
Department of Chemistry

Graduate Student Handbook

Effective: 22 April 2020

Department of Chemistry

Graduate Student Handbook

TABLE OF CONTENTS

1.	INTRODUCTION	p. 3
2.	THE GRADUATE STUDIES COMMITTEE (GSC)	p. 3
3.	THE RESEARCH SUPERVISOR	p. 4
4.	THE SUPERVISORY COMMITTEE	p. 5
5.	THE GRADUATE STUDENT	p. 6
6.	GRADUATE CLASSES	p. 8
7.	TEACHING ASSISTANTSHIPS	p. 10
8.	DEPARTMENTAL SEMINARS	p. 10
9.	MASTERS DEGREE REQUIREMENTS	p. 12
10.	MASTERS DEGREE SCHEDULE AND DEADLINES	p. 14
11.	DOCTORAL DEGREE REQUIREMENTS	p. 15
12.	DOCTORAL DEGREE SCHEDULE AND DEADLINES	p. 18
13.	STIPENDS AND TRAVEL FUNDING	p. 19
14.	COMMUNICATION	p. 20
15.	GRADUATE AWARDS AND SCHOLARSHIPS	p. 20
16.	SAFETY IN THE LABORATORIES	p. 21
17.	INTEGRITY AND APPEALS	p. 22
18.	HEALTH INSURANCE FOR INTERNATIONAL STUDENTS	p. 24
19.	APPENDIX: GRADUATE STUDIES AND MENTAL HEALTH	p. 25
20.	MSc THESIS SUBMISSION FORM	p. 26

1. INTRODUCTION

This handbook describes the current operating procedures and degree requirements for graduate study in the Department of Chemistry at Dalhousie University. Graduate students are responsible for familiarity and understanding of all aspects of their programs as described in this document and should discuss these aspects with their supervisor(s) and supervisory committee regularly throughout their graduate program at Dalhousie University. This handbook does not replace the rules set out in the Dalhousie Graduate Studies Calendar. Rather, it provides details of procedures and additional rules that are specific to the graduate program in the Department of Chemistry.

2. THE GRADUATE STUDIES COMMITTEE (GSC)

The Graduate Studies Committee (GSC) consists of professors appointed from the Department of Chemistry as well as the Departmental Administrator. The Graduate Coordinator is the Chair of the GSC, who administers all academic aspects of the graduate programs in Chemistry with the assistance of the Graduate Secretary.

Responsibilities of the GSC:

- (a) to promote the graduate program in the Department of Chemistry and to assist with the recruitment of graduate students;
- (b) to recommend to the Faculty of Graduate Studies applicants to be admitted to graduate programs in the Department of Chemistry and to ensure that potential supervisors are acceptable to the Faculty of Graduate Studies;
- (c) to recommend minimum stipends for graduate students;
- (d) to delineate courses of study to be followed by Qualifying students (those students in the process of qualifying for admission to the MSc program);
- (e) to monitor the progress of graduate students. To this end, through the Graduate Clerk, the GSC maintains records on all graduate students. The Graduate Coordinator will report any serious issues with a student's progress at a Chemistry Departmental meeting; examples to be reported include failure in a graduate class or a significant problem with academic integrity. Any decision made at such a meeting, such as a recommendation to the Faculty of Graduate Studies to terminate a student's program, will be reported promptly to the student concerned in a letter outlining the Department's decision;
- (f) to oversee the appointment of student supervisory committees;
- (g) to select and nominate qualified students for awards and scholarships;
- (h) the Graduate Coordinator is responsible for the grading of the graduate student seminars.

3. THE RESEARCH SUPERVISOR

The supervisor is responsible for outlining the general themes of the graduate student's research and for contributing to the planning of the educational program of the graduate student. To this end, the supervisor may designate courses, in addition to the minimum number for a graduate degree, which the student should pass. The supervisor will ensure that the student can engage in research that is of a high quality and can lead the student to excellence as a research scientist. The supervisor oversees the day-to-day progress of the student, but the supervisor should encourage the development of creative, independent thinking by the student. A graduate student may be co-supervised by two research supervisors.

Normally, a graduate student must make a mutually acceptable arrangement with a Chemistry professor for the supervision of his/her research before the student arrives at Dalhousie University. The selection of an appropriate supervisor should be based primarily upon expertise in the field of the proposed research. However, a student should realize that financial and space limitations may not allow a potential supervisor to accept the student into that supervisor's research group. If the potential supervisor cannot accommodate the student, the student will be encouraged by the Graduate Coordinator to contact another professor in the department.

The research supervisor has the responsibility for and the rights to the research carried out by the graduate student. Publication, application for a patent, or any other communication of research results will list the supervisor as a senior author. The student's institutional address will be the Department of Chemistry of Dalhousie University. Collaborative research will be undertaken only with the consent of the supervisor.

In the event where a conflict arises between a student and a supervisor, the Graduate Coordinator and the student's supervisory committee must oversee the development of the student's research and academic progress.

Responsibilities of the research supervisor:

- (a) to provide the student with an initial avenue of research and to assist and advise students in the further development of the research;
- (b) to oversee a safe working environment for the student, to ensure that every student has up-to-date WHMIS training, and to do her/his best to protect the student from harassment or discrimination;
- (c) to ensure that the student is reasonably supported financially, which usually means (pending the availability of grant funds) that the supervisor would provide a stipend from a research grant (for two years for a Masters student, four years for a Doctoral student) if the student does not have external funding;
- (d) to be available for consultation with the student routinely and at reasonably short notice, notwithstanding other commitments such as those associated with teaching and

- administration;
- (e) to advise the student on other aspects of the student's graduate education, such as choice of graduate classes and topics for a seminar presentation;
 - (f) to propose a supervisory committee to the GSC (following consultation by the supervisor and/or student with the proposed committee members) within one month following the official start date in the graduate program, and to encourage the scheduling of meetings (with the help of the Graduate Clerk) with the supervisory committee at least annually;
 - (g) to help the student approach other faculty members for assistance with specific problems, or even to request the reading of a chapter or section of the thesis;
 - (h) to give proper credit to the student for his/her contributions in publications, patents, and any other written or oral dissemination of research findings;
 - (i) to comment in a timely and constructive manner on written work, such as drafts of research papers, the dissertation for the PhD qualifying examination, and chapters of theses. However, the supervisor should not help a student with work related to a graduate class. While the primary responsibility for a dissertation or thesis remains with the student, the supervisor will indicate unambiguously when she/he feels that a document is not satisfactory for examination and will suggest to the student the changes or additions that should be made to ameliorate the document.
 - (j) to ensure that the student has adequate supervision at Dalhousie when the supervisor is away, such as during vacation or sabbatical leave;
 - (k) to propose to the Chair of the Department of Chemistry an additional examiner for a MSc candidate and an external examiner for a PhD candidate;
 - (l) to provide letters of reference on behalf of the student;
 - (m) to inform the Graduate Clerk that the final copy of the student's thesis has been submitted to the Faculty of Graduate Studies.

