



**Department of Chemistry & Chemical Biology**  
**McMaster University**

**Guide to Graduate Studies in Chemistry**  
**2020-21**

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Dear Graduate Students,

This guide contains practical information about graduate studies in Chemistry at McMaster. We hope it will be of use to you and complement the classical approach of asking the right person the right question. Please help us keep this guide up to date. If you find any errors, or have comments or suggestions, please contact Sara Warner ([warnes3@mcmaster.ca](mailto:warnes3@mcmaster.ca)). In the case of discrepancy between this guide and other university policy, you are advised to consult the authoritative Graduate Calendar published by the School of Graduate Studies, <https://academiccalendars.romcmaster.ca/content.php?catoid=42>. *Note:* Information in the Graduate Calendar always prevails over other sources of information, your supervisor, or the Associate Chair, Graduate Studies in Chemistry.

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## 1. IMPORTANT CONTACTS

<b>Name</b>	<b>Position</b>	<b>Office</b>	<b>Ext.</b>	<b>Email id</b>
Dr. Audrey Hicks	Acting Associate Dean of Graduate Studies (Faculty of Science)	BSB-102	24643	adeangss
Mr. Ryan Trepanier	Graduate Support Officer (Faculty of Science)	BSB-102	22733	trepanr
Dr. Gillian Goward	Chair	ABB-156	24504	goward
Dr. Peter Kruse	Acting Associate Chair of Graduate Studies	ABB-263	23480	pkruise
Ms. Salina Jaffer	Department Administrator	ABB-156	23487	jaffers
Ms. Sara Warner	Graduate Assistant/Assistant to the Chair	ABB-156	23489	warnes3
Dr. Jose Moran-Mirabal	Chair, Graduate Admissions and Recruiting	ABB-233	24507	mirabj
Dr. Jose Moran-Mirabal	Chair, Graduate Reviewing and Scholarships Committee	ABB-233	24507	mirabj
Dr. David Emslie	Chair, Graduate Oversight Committee (Transfer Exams, Comps)	ABB-450	23307	emslie
Dr. Ryan Wylie	Chemistry Seminars Coordinator	ABB-261A	23477	wylier
Dr. David Emslie	Graduate Colloquia Coordinator	ABB-450	23307	emslie
Dr. Paul Harrison	Health and Safety Committee Chair	ABB-418	27290	pharriso
Dr. Peter Kruse	TA Coordinator	ABB-263	23480	pkruise
Christopher Franko	McMaster Chemistry Graduate Student Society (MCGSS), President	ABB- 466		frankocj
Novan Gray	Graduate Student Ambassador	ABB-467		grayna

## 2. FREQUENTLY- ASKED QUESTIONS

### 2.1. Upon Arrival

The first thing to do when you arrive at McMaster is to meet with your supervisor and start making plans, including your safety training first. Another important person to meet is Sara Warner, our Graduate Program Administrator. She works in the Chemistry & Chemical Biology main office (ABB-156) and will be able to answer many of your questions. You will also need to initiate your health and social insurance (see sections 2.10 and 2.11).

### 2.2 MOSAIC, Including Registration, Course Enrollment, and Email

MOSAIC is an administrative information system that you can log into for various functions, including academic planning/advisement, course enrollment, course schedules, viewing grade history, making requests for formal transcripts, registering for safety training (on-line or in-person), updating contact information, account enquiries, making payments, and viewing/printing T2202A/T4A forms.

#### Registration

All graduate students, in both the regular and part-time programs, are required to enroll and pay supplementary fees annually and tuition fees term by term (within the first month of the term).

To be registered, students **must be enrolled** (see below) in one or more course in each term of their degree (for continuing students, enrollment for **all 3 terms** is typically completed before the end of August each year). If a student is not planning to take a course in a particular term, they must enroll in SGS-700 (for full-time students) or SGS-701 (for part time students). These are placeholder courses (i.e. they do not require any activity from the student). If a student fails to enrol in a course in each term, they will delay their pay if they are attending, they will also not retain the status of graduate student, will be withdrawn in good standing, and must apply for re-admission if they wish at a later date to continue their studies.

#### Enrollment

Prior to course enrollment, students can pre-select their desired courses through an academic planner function in MOSAIC, enrol in courses, and organize their entire academic program. A student's class schedule is automatically generated as they enroll. Students can continue to add, drop or swap courses until the last day to drop a class for the term.

#### Transcripts

In Mosaic, students are able to review their entire grade and course history. Unofficial transcripts can be viewed and printed immediately. Requests for official transcripts can be made through Mosaic as well.

## The Mosaic Student Center

Mosaic's new Student Center provides access to academic, personal and financial information. It includes the following features:

### ACADEMICS

- Class Search
- Academic Planner
- Enrollment (formerly called registration)
- Class Schedule - List & Weekly views
- Course History
- Enrollment/Financial Letters
- Grades
- Program/Plan/Sub-plan Selection
- Transcripts - instant access to unofficial transcripts and ability to order official transcripts

### FINANCES

- Account Inquiry
- Make a Payment
- Charges Due
- Enrollment/Financial Letters
- View/Print T2202A/T4A

### PERSONAL INFORMATION

- Change mailing address
- Add emergency contacts

### E-MAIL

Graduate student e-mail accounts are created through MOSAIC. Most announcements within our department are sent by e-mail to your McMaster e-mail address. **All new graduate students must obtain a McMaster e-mail address and inform Sara Warner in the Chemistry & Chemical Biology office as soon as possible, for inclusion in the relevant e-mail distribution lists.** E-mail addresses provided by commercial vendors (e.g., Hotmail, yahoo, etc.) will **not be** used by the department.

### 2.3 Student Number/Employee Number and Security ID Cards

Your student number and your employee number are the same.

Access to the Chemistry & Chemical Biology research laboratory wings requires an identity card to open the security doors. To obtain a Working at McMaster card, if you are TAing in the term of your arrival you can go straight to the Campus Store (the front of the store) Monday – Friday, 8:30am to 4:30pm to be issued a photo ID card. If you are not TAing then once you have your photo ID card, email Sara Warner ([warnes3@mcmaster.ca](mailto:warnes3@mcmaster.ca)) and she will send an email to have your Working at McMaster card prepared for you, you can then go to the Campus Store at the location mentioned above.

## 2.4 Health & Safety

In order to ensure everyone is working safely in our labs, the following training is to be completed. Supervisors may request, at their discretion, that people in their lab complete refresher training of the current health and safety courses offered by the University on a more frequent basis as is deemed necessary:

### Minimum Safety Requirements:

- **WHMIS 2015 – to be updated every 5 years**
- **Asbestos Awareness – to be updated every 5 years**
- **Ergonomics – to be updated every 5 years**
- **Chemical Handling & Spills – to be updated every 3 years**
- **Due Diligence – to be updated every 3 years**
- **Fire Safety – to be updated every 3 years**
- **Violence and Harassment Prevention in the Workplace – to be updated every 3 years**
- **Biosafety Awareness**
- **Gas Cylinder**
- **Health and Safety Orientation**
- **Primer on Privacy**
- **Slips, Trips & Falls**
- **COVID-19 Awareness (new in 2020)**
- **Site-Specific Training – to be given by the person’s supervisor or their designate**
- **Department Orientation (date to be determined)**

The following safety training may be required if they apply to your lab. Please discuss these requirements with your supervisor to see if any apply.

### Lab specific training:

- **Biosafety Training (mandatory for any BSL level)**
- **Biosafety Update (to be completed annually after Biosafety Training is completed)**
- **Biosafety Level 3**
- **Nanotechnology Awareness**
- **Autoclave Awareness**
- **Hydrogen Fluoride – to be updated every 3 years**
- **Laser Safety – to be updated every 2 years**
- **Lock Out/Tag Out – to be updated every 2 years**
- **Radiation**

Online health and safety courses offered by EOHSS, the FHS safety office, and the Biosafety office are now being conducted through the University’s learning management system, Avenue to Learn. To register for either in class or online training, log in to the MOSAIC Portal and on the home screen search for the tab Regulatory Training >> Search by Course Name.

Please note that 24 hours after registering for an online session of a health and safety training course in Mosaic, the course material and quiz will become available for review and completion by logging into their Avenue to Learn account. These online courses will be automatically graded in Avenue to Learn and the result recorded in Mosaic 24 hours after successful completion.

Most of the research labs are accessible via security card ("Working at McMaster" card or non-personalized card). Also, some of the labs still require a key combined with card access. You will need to have completed all the required safety training prior to getting access to labs.

For both (key and/or card access), your supervisor will need to send an email to Darko Ljubic the research lab manager at [ljubicd@mcmaster.ca](mailto:ljubicd@mcmaster.ca) (ext. 24504, office ABB-401) stating what room(s) the access is required and whether exterior door access is required. All keys are issued by Sara Warner upon Darko's approval and all the card access is managed by Darko after a student provided a 5-digit number from the access card. A student is responsible for obtaining a photo ID access card called "Working at McMaster" card in the bookstore (student centre). In some cases, Darko can issue a temporary non-personalized access card for a deposit of 10 dollars (deposit will be returned upon return of the card). Also, there is a \$20/key deposit which is returned when keys are returned to Sara Warner in the main office ABB 156.

## 2.5 Orientation Meeting for Graduate Students

At the beginning of each term, a meeting is scheduled to provide introductions, information about the department, and a safety orientation. This meeting is mandatory for all new graduate students.

## 2.6 Bus Passes and Parking on Campus

Bus passes which allow unlimited transport on HSR (Hamilton Street Railway) buses throughout the school year are included as part of graduate students' mandatory fees.

Bus passes will be available for pick-up mid- August. To receive a new bus pass, please bring a valid student card to the Campus Store in Gilmour Hall B101, and visit any cash register in the store.

