

PLEASE NOTE: ALL documentation for the FINAL ORAL EXAMINATION (FOE) MUST be submitted to the IMS office a minimum of nine (9) working weeks prior to the proposed defense date. See [Scheduling the Examination](#) for details.

For a Departmental Oral Exam, ALL documentation MUST be submitted to the IMS office a minimum of six (6) working weeks prior to the proposed examination date. See [Scheduling the Examination](#) for details.

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ELIGIBILITY TO DEFEND

The successful PhD candidate is expected to have:

- completed all required course work (see [PhD Candidacy](#))
- be an expert in his/her specific area of knowledge and well-versed in general knowledge of the field
- produce a thesis that is roughly the equivalent of three full research manuscripts in peer-reviewed scientific journals (see [The Thesis](#) for details). Prior publication is preferred.

The IMS PhD Oral Defense procedures include a final program advisory committee (PAC) meeting, and two oral examinations: the [PhD Departmental Oral](#) (IMS) and the [Final Oral Examination](#) (SGS). Both examinations follow the same procedures, including a student presentation, questioning, and vote. While some students benefit from two examinations, for others it is redundant. The

Departmental Oral can be [waived](#) upon request (final approval of the waiver is at the discretion of the Graduate Coordinators).

TIMELINE FOR COMPLETION

A timeline for degree completion is available on the IMS website at:
<http://www.ims.utoronto.ca/current/degree/timeline.htm>

Writing up and defending your PhD thesis takes an AVERAGE of 7-12 months (3-4 months for writing, 1-3 months for thesis proofing, review, and 3-5 months for the examination process). To ensure timely completion, students should:

- Review the PhD defense guidelines prior to starting to write the thesis
- Discuss the process with the Supervisor and PAC members as early as possible
- Complete course requirements early in the program
- Send regular thesis drafts to supervisor and PAC committee to review and set deadlines for return of comments. Allow at least one month for review of the final thesis draft by the PAC members
- Book all meetings WELL in advance
- Avoid peak examination periods if possible (August, September, December, January)
- Review the [Completion Checklist](#) attached to these guidelines
- Meet with the Graduate Coordinator if there are any concerns about the defense

FEES AND BURSARIES IN THE FINAL YEAR

Fees in your final year are levied on a monthly basis. Fees will be charged until the end of the month after you have electronically submitted your thesis to SGS.

For comprehensive information on fees in your final year, visit [Final Year Fees](#) on the SGS website or the Student Accounts Office at www.fees.utoronto.ca and 416-978-2142.

Candidates are required to pay outstanding University fees before the Final Oral Examination.

Apply for a Doctoral Thesis Completion Grant: PhD students who are outside the funded cohort may apply for a Doctoral Thesis Completion Grant. Information and forms are available on the SGS website under [Doctoral Completion & Postdoctoral Awards](#). You are only allowed one such grant during your degree.

CONFIDENTIALITY AND INTELLECTUAL PROPERTY

Make an appointment with the IMS Graduate Coordinator early in your degree if your student stipend is derived from a contract or your research project is associated with an industrial contract. Industrial support of research may limit the communication of research findings. This may affect your thesis and defense. *Guidelines for Faculty of Medicine Graduate Students and Supervisors in the Context of Commercialization of Inventions based on Thesis-Related Research* is available [here](#).

GOING TO MEDICAL SCHOOL? Plan Ahead!

We recommend that you complete your IMS degree, and then enter medical school. Most Medical Schools demand 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.

- Discuss the issue with your Supervisor and Program Advisory Committee when you apply to medical school
- Meet with your committee often to ensure you all agree on a timeline for completion and work expectations
- Confirm with your medical school(s):
 - Does admission demand degree completion prior to entry?
 - If yes, what is their final deadline for submission of degree?
 - 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

THE THESIS

The supervisor and Program Advisory Committee are responsible for guiding the student about thesis content and research completion. The Supervisor and Committee should ensure that they are prompt in reviewing, correcting, and editing thesis drafts. Make sure that your supervisor and Program Advisory Committee 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 a PhD thesis is roughly the equivalent of three full research manuscripts in peer-reviewed scientific journals. 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 an expert in your specific area of knowledge. Thesis work will reflect an original contribution to new knowledge, and the candidate should have demonstrated an appropriate level of scholarship in his/her chosen field.

Before writing your thesis...

- Meet briefly with a Graduate Coordinator
- Obtain SGS guidelines for the preparation and formatting of the thesis [here](#). Pay particular attention to the formatting, copyright instructions, and the required forms (see the SGS website for information on [Electronic Thesis Preparation and Submission](#))
- Consult the format of previously completed theses in the IMS thesis reference library or UofT library (call the IMS Office first to make sure the IMS thesis reference library is available). You can view theses on line at [Theses Canada](#) or [T-Space](#).

Electronic Thesis Preparation and Submission

Doctoral students must submit the **final** version of their thesis to SGS in electronic form. Although only the FINAL, APPROVED THESIS (after the Final Oral Examination) is submitted electronically, students must prepare their thesis according to SGS directions for ultimate electronic submission.

