at the time of their recruitment by the supervisor and agreed upon by the examiner in advance.***

- Runs the examination proceedings - “keeping the peace”.
- Represents the IMS and SGS administration and conducts the examination according to the [Rules of Procedure](#)
- Ensures that all members needed to achieve voting quorum are present.
- Instructs those present as to their duties, instructs the supervisor to carefully document items for revision and modification.
- Discusses and finalizes the results and reports the outcome to the IMS.
- Questions the candidate during the MSc Examination

### *The Examiner and Appraiser*

The Examiner/Appraiser will **attend the exam to question the student** and will also **submit a written appraisal**. ***This responsibility must be communicated to the proposed examiner at the time of their recruitment by the supervisor and agreed upon by the examiner in advance.***

- Submits a written appraisal of the thesis to the IMS at least one week prior to the examination and attends the defense. This written appraisal is not distributed to student or committee before the examination.
- Questions the candidate during the MSc Examination

## MSc Examination Package

The IMS Office requires **all** of the following documentation be uploaded as part of the MSc Examination Package a minimum of six (6) working weeks prior to your chosen MSc Oral Examination date.

Exceptions to this timeline are not possible due to the large number of examinations that need to be processed in the IMS office. Processing occurs in the order that the examination packages are received. The timeline also allows sufficient time for the examiners to read the thesis and for the Examiner/Appraiser to prepare a report.

Simply put - finish the thesis early if you have a specific deadline date to defend (e.g., due to acceptance to medical school). Remember also to allow sufficient extra time **after** the examination for any required corrections to the thesis and for submission of the final corrected version of the thesis to SGS.

## Required Documentation to be Submitted to the IMS

**An electronic examination package must be submitted for approval through the [online examination portal](#).**

**The package comprises of:**

1. Completion of an online MSc Thesis Defense Nomination Form + submission of the following supporting documentation:
2. Copy of the thesis
3. Updated Student CV
4. Examiner/Appraiser CV **only** if the examiner is external to the University of Toronto
5. Final *PAC Meeting Report*\*
6. Completed *Thesis Submission Checklist*\* signed by the student and supervisor indicating that all formatting, permissions and sections required by the SGS have been followed. Any discrepancy with these requirements may affect the thesis examination. The correct and truthful filling of this form is the responsibility of the student and supervisor.

\* Download the most current version of these forms from the website

The online nomination form captures information about the student, exam logistics, and the proposed examination committee. **The information entered into this form creates the official examination record, therefore it must be completed entirely and accurately.** By submitting the form, the student agrees to have received approval/consent from your supervisor(s) to do so.

## Helpful Tips and Reminders

- You will need your UTORID and PASSWORD to access the online examination portal
- Ensure all examiner contact information is correct (especially important when IMS needs to contact examiners for follow-up and/or in case of exam emergency)
- Include all administrative contact information (for additional peace of mind)
- The submitted examination date/time is final, subject to IMS approval, and has been agreed upon by all parties in advance
- The responsibilities of potential examiners must be communicated to them at the time of their recruitment by the supervisor, and agreed upon by the examiner in advance

## Sequence of Events

After submitting the electronic MSc Examination Package the following steps will take place:

- The Thesis and Examination Officer will vet your examiners to confirm their eligibility to serve on your exam committee.
- The Thesis and Examination Officer will send out an official notification of exam e-mail, informing all examiners of the date, time, location and committee composition of the examination. This

notification will include the details of the Zoom meeting if the exam is being held virtually and you have requested that IMS set up the Zoom meeting.

- If the exam takes place in person, the Thesis and Examination Officer will organize a room in the Medical Sciences Building and AV equipment if you have requested it (you are required to supply your own laptop and suitable ‘dongle’ connector if needed). If the exam is held off site, you must make all room and A/V arrangements and inform the IMS office of this when submitting your exam documentation.
- The Thesis and Examination Officer will instruct you to distribute a copy of the thesis to all Examination Committee members approximately 4 weeks before the MSc defense. **Do not distribute your thesis to your exam committee until receiving email confirmation from the IMS.** You should only communicate with the examiners for the purpose of sending them your thesis.
- The ‘Examiner/Chair should be familiar with the policies and procedures for chairing the exam, either in person or remotely. These policies and procedures and will be sent to the Examiner/Chair for review prior to the examination and are also available under the *Exam Rules of Procedure* on the website: <https://ims.utoronto.ca/msc-final-oral-examination>.
- The Thesis and Examination Officer will formally provide instructions for the written appraisal to the Examiner/Appraiser and will collect the appraisal. At the MSc level, appraisals are not distributed to the student or exam committee in advance of the defense.
- The Thesis and Examination Officer will send out an exam reminder email to the exam committee and student two business days prior to the defense.
- The Thesis and Examination Officer will provide all exam documentation/forms to the Examiner/Chair. Alternatively (if the exam is to be held in person), the student can pick up and distribute the exam documentation/forms in a signed sealed envelope and take to the examination.
- Post defense: The Thesis and Examination Officer will provide you with a next steps email to guide you in your degree completion.