Campus store opening hours: <https://campusstore.mcmaster.ca/information/hours.html>.

### **For full-time graduate students, there is no additional cost for a bus pass:**

Full-time students have already been charged the HSR ancillary fee on their student accounts. There is no charge when picking up the card. In addition, a bi-fold card holder will be provided at time of pick-up; it's recommended to use this to hold both student card and bus pass, as HSR drivers require both cards to grant bus access.

For more information on the new bus pass, please visit [www.msumcmaster.ca/HSR](http://www.msumcmaster.ca/HSR) or email [macgsa@mcmaster.ca](mailto:macgsa@mcmaster.ca) if you have any questions.

For updates, follow the GSA on [Facebook](#).

For September admissions, you can pick up your student card in ABB 156 (main Chemistry office). If the student card is not there, go to SGS (Gilmour Hall, Room 212); Sara Warner can advise on the best time to do this. If you also require the HSR card, that can also be picked up in SGS. Please make sure you have completed your registration, and payment agreement.

Applications for a parking permit are available online (<http://parking.mcmaster.ca>), or from the Parking Office in the Clarke Building (Room 102, ext. 24232).

## 2.7 Full-time and Part-time Status

Excerpts from the Graduate Studies Calendar

(<https://academiccalendars.romcmaster.ca/index.php?catoid=42>)

### 2.5.2 Definition of Full- and Part-time Status

#### Full-Time Status

A full-time graduate student must:

- a. have been admitted to a graduate program as a full-time student;
- b. be pursuing their studies as a full-time occupation;
- c. identify themselves as a full-time graduate student;
- d. be designated by the university as a full-time graduate student;
- e. for most programs (and all research-based programs) be geographically available and visit the campus regularly. Other programs may have different requirements and may be conducted fully on-line. Without forfeiting full-time status, a graduate student, while still under supervision, may be away from the university (e.g. visiting libraries, doing field work, attending a graduate course at another institution, etc.) provided that, if any such period exceeds four weeks in any one term, written evidence shall be available in the Graduate Studies Office to the effect that this request has the approval of the department or program Chair and Graduate Associate Dean. For information on full time off campus please consult section 2.5.6.
- f. be considered to be a full-time graduate student by their supervisor or equivalent (designated by the program office)
- g. students who change status from full to part-time, do not receive any more time to complete their program and will continue to be charged tuition fees at the full-time level.
- h. students who change part to full time will have their term count re-set on a ratio of 2:1

All active graduate students other than full-time graduate students as defined above are part-time graduate students. See also section 3.6 or 4.6 for more information on program progression.

### 2.5.3 McMaster University's Regulations for Full- and Part-time Status

In accordance with the above provincial regulations, McMaster requires students to register annually, and to confirm their status as a full-time graduate student. Only full-time graduate students are eligible for scholarship support.

McMaster University complies with the OCGS document "Principles for Graduate Study at Ontario's Universities" (March 2017) which, in Resolution 5, states the following:

"Full-time graduate students are expected to pursue their graduate degree on a full-time basis and make satisfactory progress toward timely completion of all program requirements. It is not possible, or desirable, for the university to monitor and enforce the employment activities of its graduate students outside the university. However, it is both possible and desirable for the university to ensure that it does not itself create a structural situation that jeopardizes the ability of the graduate student to make full-time progress towards the completion of graduate program requirements. Accordingly, OCGS is committed to the principle that full-time graduate students are employed no more than an average of 10 hours per week on campus."

Full-time students who are participating in McMaster-based paid employment should work no more than an average of 10 hours a week to a maximum of 505 hours in the academic year. Normally students who exceed this limit are asked to drop down to part-time status, to stop working or reduce their hours of work. Changing student status from full-time to part-time will affect a student's scholarship funding, OSAP, and student visa status.

The University considers full-time students to be those that have their studies as their priority. All full-time students must be available to conduct research (as appropriate), participate in courses and the other activities required by their program. In some cases award holders may face employment restrictions, but it is the responsibility of the student to ensure their work arrangements are compliant with the terms of their awards. All active graduate students other than full-time graduate students as defined above are part-time graduate students.



## **2.8 Employment Regulations**

Excerpt from Section 2.5.4. of the Graduate Studies Calendar:

In the McMaster context, there are three terms in the School of Graduate Studies for purposes of interpreting the rule in Section 2.5.3 limiting employment with the University to ten hours per week on average: Fall (September through December); Winter (January through April); and Summer (May through August). These are deemed to have 17, 17, and 18 weeks respectively. The ten-hour limit includes work as a Teaching Assistant at McMaster.

## **2.9 International Students**

In accordance with provincial regulations, McMaster University requires students to register annually and to confirm their full-time status. New international students must provide the School of Graduate Studies with photocopies of their student visa and/or employment authorization when registering. Returning students who have recently renewed their visa documents must also submit copies to the School of Graduate Studies. The student number and program name (Chemistry & Chemical Biology) should be included on all copies.

Copies should be brought to the Chemistry & Chemical Biology office. It is the responsibility of every visa student to make sure the original visa documents are brought to the School of Graduate Studies. If these documents are not provided on time, it will be necessary to withhold student pay cheques until they are received and you will also not receive your student card.

## **2.10 Ontario Health Insurance**

Ontario Health Insurance Plan (OHIP) coverage is restricted to permanent residents who live in Ontario. Permanent residents are Canadian citizens, landed immigrants and convention refugees. International students are not eligible for OHIP coverage. Ontario Universities and Blue Cross have instituted a Health Insurance Plan (UHIP) which is mandatory for all visa students, unless they can provide evidence of an acceptable alternative coverage. All international students must complete a UHIP application form and return it to the International Students' Advisor in Gilmour Hall, Room 104.

Students applying for permanent resident status (landing) from within Canada are not immediately eligible for OHIP coverage unless the Federal Government confirms to the Ontario Ministry of Health that the applicant has passed the immigration medical examination. This rule also applies to accompanying family members.

More information about OHIP is available online at: <http://www.health.gov.on.ca/en/>

More information about UHIP is available online through International Student Services: <https://iss.mcmaster.ca/studentlife/healthcare/> and at: <https://gsamcmaster.org/health-dental/>

## **2.11 Social Insurance Number**

Through Mosaic, all students must provide a Social Insurance Number (SIN) as soon as possible for payroll authorization.

## 2.12 Research Placements Outside of McMaster University

Activities in which students conduct part of their graduate work outside of McMaster [not including conferences, meetings, seminars, visits to academic or related institutions, and student placements (parts of professional programs that are undertaken for academic credit) within Canada], require research activity assessment and approval. For more details, see RMM #801 (both the Guidelines and the Program document) in section 8 at: <http://www.workingatmcmaster.ca/rmm/>.

Risks are rated as Low, Significant or High, and can be due to the planned activity or travel/location. Low risk activities are those that may expose the participant to hazards that are greater than those encountered in their working lives but which can be minimized through planning, training, and standard operating procedures. For LOW risk activities only, based on the RMM-801 program document and guidance document, the following requirements must be met:

- Complete the RMM #801 *Research Activity Approval and Review Form*.
- Ensure that the activity has the support of the Chair of the department (by submitting the aforementioned form for signature by your supervisor and the chair).
- Review the Safety Travel Checklist (on pages 4-8 of the guidelines document)
- If at any point the risks associated with the activity change, revisit this process and adjust accordingly.
- No further action required (EOHSS Approval is NOT required).

## 3. ACADEMIC MATTERS

### 3.1 Supervision

Each graduate student will be supervised by a faculty member in the department. The supervisor, assisted by a supervisory committee, will provide leadership and guidance to the student. The supervisory committee will also monitor the student's progress. Committees are appointed by the Department on the recommendation of the student's research supervisor.

You can find University regulations regarding supervision and supervisory committees in the Graduate Calendar (sections 2.7, 3.5 and 4.4). Aspects of supervision specific to the Department of Chemistry & Chemical Biology are described below.

Note that graduate students are responsible for reporting cases of inadequate supervision to the Associate Chair in a timely fashion.

#### 3.1.1 MSc Supervisory Committees

Each MSc student will have a supervisory committee consisting of the student's supervisor and one other faculty member. The committee meets regularly (see below) and the students are encouraged to seek advice between meetings as well. Once you know who will be on your committee, please let Sara Warner, Grad Assistant in the Chemistry department know as soon as possible, this needs to be done within the first month of your arrival. After each meeting, forms must be completed and returned to the Sara Warner, Grad Assistant as soon as possible after the meeting. It is the responsibility of each student to schedule the meeting and to obtain the requisite forms (available here:

<http://www.chemistry.mcmaster.ca/graduate/forms>) to bring to the committee meetings. See below for more information:

- 1<sup>st</sup> Meeting --- after 8-9 months; usually April-May of the first academic year:

For the first supervisory meeting, the student will prepare a 6 page<sup>1</sup> report that introduces the research topic and research goal, describes the experimental approach as well as experimental results. Please make sure to include a summary at the beginning of your report. The summary should not exceed one page.

The purpose of this meeting is to give the student an opportunity to present their research topic, and early results, and to receive feedback from the committee. The meeting will start with a 20-30-minute oral presentation by the student, with about 30 minutes of questions and discussion (often questions are asked as the student proceeds through their presentation). The supervisory committee will want to assess whether the research objectives are clearly laid out, whether the student understands the research objectives and the background chemistry, and whether there are reasonable signs of effort and progress.

- 2<sup>nd</sup> Meeting --- after ~ 16-18 months; usually Dec-Feb of the 2<sup>nd</sup> academic year (this timing ensures that the meeting is well placed to discuss the possibility of a transfer to the PhD program, or the M.Sc. thesis outline, remaining research, and the timing of remaining lab work and thesis writing).