4. THE SUPERVISORY COMMITTEE

The course of study of every graduate student in the Department must be approved by the student's Supervisory Committee. The GSC will act as a temporary supervisory committee until the supervisor suggests a supervisory committee for approval by the GSC. The supervisory committee forms the basis of the Examination Committee that recommends to the Department (and hence to the Faculty) when a student has satisfactorily fulfilled all the requirements for the MSc or PhD degree. The Chair of the Department of Chemistry, or designate, will be an *ex officio* member of all supervisory committees and may act as the Chair of a supervisory committee at her/his discretion. The Graduate Coordinator, or designate, will act as the Chair for students supervised by the Chair of the Department of Chemistry. Note that *ad hoc* changes to a formed Supervisory Committee, especially in an effort to hastily schedule a defence, are strongly discouraged.

MSc: The supervisory committee of an MSc candidate will consist of the student's research supervisor(s) and at least one other member ("committee member") who has Regular Dalhousie Faculty of Graduate Studies (FGS) membership; note that Faculty of Graduate Studies Membership

includes Regular, Adjunct and External Scholars (see the current graduate calendar for further details). External Scholars may neither supervise nor co-supervise graduate students. Should any of the chosen committee member(s) not be a regular member of the Department of Chemistry at Dalhousie University, then the "outside reader" (see Section 9 "*Masters Degree Requirements*") must hold such a position. If any member of the supervisory committee so comprised can be considered to be not at-arms-length, then an additional at-arms-length committee member who has Regular Dalhousie FGS membership is required. Committee members are only considered to be "at-arms-length" if they have had no involvement with the supervision or direction of the thesis work. In this regard, directly involved collaborators are considered not to be at-arms-length; spouses of research supervisors are also considered not to be at-arms-length.

PhD: The supervisory committee of a PhD candidate will consist of the student's research supervisor (who must hold Regular Dalhousie FGS membership), one reader who has both Regular FGS Membership and is a regular Faculty member of the Department of Chemistry, and an additional two readers with FGS Membership. While a co-supervisor can be counted among the three readers listed above, at least one of the remaining two readers must be a regular Faculty member of the Department of Chemistry who has Regular FGS Membership.

Responsibilities of the Supervisory Committee:

- (a) to assist the research supervisor in advising the student in defining the research topic and the theme of the student's thesis;
- (b) to advise the Graduate Coordinator on the benefits of a class in addition to the minimum number for a graduate degree for which the student could enroll, and the merits of a course taken at another institution for which the student requests advanced placement;
- (c) to inform the GSC of a student's background deficiencies and to make recommendations for degree requirements;
- (d) to meet with the student at least once a year and to discuss and advise the student and supervisor on the program of study;
- (e) to vet the topic chosen by the student for his/her Seminar I and to evaluate the student's Seminars I and II;
- (f) to report on the student's progress, when necessary, at a Departmental meeting;
- (g) to be a member of the Examination Committee during the student's Master's Defence, PhD Qualifying Examination, and PhD Thesis Defence.

5. THE GRADUATE STUDENT

The most important aspect of the graduate education in chemistry at Dalhousie University is research. A graduate student should choose a research supervisor who has expertise in the area of chemistry that the student wishes to study in depth. The student should bear in mind that the supervisor ultimately serves to academically undersign the research, and that the required standard for the quality and quantity of the research is determined by the supervisor. This will be a high

standard. When the research comes to an end, the student will provide to the supervisor in a tidy, organized manner, the original research notes and records (including, but not restricted to, lab notebooks, spectra, chromatograms, tabulated data, computer code/output or related data files, and references) and any equipment or software that has been developed, as well as properly stored and labelled research samples.

Responsibilities of the graduate student:

- (a) to choose a research topic with the supervisor's guidance. Note that research directions/goals frequently evolve and even change significantly, based on preliminary results and/or developments within a field.
- (b) to be cognizant of all of the degree requirements of the Faculty of Graduate Studies and the Department of Chemistry (i.e., this handbook). Students must register (online) in the program, for classes, and, in the appropriate semester(s), for seminar(s).
- (c) to devote a major amount of time and energy to research, and to report results regularly to the supervisor. The student must request time away from the University, e.g. vacation time, in advance from the supervisor. If a student is considering additional work outside the degree requirements, e.g. extra teaching, he/she should discuss this with the research supervisor.
- (d) to give serious and considered attention to advice and direction from the supervisor, to obey directions regarding safety, and to ensure that he/she has up-to-date WHMIS certification;
- (e) to realize that the supervisor has other duties, such as teaching and administration, which may at times delay the graduate student's access to the supervisor at short notice;
- (f) to acknowledge (verbally, and in writing, as appropriate) direct assistance and borrowed material from other scholars or researchers. Students are directed to read the section in this handbook entitled Integrity.
- (g) to complete an annual on-line progress report form (see the online GSIS page for details: <http://www.dal.ca/faculty/gradstudies/currentstudents/gsis.html>);
- (h) to organize and hold a formal meeting with the supervisor and the supervisory committee at least annually;
- (i) to produce a thesis that meets the standards of scholarship required by Dalhousie University and the Department of Chemistry. This must include a demonstration of a clear capacity for independent scholarship and research in the chosen field. The student should consult the Faculty of Graduate Studies for details of formatting for theses.
- (j) to submit work to the judgment of the Department and to abide by the decision of the Department when any rights of appeal, if exercised, have been exhausted;

Qualifying student: A BSc student who lacks some of the requirements for admission into the MSc program may be accepted as a "Qualifying Student," but being a qualifying student does not guarantee acceptance into the chemistry graduate program. A qualifying student takes advanced undergraduate classes (usually over the course of one year, including any laboratory associated with a class) to raise his/her level of knowledge to that required for an Honours degree in Chemistry at Dalhousie University so as to enable admission to our Chemistry MSc program. The course of study will be determined by the GSC and should include a research project to be coordinated with those of

the final-year BSc Honours candidates. The research project supervisor should be the professor most likely to accept the student as a regular graduate student following the qualifying year. On the basis of the performance in the classes and in the research project conducted in the qualifying year, as well as the student's prior record, an application from a qualifying student for entrance to the chemistry graduate program will be considered on an individual basis.

6. GRADUATE CLASSES

Masters Degree Requirements:

Candidates seeking the MSc degree require a minimum of six credit-hours of Core Chemistry Classes (see "Core Chemistry Classes" below), unless an alternative set of classes totaling six credit-hours is specified by the student's supervisory committee. Six credit-hours is the equivalent of two one-term classes, each meeting three hours per week for thirteen weeks. These classes may not have been used towards any other degree. More classes are permitted, with the consent of the supervisor and the supervisory committee. If the supervisor and the supervisory committee deem that a student's background is deficient, the student may be obliged to take one or more additional classes at the undergraduate or graduate levels. It is strongly recommended that all classes be completed within one year of the initial registration in the program. Credit ("advanced placement") will not normally be given for classes taken at another institution.