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

The digital copy of the thesis will be considered the “official” version of the thesis. Each ETD will be assigned a permanent URL - a URL that will not change - thus ensuring reliable access to the digital version.

Final theses are housed in “T-Space”, the institutional research repository for the University of Toronto community (see <https://tspace.library.utoronto.ca/>). ETDs will normally be released 2- 5 weeks after the student’s convocation; release may be delayed by completing a [restrict thesis release form](#). For Phase One, ETDs will be sent to ProQuest for conversion to microfiche, citation in Dissertation Abstracts International, and transmission to Library and Archives Canada, as are paper copies.

A website, style templates (Word and Latex) and workshops have been developed to assist students with the production and submission of ETDs. Adobe Acrobat will be required to complete the PDF conversion (available inexpensively through the U of T site licensing at <http://www.utoronto.ca/ic/software/detail/adobepro.html#student>). A computer in the Information Commons equipped with this software has been designated as an ETD workstation and the Help Desk at [Information Commons](#) is available to respond to technical enquiries.

Contributions of Others To Your Project...

Discuss this with your supervisor. Acknowledge others properly in the thesis and be ready to defend work by others used in your thesis. Clearly state your own contribution in the thesis.

Research Included in PhD thesis...

Your PhD thesis should only be composed of work acquired while enrolled in the PhD program. It should not include work acquired during previous degrees or employment.

Multiple Publications Generated During Your Research...

If they are related to your main hypothesis, you may present them as separate chapters in the thesis. If they are not directly related to your main research, you may add it 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, eliminate the Methods chapter and present 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 quick degree completion. Book an appointment with the Graduate Coordinators if there is disagreement over this. Appointments can be requested by phone at 416-978-5012.

THESIS PREPARATION GUIDELINES

Detailed guidelines on the technical aspects of thesis preparation and formatting can be found on the SGS website under [Producing Your Thesis](#).

Format

Your thesis may be prepared in a continuous “traditional format”, with:

- *Abstract*
- *Acknowledgements*
- *Contributions*
- in depth *Literature Review*
- *Aims/Hypotheses*
- detailed *Methods* section
- data presented in a central *Results* section
- a *Discussion* that describes the plausible range of interpretations for your work
- *Conclusions* and *Future Directions*

Alternatively, you may choose a "paper format". In this case, your thesis work is organized as follows:

- *Abstract*
- *Acknowledgements*
- *Contributions*
- *Literature Review*
- *Aims/Hypotheses*

Followed by a series of self-contained chapters, each containing a focused:

- *Introduction*
- *Methods*
- *Results*
- *Discussion/Conclusion*

Followed by:

- *General Discussion*
- *Conclusions*
- *Future Directions*

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 related studies that together tell your story. Bring in your proposed *Table of Contents* and the Graduate Coordinators will be glad to look it over.

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. A doctoral thesis abstract cannot exceed 350 words.

Acknowledgments and Contributions

Explicitly acknowledge 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. Personal thanks to friends and family may also be included. A listing of the specific contributions of others should be 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. Be sure to include formal letters of permission to incorporate any published materials in your thesis. More information on copyright issues and a template for preparing copyright letters of permission are available online from the SGS website under the [Copyright](#) section.

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 through the UofT Gerstein Library, or for purchase at <http://www.councilscienceeditors.org>), 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. Leave details to the legends. All figures require a legend. Remember to include error bars. By skimming the figures and legends, a reviewer should get a clear sense of the results in your thesis.

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. Very fine detail (e.g. chemical recipes) can be placed in an *Appendix*.

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 that 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.

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 *General 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 *General 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 implication 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..."). You can use any one of the standard formats for references but be consistent in its use. 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.

THESIS FAQs

1. How long should my thesis be?

A Ph.D. thesis is 150 - 300 pages plus references. It includes:

- A scholarly *Literature Review* (50+ pages)
- Statement of *Hypotheses and Research Aims*, (2-5 pages) experimental work equivalent in depth to what would typically be contained in 3-4 peer-reviewed papers in substantive journals
- *General Discussion* (20-50 pages) and *Future Directions*

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. You may also find it helpful to discuss your outline and thesis plans with one of the Graduate Coordinators.

2. 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 committee 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 following University of Toronto resources are available to students to improve their academic writing and speaking skills:

Office of English Language and Writing Support (ELWS)

<http://www.sgs.utoronto.ca/informationfor/students/english>

3. 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.

4. Can I actually plagiarize my own work!?

It may seem surprising, but reproducing your own published work without proper acknowledgement 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.

5. Where else can I find guidance on what to include, organization and formatting?

Take a minute to peruse the PhD and MSc theses of previous IMS students in the IMS thesis reference library. 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 text.

PHD CANDIDACY

By the end of year 3 of the PhD program, all PhD students are expected to have completed specific degree requirements, exclusive of thesis writing and defense. These are:

Courses

MSC 1011Y (indicated on the transcript or academic history with a CR upon completion)

PLUS

- For students with a MSc degree - One full graduate course equivalent
- For PhD Direct Entry students or MSc students who transferred to the PhD program –Two full graduate course equivalents

PLUS

- Additional degree requirements for a collaborative program, if applicable. Check with your collaborative program administrator for specific requirements.