At this second meeting, the student will again present a brief overview of the project's goals, and will outline their experimental results; he/she will typically have publishable data, whether or not he/she plans to transfer to the PhD program. There should also be some discussion of relevant literature, and evidence that the student is participating in the design as well as the execution and interpretation of experiments. The student's report for this meeting will be about 20 pages<sup>1</sup> to give room for experimental results. Please make sure to include a summary page at the beginning of your report. As with the first meeting, there will be a 20-minute oral presentation, with questions and discussion (meetings are typically ~ 90 minutes long and room bookings should be for 2 hours).

For students planning to graduate with an MSc degree, the committee will look at the student's progress to date and, if necessary, make recommendations on what work must be accomplished for completion of the MSc thesis. The student must present a plan to finish all experimental work, submit drafts, and complete their thesis on time; *i.e.*, within 2 years of beginning the MSc program.

For students planning to transfer to the Ph.D. program, the committee will look at whether the student is on track for a transfer. *Alternatively, for M.Sc. students who intend to transfer to the Ph.D. program, and have strong support for this from their supervisor and committee, the transfer exam (see below for more details) can double as the 2nd M.Sc. committee meeting --- in this case, please be aware that:*

- *all transfer exams must take place within 22 months of your start date in the M.Sc. program (this deadline is from the School of Graduate Studies and is not flexible), and*
- *if you want the transfer exam to double as an M.Sc. supervisory committee meeting, please make sure you bring and complete both sets of forms (those for the transfer exam and those for an M.Sc. committee meeting).*

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<sup>1</sup> Double-spaced, 12 point font, 2.5 cm margins. Figures, tables, references, and appendices do not count in the page limit. The report should be submitted to committee members one week in advance of the meeting. Any presentations or publications arising from the student's research should be included in an appendix.

### 3.1.2 Transfer from MSc to PhD Program

We encourage graduate students registered in the MSc program, and interested in pursuing a PhD degree, to transfer to the PhD program without completing all of the formal MSc requirements. Transferring is an attractive route to the PhD degree, as it removes the need to write and defend an MSc thesis, and allows you to use your research results obtained to date as part of your PhD thesis.

The Transfer Exam is designed to make sure you have the skills needed to succeed in the PhD program. In addition to evidence of significant experimental progress, this includes a good understanding of the scientific principles of your research, and the ability to discuss your research in a broader context. Our graduate program offers multiple opportunities to hone these skills, including courses, meetings with your supervisor and committee, as well as TA duties and informal discussions with other graduate students and local and visiting faculty – we encourage you to take advantage of these opportunities!

Your supervisory committee will formally consider you for the transfer process around the time of your second supervisory committee meeting, and after you have completed most of your MSc courses and have made good progress in your research.

The transfer exam **MUST** be held within the 22 month period from your start date. If your supervisor and supervisory committee agree, the transfer exam may double as the 2<sup>nd</sup> M.Sc. supervisory committee meeting, so long as the transfer exam form, the change of status form and the M.Sc. committee meeting form are completed and submitted for this meeting. So, you will need a total of three forms, but only a single report suffices when you combine your 2<sup>nd</sup> M.Sc. supervisory committee meeting and the transfer exam. The single report should conform to the guidelines for the transfer report outlined below.

You will be asked to submit a Transfer Report (see below) summarizing your research results and outlining your plans for their extension into the PhD program. At the meeting, you will be asked to give a 20 min presentation summarizing your research, and then to field questions designed to test your background knowledge, familiarity with the research field, and research skills (~90 min).

Your transfer exam committee will consist of your MSc supervisory committee, one additional faculty member, and the chair of the exam (a member of the graduate oversight committee, for a total of four professors. The possible outcomes of the Transfer Exam are:

- Transfer approved
- Transfer approved with conditions, such as registration in specified courses, or required readings.
- Transfer not recommended. You would then be advised to submit and defend an MSc thesis by the end of term 6 (e.g. the end of August in year 2). You may subsequently apply to enter the PhD program.

#### *Preparation of the Transfer Report:*

The transfer report and the transfer exam differ from the earlier committee reports and meetings. Their purpose is to allow the transfer committee to assess your research progress and your level of scientific thinking as well as your future research plans. It is important that you structure your report and presentation according to these purposes.

The report should start with a review of the relevant literature, and then summarize the research questions you have addressed to date, supported by key results. It should not list every experiment you have carried out, but rather concentrate on results and the bigger picture. The report should go on to

explain how you plan to extend this research into your PhD program. Again, your focus should include discussion of the big picture, with enough detail to permit your committee to appraise your plan.

A central goal of the transfer report and exam is to clearly communicate to your supervisory committee: **(a)** the key questions that you plan to address during your Ph.D.; **(b)** the main aims that you propose for your doctoral research; **(c)** the related experimental plan. If possible, include also a statement of the central hypothesis that you plan to test during your Ph.D. studies.

In format the transfer report is closer to an extended supervisory committee report than to an MSc thesis, which typically requires much more detail. Manuscripts may be appended to the report. Transfer reports are typically 20 pages, double spaced, font size 12, plus tables, figures and references. Additional material can be included as an Appendix. Any manuscripts and published papers should be appended to the transfer report. In this case, the transfer report can be correspondingly shorter, briefly summarizing the highlights of that work, rather than reiterating the manuscript. Make sure to include a one-page summary at the beginning of your transfer report. We encourage you to show an early draft of the transfer report to your supervisor for feedback before the actual transfer meeting.

#### *Preparing for the M.Sc. Defense:*

The details of the M.Sc. defence are provided in section 3.6. (iii). In preparation for the M.Sc. defense, you will need to:

- a)** Ask your supervisor the name of an additional examiner, who must be different from the MSc supervisory committee member and who serves also as Chair of your M.Sc. defense.
- b)** E-mail the MSc thesis draft to the examination committee at least two weeks before the date of the defense, which has to occur within 24 months from the start of the MSc.
- d)** Schedule the MSc thesis defense at a time suitable for you and the professors involved in the defense.
- e)** Please make sure to bring to the M.Sc. defense three forms: *i.* Report on M.Sc. defense (available [here](#)); *ii.* Final Thesis Submission Sheet; *iii.* McMaster University License (for the last two forms see <https://gs.mcmaster.ca/current-students/completing-your-degree/masters-thesis/>)

### **3.1.3 PhD Supervisory Committee**

The PhD supervisory committee consists of the supervisor and two other faculty members. For students who transferred into the PhD program from the MSc program, this committee is typically the same as the examining committee from the transfer exam. These faculty members are usually, but not necessarily, from within the Department, and additional members may be added at the discretion of the Department.

Excerpt from the Graduate Studies Calendar (Section 4.4) --- the duties of the PhD supervisory committee will be as follows:

- to assist in planning and to approve the student's program of courses and research;
- to approve the thesis proposal;
- to decide, within departmental regulations, on the timing of the comprehensive examination and, where applicable, of the language and other examinations;
- to maintain knowledge of the student's research activities and progress;
- to give advice on research, usually through the student's supervisor;

- to provide the student with regular appraisals of progress or lack of it;
- to perform such other duties as may be required by the department;
- to report on the above matters annually, in writing, on the approved form to the department, which in turn will report to the Faculty Graduate Committee on Admissions and Study;
- to initiate appropriate action if the student's progress is unsatisfactory (indicated by a grade of marginal or unsatisfactory in a committee meeting), including any recommendation that the student withdraw, for approval by the department and the Faculty Committee on Graduate Admissions and Study;
- to decide when the student is to write the thesis and give advice during this process;
- to act as internal examiners for the student's thesis;
- to act as members of the examination committee for the final oral when so appointed.

The PhD supervisory committee must meet at least once per year, *before November 30<sup>th</sup>*, to review the student's progress. It is the joint responsibility of both the supervisor and student to ensure that supervisory committee meetings take place at the proper times. With respect to the timing of PhD committee meetings, important points are:

- Regardless of your start date (even Jan or May of the current year), a PhD committee meeting is required to have been completed before November 30<sup>th</sup> (even if you had an M.Sc. committee meeting and/or transfer exam within this time period - this is a regulation from graduate studies, and they are not currently showing flexibility with this).
- For students with a September start date, PhD meetings should typically be scheduled in Jan-May (*meetings later in the year are acceptable if this is unavoidable due to supervisory committee availability, but they must happen before November 30*).
- For students with a January or May start date in the PhD program (especially those who joined the PhD program in the current year), a committee meeting in September/October/November may be preferable, although an earlier PhD meeting is also fine. The only stipulation is that the meeting must take place before November 30<sup>th</sup>.
- Please note that ~\$8,000 of your PhD funding will not be transferred from grad studies to our department if your PhD committee meeting does not happen before the end of November each year, so it is very important that students and supervisors ensure that this happens!

More frequent meetings may be held at the student's or committee's request. After each meeting, a report must be completed and returned to the Associate Chair. It is the responsibility of each student to initiate the committee report forms and complete the student report before the meeting online through Mosaic 'Admin Tools'.

All PhD committee meetings will involve an oral presentation detailing progress and results since the last meeting (or transfer meeting), accompanied by questions from committee members and discussion of the results and future directions.

The exact format of reports or documentation required for a meeting may vary between research groups. Check with your supervisor before your first PhD meeting. Most committees will require a written report of progress, results, and future work. This must be delivered to the committee members at least one week before the meeting. Some committees may only require a hard copy of the slides from the oral presentation, also delivered to the committee members one week before the meeting. In all cases, any publications or drafts of publications since the last meeting should be appended to the report. Students are strongly encouraged to write up completed work continuously throughout their studies rather than waiting to write everything in the thesis at the end of their studies. Please include a summary page at the beginning of your report.

### 3.1.4 Supervisory Committee Report Forms

Supervisory committee meetings must be officially recorded by completing a Supervisory Committee Meeting Report form online through Mosaic.