## **MSc Examination Procedures**

[Refer to the website for the most current versions of the IMS Rules of Procedures \(In-Person and Remote Exams\)](#)

### **Before the presentation**

- IMS sends the MSc Examination exam file to the Examiner/Chair and starts the Zoom meeting if required.
- The Examiner/Chair introduces the members and the candidate and ensures that all examiners are present. If members are missing, the Examiner/Chair advises the IMS Office and discusses action to be taken. The examination will be cancelled if quorum is not met.
- The Examiner/Chair instructs the supervisor of their responsibility to carefully document items for revision and modification (if necessary) during the examination.
- The Examiner/Chair asks the student to leave the room or the Supervisor places the student in the “Waiting Room” if the examination is virtual.
- The Examiner/Chair advises the examiners whether the student has completed degree course requirements and inquires whether there are any major concerns about the upcoming examination.
- The Examiner/Appraiser summarizes their appraisal with the focus on the most pressing points. Discussion may follow the summary of the appraisal.

- The supervisor is provided with a copy of the appraisal.

### **Presentation by candidate**

The student is invited back into the room/virtual meeting to give a 20-minute (uninterrupted) presentation with slides. This is a strict time limit.

### **Question period**

- Following the presentation, the examiners question the student. There is an initial round of questions, with 10 minutes allotted to each examiner.
- The Examiner/Chair allows only one examiner at a time to ask questions at a time (discussion by examiners among themselves will only detract from the 10-minute time period) The Examiner/Chair should intervene if another examiner, or the supervisor, starts to join in the discussion.
- Order of questions is usually from the most distant: i.e., Examiner/Appraiser, Examiner/Chair, PAC Members, and Supervisor (if necessary).
- A second round of questioning along the same format is permitted and is typical. Some examiners may choose not to ask additional questions, or not to take up the full 10 minutes on the second round.
- The Examiner/Chair should keep informal notes about the content of questions that may lead to thesis revisions for reference during the analysis of the defense.
- Following questioning, the student is again asked to leave the room/placed in the “Waiting Room”.

### **Committee discusses the examination and votes**

The Examiner/Chair asks the following specific questions of the examiners. All examiners must address the questions:

#### ***Is the written thesis acceptable?***

- Acceptable in its Present Form (with no minor corrections or modifications).
- Acceptable with Editorial Corrections (typos, change in format, additional information, no new data or new interpretation of data required). The student has **one (1) month** to complete the corrections. Please note that the student's supervisor must certify in writing to the IMS Office that these corrections have been made within one month of the exam.
- Acceptable with Minor Revisions (rewrite part of the proposal, addition of new experimental data and/or completely new interpretation of data). The student has **three (3) months** to complete the modifications and these must be reviewed by a sub-committee appointed by the Examiner/Chair after the exam.
- Not Acceptable.

#### ***Was the Oral Defense?***

- Excellent
- Very good
- Good
- Acceptable
- Not acceptable; must undergo re-examination

In the case that a consensus about the recommendations is not reached, the Examiner/Chair must ask for a vote on each question. More than one negative vote (or abstention) causes the examination to be adjourned.



The exam committee also determines if the student should be recommended for an award and if s/he is suitable for entry into the IMS PhD program.

If minor modifications are required, the Examiner/Chair appoints a Minor Modifications Subcommittee. The student is invited into the room/meeting and the Examiner/Chair advises the student about the outcome of the examination. A clear statement about who will review the revised thesis is given to the student and supervisor and the defense is adjourned.

The Examiner/Chair has the obligation to protect the student. If you feel harassed you may bring this to the attention of the Examiner/Chair and/or the other examiners.

### **After the examination**

The Examiner/Chair returns the file to the IMS.