These are minimum course requirements. Your supervisor and PAC may request that you take additional courses towards your degree. Check on ROSI (<http://www.rosi.utoronto.ca>) to make sure you have been correctly enrolled and credited for your courses.

- **Regular PAC meetings** – at least four PAC meetings must have been held and reports filed in the IMS office by the end of year 3 of the PhD.

FINAL PROGRAM ADVISORY COMMITTEE (PAC) APPROVAL FOR DEFENSE

When the supervisor and Program Advisory Committee have approved the written thesis, a final committee meeting is held with a FULL PRACTICE ORAL EXAMINATION to prepare the student for defense. The final PAC meeting will include a 20-minute slide presentation by the student, and a question period where committee members pose questions that would be typical of those asked during a final defense.

If the student intends on applying for a waiver (see (b) below) of the IMS Departmental examination it is mandatory to have an additional faculty member at the final PAC meeting. The additional faculty member must be a member of SGS, with supervisory experience, and be able to provide an objective perspective and feedback to the PAC and student regarding the content of the thesis and presentation.

At the end of the meeting, the committee votes on the student's readiness for defense, and SIGNS AND COMPLETES THE WAIVER REQUEST (if applicable) AND FINAL PAGE OF THE PROGRAM ADVISORY COMMITTEE FORM, indicating:

(a) Readiness to Defend:

- 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 a formal oral examination.
- The committee has tested the student's presentation and oral defense of work. 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.

(b) Recommendation for Waiver of the IMS Departmental Oral Examination

IMS PhD Oral Defense procedures include two oral examinations: the PhD Departmental Oral (IMS) and the Final Oral Examination (SGS). Both examinations follow the same procedures, including a student presentation, questioning, and final vote. A review of past examination outcomes has shown that while some students benefit from our two-examination process, for others it is redundant. PhD candidates have the option of requesting a waiver of the IMS PhD Departmental Oral Examination. To request a waiver, an additional SGS faculty member who has read the thesis and is competent to comment on the scientific content, must be present at the final PAC.

If a PhD Oral Examination Waiver is requested, a PhD Oral Examination Waiver Request Form (completed by the supervisor and signed by the PAC and additional SGS faculty member), the student's complete CV and thesis should be appended to the FINAL PAC form and submitted to the IMS Office.

Approval of the request will be made by the IMS Graduate Coordinators, and will be dependent on a review of the waiver request, final PAC report, participation of an external faculty member at your final PAC, as well as grades, publications arising from graduate work, and public presentations. Decision on the request will be one of the following:

- **Approval of the departmental oral examination waiver.** Usually requires prior publication of a significant proportion of the thesis work and peer review of the bulk of experimental work.
- **Waiver of departmental oral examination denied.** Student must complete two-tier examination process. Waivers are generally not approved by the IMS Graduate Coordinators if research involves issues of conflict of interest, confidentiality, or intellectual property or if the student has lapsed for a significant period of time.

Students who are uncertain of the potential eligibility to waive a Departmental Oral are encouraged to meet with the IMS Graduate Coordinators prior to arranging the final PAC meeting.

(c) Submission of External Examiner Nomination Form for the Final Oral Examination

The Vice-Dean of Graduate Studies personally reviews and approves the External Examiner for the Final Oral Examination.

SGS mandates that an arm's length relationship be maintained among candidate, supervisor, and External Examiner. Students may NOT contact the examiner. Supervisors may contact external examiners ONLY to ascertain willingness to provide a written appraisal, availability to attend the examination at the specified time and preference of thesis submission format. Supervisor and examiner DO NOT discuss thesis content, aside from providing the thesis title and sending the thesis.

At the Final PAC meeting, committee, student, and supervisor should recommend three potential External Examiners for the Final Oral Examination.

The external examiner must:

- be a non-UofT expert in the candidate's field of research
- be affiliated with another University and hold professorial rank equivalent to a Full Member of SGS (i.e eligible to supervise graduate students as a Professor or Associate Professor)
- be an objective reviewer - *neither affiliated with the student's research project nor collaborated with the supervisor or student in the previous six years.*

For complete details on external appraiser eligibility, please see the Guidelines for the Doctoral FOE here: <http://www.sgs.utoronto.ca/currentstudents/Pages/Doctoral-Exams-and-Schedule.aspx>

The external examiner will be required to submit a written appraisal of the thesis at least two weeks before the Final Oral Examination. The External Examiner may attend the defense in person, participate via teleconference (voting member), or not attend at all (non-voting member). The IMS Office presents a \$100 honorarium to external appraisers, and up to \$500 in traveling expenses (upon submission of all original receipts by the external examiner to the IMS office). We encourage external appraisers to attend via teleconference. The external examiner is not to book travel arrangements until he is formally approved by the IMS and SGS.