Some sections of the report must be completed by the student *before* the committee meeting. The supervisory committee completes and electronically approves the report at the end of the meeting or as soon as possible after the meeting. The student then has the opportunity to read the committee's comments and approve the report. It is the joint responsibility of the student and the supervisor to see that written reports of each meeting are submitted promptly to the Chemistry & Chemical Biology office within a few days after the meeting. MSc reports remain in the Department, whereas PhD reports are electronically forwarded to the School of Graduate Studies and saved as 'milestones' in the student's record, after approval by the Associate Chair of Graduate Studies. More information about Ph.D. supervisory committee forms in Mosaic is available [here](#).

On the report, each committee member must indicate whether the progress made by the student has been excellent, good, satisfactory, marginal or unsatisfactory. If an unsatisfactory grade is given by any member of the supervisory committee, another committee meeting must be held within three to six months to re-assess the student's progress. A specific course of action will be recommended to help ensure a satisfactory result at the next meeting. The Associate Chair may be invited to attend this meeting (as a non-voting member) at the invitation of either the student or the supervisor.

If progress is deemed to be unsatisfactory (based on a rating of unsatisfactory or marginal by *all* committee members in a committee meeting), the supervisor will confer with the Associate Chair of Chemistry & Chemical Biology and/or the Associate Dean of Graduate Studies (Science) to decide what further course of action to take, which could include asking the student to withdraw from the program.

In all cases, a student will be asked to withdraw from the program if progress is deemed to be unsatisfactory (as determined by unanimous unsatisfactory or marginal supervisory committee ratings) at two consecutive supervisory committee meetings.

## 3.2 Chemistry & Chemical Biology Degree Requirements

### ▪ MSc Degree

The minimum course requirement for the MSc degree is four graduate modules or the equivalent, selected from Chemistry & Chemical Biology 700-level courses, 600-level courses (one module credit each; a maximum of one 600-level course may be included in the minimum course requirement), or extra-departmental graduate courses (usually full-term graduate courses worth two module credits each). Students are strongly encouraged to complete a minimum of two prescribed modules within their sub-discipline, and all extra-departmental courses must be relevant to the student's research and approved by the supervisor. *Additional courses beyond the minimum requirement may be recommended by the supervisory committee.*

For graduate students, the minimum passing grade for any module or course is B-.

MSc candidates must also present a departmental research colloquium (see below). In addition, a thesis embodying the results of original research must be defended in a final oral examination.

Students who have satisfactorily completed the requirements for the MSc degree and have made satisfactory progress in their research may apply to the Department for transfer to the PhD program, without first satisfying the MSc thesis requirement. The transfer must occur within 22 months of starting the M.Sc. degree. In the case of an early transfer, the requirement for a departmental research colloquium can also be fulfilled during the year following the transfer. The transfer examination

involves the submission and defence of a report detailing the student's research progress and a comprehensive proposal for future research (see above).

- **PhD Degree**

The minimum course requirement for the Ph.D. degree varies with sub-disciplines as follows:

*Analytical, Organic, Physical, and Theoretical Chemistry:* There is no course requirement at the Ph.D. level for students who have completed the M.Sc. requirements. Students with direct entry into the Ph.D. program (with or without first completing an M.Sc.) must complete a minimum of two graduate modules or the equivalent, and must present a departmental research colloquium.

*Inorganic Chemistry:* The minimum course requirement for students in this sub-discipline is two graduate modules or the equivalent beyond the requirements for the M.Sc. degree. In addition, students with direct entry into the Ph.D. program (with or without first completing an M.Sc. elsewhere) must present a departmental research colloquium.

*Additional courses may be recommended by the supervisory committee in cases where background is deemed inadequate for the research being undertaken.*

All Ph.D. candidates must pass a Comprehensive Examination (described in more detail in Section 3.3), normally taken within the first 20 months after beginning Ph.D. work (with an upper limit of 24 months) that tests breadth of knowledge within the student's major field of study. The Comprehensive Examination will require the submission of a document that provides a review of a relevant, current field of research, along with an original proposal for research. The defence will consist of a 20-minute oral presentation, followed by an oral examination.

A thesis embodying the results of original research must be defended in a final oral examination. In their final year of study, PhD students must present a departmental seminar on their research before defending their thesis. Details about the thesis submission process can be found [here](#).

### **3.3 Comprehensive Examination**

The comprehensive examination provides practice in developing and defending new research ideas, and is designed to foster creative and broad critical thinking. It involves a literature review and research proposal, and its discussion in a broader context. The topic must be significantly different from the immediate research project being carried out by the student, but can be within the same general field. For example, a student in an organic synthetic group can propose to do a synthesis of a natural product, but the methodology required should be different than what the student is using in his/her research. In general, you should strive to challenge yourself by choosing a topic that you are interested in, but know little about.

All comprehensive examinations will be held in February of each year, and normally take place within 20 months from the start of your Ph.D. degree, with an upper limit of 24 months. Students will be notified of the deadline for submission of two different topic outlines to the comprehensive committee, developed in consultation with their supervisor. These topic outlines are 1-page documents that provide 1-2 paragraphs about the topic, as well as a brief description of the direction the proposal will take, and ~5 leading references.

The committee will approve one of the topics, which will be emailed to the student on the first day of the examination. Students then have 3 weeks to prepare a written document (~20 pages, Times Roman 12 point font, double spaced, not including figures and tables, the title page, references, and any table of contents or abstract) containing both a review of the field (~50%) and a proposal for novel,



feasible and worthwhile research in this field (~50%). This should include a clear statement of the aim of the proposal, and discussion of key methodology, and in terms of the scope of the proposal, you should pretend that you are a starting professor or a new employee at a company, and need to employ 1-3 people for ~5 years with your ideas. A carefully written proposal, based on innovative ideas and sound science, will go a long way towards a successful comprehensive examination.

During this process, students should submit a draft copy of the proposal to the committee after 2 weeks, and receive general feedback through the supervisor. The final proposal is due to the committee exactly 3 weeks after the topic is assigned, and the oral examination (~2 hours in duration) will normally be scheduled for the following week. In the oral part of the examination, students will be expected to give a 15-20-minute summary presentation and then field questions concerning both the proposal and the general research area. The format of the oral examination is similar to that of a transfer examination or Ph.D. defense, with two rounds of questioning by the committee. Note: questions can be very broad in scope, and will assume a sound understanding of undergraduate-level concepts. Most questions start with something related to the comprehensive topic and submitted document, but can then extend to fundamental concepts that the student is expected to know.

At the end of the meeting, the committee will deliberate briefly, and then provide the student with their decision and feedback. The possible outcomes are: (1) pass with distinction, (2) pass, or (3) fail. With proper preparation, students should expect to pass the comprehensive examination. However, in the event of a fail, one retake of the oral or the complete comprehensive exam is possible within 2 months.

## Guidelines

**How to prepare for the comprehensive exam:** Graduate students learn to discuss new research ideas throughout their studies. For example, your supervisory committee meetings are good places to learn how to generate and discuss ideas, and to become familiar with the fundamental concepts in your area of research. The “comp” is just one more opportunity to do this, and also provides good practice for your thesis defense.

**How to find good proposal topics:** Ideas for proposals often come from current literature or seminars, or may be extensions of your current research or course work (but not too closely related). Sometimes it helps to ask yourself what you might like to work on in a new post-doctoral, industrial or faculty position. Proposals may involve the preparation of new compounds, the study of reaction mechanisms, or the design of new ways to measure or predict compositions and properties. Your supervisor will work with you to identify and define two suitable proposal topics. Your two topic outlines should convey the scientific questions, and your excitement about pursuing them.

## 3.4 Graduate Courses

The Department of Chemistry & Chemical Biology offers graduate courses in the form of modules, which are short quarter courses of six weeks duration with generally 3 hours of lectures per week. Approximately eight to ten different modules are offered every year in three time periods, one in the Fall term (Nov-Dec; Named term 1-2 or term X) and two in the Winter term (Jan-Feb & Mar-Apr; named terms 2-1 and 2-2, respectively, or terms Y and Z). Each year, available graduate courses are listed in Mosaic before the end of the Summer.

### 3.4.1 Zero-credit Grad Courses Required by Grad Studies

All graduate students, including part-time students, must complete and pass the course SGS-101 (Academic Research Integrity and Ethics) within the first twelve months after their admission

to graduate studies at McMaster. The purpose of this course is to ensure that the standards and expectations of academic integrity and research ethics are communicated early and are understood by incoming students. All students are required to take and pass SGS-101. Students may not graduate or register in subsequent academic year without having successfully completed this course.

All graduate students are also required to complete and pass SGS-201 (Accessibility for Ontarians with Disabilities Act; AODA), which can be completed on-line ([www.mcmaster.ca/accessibility](http://www.mcmaster.ca/accessibility)). Students may not graduate or register for subsequent years in their program until they have completed their required training.

### 3.4.2 Sessional Dates, Add/Drop Deadlines

Sessional dates and add/drop deadlines for courses and modules are listed in the Graduate Calendar (<http://registrar.mcmaster.ca/category/dates/sessional/>). Note that the add/drop deadlines are not the same as for undergraduate courses.

### 3.4.3 Chemistry Graduate Course List

Brief descriptions for all Chemistry modules (offered periodically) are available by scrolling down the page at: <https://www.chemistry.mcmaster.ca/graduate/graduate-courses.html>. For more detailed information about the content and format of particular graduate modules, students are encouraged to consult with the course instructors directly.