If minor or organizational corrections are recommended:

- Student consults with Supervisor and PAC members about changes, revises thesis and submits it to the committee.
- Supervisor writes to the IMS Graduate Program Assistant, MSc. at [msc.medscience@utoronto.ca](mailto:msc.medscience@utoronto.ca) to confirm completion of revisions within 1 month of the examination

If minor modifications are recommended:

- Examiner/Chair will appoint a subcommittee
- Includes the Examiner/Appraiser and 2 other members
- Subcommittee Chair cannot be the Supervisor
- Student consults with subcommittee members about changes, revises thesis and submits it to the subcommittee
- Subcommittee Chair writes to the IMS Graduate Program Assistant, MSc. at [msc.medscience@utoronto.ca](mailto:msc.medscience@utoronto.ca) to confirm completion of revisions within 3 months of the examination

### **A repeat MSc Examination is absolutely required if:**

- The student does not pass the oral exam. This may occur when a vote is required (i.e., examiners disagree about the recommendations) and there is a negative outcome.
- The written thesis is deemed not acceptable.
- Revisions or corrections are not submitted within the required timeline (above).

### **Students are allowed only one repeat MSc Examination, to be scheduled within 1 year of the initial exam.**

The IMS Office will complete all paperwork required for reporting the outcome of the examination to the School of Graduate Studies.



## Submission of the Final Thesis

Your thesis is permanent evidence of your degree training. It is the culmination of your degree. Your degree is not an occupation, but a lifetime honor. Make sure that this enduring document is of the highest standards.

Please follow the instructions for electronic thesis submission on the SGS website [here](#).

Your thesis does not become public on T-Space until after your convocation cycle. If you wish to restrict the release date of your thesis, please submit the [Restrict Thesis Release Date](#) form to the IMS Thesis and Examination Officer. The IMS requires at least 1 week to obtain the necessary signatures. The form must be accompanied by the rationale for why the student is requesting that the thesis release be restricted. **Please note that these requests do not get approved for future publication reasons alone**, as this is the case for the majority of IMS students. Generally requests are granted approval for patent/intellectual property related reasons.

Electronic upload of the thesis is a mandatory requirement to graduate. Students who do not follow the necessary procedures for electronic submission may be removed from the convocation list. For questions related to electronic submission or if you experience difficulty uploading your thesis, please contact SGS at [sgs.masters@utoronto.ca](mailto:sgs.masters@utoronto.ca).

## Graduation

Once the IMS Thesis and Examination Officer receives confirmation of corrections from your supervisor or sub-committee chair, we will complete and forward an MSc Degree Recommendation to SGS. SGS will calculate any balance of degree fees and inform you directly. You are responsible for ensuring that electronic thesis submission requirements have been met in order to graduate. You can find information on graduation procedures on the [Graduation and Convocation section](#) of the SGS website.

Once this is complete, your fees for the next academic session will be cancelled on [ACORN](#) and you will be placed on the next available convocation cycle - November or June (or March in absentia if requested). Please be patient during peak examination times such as September, October, December and January. It may take some time before SGS cancels your fees on ACORN.

SGS will notify you by e-mail to your UofT e-mail address about convocation dates, gown rental, tickets etc. approximately 4 weeks prior to the convocation date. If you are forwarding your UofT e-mails to another e-mail address, please make sure to check your junk mail for convocation notifications.

## Confirmation of Degree Letters

SGS prepares letters for master's students requesting confirmation that all degree requirements have been met. To request such a letter, complete the [confirmation of degree form](#) and send the form by email to [graduate.information@utoronto.ca](mailto:graduate.information@utoronto.ca). There is no charge for letters. Please allow five days (or more during peak periods).

For more information about convocation dates and tickets, please contact the [Office of Convocation](#) directly.

## **IMS Staff Contact**

For clarification on these guidelines or for any other thesis and exam related questions, please get in touch with:

Graduate Program Assistant, MSc.

Institute of Medical Science | University of Toronto

1 King's College Circle, Room 2364 | Toronto, ON | M5S 1A8

phone: 416.978.6696 | e-mail: [msc.medscience@utoronto.ca](mailto:msc.medscience@utoronto.ca)

## Thesis FAQs

### *1. How long should my thesis be?*

The recommended MSc thesis length is 85-100 pages (excluding references). Ultimately, quality is the most important issue for the thesis as it is the basis for the examination. If the scholarship, research, presentation and interpretations are of high quality, and the PAC approves the thesis for examination on the basis that they think it meets the standards for an MSc degree then that is the basis for you to defend.

The thesis includes:

- Literature Review (typically up to 25-30 pages)
- Hypotheses and Research Aims (2-5 pages)
- Experimental work equivalent in depth to what would typically be contained in 1-2 peer-reviewed papers
- General Discussion and Future Directions (typically ~10 pages)

Consult with your supervisor and PAC to ensure that you have adequately covered the background to your question, your results and their significance to the field.