The IMS office will review the proposed examiners, obtain a copy of the external examiners' CV and forward it to the School of Graduate Studies for formal approval.

SCHEDULING THE EXAMINATION(S)

Scheduling a PhD Oral Examination is a complex process. We have set STRICT deadlines to ensure that your examination runs smoothly. Please read the complete examination guidelines thoroughly.

This section of the PhD Examination Guidelines includes information on both the Departmental and Final Oral Examinations. Many students will successfully waive the Departmental Oral and proceed directly to the Final Oral Examination.

When settling on a defense date and time with your committee, 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.
- 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](#)
For example: If a student wishes to convocate in November, they must defend no later than Sept. 28th (1 week prior to the degree recommendation deadline of Oct.5th for that particular year). Please note that SGS sessional dates vary from year to year.
- The University is closed for approximately 2 weeks during the winter holidays. These 2 weeks do not count toward the minimum 9 working weeks' notice needed to schedule the defense.
- SGS does not allow PhD FOEs typically one full week prior to the official University closure date for the winter holidays or in the first 3 business days after the University officially opens in

January. Students and faculty will receive an e-mail MEMO at the end of September, notifying them of these dates. Dates vary by year.

STEP 1 – APPROVAL FOR DEFENSE

- The IMS Office will review and file the final PAC Report. The final PAC form must be in the IMS Office prior to scheduling a defense.
- Students wishing to waive the Departmental Exam can meet with the Graduate Coordinators prior to their Final PAC to discuss the waiver criteria.
- The IMS Graduate Coordinators will review the PhD Oral Examination Waiver Request Form (if submitted) and decide whether to waive the Departmental Oral Examination. Waiver requests may require 1-2 weeks for processing, depending on the availability of the Graduate Coordinators. Student and supervisor will be informed via e-mail of the decision.

STEP 2 – THE DEPARTMENTAL ORAL EXAMINATION

The purpose of the Departmental Oral Examination is to closely review the thesis, recommend revisions to be made prior to the Final PhD Defense, and test the student's knowledge of his/her field of study. The exam provides an objective analysis of the candidate's thesis and background knowledge by faculty members of good standing, who are familiar with the standards of scholarship required by the School of Graduate Studies.

If the Departmental Oral Examination has been waived, proceed to STEP 3 – [The Final Oral Examination](#)

The IMS Office requires **ALL** of the following documentation **AT LEAST 6 [WORKING WEEKS PRIOR](#)** to the proposed date of a PhD Departmental Oral Examination:

- **Unbound paper copy of the thesis (will be reviewed by the Graduate Coordinators)**
- **Up-to-date student CV – including detailed list of publications**
- **Completed PhD Thesis Defense Nomination Form. All committee members must have agreed to be available on the listed potential examination date(s).**

In addition, the student is responsible for distributing a copy of the thesis to all committee members once approved by the IMS office.

Upon receipt of all required documentation, the IMS office will approve the committee composition, appoint the examination Chair, organize the room and equipment, and officially inform all examiners (in writing) of the date, time, location and committee composition of the examination. The IMS office will also formally provide instructions as appropriate for written appraisals. Finally, the IMS Office will collect appraisals and distribute as required.

Members of the Departmental Oral Examination Committee

Student and supervisor discuss and agree on who should be on the examination committee. *The supervisor is ultimately responsible for contacting the examiners and confirming their willingness and availability to participate.*

The Departmental Oral Examination committee consists of 6 voting members, plus the Examination Chair. Minimum quorum is four voting members; two from the PAC and two from outside the PAC. The committee is composed of:

- **Supervisor**
- **1-2 Program Advisory Committee** members (you can invite them all if you have more)
- **1-2 Examiners** who are members of the UofT graduate faculty with expertise in the field BUT are *neither affiliated with the student's research project nor collaborating with the supervisor and/or student in the past 6 years*. Full Members of the Graduate Faculty are preferred.
- **1 Internal Examiner/Appraiser**, a member of the UofT graduate faculty with expertise in the field BUT are *neither affiliated with the student's research project nor collaborating with the supervisor in the past 6 years, or a member of the supervisor's primary ACADEMIC department*. In the case of larger departments such as the Dept. of Medicine, Psychiatry or Surgery s/he should not be from the same DIVISION as the supervisor. Full Members of the Graduate Faculty are preferred. This examiner submits a written appraisal of the proposal at least **5 working days** prior to the Exam, and attends the defense. The written appraisal is **NOT** distributed to student or committee before the examination. When selecting an Internal examiner, student and supervisor should only ascertain his/her willingness and availability to attend the examination at the specified times. DO NOT discuss thesis content, aside from providing the thesis title and sending the thesis.

All examiners must be members of the University of Toronto Graduate Faculty, as an Associate Member, Full Member, or Member Emeritus. You can determine the graduate faculty status of a proposed examiner by checking with:

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

If in doubt, consult the IMS Office.