### 3.4.4 Auditing (rather than enrolling in) Graduate Courses

Graduate students may audit graduate courses, in which case a record of the course appears on the student's transcript (as audited, but with no grade). For a course to be audited, the student is required to attend >80% of the lectures, or the equivalent for non-lecture-based courses. Note: it is only possible for grad students to audit grad courses, not undergrad courses, and to audit, students should **not** register through mosaic). In order to audit a graduate course, a graduate student should:

- Obtain a copy of the course outline from the course instructor, and discuss the requirements for auditing the course.
- Before the start of the course, fill out the top part of auditing form ([https://gs.mcmaster.ca/sites/default/files/resources/audit\\_course\\_fillable.pdf](https://gs.mcmaster.ca/sites/default/files/resources/audit_course_fillable.pdf)), sign the form, and obtain signatures from your supervisor and the course instructor.
- At end of the course, the instructor will check the appropriate box on the auditing form to say yes/no whether student attended at least 80% of the lectures (or equivalent for courses with a non-lecture-based component).
- If the course was successfully audited, the form is then provided to Sara Warner, who will obtain a signature from the chair or associate chair, grad studies, and then send the form over the graduate studies, who will manually input the record of Auditing into Mosaic.
- If the course was not successfully audited, no further action is taken and no record of the course appears on the student's transcript.

### 3.4.5 Module / Course Failure

The university stipulates that the minimum passing grade is B- in all graduate courses or modules. A grade below B- is considered a failure. All instances of failures are reviewed by the appropriate Faculty Committee on Graduate Admissions and Study or the Associate Dean. In the absence of a favorable departmental recommendation to allow the student to continue, the student will be required to withdraw. Those allowed to remain in the program must either repeat or replace the failed course. Students who fail a second course will be required to withdraw from the program without exception.

### 3.4.6 Course Assessment by Students

The student feedback on all Chemistry & Chemical Biology graduate modules is requested. Each student will be sent a course evaluation that will be completed online. Students remain anonymous. The information will be provided to the instructor to help to maintain and improve the usefulness and quality of our module offerings.

## 3.5 Seminars and Colloquia

***All graduate students are expected to attend departmental seminars and colloquia regularly.***

MSc and direct-entry PhD students are required to present a departmental colloquium on their research progress in their second year of study (the Chemistry Graduate Colloquium day is typically held at the end of April each year; talks are usually 25 min. including questions). PhD students must also present their research work in a departmental seminar (50 min. including questions) during their final year of study before defending their thesis.

Students are encouraged to use computer-based presentation programs such as PowerPoint. If the presentation is taking place in either A204, A304 or A404, projectors are provided in these rooms. If the presentation is taking place elsewhere, it is the student's responsibility to check whether a projector is available in the room, and if not, to reserve a projector (available in the Chemistry & Chemical Biology office, ABB 156) well in advance (at least 24 hours). The computer and projector must be set-up properly *well in advance* of the start of the seminar and be returned to the Chemistry & Chemical Biology office immediately afterwards.

## 3.6 Thesis and Oral Defence

Students should consult the "Guide for the Preparation of Masters and Doctoral Theses" <https://gs.mcmaster.ca/current-students/completing-your-degree/> the guide explains the style and format preferred by the School of Graduate Studies. An archive of MSc and PhD theses from McMaster is available for download in PDF format on MacSphere (<https://macsphere.mcmaster.ca>).

For a list of MSc and PhD thesis from our department in reverse chronological order going back all the way to 1946, try this link:

[https://macsphere.mcmaster.ca/simple-search?location=&query=&filter\\_field\\_1=department&filter\\_type\\_1=contains&filter\\_value\\_1=Chemistry&rpp=100&sort\\_by=dc.date.issued\\_dt&order=DESC&etal=0&submit\\_search=Update](https://macsphere.mcmaster.ca/simple-search?location=&query=&filter_field_1=department&filter_type_1=contains&filter_value_1=Chemistry&rpp=100&sort_by=dc.date.issued_dt&order=DESC&etal=0&submit_search=Update)

The submission of MSc theses is arranged within the Department according to the process outlined below. On the other hand, PhD thesis submissions and defences are organized by the School of Graduate Studies, <http://graduate.mcmaster.ca>.

Process for completing an MSc thesis:

- i) The student is given permission to write the thesis when they have conducted sufficient research to justify preparation of a thesis. Permission to write may be conditional (i.e., permission to write after a defined list of experiments are complete).
- ii) Drafts of chapters of the thesis should be provided to the supervisor for review and comments/corrections as thesis writing progresses. A first complete draft of the thesis document is also submitted to the supervisor for review and critical comments. After suitable revisions and approval by the supervisor, the revised version of the thesis may be submitted to the Examination Committee, which consists of the supervisory committee and one other qualified faculty member selected by the supervisor. The final version of the thesis must not exceed 150 pages (at least 12 pt. font, double-spaced letter-size paper), including all figures, and tables, but excluding table of contents, title page, references and appendices.
- iii) The MSc thesis defence is organized by the supervisor at least two weeks after submission of the thesis. The MSc defence requires an examination committee composed of your two-member M.Sc. supervisory committee (see above) and an additional examiner who serves also as chair. The defence is open to the public. The chair will usually start the defence by asking all persons except the Examination Committee to leave the room, in order to discuss the format of the examination and the responsibilities of the examiners. The examination will consist of an oral presentation (15 - 20 minutes) by the student, followed by a series of questions asked by the members of the Examination Committee in turn. The defence should not normally exceed two hours in duration. At the end of the defence, the Examination Committee will consider their verdict in closed session. The Chair will then call the student into the room to give the committee's decision.
- iv) When the student has made any further corrections and revisions suggested by the examiners to the satisfaction of the supervisor and Examination Chair, then the student submits the final version to the School of Graduate Studies electronically. The detailed instructions and forms are at <https://gs.mcmaster.ca/current-students/completing-your-degree/masters-thesis/>. The MSc degree will be awarded on receipt of a thesis submitted electronically according to the regulations of the School of Graduate Studies.

Process for completing a PhD thesis:

- i) The student asks the supervisor for "permission to write" the thesis. This request is considered formally at a Supervisory Committee meeting, usually after the student has summarized his/her research. The majority of the committee must agree with the request. Permission to write indicates that the student has conducted sufficient research to justify preparation of a thesis. The Supervisory Committee may give conditional permission to write (i.e., permission to write after a defined list of experiments are complete).

- ii) Drafts of chapters of the thesis should be provided to the supervisor for review and comments/corrections as thesis writing progresses. A first complete draft of the thesis document is also submitted to the supervisor for review and critical comments.
- iii) Once the thesis is complete, the defence process must be initiated by the student electronically in Mosaic. After logging into Mosaic, navigate to your Student Centre and under the "My Academics" tab select 'other academics' and then select 'Thesis Intent-Defend my Thesis' to initiate the process (it typically takes about 8 weeks from this point until the thesis defense).
- iv) Within the following week, your supervisor will suggest 3 possible external examiners, and your supervisory committee will have to approve this selection. From this list of recommended external examiners, the School will contact one examiner and secure his/her agreement to read the thesis and provide a written report.
- iii) After approximately 2 weeks, the candidate is required to submit an electronic copy of their thesis (pre-defence version) and to suggest a date for the thesis defence (in consultation with his/her committee members). In the remaining time before the defence, the examining committee will read the thesis and prepare questions and comments. The external examiner will also report back to the Dean of Graduate Studies whether or not the thesis is acceptable for defence. If it is acceptable, the School of Graduate Studies will confirm the date and time, and will arrange the location for the examination.
- iv) The PhD defence is organized by the Thesis Coordinator in the School of Graduate Studies. The Examination Committee will consist of the supervisor, the Supervisory Committee members, the external examiner (if he/she wishes to attend in person or via Skype; if not, an internal external examiner - a McMaster faculty member from outside of the department - will typically take their place) and the Examination Chair.
- v) A PhD Examination Chair, appointed by and representing the Dean of Graduate Studies, will oversee the PhD defence; the Examination Chair does not read or evaluate the thesis and does not have voting privileges. The examination is open to the public. The examination is conducted in essentially the same manner as described for the MSc defence (see above). Any questions posed by an external examiner unable to attend the examination will be asked by either the supervisor or the Chair in proxy.
- vi) When the student has completed all revisions and corrections, the final thesis is submitted to the School of Graduate Studies electronically. Please follow this link for the details regarding the submission of the theses, <https://gs.mcmaster.ca/current-students/completing-your-degree/doctoral-degree/> and the forms that are required. The PhD degree will be awarded on receipt of a thesis according to the regulations of the School of Graduate Studies.

### **3.7 Review of Academic Decisions**

Excerpt from the Graduate Studies Calendar (Section 6.3):

- The University has a responsibility to provide fair and equitable procedures for the lodging and hearing of student complaints arising from University regulations, policies and actions that affect them directly. The procedures described in the Student Appeal Procedures are intended to provide a mechanism to remedy injustices and may culminate in a hearing before the Senate Board for Student Appeals.

- Students are strongly encouraged, however, to pursue any complaint or grievance through informal channels, before following the formal procedures. Experience has shown that many complaints can be resolved satisfactorily through informal communication.
- A graduate student should consult with the Chair of his/her Supervisory Committee (or the Department Graduate Advisor where no committee exists), the Department Chair and/or the Associate Dean of Graduate Studies before beginning the formal appeal process.
- Students should seek remedies for their grievances as promptly as possible, and must do so within six months of the academic year in which the grievance occurred.
- A Master's or doctoral thesis is specifically excluded from the re-read procedures identified in the Student Appeal Procedures, as is a PhD comprehensive exam. If a student does poorly in any of these examinations, the original examining committee is required to allow the student a second opportunity at the examination after at least a week. If the student fails on that second attempt, no further "re-read" of the examination is permitted.

The full procedures for student appeals are available at <https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/>.