### *2. What font size and spacing should I use?*

According to SGS guidelines font size must be a minimum of 10 points and is typically 12 points. You may use a smaller font size for graphs, formulas, footnotes, and appendices; avoid italics. You should typically use one-and-a-half line spacing, except for the thesis abstract, which should be double-spaced. Single spacing may be used for long quoted passages and footnotes.

### *3. English is not my native language. Does my thesis have to be written in perfect English?*

The grammar and spelling in your thesis must be of high standard, just as they would need to be in articles submitted for publication. Please ask your supervisor and your PAC members to advise you on language adequacy. Do not fall into the trap of taking verbatim passages from published papers or textbooks because you think they are written in “better English” than you can produce.

The [Graduate Centre for Academic Communication](#) provides a number of resources for students to improve their academic writing and speaking skills.

### *4. When does borrowing from the work of others become plagiarism?*

Under [The Code of Behaviour on Academic Matters](#), to plagiarize is to “... knowingly represent as one’s own any idea or expression of an idea or work of another” in an academic work. It is critical that the ideas and arguments of others be correctly attributed and simply paraphrasing these as your own does not suffice. A more extensive discussion of the subject is provided in the guide “[How Not to Plagiarize](#)” an excellent online resource prepared by Dr. Margaret Procter, U of T Coordinator, Writing Support.

### *5. Can I actually plagiarize my own work!?*

It may seem surprising, but reproducing your own published work without proper acknowledgment can be considered “self-plagiarism”. If you include such materials in your thesis, cite the published work and submit a letter of permission from the copyright holder, or a statement from the publisher (often available on journal websites) authorizing use of the material, when you deposit your thesis.

If chapters in your thesis are **reproduced exactly** as your published work, the title page of that chapter should include language similar to the following:

“This chapter was published as Smith, J. (2015). Publication title. Journal, pages and is reproduced with copyright permission”

If chapters in your thesis are **based on** your published work, the title page of that chapter should include language similar to the following:

“This chapter is modified from the following: Smith, J. (2015). Publication title. Journal, pages.”

### ***6. Where can I find guidance on what to include in my thesis, organization, and formatting?***

Take a minute to peruse the MSc theses of previous IMS students on [T-Space](#). If available, look at the theses of students from your laboratory. The Table of Contents will give you an idea of thesis structure. Skimming through several theses will give you a sense of what content and arguments should be covered in each section of your own thesis.

### ***7. Who is responsible for distributing the thesis to the exam committee?***

Once the IMS has approved the **Required Documentation** (see section above), we will send out a notification of exam e-mail, instructing the student to distribute the thesis to all exam committee members. Students are expected to distribute the thesis as soon as they receive notice. Please deliver your thesis to your examiners by PDF copy, and also by hard copy if requested. If the examiners would like a hard copy of the thesis, the supervisor is expected to cover any courier costs for the student.

## **General MSc Thesis & Exam FAQs**

### ***1. Can I invite members outside of my approved committee to my examination?***

No. The IMS examinations are only available to those members who have been listed on your nomination form and pre-approved by the IMS office.

### ***2. I'm having difficulty finding a date that all my examiners are available, what should I do?***

This is a common problem. Luckily there are logistical solutions that can make scheduling much simpler. Keep in mind that not all PAC members have to be present at the exam. If you are really struggling with having them all present at the exam, just ensure that your committee meets minimum voting quorum. If you do not meet the minimum quorum requirements your exam will be cancelled.

Currently, all members of your exam committee can participate virtually using Zoom, Teams or teleconference. To do so, they must remain in the meeting for the duration of the exam.

### ***3. I am planning on starting medical school immediately after my MSc, what should I keep in mind to transition from my MSc to Medical School?***

Most universities require degree completion before starting medical school. Offers of admission are issued up to the start of medical school classes. If you plan to start in the Fall you must defend by mid-June at the latest.

- Discuss the issue with your supervisor and Program Advisory Committee when you apply to medical school.
- Meet with your PAC often to ensure you all agree on a timeline for completion and work expectations.
- Confirm with your medical school(s):

*Does admission require degree completion prior to entry? If yes, what is their final deadline for confirmation of degree completion? What is the final date when you'll hear about your acceptance?*

- Get all research for your degree completed well in advance.
- Book your defense early. Defend your thesis by mid-June at the latest. Note the [timelines](#) and follow them.

***4. Do I need to request graduation?***

No, as a graduate student you are not required to request graduation. The IMS will send a degree recommendation to SGS for you.