The Examination Chair (appointed by IMS Office) *runs the examination proceedings, "keeping the peace"* and representing the IMS and SGS administration and conducting the examination according to the rules of procedure (see below). S/he *protects the student's interests*, ensures that all examiners needed to achieve quorum are present (otherwise the examination will be CANCELLED), 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 Thesis and Examination Officer. The Examination Chair DOES NOT need to review the thesis in advance and does not vote.

Departmental Oral Examination Rules of Procedure

Before the presentation

- The Exam Chair collects the Examination File from the IMS Office or by arrangement with the IMS Thesis and Examination Officer.
- The Chair introduces the members and the candidate and ensures that all examiners are present. If members are missing, the Chair advises the IMS Office and discusses action to be taken. The examination may be cancelled.
- The Chair instructs the Supervisor of his/her responsibility to carefully document items for revision and modification (if necessary) during the examination.

- The Chair asks the student to leave the room.
- The 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 Internal Examiner/Appraiser presents his/her appraisal. Discussion may follow reading of the appraisal.
- The Supervisor is provided with a copy of the appraisal.

Presentation by Candidate

- The student is invited back into the room to give a 20-minute (uninterrupted) presentation. This is a strict time limit. A PowerPoint presentation usually accompanies the presentation. Make sure you bring backup in case of technical difficulties.

Question Period

At the examination, the Supervisor should carefully document items for revision and modification.

- Following the presentation, questions are posed to the student. These are presented in two rounds, with 10 minutes allotted to each examiner per round.
- The Chair allows only one Examiner at a time to ask questions (discussion by Examiners among themselves will only detract from the 10 minute time period) and should intervene if another examiner, or the Supervisor, starts to join in the discussion.
- Order of questions is usually: Internal Examiner/Appraiser, Examiners, Committee Members, and Supervisor.
- The Chair should keep informal notes about the content of questions that may lead to proposal revisions for reference during the analysis of defense.
- Following questioning, the student is again asked to leave the room.

Committee discusses the Examination and Votes

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

Is the written thesis acceptable

- a) With no modifications
- b) With minor or organizational corrections (typos, change in format, additional information, no new data or new interpretation of data required). The student has 1 month to complete this.
- c) With minor modifications (rewrite part of the proposal, addition of new experimental data and/or completely new interpretation of data). The student has 3 months to complete this.
- d) Not acceptable

Was the Oral Defense:

- a) Excellent
- b) Very good
- c) Acceptable
- d) Not acceptable

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

If minor modifications are required, the Chair appoints a Modifications Subcommittee (see [After the Departmental Oral Examination](#)).

The student is invited into the room and the Chair advises the student about the outcome of the examination.

A clear statement about who will review the revised thesis is given to student and supervisor and the defense is adjourned.

After the Departmental Oral Examination

The Exam Chair returns the file to the IMS Office.

If minor or organizational corrections are recommended...

- Student consults with supervisor and Program Advisory Committee members about changes
- Supervisor writes to IMS office to confirm completion of revisions within 1 month of the examination and before a Final Oral Examination can be booked

If minor modifications are recommended...

- Examination Chair will appoint a subcommittee
 - Includes the Internal Examiner/Appraiser and 2 Examiners
 - 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 IMS office to confirm completion of revisions within 3 months of the examination and before a Final Oral Examination can be booked

A repeat departmental oral exam is absolutely required if:

- The student does not pass the oral defense/exam. This may occur when a vote is required (i.e., examiners disagree about the recommendations) and there is a negative outcome
- The thesis requires very major modifications that must be defended

The student is allowed only one repeat Departmental Oral Examination.

STEP 3 – THE FINAL ORAL EXAMINATION (FOE)

The purpose of the Final Oral Examination (FOE) is to ensure a consistent level of academic excellence across the University and the country. The FOE, in addition to reviewing and approving the thesis, and testing the student's knowledge of his/her field of study, should discuss new questions that arise from the work and future projects that could be developed. The examination usually lasts about 2 1/2 hours.

The IMS Office requires **ALL** of the following documentation **AT LEAST 9 WORKING WEEKS** PRIOR to the proposed date of a PhD FOE. EXTRA notification time will be required over the winter holidays in December (2 extra weeks).

- Unbound paper copy of the final thesis
- 1-page thesis abstract, double-spaced
- Up to date Student CV
- Completed PhD [Thesis Defense Nomination Form](#). All proposed committee members must have agreed to be available on the listed potential examination date(s).
- Final Oral Examination [External Examiner Nomination Form](#)

The student is responsible for distributing a copy of the thesis to all committee members, **INCLUDING THE EXTERNAL EXAMINER**, upon instruction from the IMS office approximately **6 weeks** before the Final Oral Examination.

Upon receipt of all required documentation, the IMS office will organize the room (within the IMS or SGS) book audiovisual equipment, and officially inform, in writing, all examiners of the date, time, location, and committee composition of the Final PhD Defense. We will also obtain SGS approval of the examination, committee composition, ensure that all other degree requirements are met, arrange for an Examination Chair and provide him/her with the examination file and, finally, remind all FOE committee members of the examination prior to the examination.