## 4. SCHOLARSHIPS AND AWARDS

### 4.1 External Awards

External awards tenable at the University are given by federal and provincial government agencies and other private organizations that rely on McMaster University to recommend candidates, facilitate payments, and ensure compliance of terms and conditions of the award. Examples of these agencies/awards include the Canadian Institute of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), the Social Sciences and Humanities Research Council (SSHRC), and the Ontario Graduate Scholarships (OGS). Applicants must be invited by their department to submit an application to these competitions and verify eligibility requirements with the external agencies. Awards from external agencies are sometimes renewable.

The application process for these external awards is usually held in the year prior to receipt of the award (for example, competitions are held in the Fall for awards starting in May or September of the subsequent year, or January of the year following this). Applications and eligibility requirements are usually indicated on respective government agency web sites by late August.

The major external scholarships available to Chemistry graduate students are offered by the Natural Sciences & Engineering Research Council (NSERC) - Postgraduate Scholarships (PGS) and Canada Graduate Scholarships (CGS) for Canadian citizens or Permanent Residents, and by the Ontario Government - Ontario Graduate Scholarships (OGS).

Award application deadlines vary, but NSERC/OGS doctoral (PhD) and PDF applications are typically due in early October of each academic year (with a departmental deadline in late September), while NSERC/OGS masters (MSc) applications are due later; early January in recent years.

*Note: At McMaster, NSERC and OGS awards are evaluated in the same competition, so there is not a separate call for OGS applications. Therefore, all NSERC-eligible students who wish to be considered for an OGS award, should submit an application for an NSERC award. See the section on OGS awards (below) for more details.*

In case of a successful application, students must provide a copy of the award notice of any externally funded scholarship to the Grad Assistant (ABB-156). As the recipient of a CIHR, NSERC, SSHRC, OGS or similar award, the student may also be required to complete acceptance/refusal forms, and provide copies to the department. If the student changes his/her status, or is granted a leave of absence, the student may be required to notify the external agency as outlined in the guidelines (or terms and conditions) of the award. It may also be the case that the external award is subject to restrictions that require altered terms of the original letter of offer, or else forfeit the award.

## **NSERC**

All McMaster NSERC and OGS scholarships from NSERC-eligible applicants are assessed and ranked by a central university scholarships committee. Then, the applications are forwarded to NSERC along with these rankings, and the NSERC committee meshes the rankings from all universities. After NSERC award winners have been identified, runners-up on the university ranking list will be offered OGS awards.

All MSc level NSERC awards are CGS-M (Canada Graduate Scholarship; Masters) awards.

PhD level NSERC awards are PGS-D (Postgraduate Scholarship; Doctoral) and CGS-D (Canada Graduate Scholarship; Doctoral) awards; there is just one competition for NSERC doctoral awards (i.e. students do not apply separately for PGS-D and CGS-D awards), and the distinction is that only the top tier of NSERC doctoral award recipients are awarded a CGS-D award.

NSERC CGS-M Awards are awarded for 1 year, and selection criteria are heavily weighted on a student's academic performance in undergraduate courses. NSERC PGS-D and CGS-D awards are for 2-3 years to PhD students. Their selection criteria place more weight on research accomplishments, particularly publications and oral or poster presentations at conferences.

NSERC Scholarship Selection Criteria Weightings

	CGS-M (%)	PGS-D & CGS-D (%)
Academic excellence	50	30
Research ability or potential	30	50
Communication, interpersonal and leadership abilities	20	20

## **OGS**

As noted above, all students who submit an NSERC award application will be considered for an OGS award. Therefore, all NSERC-eligible students who wish to be considered for an OGS award, should submit an application for an NSERC award. After ranking of all McMaster applications by a central scholarship committee, and once NSERC award winners have been identified, runners-up on the ranking list will be offered OGS awards.

For students who wish to be considered for an OGS award but are not NSERC-eligible (e.g. students who are not Canadian citizens or permanent residents), a small number of additional OGS awards (typically 2 or 3) are provided to the program, to be allocated by the Scholarship Committee in a separate competition, with applications due each year in the Spring (typically in April).

## 4.2 Internal Awards

### University Awards

University awards (e.g. Queen Elizabeth II Graduate Scholarships in Science and Technology (QEII-GSST), Ontario Graduate Fellowships, OGS International Awards, NSERC CGS-Michael Smith Foreign Study Supplements) are made primarily on the basis of academic qualifications set by the Scholarships Committee of the School of Graduate Studies. Students will receive notification of procedures for applying for these awards during the Winter term of each year.

### Departmental Awards

A number of Chemistry & Chemical Biology scholarships and bursaries are awarded at the end of each academic year (in the Summer) by the School of Graduate Studies upon recommendation by the Department's Graduate Reviewing and Scholarships Committee. The selection criteria include performance in course work and in thesis research (publications, conference presentations etc.) as well as citizenship within the department or the university.

Academic CV's are used in the departmental selection process, and all students are strongly encouraged to maintain an up-to-date CV on file in the Chemistry & Chemical Biology office. The information contained in the academic CV includes courses taken, publications, conference presentations and relevant citizenship activities. A CV template is available at:

<http://fhs.mcmaster.ca/facultyrelations/documents/CVGuidelinesforincomingPartTimeFaculty.pdf>

Departmental awards include:

- International Excellence Awards
- Faculty Ontario Graduate Scholarship (OGS) Awards
- The Brian McCarray Graduate Chemistry Scholarship
- The Dr. Ronald J Gillespie Prize
- Impact Awards (for students in Chemistry who have published a particularly high impact research article or communication; the student is typically first author, the impact factor is typically >10, and 2-3 are typically offered each year).
- Manske-McLean and Brooman Bursaries
- The James A Morrison Scholarship and Arthur Bourns Ontario Graduate Scholarship (both are in-name-only awards for existing OGS winners)
- Ed Hileman Travel Awards to assist with the cost of conferences in North America (value \$500).<sup>2</sup>
- Russell Bell Travel Awards to assist with the cost of conferences outside of North America (typically \$1000-2000).<sup>2</sup>

*Note: the GSA also offers \$500 travel awards with 2 deadlines for applications each year, typically in September and May,*

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<sup>2</sup> It is highly preferred that the travel refund request related to this award is submitted when the travel awardee is still a graduate student.



### 4.3 NSERC Postdoctoral Fellowships

Students considering applying for an NSERC PDF are encouraged to consult the NSERC web site ([http://www.nserc-crsng.gc.ca/Students-Etudiants/PD-NP/PDF-BP\\_eng.asp](http://www.nserc-crsng.gc.ca/Students-Etudiants/PD-NP/PDF-BP_eng.asp)), and to discuss their plans well in advance with their supervisor and members of their supervisory committee.

## 5. THE ADMINISTRATIVE ORGANIZATION

### ▪ The University

All matters pertaining to Graduate Studies at McMaster University are the responsibility of the Dean of the School of Graduate Studies. The Dean of Graduate Studies may delegate certain responsibilities to the Associate Dean of Graduate Studies (Science).

### ▪ The Department of Chemistry & Chemical Biology; Chemistry Graduate Program

Within the Department of Chemistry & Chemical Biology, the Chair and the Associate Chair, Grad Studies are responsible for all aspects of the graduate program in collaboration with the relevant departmental graduate committees. The Departmental Administrator and the Graduate Assistant maintain academic, financial and administrative records for each graduate student. They and the Associate Chair also serve as liaison between graduate students and the School of Graduate Studies.

### ▪ Associate Chair, Grad Studies in Chemistry

The Associate Chair, Grad Studies co-ordinates the work of the graduate committees. Together with the Teaching Assistant (TA) Coordinator, the Chair is responsible for the assignment of TA duties to graduate students. The Associate Chair chairs the Graduate Admissions and Recruiting Committee, the Graduate Oversight Committee, the Graduate Curriculum Committee, and the Graduate Reviewing and Scholarships Committee, and the MSc to PhD transfer examinations. The Associate Chair also becomes involved in issues requiring informal or formal intervention related to course work, supervision, appeals, *etc.*

### ▪ Graduate Admissions and Recruitment Committee

The committee determines the admissibility of applicants to the Chemistry graduate programs and develops recruitment strategies for attracting new graduate students. The committee is typically composed of three faculty members and the Associate Chair (*ex officio*).

### ▪ Graduate Curriculum Committee

The committee deals with matters of graduate curriculum and policies affecting graduate work in Chemistry. Specific duties include: (i) evaluation of new courses or changes to existing ones, (ii) evaluation of new or changed programs, (iii) all academic aspects of graduate studies in Chemistry not directly related to an individual's research, including the colloquium and seminar programs, comprehensive examinations, and policy on supervisory committees.

### ▪ The Graduate Reviewing and Scholarships Committee

The committee reviews the progress of every graduate student annually. It makes recommendations in instances of failure in a graduate course or in a comprehensive examination. The committee is also responsible for the selection and ranking of nominees for scholarships (NSERC and OGS) and other university or departmental awards. The committee is typically composed of four faculty members and the Associate Chair (*ex officio*).

▪ **The Graduate Colloquium Committee**

This committee is responsible for the operation of the colloquium program and, with the Graduate Curriculum Committee, is responsible for policies of the program. This committee is composed of two faculty members plus a number of graduate students who help with the organization of the colloquia.

## **6. FINANCIAL MATTERS**

### **6.1 Minimum Financial Support**

Students who have been in the PhD program for less than 4 years are "in time", those who have been in the program for more than 4 years but less than 6 are "over time", and any students who have been in the program for 6 or more years are "out-of-time", and are required to withdraw from the program (in the absence of a successful petition for special consideration to Graduate Studies). M.Sc. students are classified similarly, with the "in time"/"over time" and "over time"/"out of time" transitions after 2 and 3 years, respectively.

A minimum level of financial support (stipend) is guaranteed for all in-time graduate students, which consists of a Teaching Assistantship (TA) and a research scholarship paid from their supervisor's research grant.