Doctoral Degree Requirements:

Candidates proceeding from a BSc degree, or from an MSc obtained at a location other than the Department of Chemistry at Dalhousie University, toward the PhD degree require a minimum of six credit-hours of Core Chemistry Classes (see "Core Chemistry Classes" below), unless an alternative set of classes totaling six credit-hours is specified by the student's supervisory committee. Six credit-hours is the equivalent of two one-term classes meeting three hours per week. An additional six credit-hours of graduate classes are required, which must include at least three credit-hours of 6000-level Chemistry Graduate Modules; each graduate module (six weeks in duration, 1.5 credit-hours) is the equivalent of one half of a one-term class. While these classes may not have been used towards any other degree, candidates proceeding from an MSc degree in Chemistry from another institution may receive credit (not more than three credit-hours) for a one-term graduate-level class, but the student must request advanced placement for this class (see "Transfer Credit" below). More classes are permitted, with the consent of the supervisor and the supervisory committee.

Candidates proceeding from an MSc degree in Chemistry from Dalhousie University must complete at least six credit-hours in addition to the credit obtained for the MSc degree, and at least three credit-hours (either completed as part of the MSc degree in Chemistry from Dalhousie University or as part of the PhD degree in Chemistry at Dalhousie University) must be from 6000-level Chemistry Graduate Modules.

In all cases, at least two classes (core or module) should be taken from faculty members other than the student's supervisor. It is recommended that at least six credit-hours of classes be completed within a year of the initial registration in the program, and that all of the class requirements be

completed by the end of the second year. Classes may be taken outside of the Chemistry, but only with the approval of the supervisory committee and the Graduate Coordinator; the student must obtain this approval before registration in the class. If the supervisory committee deem that a student's background is deficient, the student may be obliged to take one or more additional classes at the (under)graduate level(s).

Dalhousie Chemistry undergraduates who continue into the Chemistry Graduate Program at Dalhousie University can apply any cross-listed Core Chemistry Classes toward fulfilling the core class requirement of the chemistry graduate program. However, they will not be given class credit and must take a full complement of graduate classes as outlined above for the MSc (six credit-hours) and PhD degrees (twelve credit-hours).

Transfer Credit: Transfer of credit ("advanced placement") may be given for only one graduate-level class taken in English at another institution. In his/her first term, the doctoral student can request advanced placement by writing to the Graduate Coordinator, and the request should be accompanied by a syllabus for the class and, *if possible*, copies of class notes, tests and the final examination. The Graduate Coordinator will consult with the student's supervisor and may consult with the supervisory committee and the instructor(s) of the Dalhousie class most similar to the class for which advanced placement has been requested. Advanced placement will not be recommended if the supervisor does not agree to the advanced placement, or if the level is not judged to be adequate, or if the class is not relevant to the degree, or if the student has taken, or plans to take, a similar class at Dalhousie University. The Graduate Coordinator will write to the Faculty of Graduate Studies with a recommendation for advanced placement only when it has been established that advanced placement is justified. Final decisions on recommendations of advanced placement are made by the Faculty of Graduate Studies.

Core Chemistry Classes: For an up-to-date list of Core Chemistry Classes, and for information regarding currently offered classes, please contact the departmental website and/or the Graduate Clerk.

Chemistry Graduate Modules: Specialized, six-week 6000-level modules will be offered by members of the Chemistry Faculty on an as-needed basis, with the divisional Core Chemistry Classes normally serving as appropriate prerequisite classes. For information regarding currently offered classes, please contact the departmental website and/or the Graduate Clerk.

Grades: At least one assessment of a student's progress will be taken every six weeks in graduate classes in chemistry. These assessments will often be taken under formal examination conditions; in such cases, faculty regulations do not allow supplemental examinations in graduate classes. Grades for graduate classes in the fall term must be submitted to the Departmental Office before December 31. In the spring, grades must be submitted before May 7.

Failure in a Graduate Class: The Faculty of Graduate Studies regulates that a student who fails a class (i.e., who does not attain a grade of at least B- in any chemistry class) is automatically dropped from her/his program of study. The grading scheme used by the Faculty of Graduate Studies is

presented below. Students who fail in only one class and wish to be considered for reinstatement must write to the Graduate Coordinator, who presents the student's case at the next Departmental meeting. The Department will make a recommendation to the Dean of the Faculty of Graduate Studies, and the Graduate Coordinator will make this recommendation in writing to the student.

Faculty of Graduate Studies Grading Scheme (See Graduate Studies Calendar):

Letter grade: A+ (90-100%); A (85-89%); A- (80-84%); B+ (77-79%); B (73-76%); B- (70-72%); F (<70%).

7. TEACHING ASSISTANTSHIPS

Graduate students are assigned Teaching Assistant (TA) duties at Dalhousie University during their program. A total of 270 hours of TA experience is required as a component of an MSc degree. A total of 360 hours of TA experience (which can include hours completed as part of a Dalhousie Chemistry MSc degree) is required as a component of a PhD degree. TA assignments depend on undergraduate enrolments and the experience of the graduate students. Normal TA assignments may include serving as a part-time chemistry academic, as a chemistry lab instructor assistant or demonstrator, as a marker for laboratory and lecture assessments (lab reports, quizzes, tests and final examinations), as a tutorial leader, as an invigilator for tests and final examinations, and as a one-on-one tutor in the Resource Centre. The research supervisor must approve in writing of all teaching assignments. Laboratory demonstrators and tutorial leaders will be subject to student evaluation by their undergraduate students. Unsatisfactory performance or failure to fulfil TA responsibilities may result in sanctions up to and including termination of the student's program. It is the graduate student's responsibility to find a replacement if he/she is unable to fulfil a TA assignment on a particular day. Remuneration for TA duties is governed by a Collective Agreement.

Professional Ethics: As a representative of the University, TA's are expected to maintain the standards of the University. This includes following all guidelines and rules established by the University. In the event of a disagreement regarding the policies of the University or the faculty member, the TA is obliged to discuss the issues privately with the faculty member or an appropriate University administrator rather than doing so in front of students. Simply refusing to follow University guidelines is not acceptable.

TA's also have responsibilities as a teacher to help students learn and improve their ability to learn. TA's must be fair and honest and do nothing to exploit their position of power over the students. All students must be treated equally and with respect. Bias or disparaging remarks will not be tolerated.

8. DEPARTMENTAL SEMINARS

Departmental Visiting Speakers Seminars: Graduate students are required to attend all formal Departmental Seminars that are presented by invited speakers unless there is a conflict with a TA assignment. These usually take place on Friday afternoons, but in some cases may take place at alternative times or in the evening (e.g. Chute lecture), and often there will be an opportunity for students to meet visiting speakers.