Members of the Final Oral Examination Committee

Student and supervisor discuss and agree on who should be on the FOE examination committee (see below). *The supervisor is ultimately responsible for contacting the examiners and confirming their willingness and availability to participate.*

All UofT examiners must be members of the UofT Graduate Faculty, as an Associate Member, Full Member, or Member Emeritus. You can determine the graduate faculty status of a proposed examiner by checking with:

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

If in doubt, consult the IMS Office.

A committee must have a minimum of 4 voting members, plus the Examination Chair. If a final quorum of 4 is not reached at the exam, the exam will be cancelled.

The FOE committee is composed of:

- **Supervisor**
- **1 (minimum) or 2 (maximum) Program Advisory Committee members**
- **1 (minimum) or 2 (maximum) examiners** who are members of the UofT graduate faculty with expertise in the field BUT are *neither affiliated with the student's research project nor collaborating with the supervisor and/or student in the past 6 years*. Full Members of the Graduate Faculty are preferred.
- **1 External Examiner**. Click [here](#) for external examiner eligibility criteria.

PLEASE NOTE: As of July 1st, 2012 a minimum of 2 non-PAC members must be present at the FOE (in person or by phone) to achieve quorum. If quorum is not achieved, the FOE will be cancelled. Please see the FOE committee rubric at the end of these guidelines for details.

- **The Examination Chair (appointed by SGS)** runs the examination proceedings, represents the School of Graduate Studies, and conducts the examination according to the rules of procedure. S/he protects the student's interests, ensures that all examiners are present (otherwise the examination may be CANCELLED), 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 School of Graduate Studies. The Examination Chair DOES NOT need to review the thesis in advance and does not vote.

The FOE is a closed examination. Only members of the examination committee may attend the examination. If the candidate wishes to include non-voting members at the defense, s/he must request this in writing to the IMS Office at the time of booking the examination. The Vice- Dean of SGS must approve the attendance of any non-voting members.

Two week before the examination the IMS Office will distribute a copy of the External Examiner's thesis appraisal to all FOE Committee members and the candidate **WITH THE PROVISIO THAT THE COMMITTEE AND CANDIDATE SHALL NOT DISCUSS THE APPRAISAL PRIOR TO THE EXAMINATION.** The student is entitled to this time to reflect on the appraiser's comments and address these comments at the examination.

If the External Examiner's appraisal is not available 2 weeks before the FOE, the examination can be cancelled (at the supervisor and student's discretion), or the candidate will be required to complete a form, waiving his/her right to see the written appraisal prior to the examination.

Final Oral Examination Rules of Procedure

The official SGS Principles and Practices of the PhD FOE are available on line [here](#). A synopsis of the FOE follows below.

Before the candidate enters, the Chair

- Confirms that quorum is present. If members are missing, the Chair advises the PhD Orals Office and discusses action to be taken
- ensures that all committee members have sufficient knowledge of the thesis to judge its acceptability
- reminds the committee that the examination covers both thesis and oral defense
- confirms that all members have received the external appraisal. If any member has not reviewed the appraisal in advance, it will be read aloud by one of the examiners
- consults with committee to determine order of questioning. Order of questions is usually: External Examiner, Examiners, Committee Members, and Supervisor.
- determines who will be responsible for carefully documenting items for revision and modification during the exam (usually the supervisor)

Candidate's Presentation

- The Chair invites the candidate (and any non-voting members) into the room and introduces the members.
- The candidate gives a 20-minute (uninterrupted) presentation. This is a strict time limit. A PowerPoint presentation usually accompanies the presentation. Make sure you bring backup in case of technical difficulties.

Question Period

- Following the presentation, questions are posed to the student. These are presented in two rounds, with 10 minutes allotted to each examiner per round.
- The Chair allows only one Examiner at a time to ask questions (discussion by Examiners among themselves will only detract from the 10 minute time period) and should intervene if another examiner, or the Supervisor, starts to join in the discussion.
- The Chair should keep informal notes about the content of questions that may lead to proposal revisions for reference during the analysis of defense.
- Following questioning, the student is again asked to leave the room. Non-voting members (if any) also leave at this time.

Committee discusses the Examination and Voting Options

After a discussion of the thesis and the defense, the Chair distributes the voting ballots and explains the options in detail. Voting then takes place.

1. Members must vote yes or no as to whether or not the thesis and its defense are acceptable. More than one negative vote or abstention causes the examination to be adjourned.
2. Committee members who found the thesis acceptable must also indicate whether it is acceptable
 - a) as is, in its present form
 - b) with minor corrections (typographical errors, errors in punctuation or problems in style)
 - c) with minor modifications (i.e. clarification of textual material, qualification of research findings or conclusions).

The Chair collects the ballots and the votes are read out loud and recorded. The Chair does not vote.

Candidate is informed of the Decision

The student is invited into the room and the Chair advises the student about the outcome of the examination.

A clear statement about who will review the revised thesis is given to student and supervisor and the defense is adjourned.

In the Event of an Adjournment

A student is allowed one reconvened examination within one year. Examinations may be adjourned for failure to reach a quorum, more than one negative vote or abstention. The Examination Chair will provide a written report for the candidate, within two weeks of the adjourned examination, setting out the reasons for the adjournment and the requirements for a reconvened examination.