The minimum stipend is set each year by the department. The normal maximum time allowed for completion of MSc and PhD degrees (full-time) is three and six years, respectively. It is, however, expected that students will complete an MSc degree in two years and a PhD in five years, from the B.Sc. level. TA support (or equivalent research stipend support, or departmental scholarship support) is guaranteed for periods of two years in the MSc program and four years in the PhD program. TA support after the fourth year of PhD studies is not generally available, and research scholarship support from the supervisor may also be unavailable. Therefore, all students are encouraged to work hard, efficiently, and purposefully (with a view towards accomplishing specific research goals within defined time periods), in order to ensure that they stay on-track to complete their degree in a timely fashion.

Some students win scholarships, fellowships or bursaries which provide financial support through some or all of their time as graduate students. The stipends of students with external or internal scholarships are higher than those without scholarships.

### **6.2 Teaching Assistantships**

At the beginning of each academic year, the TA positions are assigned by the TA co-ordinator in consultation with the Associate Chair and the course instructors. TA salaries and conditions of employment are regulated by the School of Graduate Studies and CUPE, Local 3906.

New graduate students are normally assigned full TA duties equivalent to 260 hrs per year, in 4 units of 65 hrs each.

Students holding major external awards (e.g., NSERC, OGS) are normally assigned reduced teaching (TA) loads; typically, 1 unit p.a. for NSERC-CGSD, 2 units p.a. for NSERC-PGSD or CGSM, and 3 units p.a. for OGS. More information can be obtained from the TA coordinator or the Associate Chair.

### 6.3 Tuition

Tuition fees for graduate students are determined annually by the Board of Governors of the University. Applicable tuition fees and other miscellaneous fees are listed in the current Graduate Calendar (Section 5.1) <http://future.mcmaster.ca/money-matters/cost-estimator/>.

For students paid for a period which is less than 12 months, tuition fees for the academic year, September to August, will be deducted in monthly instalments during that period (*i.e.*, if a student is being paid for four months, all the fees will be deducted during that period).

Students must be registered and pay tuition until their thesis (MSc or PhD) has been submitted to the School of Graduate Studies (unless a student is on leave of absence or decides to withdraw in good standing and then re-apply at a later date, typically for the purpose of submitting and defending the PhD thesis). If a student completes the degree requirements before the end of the academic year, he/she will be entitled to a refund. (This does not apply to students who are readmitted.) The refund is based on the number of full months remaining in the academic year at the time when the academic change form is received by the School of Graduate Studies.

International students in Term 7 or greater of a Masters program will pay Canadian fees. Full-time Ph.D. students (Canadian and international), who have reached term 13 or greater of their Ph.D. studies, will be charged tuition at a discounted fee rate. The discounted tuition rate is normally equal to 1/2 of the Canadian tuition rate. Students on leave of absence do not pay tuition fees but do pay mandatory supplemental fees. Students who are on leave for a complete academic year do not pay mandatory supplemental fees. Students who have "withdrawn in good standing due to time limit" do not pay fees until readmission.

Graduate studies publishes a deadline by which time theses must be submitted for each academic term. Deadlines for each term are published online under the "Sessional Dates" heading with the Graduate Calendar.

### 6.4 Student Pay

The following information has been compiled to assist you in understanding your stipend as a full-time graduate student:

#### Where handled

The Department Administrator is responsible for completing payroll authorization forms for graduate students, and providing letters outlining payment schedules for the year. Inquiries regarding payroll issues should be directed to the Department Administrator.

#### Employee Number

Each student has a student number, which is the same as their employee number

#### When Available

Your pay is deposited directly into your bank account on the last Thursday of each month, except in December. December pay is deposited on the second Thursday of the month. The statement of earnings will be placed in your mail box at the end of each month.

Vacation pay is included in your TA wages, as per Article 20 in the collective agreement between CUPE and McMaster University. You will not receive a lump sum payment at the end of the year.

All outstanding account balances (e.g., bookstore, library, parking fines, etc.) at the end of December, April and July will be deducted from the next month's pay.

## 6.5 Taxes

The University is required by law to deduct Unemployment Insurance and Canada Pension premiums on all *employment* income, (e.g., TA payments). Federal Income Tax is assessed on all income, including scholarships and bursaries. You may obtain a Tax Exemption Return (form TD1) from the School of Graduate Studies if you have additional exemptions (e.g., you are supporting a spouse in Canada) which will change the rate at which you are taxed.

Tax forms (T4 and T4A slips) are sent by the end of February to your address listed in MUGSI. If you do not receive these forms, please contact The School of Graduate Studies.

## 6.6 Union Dues

If you receive a TA, you are a member of CUPE (Canadian Union of Public Employees Local 3906). Union dues will be deducted for each month in which TA wages are received. Copies of the current agreement between CUPE and McMaster University are available at the School of Graduate Studies (<https://hr.mcmaster.ca/resources/collective-agreements-contracts/>)

## 6.7 Dental Plan

All full-time graduate students receiving a TA have Dental Plan premiums deducted each month for the full year (September to August). If you will not be receiving any cheques from the University during the May to August term but will continue to be registered as a full-time graduate student, the premiums for that term will be deducted in April along with the April premium.

Provisions for opting-out of the Dental Plan or for obtaining family coverage are covered in a separate document. Please contact the CUPE office for information.

## 6.8 Vacation, Leave of Absence, Maternity or Parental Leave

Full-time students are obliged to be on campus, except for vacation periods or authorized off-campus status, for all three terms of the university year. Students who absent themselves from campus for more than two weeks during the fall or winter terms or four weeks in the summer term, without permission from the Department and the appropriate Associate Dean of Graduate Studies, will be deemed to have withdrawn voluntarily from graduate study. Students may arrange, through the Department and the Associate Dean of Graduate Studies, to be "full-time off-campus" for periods of up to a year. In cases of unauthorized absence, the student will have to petition for readmission. The appropriate Committee on Graduate Admissions and Study will rule on each request on a case-by-case basis. No guarantee of readmission or of renewal of financial arrangements can be made. For detailed information on leaves of absence and parental leave, see: [https://academiccalendars.romcmaster.ca/content.php?catoid=37&navoid=7553#2-5-7\\_leaves\\_of\\_absence](https://academiccalendars.romcmaster.ca/content.php?catoid=37&navoid=7553#2-5-7_leaves_of_absence)

**Excerpt from the CUPE collective agreement (Section 20.02):**

Employees will be allowed a total of two (2) weeks' vacation, which may be taken during the mid-term recess or subsequent to the completion of employment duties within an academic term during which they are employed. Scheduling of vacations shall be subject to the academic and residency requirements of the employee's programme of studies.

Procedures concerning Leaves of Absence are described in the Graduate Studies Calendar (Section 2.4.5). Request forms are available at <http://graduate.mcmaster.ca/resources> (Petitions for Special Consideration to the Committee for Graduate Admissions and Study).

## 6.9 Financial Statement

During August, a letter with details of the financial support for the coming academic year is sent to each student. The details will include any external or internal awards, TA salary and any contribution from the supervisor's grant(s).

## 7. ACADEMIC INTEGRITY

The Senate Academic Integrity Policy specifies the procedure to be followed in the event that a student, graduate or undergraduate, is charged with academic dishonesty. Copies may be obtained from the Office of Academic Integrity. (<https://www.mcmaster.ca/academicintegrity/>)

Excerpt from the Graduate Studies Calendar (Section 6.1): McMaster University demands scholarly integrity of all its members.

### Academic Work

Academic work includes any academic paper, term test, proficiency test, essay, thesis, research report, evaluation, project, assignment or examination, whether oral, in writing, in other media or otherwise and/or registration and participation in any course, program, seminar, workshop, conference or symposium offered by the University.

For graduate students, comprehensive/qualifying exams, any research work, and thesis work (a thesis proposal, or thesis draft, or draft of one or more chapters) also constitute academic work and must adhere to standards of academic integrity.

### Academic Dishonesty

#### Definition

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage.

Wherever in this policy an offence is described as depending on "knowingly," the offence is deemed to have been committed if the person ought reasonably to have known.

Students and applicants to graduate programs are responsible for being aware of and demonstrating behaviour that is honest and ethical in their academic work. Such behaviour includes:

- a. adhering to the principles of academic integrity when submitting application materials

- b. following the expectations articulated by instructors for referencing sources of information and for group work;
- c. asking for clarification of expectations as necessary;
- d. identifying testing situations that may allow copying;
- e. preventing their work from being used by others, e.g., protecting access to computer files; and
- f. adhering to the principles of academic integrity when conducting and reporting research.

Students are responsible for their behaviour and may face penalties under the Academic Integrity or Research Integrity policies if they commit academic dishonesty or research misconduct.

Graduate students, having been deemed admissible to higher studies, are expected to be competent in the acknowledgement of other people's work, whether that work is in print or electronic media.

Graduate students are expected to understand the demands of ethical conduct of research and reporting research results and behave ethically and responsibly in conducting and reporting research. All graduate students are responsible for familiarizing themselves with the definition of research misconduct in the University's policy, namely, "a researcher must be honest in proposing, seeking support for, conducting, and reporting research; a researcher must respect the rights of others in these activities."

## **Research Integrity**

The University states unequivocally that it demands research integrity from all of its members. Research misconduct, in whatever form, is ultimately destructive to the values of the University and society; furthermore, it is unfair and discouraging to those who conduct their research with integrity. This Policy applies to all institutional personnel. The Office of Academic Integrity is the administrative office responsible for the receipt and processing of allegations of misconduct at the investigation stage. A complete list of Policy violations can be found within the Research Integrity Policy.