Graduate Student Seminar Series: Graduate students are required to attend Departmental Graduate Student Seminars unless there is a conflict with a TA assignment. Attendance at each seminar will be taken. MSc students must deliver a satisfactory Seminar I (Chem 5509), and PhD students must present a satisfactory Seminar I and a satisfactory Seminar II (Chem 6509). The seminar schedule is prepared for the upcoming academic year by the Graduate Clerk by mid- August with the input of the students involved. The student must register for the seminar in the term in which her/his seminar is to be presented. Postponement of a seminar is possible due to illness or a serious extenuating circumstance, but only if appropriate documentation is provided to the Graduate Coordinator. In such a case, the seminar will be rescheduled at the earliest reasonable date by the Graduate Clerk. A seminar title and an abstract must be provided electronically to the Graduate Clerk two weeks before a student presents a seminar; further details regarding topic selection are provided below. All seminars will be evaluated by the members of the student's Supervisory Committee (or their designates), who will submit their reports to the Graduate Clerk. The Graduate Coordinator, in consideration of the reports provided by the Supervisory Committee, makes the final decision regarding whether the seminar is satisfactory. In the event that the seminar is deemed unsatisfactory, the student will have one more opportunity to present a satisfactory seminar. The Graduate Clerk will try to schedule the second attempt for a seminar in the next term, but student seminars are not presented during the Summer Term.

Seminar I (Chem 5509). Each student is required to present one Seminar I (Chem 5509) to the Department during his/her program, usually during the second year of the program. Students who have successfully completed Seminar I as part of a Dalhousie Chemistry MSc degree do not need to present a second Seminar I as part of their Chemistry PhD degree requirements. The chemistry-focused topic of the seminar *must not* be directly related to the thesis research topic of the student, research work completed during a previous degree, specialized topics that the student may have presented as part of the requirements for a graduate class or course, or active research projects in their supervisor's research group. At least one month prior to the seminar, students will provide a tentative title and copies of the major scientific references for their Seminar to their Supervisory Committee. When the members of the Supervisory Committee approve the seminar topic, they will sign the Seminar I form. When all members of the Supervisory Committee have approved the topic, the student will submit the Seminar I form to the Graduate Clerk. The Graduate Coordinator will monitor the submission of such forms; should two students submit to present on the same or very closely related topics in a given year, the Graduate Coordinator will approach the student who submitted the Seminar I form at the later date so that an alternative seminar topic can be identified by that student. The seminar shall be formatted as a scientific research lecture and shall focus on (a) chemistry topic(s) from the current chemical literature. Rather than an overview of a wide ranging topic, the seminar shall focus on a specific chemistry topic and include sufficient data and experimental results to justify the conclusions made. In addition, each seminar shall provide the necessary background information to introduce the subject to the audience. The level of scientific information presented in the Departmental Seminar shall be geared towards other graduate students, postdoctoral fellows and faculty. The seminar shall be approximately 45 minutes long to allow additional time for questions from the audience in the one-hour time-slot allocated for the seminar; seminars that deviate significantly from this timeframe may be deemed unsatisfactory.

Seminar II (Chem 6509). Seminar II for a PhD student should be a summary of his/her Doctoral research. A doctoral student entering her/his final year of the program (i.e., anticipated defense date within twelve months) should present Seminar II. The seminar shall be approximately 45 minutes long to allow time for questions from the audience in the one-hour time-slot allocated for the seminar. Seminar II must be successfully completed before the PhD thesis can be submitted.

9. MASTERS DEGREE REQUIREMENTS

The most important component of an MSc in chemistry is research. A student should ensure that adequate time and effort is applied to his/her research. In addition, the student must present and pass a Departmental seminar (Seminar I), fulfil the graduate class requirements and the TA requirements, and pass the MSc defence (thesis and oral). The minimum residence period at Dalhousie University for an MSc candidate entering with an Honours BSc (or equivalent) is twelve months. The minimum residence period at Dalhousie University for an MSc candidate entering with a Major BSc (or equivalent) is twenty-four months. Each candidate is required to discuss her/his program of study with her/his supervisory committee at least annually during his/her program

MSc Thesis Approval and Defence Scheduling. The scheduling of MSc thesis defences will normally only proceed when the members of the examining committee confirm, through the signing of the “*MSc Thesis Submission Form*” (available from the Graduate Clerk; a copy can also be found in Section 19 of this Handbook), that the thesis document is in a complete or nearly complete state suitable for proceeding to the defence. When the student and his/her research supervisor(s) feel that the thesis is complete or nearly complete, the Graduate Coordinator should be contacted by the supervisor(s) so that an appropriate outside reader can be identified and asked to join the examination committee. With the outside reader confirmed, the thesis document (and the MSc Thesis Submission Form, pre-signed by the research supervisor(s)) must be provided to the other members of the examination committee for evaluation (which includes at this stage the outsider reader), typically in electronic form (e.g. PDF). The Faculty of Graduate Studies offers information regarding the required formatting and preparation of theses. Students should expect that the evaluation process will take some time and should consult with the examining committee members regarding expected evaluation timelines. When the MSc Thesis Submission Form is signed by the supervisor(s), the members of the examining committee, and finally the MSc candidate, this form should be submitted to the Graduate Clerk immediately so that (s)he can initiate the defence scheduling process (including room booking and confirming the defence Chair). The final pre-defence version of the thesis must be provided to all examining committee members at least three weeks prior to the scheduled defence date; the candidate should inquire if the examiners wish to receive the thesis electronically or in hardcopy. Failure to adhere to this three-week deadline will normally result in the postponing of the defence. Please note that no MSc defences will be scheduled within two weeks of the FGS thesis submission deadline for that term (i.e. the deadline associated with having to pay fees into the following term, not the deadline related to convocation), so as to allow time for revisions arising from the defence to be addressed appropriately. Please consult the FGS website for relevant submission deadlines. Moreover, candidates for the MSc degree in chemistry must defend their thesis in person at Dalhousie University (i.e., not remotely by teleconference or other).

NOTE: MSc candidates should bring a fresh copy of the “*Masters Thesis Approval Form*” to the defence. This form can be found at the following link:

http://www.dal.ca/content/dam/dalhousie/pdf/fgs/thesesanddefences/master_thesis_approval_extended.pdf

Evaluation of the MSc Thesis. The thesis will be assessed by an Examination Committee consisting of:

- i. *The Chair of the Examination Committee* (hereafter “the Chair”), who is the Departmental Representative. The Chair is chosen by the Graduate Coordinator, and is normally a member of the Graduate Studies Committee. Neither the supervisor nor another member of the supervisory committee can act as the Chair. The Chair oversees the evaluation of the thesis.
- ii. *The Supervisory Committee.* See Section 4 “*The Supervisory Committee*”.
- iii. *An Outside Reader.* One additional reader who has Regular Dalhousie FGS membership, and who has had no involvement with the supervision or direction of the thesis work (“outside reader”) must be added to the examining committee. The Graduate Coordinator will choose this outside reader in consultation with the Supervisor; the final decision regarding the suitability of the outside reader rests with the Graduate Coordinator. If any of the chosen Supervisory Committee Member(s) is not a regular member of the Department of Chemistry at Dalhousie University, then the outsider reader must be a regular member of the Department of Chemistry at Dalhousie University. It is expected that the supervisor(s) will actively participate in the questioning of the MSc candidate at the defence, along with the other thesis examination committee members.
- iv. *A representative of the Faculty of Graduate Studies.* The Dean of Graduate Studies (or designate) may appoint a Faculty representative if it is deemed necessary, or at the request of the Chair, or at the request of the student. A Faculty representative has rarely been appointed.