Candidates are allowed only one reconvened FOE. If your FOE is adjourned, please contact the IMS Office immediately after the examination.

After the Final Oral Examination

Candidate and Examination Chair report to the PhD Oral Office at 63 St. George Street to submit the completed examination file. The student will be informed at this time of any additional paperwork that must be completed. Convocation is held annually in November and June and *in absentia* in March. The PhD Oral office will inform the student of the convocation date.

- **Minor corrections must be corrected within one month** of the examination. The supervisor will inform the candidate of the corrections and must certify in writing to the PhD Oral Examinations Office and the IMS that all corrections have been made.
- **Minor modifications must be corrected within three months of the examination.** A supervising Subcommittee will have been appointed at the FOE to supervise the modifications. The designated Convener of the subcommittee provides a written report of required modifications to the candidate, supervisor and PhD Orals Office as soon as possible after the exam, preferably before the committee disperses. The convener reports in writing to the PhD office, IMS Office and Examination Chair within three months that corrections have been made, or the state of the corrections to be made (if in dispute). If minor modifications are not made to the satisfaction of all subcommittee members within the 3-month time limit, a reconvened examination must be held.

The student must submit an electronic thesis to the School of Graduate Studies by the deadlines listed in the SGS [sessional dates calendar](#).

Ensure that you have completed and obtained the necessary paperwork for your thesis submission as outlined on the SGS website.

The IMS Office pays the external examiner's honorarium and up to \$500 of related travel expenses upon presentation of original receipts and completion of an expense reimbursement form. If the supervisor or supervisor's academic department pays all traveling expenses, the supervisor is responsible for contacting the IMS Office at pa.medscience@utoronto.ca for reimbursement of the IMS \$500 portion of expenses and to obtain an expense reimbursement form.

GRADUATION

See information on graduation procedures on the SGS website [here](#).

MAKE SURE TO CHECK YOUR E-MAIL ADDRESS AS IT IS LISTED ON ROSI. This e-mail will be used for mailings about convocation.

EXAMINATION DAY TIPS

One day before the exam:

- Check all audio/visual presentation equipment: computer, projector, overhead
- 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:

- It is recommended to dress in a professional manner
- Come early to check the equipment again
- Bring water and/or refreshments for your committee
- Bring a hard copy of your thesis

Presentation

- 20 minutes MAXIMUM (about 20 slides)
- 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
 - Method: concentrate on the experimental design
 - Results: only present the main results
 - Conclusion: be clear and accurate

Examination Questions

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

- Related to your research: background, significance
- Questions from your thesis: statement, presentation of figures, additional information, your mistakes
- Background knowledge: statistics, etc
- 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 think it over
- 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 Chair has the obligation to protect the student. If you feel "harassed" you may bring this to the attention of the Exam Chair

GENERAL FAQ'S

1. Why does the IMS require a 9 week lead time?

The examiners have to be vetted, a chair needs to be appointed, and the external appraiser needs enough time to thoroughly read the thesis and prepare a report. The most important reason is that the thesis has to be screened by the Graduate Coordinators and the external examiners' CV needs to be reviewed by the School of Graduate Studies.

2. Can I invite members outside of my approved defense committee to my defense?

No. The PhD defense is available only to those members who have been listed on your nomination form and pre-approved by the IMS office and School of Graduate Studies.

3. Who is responsible for distributing the thesis to the FOE or Departmental Exam committee?

Once the IMS has approved the thesis, we will send out a notification of exam by e-mail, instructing the student to distribute the thesis to all committee members. Students are expected to distribute the thesis as soon as they receive notice. If an examiner requests a hard-copy of the thesis mailed to them, we ask that the supervisor cover courier costs.

PhD THESIS DEFENSE COMPLETION CHECKLIST

PhD Candidacy Achieved

By the end of Year 3 of the PhD program, students are expected to have completed **ALL** course requirements and submitted at least 4 completed PAC reports to the IMS Office in order to achieve official PhD candidacy status.

In order to use this checklist, you'll need to select a target final oral examination date and work backwards from there. Timeline to completion will require regular modification to accommodate delays in the many stages.

Approximately one year prior to final defense date

- start writing thesis
- read defense guidelines thoroughly
- apply for degree completion bursary, if applicable
- ensure that all other degree requirements are met (courses, PhD candidacy)
- meet with IMS Graduate Coordinators if ANY complications are anticipated

Approximately 3-4 months prior to final defense date

- complete thesis writing and revisions
- hold Final PAC meeting for approval to proceed to defense
- apply for PhD Departmental Oral Examination Waiver (if applicable and recommended by committee)
- select FOE committee membership and determine potential examination date

At least [9 working weeks](#) prior to FOE date

- submit **ALL** [required documentation](#) for Final Oral Examination to the IMS Thesis and Examination Officer . Ensure all documentation is complete and legible to avoid processing delays

FINAL ORAL EXAMINATION

After FOE date

- complete post-examination corrections or modifications (student's supervisor or sub-committee chair must submit confirmation of completed modifications or corrections to Doctoral Examinations Office and IMS office)
- ensure that conditions for graduation (i.e. payment of fees) are met
- upload thesis to SGS via ProQuest digital library repository
- submit hard-bound thesis to IMS Office before your convocation (optional)

Convocate in June, or November (or March in absentia if requested).