## **8. WHERE TO GO FOR HELP**

### **8.1 Academic, research or personal matters**

i) Your supervisor or supervisory committee are the first people to approach with academic or other problems.

ii) If your supervisor is unavailable or is unable to help, the Associate Chair is the next person to approach for academic matters (or even personal problems).

iii) If the Associate Chair is unable to help, the next person to approach is the Chair.

iv) If no one in the department is able to help, the Associate Dean of Graduate Studies (Science) is the final person to contact.

For purely academic concerns (e.g., issues with graduate courses, comprehensive examinations, thesis defences, transfer from MSc to PhD, external and internal scholarship awards, special events information, program policies and procedures), please contact the Associate Chair.

## 8.2 TA-related matters

i) The course instructor as your employment supervisor should be your first contact for any concerns related to your TA-ship.

ii) If your TA assignment is not yet known, or your course instructor is unable to help you, you should approach the departmental TA Coordinator (as listed at the front of this document).

iii) If the TA Coordinator is unable to help, you may also approach the Associate Chair with your concern.

iv) If the Associate Chair is unable to help, the next person to approach is the Chair.

While we would much prefer for all TA-related problems to be resolved within the department, you are a member of CUPE (Canadian Union of Public Employees Local 3906) and have the right to contact your Union Steward for advice on how to proceed.

If you enjoy teaching, would consider it as part of your future career plans and would like to access resources that help you become a better teacher, you should check out the Paul R. MacPherson Institute for Leadership, Innovation and Excellence in Teaching (<https://mi.mcmaster.ca>).

## 8.3 Complaints and grievances

It is possible, from time to time, that serious interpersonal disagreements will occur between members of a lab, or between a student and a supervisor. Formal procedures exist to deal with these situations, as detailed in the Graduate Studies Calendar (section 6.3). However, students are strongly encouraged to pursue any complaint or grievance through informal channels before following the formal procedures. Experience has shown that many complaints can be resolved satisfactorily through informal communication with the people listed above.

If these resolution mechanisms fail, students may also seek the advice of the University Ombudsperson <https://www.mcmaster.ca/ombuds/> or the Human Rights & Equity Services Office <https://equity.mcmaster.ca/>

## 8.4 Personal Counselling

If you encounter personal difficulties, you are encouraged to approach your supervisor or any other person in the Department that you are comfortable with.

The Student Wellness Centre (located in MUSC B-101) offers confidential personal counselling. They are there to help you deal with any issue that is interfering with your well-being, happiness, or ability to succeed at university. All services are provided by psychologists, professional counsellors, or supervised psychology interns. All appointments are private and confidential. To arrange an appointment with a counsellor, contact the SWC reception (call ext. 27700 or visit <http://wellness.mcmaster.ca/> )

## 8.5 Disability Accommodations

Student Accessibility Services (SAS) provides academic accommodation assistance and related supports to students with disabilities at McMaster: <http://sas.mcmaster.ca/>

## **8.6 International Students**

The International Student Services provides resources for people whose first language is not English. All of the services are free. The International Student Services offers information and services for students who have recently arrived in Canada. Visit their web site at: <https://iss.mcmaster.ca/>

## **8.7 Student Success**

From the time you accept your offer of admission, up to ten years after graduation, the Student Success Centre (SCC; <https://studentsuccess.mcmaster.ca/> , located in GH-110), will provide services, programs and resources to help you achieve your immediate and future goals. Focus areas are academic support, personal growth, and professional development. Further information on professional skills development is available at: <https://studentsuccess.mcmaster.ca/develop-skills/>

## **8.8 Getting Home Safely at Night**

The Student Walk Home Attendant Team (SWHAT) is a volunteer service within the McMaster Students Union that will walk or bus with McMaster students during the evening hours (7pm-1am) every day of the week, whatever the weather. SWHAT will walk anywhere on campus or off campus from University Plaza to the 403 to the edge of the escarpment. They will even take the bus with you if requested. They can be reached at ext. 27500. Their website is: <https://www.msumcmaster.ca/services-directory/3-student-walk-home-attendant-team-swhat>

## **8.9 Financial and Administrative Matters**

For all financial matters or other administrative matters, please contact the Department Graduate Administrator, Sara Warner [warnes3@mcmaster.ca](mailto:warnes3@mcmaster.ca)

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**Appendix**

**Timelines for Graduate Degree Completion**

***MSc (Thesis)***

<b>Fall Entry</b>	September - December	January - April	May - August
Year 1	Take SGS-101+SGS-201 Apply for major scholarships for your 2nd year.		1st committee meeting (April-May) Consider early transfer to PhD.
Year 2	If planning to transfer to PhD, apply for major scholarships.	2nd committee meeting (Dec-Feb) Colloquium (April)	Transfer to PhD by end of June, or defend MSc thesis by end of Aug.
Year 3	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 4	OUT OF TIME!! - You can only continue with special permission.		

<b>Winter Entry</b>	January - April	May - August	September - December
Year 1	Take SGS-101+SGS-201		1st committee meeting (August-September) If planning to transfer to PhD, apply for major scholarships. Consider early transfer to PhD.
Year 2	Colloquium (April)	2nd committee meeting (April-June)	Transfer to PhD by end of October, or defend MSc thesis by end of Dec.
Year 3	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 4	OUT OF TIME!! - You can only continue with special permission.		

<b>Spring Entry</b>	May - August	September - December	January - April
Year 1	Take SGS-101+SGS-201	Apply for major scholarships for your 2nd year.	1st committee meeting (December-January) Consider early transfer to PhD. Colloquium (April)
Year 2		2nd committee meeting (August-October) If planning to transfer to PhD, apply for major scholarships.	Transfer to PhD by end of February, or defend MSc thesis by end of April
Year 3	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 4	OUT OF TIME!! - You can only continue with special permission.		

### **PhD after Transfer from MSc**

(your clock starts with the term in which your transfer took effect)

<b>Fall Entry</b>	September - December	January - April	May - August
Year 1	Apply for major scholarships for your 2nd year.	If not taken during MSc: Colloquium (April) If you feel ready, you may already take the Comprehensive Exam.	
Year 2	1st committee meeting (September-October) Apply for major scholarships for your 3rd year.	Comprehensive Exam	
Year 3	2nd committee meeting (September-October) Apply for major scholarships for your 4th year.		
Year 4	3rd committee meeting (September-October)		Departmental Seminar Submit PhD thesis to SGS Defence
Year 5	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 6	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 7	OUT OF TIME!! - You can only continue with special permission.		

### **PhD after Transfer from MSc**

(your clock starts with the term in which your transfer took effect)

<b>Winter Entry</b>	January - April	May - August	September - December
Year 1	If not taken during MSc: Colloquium (April)  If you feel ready, you may already take the Comprehensive Exam.		1st committee meeting (September-October)  Apply for major scholarships for your 2nd/3rd year.
Year 2	Comprehensive Exam		2nd committee meeting (September-October)  Apply for major scholarships for your 3rd/4th year.
Year 3			3rd committee meeting (September-October)
Year 4			4th committee meeting (September-October)  Departmental Seminar Submit PhD thesis to SGS  Defence
Year 5	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 6	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 7	OUT OF TIME!! - You can only continue with special permission.		

### **PhD after Transfer from MSc**

(your clock starts with the term in which your transfer took effect)

<b>Spring Entry</b>	May - August	September - December	January - April
Year 1		1st committee meeting (September-October)  Apply for major scholarships for your 2nd year.	If not taken during MSc: Colloquium (April)  If you feel ready, you may already take the Comprehensive Exam.
Year 2		2nd committee meeting (September-October)  Apply for major scholarships for your 3rd year.	Comprehensive Exam
Year 3		3rd committee meeting (September-October)  Apply for major scholarships for your 4th year.	
Year 4		4th committee meeting (September-October)	Departmental Seminar Submit PhD thesis to SGS  Defence
Year 5	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 6	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 7	OUT OF TIME!! - You can only continue with special permission.		

### **PhD (Direct Entry)**

<b>Fall Entry</b>	September - December	January - April	May - August
Year 1	Take SGS-101+SGS-201 Apply for major scholarships for your 2nd year.		
Year 2	1st committee meeting (September-October) Apply for major scholarships for your 3rd year.	Comprehensive Exam Colloquium (April)	
Year 3	2nd committee meeting (September-October) Apply for major scholarships for your 4th year.		
Year 4	3rd committee meeting (September-October)		Departmental Seminar Submit PhD thesis to SGS Defence
Year 5	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 6	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 7	OUT OF TIME!! - You can only continue with special permission.		

### PhD (Direct Entry)

Winter Entry	January - April	May - August	September - December
Year 1	Take SGS-101+SGS-201		1st committee meeting (September-October)  Apply for major scholarships for your 2nd/3rd year.
Year 2	Comprehensive Exam Colloquium (April)		2nd committee meeting (September-October)  Apply for major scholarships for your 3rd/4th year.
Year 3			3rd committee meeting (September-October)
Year 4			4th committee meeting (September-October)  Departmental Seminar Submit PhD thesis to SGS  Defence
Year 5	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 6	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 7	OUT OF TIME!! - You can only continue with special permission.		

### **PhD (Direct Entry)**

<b>Spring Entry</b>	May - August	September - December	January - April
Year 1	Take SGS-101+SGS-201	1st committee meeting (September-October)  Apply for major scholarships for your 2nd year.	
Year 2		2nd committee meeting (September-October)  Apply for major scholarships for your 3rd year.	Comprehensive Exam Colloquium (April)
Year 3		3rd committee meeting (September-October)  Apply for major scholarships for your 4th year.	
Year 4		4th committee meeting (September-October)	Departmental Seminar Submit PhD thesis to SGS  Defence
Year 5	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 6	OVERTIME!! - You can no longer TA. You cannot hold scholarships. Pay by your supervisor is optional. [exceptions apply for COVID-19]		
Year 7	OUT OF TIME!! - You can only continue with special permission.		