***5. When will my transcript reflect that I have been awarded the MSc degree?***

Your transcript will show that your MSc degree has been conferred on the first business day following convocation. This is when your thesis credit on your transcript will also change from IPR (in progress) to CR (credit).

***6. Where can I get a confirmation of degree completion letter?***

An official confirmation of degree completion letter can be issued once your supervisor or modifications subcommittee chair has confirmed your thesis corrections, you have uploaded your thesis and SGS has received your degree recommendation from the IMS office. This letter needs to come from SGS and can be requested using the [Confirmation of Degree Requirements Form](#) found on their website.

## Examination Tips

One day before the exam:

- Check all presentation equipment: computer, projector, overhead, screen sharing
- Briefly review your proposal, get familiar with your figures
- Get familiar with several key references, including authors' names, research groups and major points that may support your defense

On the day of the exam:

- There is no proscribed dress code, but we recommend dressing in business attire
- Come earlier to check the equipment/screen sharing again
- Bring a bottle of water if your examination is in person
- Bring a copy of your thesis

Presentation

- 20 minutes MAXIMUM
- Remember: everyone has read your thesis. You don't need to teach your examiners.
- Background: provide the rationale and significance of your research
- Hypothesis: This is the most important part of your research
- Methods: concentrate on the experimental design
- Results: focus on the key findings – you only have 20 minutes so you can't include everything
- Conclusions: summarize the meaning and impact of your work
- Next Steps: mention a few outstanding questions from your work and map out a few experiments that you would do if you were staying on for a PhD

Examination Questions

There are several types of examination questions, which generally fall into 4 categories:

- Questions arising directly from your data – methodology, interpretation, limitations
- Background knowledge
- Future directions – additional experiments, approaches to answering remaining questions
- Unpredictable questions
  - If the Globe and Mail wants to release your research, what would be the title of the article?
  - What are the top 3 secrets of your success?
  - If you were allowed to re-do your project, what kind of new approaches would you like to use?

How to answer your questions:

- Make sure you understand the question properly. Repeating the question back can give you time to reflect
- Provide a clear, brief answer
- Use references to demonstrate your knowledge and support your point
- Don't be defensive
- Be honest. Sometimes, "I don't know" could be the best answer
- If the question is not related to your research directly, point it out first, then speculate
- After the first round, if you feel necessary, you may ask for a short break
- The Examiner/Chair has an obligation to protect the student. If you feel "harassed" you may bring this to the attention of the Examiner/Chair

# MSc Thesis Defense and Program Completion Checklist

In order to use this checklist, you will need to select a target defense date and work backwards from there. Your timeline to completion may require modification to accommodate delays and/or holidays.

## By the end of Year 1 in the Program:

- Review the [MSc Thesis and Examination Guidelines](#)
- Hold 1-2 PAC meetings
- Complete all required coursework
- First author paper is in progress (recommended)

## Approximately six months prior to intended defense date:

- Ensure that all degree requirements are met by checking the [Master of Science Program Requirements](#) section of our website
- Start writing your thesis
- Follow the IMS thesis submission checklist and submit with your full examination package
- If necessary, arrange to meet with a Graduate Coordinator or IMS Staff Member if any complications arise.

## Approximately 3 months prior to final defense date:

- Complete thesis writing and revisions
- Hold a Final PAC Meeting for approval to proceed to the defense
- Select the Examination Committee membership and determine the potential examination date/time
  - Carefully review the examiner roles and eligibility criteria with your Supervisor
  - Your Supervisor is responsible for contacting potential Examiners and confirming their willingness and availability to participate in the prescribed roles

## At least 6 working weeks prior to final defense date:

- Submit your MSC Final Oral Examination package to IMS for approval
  - All information must be complete, legible and accurate. Please ensure examiner e-mail addresses and contact phone numbers are correct. Incomplete forms will not be processed.

**Note: The Examination Package, including all supporting documentation, is submitted electronically through the website portal. Incomplete packages will not be accepted.**

## After the final defense date:

- Complete post-examination thesis corrections or modifications (if applicable)
- Supervisor or modifications sub-committee chair (whichever applies) must send a confirmation of completed corrections email to [msc.medscience@utoronto.ca](mailto:msc.medscience@utoronto.ca)
- Student must ensure that conditions for graduation (i.e. payment of fees) are met
- [Upload thesis electronically to SGS](#)

**Optional:** Provide a faux-leather hard-bound thesis to the IMS office for display in the IMS thesis library

**Convocation takes place in November, June or March (in absentia, if requested).**