PhD Departmental Oral Waiver Request Form

PLEASE NOTE: ALL documentation **MUST** be submitted to the IMS office a minimum of nine (9) working weeks prior to the examination date.

- Objectives: to ensure that PhD candidates are ready for a final oral examination and :
- **The committee has reviewed the thesis** and it is acceptable, in terms of content, quality of writing, and presentation. **The thesis is ready for presentation at a formal oral examination.**
 - **The committee has tested the student’s presentation and oral defense of work and the student is ready to defend the thesis at a formal oral examination.**
 - **The committee has tested the student’s general and specific knowledge related to research, the student has completed appropriate graduate courses for degree completion, and minimum degree requirements have been met. The student’s basic scientific knowledge has been appropriately tested and is acceptable for thesis defense**

Name of Student: _____

Thesis Title: _____

	Strongly Disagree		Neither Agree nor Disagree		Strongly Agree
PAC Recommendation					
Committee is unanimous in recommending waiver of Departmental Oral Examination	1	2	3	4	5
Thesis has been reviewed and approved by PAC	1	2	3	4	5
PAC Reports					
PAC reports show consistently good progress	1	2	3	4	5
PAC meetings have been held regularly	1	2	3	4	5
General principles, fundamentals or basic science component of research program (i.e. cell biology, molecular biology, clinical trial design, critical appraisal of the literature etc.) have been reviewed and highly rated	1	2	3	4	5
Knowledge relevant to the specific area of research, as well as general knowledge relating to the clinical and research aspects of the chosen field of study have been highly rated	1	2	3	4	5
Student’s overall competence in the techniques specific to the research project (in a laboratory, or in experimental design or data analysis and population studies) have been highly rated	1	2	3	4	5
Publications and Abstracts					
2-3 peer-reviewed publications have arisen from this work, or are under review	1	2	3	4	5
Publications arising from work are in prominent journals in the field	1	2	3	4	5
The student displays a high level of productivity	1	2	3	4	5

Final Oral Examination EXTERNAL EXAMINER NOMINATION FORM

Please be reminded:

- Students may NOT contact the examiner.
- Supervisors may contact external examiners ONLY to ascertain willingness to provide a written appraisal, availability to attend the examination at the specified time and preference for thesis submission.
- Supervisor and examiner DO NOT discuss thesis content.

The external examiners listed below must fit the [eligibility criteria](#). External examiners who do not meet this criteria will not be considered by SGS.

First Choice (please print clearly)

Name _____ Position and Rank: _____

Institution: _____

Address _____

Phone: _____ Fax: _____ Email: _____

Area of Specialization: _____

Does this External Examiner plan to attend the defense? No Yes, in person Yes, via teleconference

Second Choice

Name _____ Position and Rank: _____

Institution: _____

Address _____

Phone: _____ Fax: _____ Email: _____

Area of Specialization: _____

Does this External Examiner plan to attend the defense? No Yes, in person Yes, via teleconference

Third Choice

Name _____ Position and Rank: _____

Institution: _____

Address _____

Phone: _____ Fax: _____ Email: _____

Area of Specialization: _____

Does this External Examiner plan to attend the defense? No Yes, in person Yes, via teleconference

PhD THESIS DEFENSE NOMINATION FORM

PLEASE NOTE: ALL documentation MUST be submitted to the IMS office a minimum of nine (9) working weeks prior to the defense date.

For a Departmental Oral Exam, ALL documentation MUST be submitted to the IMS office a minimum of six (6) working weeks prior to the examination date.

This is a (choose one): Departmental Oral Exam Final Oral Examination

Student Name: _____ UofT Student #: _____

Examination Date: _____ Start Time (min. 3 hours): _____

Thesis Title: _____

Student Phone #: _____ Valid UTORONTO Email: _____

Committee Composition (All members listed on this form must be verified for eligibility)

Examiner	Name & SGS Appointment	Mailing Address	Communications:
EXAMINATION COMMITTEE (for Departmental and Final Oral Exams)			
Supervisor	Name: Dept:		Phone: Fax: Email:
PAC Member # 1	Name: Dept:		Phone: Fax: Email:
PAC Member # 2	Name: Dept:		Phone: Fax: Email:
PAC Member # 3 (non-voting)	Name: Dept:		Phone: Fax: Email:
Examiner #1	Name: Dept:		Phone: Fax: Email:
Examiner #2	Name: Dept:		Phone: Fax: Email:
Additional Member for DEPARTMENTAL EXAMINATION ONLY			
Internal Examiner/ Appraiser	Name: Dept:		Phone: Fax: Email:

Examination Chairs are provided by the SGS and do not need to be listed on this form.