The thesis defence is open to the public. First, the candidate gives an oral summary, up to 20 minutes in duration, of the research that the student has carried out. Normally, the members of the supervisory committee, the additional member of the examination committee and the supervisor each asks questions in two rounds. In the first round each of these examiners has approximately twenty minutes, and in the second round each examiner has approximately ten minutes. The examiners’ questions will focus mainly on the material from the thesis, but they may also probe how the thesis might relate to a broader area of science. The Chair may conclude the question period with questions from the audience. The Examination Committee discusses the result of the evaluation *in camera* immediately following the oral defence. The Examination Committee decides the outcome of the evaluation by majority vote. In the case of an otherwise deadlocked vote by the Examination Committee, the Chair will break the deadlock within 48 hours, after having had the opportunity to review the thesis document. The defence is concluded by the Chair verbally informing the candidate of the result, and the Chair also communicates the result in writing to the candidate, the Supervisor,

and the Graduate Coordinator. The Chair's written report should summarize the strengths and weaknesses of the thesis and the oral defence, the final decision and any conditions attached. This report becomes part of the student's departmental file. In the case of a failure, i.e., category 4 below, the Graduate Coordinator will also send a written notification of failure FGS.

The result of the thesis evaluation will fall within one of these categories:

1. The thesis is approved as submitted. This outcome is extremely rare.
2. The thesis is approved pending completion of specific corrections. This is the most common result. A deadline, at most a month from the date of the defence, for completion of the corrections is given to the candidate. An oral defence of the revised thesis is not required.
3. The thesis is rejected, but permission is granted to re-submit a revised thesis for re-examination. This result may be because of a significant inadequacy in the thesis itself and/or because of serious shortcomings in the oral defence. A second oral defence may, or may not, be deemed necessary by the Examination Committee. A deadline for completion of the requirements will be given (within one year from the date of the initial oral defence, or sooner as outlined by the Examination Committee). When possible, the Examination Committee remains the same for the evaluation of the revised thesis including, if necessary, the second oral defence. A third oral examination cannot be recommended.
4. The thesis is rejected outright. The Examination Committee judges the thesis itself and/or the oral defence to be so far below a minimum standard that no opportunity for re-examination is offered. In this case, every member of the Examination Committee will submit a written report to the Graduate Coordinator and to the Faculty of Graduate Studies as soon as possible. Each report will be signed and dated, and each will be part of the student's departmental file.

10. MASTERS DEGREE SCHEDULE AND DEADLINES

Masters students may begin their programs on January 1, May 1 or (most commonly) September 1 of each year; however, some deadlines are scheduled around the calendar year.

Year 1:

September (first days) – attend the graduate student orientation day;

- obtain WHMIS training
- confirm the supervisory committee membership with the research supervisor

September 15 - submit list of fall term classes to the Graduate Clerk

January 15 - submit list of winter term classes to the Graduate Clerk

Within twelve months - arrange a meeting (see Graduate Clerk) with the supervisor and the supervisory committee

Before August 15 – schedule a date for the presentation of **Seminar I** with the Graduate Clerk

August 31 - consider MSc to PhD transfer, in consultation with the supervisor, and inform the Graduate Coordinator, the Graduate Clerk, and the Departmental Administrator; arrange for the addition of a supervisory committee member, as per the doctoral supervisory committee requirements (Section 4).

Year 2:

No later than one month prior to Seminar I date – submit the completed Seminar I form to the Graduate Clerk

Three months prior to completion of the MSc thesis -

- consult Faculty of Graduate Studies for current thesis format regulations

Three weeks prior to the scheduled date of MSc final oral defence -

- final pre-defence version of the thesis must be provided to all examining committee members; notify the Graduate Clerk that the thesis has been submitted

Final thesis submission to the Faculty of Graduate Studies - It is the responsibility of the student to make recommended changes to the thesis and to submit the approved version to the supervisor and to the examination committee when this has been specifically requested. It is the responsibility of the student to submit the approved thesis to the Faculty of Graduate Studies Office (via electronic upload). It is the responsibility of the student and supervisor to inform the Graduate Clerk and Departmental Administrator when the approved thesis has been submitted. If the student and/or the supervisor desires a bound copy of the thesis, this is the responsibility of the student and/or the supervisor and is entirely at the expense of the student and/or the supervisor.

11. DOCTORAL DEGREE REQUIREMENTS

The most important component of a PhD in chemistry is research. A student should ensure that adequate time and effort is applied to research. In addition, the student must present and pass two Departmental seminars (Seminar I and Seminar II), fulfil the graduate class requirements, the TA requirements, pass the PhD Qualifying Examination, and pass the PhD defence (thesis and oral). The minimum residence period at Dalhousie for a PhD candidate entering with an Honours BSc (or equivalent) is 36 months. The minimum residence period at Dalhousie University for a PhD candidate entering with an MSc (or equivalent) is 24 months. A PhD candidate must complete at least 12 months of residence study after satisfactory completion of the PhD Qualifying Examination, which consists of a written and an oral component. Each candidate is required to discuss her/his program of study with her/his supervisory committee at least annually during his/her program.

Transfer from MSc to PhD: An MSc candidate may transfer to the PhD program without completing an MSc degree if certain criteria are met. Normally, a candidate must have a first-class record in graduate class-work and must have performed well in research and teaching. Upon obtaining the consent of the research supervisor and supervisory committee, the student must request a transfer by writing to the Graduate Coordinator. On approval of the Graduate Coordinator, transfer to the PhD program is usually effective at the beginning of term following successful completion of the PhD Qualifying Examination.

PhD Qualifying Report: Within 18 months of the first registration in the Chemistry PhD program at Dalhousie, or MSc program at Dalhousie for a student who is planning to transfer to the PhD, a student is required to submit a PhD Qualifying Report to the supervisor and the supervisory committee, and to

inform the Graduate Clerk and the Graduate Coordinator upon making such a submission. The student should ask each of their committee members if they prefer electronic or hardcopy, and provide the document in the preferred format(s). A student who begins the graduate program on September 1 has a deadline of February 28 in their second year for submission of a PhD Qualifying Report. A student who begins the program on January 1 has a deadline of June 30 in the second year for submission of a PhD Qualifying Report. A student who begins the program on May 1 has a deadline of October 31 in the second year for submission of a PhD Qualifying Report.

If the PhD Qualifying Report is not submitted within 18 months of the start of the program, the student is required to present to the supervisory committee, the Graduate Clerk, and the Graduate Coordinator a brief rationale and a revised program schedule in writing. This can normally be completed by way of an email message to this group, but a meeting will be called to follow up if deemed required by the Graduate Coordinator upon consultation with the supervisory committee. If the PhD Qualifying Report is not submitted and successfully defended in a PhD Qualifying Oral Examination within 24 months of the start of his/her program, the student will only be permitted to complete and defend an MSc thesis. Only in the case of unforeseen and unusual circumstances will an exception be made to the above-mentioned timeline. In order to seek such an exception, emergency situations notwithstanding, the student and supervisor must submit a request, with rationale, in writing to the Chemistry Graduate Studies Committee no later than six-weeks prior to the 24 month deadline.

The PhD Qualifying Report should be written in approved thesis format (please consult the current guidelines within the Dalhousie University Faculty of Graduate Studies (FGS) Calendar at <http://www.dal.ca/faculty/gradstudies.html>) and may ultimately be included in the final PhD thesis. The report must include a literature survey, a discussion of research progress to date, and a 5-10 page research proposal for the remainder of the PhD thesis work. The purpose of the discussion of research progress to date is to provide details of the thesis-related research work and/or methodology development or usage (as appropriate for the field) that the candidate has undertaken thus far in their graduate studies. Students should feel free to comment on both successful and unsuccessful research efforts; however, a protracted discussion is not required, especially in the case of unsuccessful experiments. In keeping with FGS policy, it is expected that the student has made a substantial contribution to any portions of manuscripts that are included as part of the PhD Qualifying Report. Where portions of co-authored manuscript(s) are included in the report, the student's contribution must be clearly indicated and proper attribution given to the work of others. In simple terms, this section should provide the reader with a sense of what the candidate has done up to that point in their thesis research, so as to provide context for the proposed future work. It is required that the candidate provide details of representative research data/methods employed, again, as appropriate for the field. The report should be no more than 70 pages in length, and the inclusion of extensive appendices is discouraged.

PhD Qualifying Oral Examination: The PhD Qualifying Oral Examination will normally be held between two and four weeks after submission of the PhD Qualifying Report. The Graduate Clerk will schedule the date and time of the examination in consultation with the candidate and the supervisory committee. The Qualifying Oral Examination is attended by only the candidate, an examination committee consisting of the supervisory committee and an examination chair, who is chosen by the Chair of the Department of Chemistry. The candidate should have a copy of the

Qualifying Report at the Oral Examination, but reference materials are not permitted. The candidate will make an oral presentation of up to 20 minutes based on the content of the Report. Thereafter, members of the examination committee, as well as the examination chair (if he/she so wishes), will question the candidate on the PhD qualifying report and oral presentation, as well as on a range of general topics in chemistry, to determine whether the student is adequately equipped to complete PhD-level research work in the area of the thesis and whether the student has a sufficiently broad knowledge of chemistry. Normally, the oral examination is in two rounds. In the first round each examiner asks questions for approximately 20 minutes, and in the second each examiner has approximately 10 minutes. The examination committee may judge the PhD Qualifying Oral Examination and PhD Qualifying Report to be satisfactory, conditionally satisfactory or unsatisfactory. If either of these is deemed by the examination committee to be unsatisfactory, there will be a recommendation that either the student complete an MSc degree or be withdrawn from the graduate program. (In the rare case of a deadlocked vote by the examination committee, the examination chair will break the deadlock within 48 hours, after reviewing the Qualifying Report.) The defence is usually concluded by the examination chair verbally informing the candidate of the result. Also, the Chair also communicates the result in writing to the candidate, the supervisor, and the Graduate Coordinator. Note that if the overall result is conditionally satisfactory, the student may proceed to present a doctoral thesis only after satisfying the conditions set out by the examination committee. These conditions may include a second PhD Qualifying Oral Examination, and/or a rewritten report. If either of these is still deemed by the examination committee to be unsatisfactory, there will be a recommendation that either the student complete an MSc degree or be withdrawn from the graduate program.

PhD Thesis: It is the responsibility of the student to submit a tentative title for the PhD thesis to the Dean of Graduate Studies for approval upon satisfactory completion of the PhD Qualifying Oral Examination, and no later than six months before the PhD Defence. The Faculty of Graduate Studies Office offers information for the formatting and preparation of theses. The unbound thesis must be approved (for format) by the Faculty of Graduate Studies (call to make an appointment), and a thesis submission form should be signed by the supervisor and the supervisory committee before the thesis is submitted to the External Examiner. The PhD thesis is normally presented in an unbound form (but otherwise ready for final production) or in a temporary binder for consideration by the student's examination committee; some supervisory committee members may prefer an electronic copy of the thesis. As such, please consult with your local supervisory committee members regarding their preference.

PhD Defence: It is the responsibility of the Chair of the Department to recommend to the Dean a suitable time for the thesis defence, and to make the arrangements with the External Examiner. The Faculty of Graduate Studies will arrange and publicize the PhD defence in consultation with the supervisor and the student. The defence is open to the public.

The Examination Committee consists of:

- i. *The Chair* of the Committee is the Dean of the Faculty of Graduate Studies or an appointee of the Dean (usually).
- ii. *An External Examiner.* The attendance of the external examiner at the oral defence is strongly encouraged. This is a scientist from another university with expertise in the subject area of the thesis and experience in doctoral supervision. The External Examiner is recommended to the Faculty of

Graduate Studies by the supervisor, through the Chair of the Department of Chemistry. A supervisor should not recommend as an external examiner someone who is a research collaborator, a previous graduate student or supervisor, or who has personal ties with either the supervisor or the student. The student must not correspond in any way with the External Examiner before the thesis defence.

iii. *The Supervisory Committee* including the supervisor.

iv. *A Departmental representative*, appointed by the Chair of the Department of Chemistry.

The PhD candidate will make an oral presentation of his/her work for 20 minutes. Thereafter, the members of the Examination Committee will question the candidate. The members of the Examination Committee who vote on the outcome of the thesis defence are the external examiner, the members of the supervisory committee and the supervisor. The thesis and the oral defence are judged to be satisfactory, conditionally satisfactory, or unsatisfactory. The most common result is that the thesis and defence are judged to be satisfactory, but that the thesis should be corrected or revised on the basis of comments and suggestions of the External Examiner and the supervisory committee.

12. DOCTORAL SCHEDULE AND DEADLINES

Graduate students can begin their programs on January 1, May 1 or September 1 of each year, however, some deadlines are scheduled around the calendar year.

Year 1:

September (first days) – attend the graduate student orientation day;

- obtain WHMIS training
- confirm the supervisory committee membership with the research supervisor

September 15 - submit list of fall term classes to the Graduate Clerk

September 30 – if applicable, apply to the Graduate Coordinator for an “advanced placement” class credit

January 15- submit list of winter term classes to the Graduate Clerk

Within twelve months - arrange a meeting (see Graduate Clerk) with the supervisor and the supervisory committee

Before August 15 - schedule a date for the presentation of **Seminar I** with the Graduate Clerk

Year 2 and future years:

No later than one month prior to Seminar I date – submit the completed Seminar I form to the Graduate Clerk

September 15/January 15 - submit list of proposed fall term classes (Sept 15th) and winter term classes (Jan 15th) to the Graduate Clerk

Within eighteen months of the first registration in the Faculty of Graduate Studies - submit PhD Qualifying Report

- present one copy of the PhD Qualifying Report to each member of the supervisory committee
- notify the Graduate Clerk that the Report has been submitted to the members of the supervisory committee

Every twelve months - arrange a meeting with the assistance of the Graduate Clerk with the

supervisor and the supervisory committee to discuss progress

End of subsequent years - if timing is appropriate, schedule a date for the presentation of Seminar II

Six months prior to the intended date of the oral defence -

- consult Faculty of Graduate Studies for current thesis format regulations
- remind the supervisor to recommend an external examiner to the Chair of the Department of Chemistry
- in conjunction with your supervisor(s) and the Graduate Clerk, schedule a tentative time for the PhD final defence

Six weeks prior to the intended date of the oral defence - present one copy of the thesis to each member of the supervisory committee and the Department Chair along with the PhD Thesis Submission Form (available from Graduate Studies), which should be signed by the supervisor and every member of the supervisory committee before submission of the thesis to the Faculty of Graduate Studies;

- notify the Graduate Clerk that the thesis has been submitted to the members of the supervisory committee

At least one month prior to the intended date of the oral defence -

- submit an electronic pdf attachment of your thesis, CV and the original signed/completed PhD Thesis Submission Form
- notify the Graduate Clerk that the thesis has been submitted to the Faculty of Graduate Studies
- arrange with Graduate Studies to proof-read the Notice for the Defence
- arrange for audio-visual equipment for the PhD defence

Final thesis submission to the Faculty of Graduate Studies - It is the responsibility of the candidate to make the changes to the thesis which have been recommended by the examination committee and to submit the approved version to the supervisor and/or the examination committee. When the thesis has been approved by the supervisor and/or the committee, it is the responsibility of the student to submit the revised thesis to Faculty of Graduate Studies Office (via electronic upload). It is the responsibility of the supervisor to inform the Graduate Clerk that final thesis submission has taken place. If the student and/or the supervisor desires a bound copy of the thesis, this is the responsibility of the student and/or the supervisor and is entirely at the expense of the student and/or the supervisor.

13. STIPENDS AND TRAVEL FUNDING

Full-time graduate students in the Department of Chemistry are supported by scholarships that rely on a number of funding sources, including the Dalhousie Faculty of Graduate Studies Scholarship Fund, the Killam Trust Fund and the research grants of the supervisors. With the exception of pre-arranged research agreements that might take as student off-campus (e.g. research exchange abroad or off-site research data collection) financial support is tenable only for the period the student is engaged in full-time graduate degree preparation on the university campus. If for any reason (graduation, withdrawal from program, etc.) full-time graduate study ceases or is interrupted, or if an

appropriate academic standing is not maintained, payment of the stipend/scholarship will cease immediately. Normally, a maximum of two years of financial support is available for MSc students, and four years of financial support for PhD students. (If the student has completed an MSc at Dalhousie and then immediately starts a PhD under the same supervisor, only three years of funding may be provided for the PhD). The value of the stipend is dependent on a number of factors, including the availability of grant money. If a student changes either supervisor or status, the total award and/or amount of teaching duties may change. A student who is employed outside Dalhousie University for more than 6 hours per week, (in addition to a maximum of 10 hours as a Teaching Assistant) cannot be considered a full-time student and will, therefore, not be able to hold a Dalhousie Graduate Student Award. In the case of 12-month awards, graduate students are permitted a two-week vacation period. Vacation periods longer than two weeks must be reported to the Graduate Coordinator. Graduate students registered at Dalhousie University are eligible to apply for support for research travel, e.g., to conferences. At present, this support is usually \$400, once per program. Application forms are available at the Faculty of Graduate Studies and must be submitted no later than one month before the conference.

14. COMMUNICATION

Changes made to existing regulations and/or information bulletins that are important to a student's program or research activity will be sent to the student *via* E-mail and/or the campus mail (e.g. from the Department of Chemistry or Faculty of Graduate Studies). As such, graduate students in the Department of Chemistry are required to check their Dalhousie-issued E-mail accounts frequently (normally daily) so as to receive such information in a timely fashion. Information of a more general nature is posted on the bulletin board labelled "Graduate Studies", located outside the Departmental Office on the second floor of the Chemistry Building, or on the board in the Graduate Students' room on the fifth floor. Information concerning chemistry-related job openings is posted on the "Job Board" on the second floor of the Chemistry Building, near the main foyer.

15. GRADUATE AWARDS AND SCHOLARSHIPS

There four prizes/awards/scholarships of equal value and prestige that are given to deserving graduate students in September based on accomplishments in research, class work and teaching (TA). These are the Donald R. Arnold Scholarship, the Gerry Dauphinee Graduate Scholarship in Chemistry, the Douglas E. Ryan Prize for Excellence in Graduate Studies in Chemistry (up to five prizes), and the Anna Wilson Scholarship in Chemistry. The GSC selects the awardees based on letters of nomination from supervisors, performance in classes and teaching evaluations. The GSC also chooses the awardee for the Kenneth T. Leffek Prize for the Best PhD Thesis in Chemistry.

Nominations for university-wide prizes from the Department (through the GSC) have resulted in awards of the Governor General Gold Medal, the President's Graduate Teaching Assistantship Award and the Dalhousie Doctoral Thesis Prize.

Some institutional and national scholarships require an application from the student. The most common of these scholarships are:

		Nomination Deadline
NSERC Graduate Scholarships (CGS and PGS)	National	Fall
Killam Scholarship	Institutional	Early Winter
Eliza Ritchie Doctoral Scholarship for Women	Institutional	Early Winter
Sumner Scholarship	Regional	Early Winter
Nova Scotia Graduate Scholarship	Regional	Early Winter

Note that the deadlines in the Chemistry Department for all of these awards are significantly before the institutional deadlines. Most awards require official transcripts so allow plenty of time for these to be received. *It is important to consult with the supervisor and the Graduate Clerk before beginning any application.*

16. SAFETY IN THE LABORATORIES

Providing a safe and healthful environment in the University's research laboratories is a shared responsibility of all those involved in laboratory programs. The Dalhousie Research Laboratory Safety Policy Manual (http://safety.dal.ca/files/lab_policy_manual_2007.pdf) specifies the responsibilities of the University, departmental chairs, laboratory supervisors, staff and students to maintain a safe working environment. In addition to the University Policy, a Chemistry Department Safety Policy has been developed in recognition of the special working environments found in chemical laboratories:

The **Safety Committee**, appointed by the Department, is responsible for monitoring trends in safety programs in the academic community, for overseeing the laboratory safety audits and undergraduate safety modules, and recommending changes to policy and safety procedures for approval by the Chair;

The **research supervisor** is responsible for the safe operation of the research activities being undertaken in the research laboratory. This includes training in the general and protocol-specific procedures undertaken in the laboratory. The research supervisor should approve any standard operating procedures (SOPs) for his/her laboratory. The SOPs can include documents prepared specifically by the laboratory personnel, documents obtained from other laboratory safety sites, and procedures described in standard reference books provided the reference is available in the lab. The SOPs should be provided to research personnel at the start of the research program and updated as needed. An up-to-date MSDS database for the chemicals used in the research should be maintained as a hard-copy, electronic/online or a combination. The MSDS database must be readily available to research personnel working in research labs. It is perhaps easiest to do this when a new chemical arrives in the laboratory or the first time it is used by a researcher.

Graduate researchers have the responsibility to perform their research in a manner that ensures their own safety and the safety of their co-workers. Every researcher is expected to:

- i. ensure that he/she has up-to-date WHMIS certification;
- ii. review the lab's SOPs on a regular basis;
- iii. when requested by the supervisor, the researcher should investigate the appropriate literature and develop SOPs for use in the laboratory. New or revised SOPs should be approved by the research supervisor;
- iv. assess the hazards for procedures undertaken in the laboratory by filling out a Hazard Assessment Form. Have a co-worker check and sign the form;
- v. notify other workers in the laboratory about unattended operations by filling out an Unattended Reaction Form and attaching the form to the fume hood where the reactions are occurring;
- vi. notify the Department about the use of noxious chemicals (for example, thiols and lachrymatory substances) being used on a daily basis. A Web form/site will be used to facilitate dissemination of this information. (The only information publically available would be the date, time, laboratory room number and the chemical);
- vii. ensure that waste is properly segregated, contained and labeled to be disposed of by the university chemical safety office.

17. INTEGRITY AND APPEALS

Integrity. The Department of Chemistry at Dalhousie University expects a very high level of academic honesty. Any failure to achieve that high standard can result in an academic offence. An academic offence can lead to the assignment of a failing grade in a class or examination, suspension, expulsion from the University and even the withdrawal of a degree that was previously awarded.

The following are some examples of serious academic offences, but there are others:

- the presentation of research data as accurate and reliable, when the researcher knows the data are inaccurate or unreliable, or, even worse, fabricated;
- the presentation of ideas or results as one's own when those ideas or results were obtained from an unwitting colleague, or were taken from a thesis, report, manuscript, publication, conference presentation, website, etc.;
- copying text or figures from a book, thesis, publication, etc. and presenting this without proper attribution of authorship (plagiarism);
- cheating on tests or examinations by copying, unauthorized communication, accessing unauthorized materials, etc.

University policies regarding academic integrity are at: <http://academicintegrity.dal.ca/index.php>

Appeals. Appeals within the Department of Chemistry are handled in keeping with FGS guidelines (see below – adapted and modified from: http://www.dal.ca/academics/academic_calendars/Graduate_Calendar_2013_2014 /Faculty_of_Graduate_Studies_Regulations.html#12).

Appeals related to class examinations, qualifying examinations, and Master's thesis defenses are handled initially within the Department of Chemistry. The handling of these appeals is done in an *ad hoc* manner, depending on the situation in hand. With regard to class examinations and coursework, the appeals are normally handled by the Professor involved and if this is not satisfactory to either party, then the matter is brought to the GSC or the Departmental Chair, should the GSC member(s) be in a conflict of interest, and as needed the Dean of Science. A similar protocol would apply for qualifying examinations, and Master's thesis defenses, which are normally chaired by a member of the Chemistry GSC. We have no record of any appeal of any type being brought either to the GSC, the Departmental Chair, or the Dean of Science over the timespan of this unit review. FGS policies state that if the aforementioned appeals are not resolved at the home Faculty level, the student may appeal to the Faculty of Graduate Studies on the grounds below. Appeals related to Doctoral defenses are directed to Faculty of Graduate Studies in the first instance. There are no appeals on admission decisions, or decisions on scholarships, grants or bursaries.

The grounds for appeal are limited to the following:

1. procedural unfairness;
2. bias; or
3. irregularity in procedure.

Once an appellant has exhausted all available and appropriate appeal avenues within their home department and Faculty, s/he may appeal to the Faculty of Graduate Studies. A written appeal must be submitted to the Dean of the Faculty of Graduate Studies within sixty (60) days following a) the event or circumstances appealed, or b) notification to the appellant of the outcome of the appeal at the unit level, whichever is later. The submission must include:

- i) a description of the exact nature of the appeal including a summary of events and chronology
- ii) specific details of the alleged unfairness, bias or irregularity; and any other relevant consideration or information
- iii) the requested resolution of the appeal.

In an appeals process the student has the right to representation. The student is required to inform the Dean, in writing, if s/he will have a representative presenting the appeal.

Decisions of the Appeals Committee are forwarded to the Dean. Students may appeal the final Faculty of Graduate Studies decision to the Secretary of Senate within 30 working days of the receipt of the Faculty decision. See the Senate office website at http://senate.dal.ca/Revised_Senate_const.php

18. HEALTH INSURANCE FOR INTERNATIONAL STUDENTS

All international students are required to have health insurance while studying in Canada. The International Student and Exchange Services office (ISES) administers the International Student Health Insurance Plan provided by Travel Insurance Coordinators Ltd. (TIC) in order to provide a comprehensive insurance plan to all registered international students. The TIC health fee (contact the Faculty of Graduate Studies for current values) is automatically generated on Banner when students register in September. Students may opt out before the registration deadline by providing proof of alternate coverage (i.e., private health insurance, MSI) and receive a full refund by completing a “Waiver of International Health Insurance” form at the ISES office in the Killam Library. Students who submit this form must notify the Graduate Clerk immediately. Students who also wish to add their spouse and/or dependents can do so by completing the “International Student Health Insurance Application Form” at the ISES office. Questions concerning the International Health Insurance can be addressed to ISES at 494-1566.

19. APPENDIX: GRADUATE STUDIES AND MENTAL HEALTH

The various responsibilities of a graduate student can sometimes become overwhelming. We recommend that students who feel that their graduate training is overwhelming should discuss this with their supervisors. Alternatively, students may also discuss issues with the Graduate Coordinator of Departmental Chair in confidence. These individuals may help you access additional resources such as those provided below, or you can access them directly.

- Student Health and Wellness Centre
 - Interprofessional health care team consisting of counsellors, health promotion experts, nurses, physicians, psychiatrists, psychologists, and social workers.
 - Stop by for a walk-in counselling or nursing appointment at 1246 LeMarchant St. (2nd floor).
 - Book a medical or social work appointment by calling 902-494-2171.
- Resources for Students
 - **Ask a Chaplain** – ask your faith or spirituality-related questions online at dal.ca/askachaplain.
 - **Ask a Nurse** – ask your health-related questions online at dal.ca/askanurse
 - **Good2Talk** – a free, confidential hotline for post-secondary students, available 24/7/365 – call 1-833-292-3698.
 - **Group Counselling** – eating disorders drop-in group; grief drop-in group; mediation; overcoming anxiety; resilience training. Visit dal.ca/livewell.
 - **I.M. Well App** – confidential support for international students, available 24/7/365 in 180 languages. Visit dal.ca/livewell.
 - **Peer Support** – free confidential and safe mental health support. Drop in Monday-Thursday, 4-6 pm, Wellness Room (SUB, lower level). Visit dal.ca/stayconnected.
 - **Q-Life** – A free, online resiliency-training program. Visit dal.ca/resilienceproject.
 - **WellTrack** – a free, online self-help program. Visit dal.ca/welltrack.

For more information on any of the above resources, visit dal.ca/livewell.

