



University
of Windsor

Department of Chemistry & Biochemistry

GRADUATE STUDENT HANDBOOK 2022/23
For Research-Based MSc and PhD Programs in the
Department of Chemistry and Biochemistry

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TABLE OF CONTENTS

1. THE MASTER'S PROGRAM	4
1.1 Duration:	4
1.2 Program Requirements:	4
1.2.1 Courses	4
1.2.2 Attendance at the Departmental Seminar Series (CHEM-8900)	4
1.2.3 Research Requirements – The Master's Thesis (CHEM-8970)	5
1.3 MSc Timeline	5
1.5.1 Students who already possess an MSc degree	6
1.5.2 Students who do not have an MSc degree but wish to transfer to the PhD Program ...	6
1.5.3 Students can transfer to the PhD Program after completion of the MSc	8
2. THE DOCTORAL PROGRAM	8
2.1 Course Duration	8
2.2 Entrance into the Doctoral Program	8
2.3 Program Requirements	8
2.3.1 Courses	8
2.3.2 Attendance at the Departmental Seminar Series (CHEM-8900)	10
2.3.3 The Comprehensive Examination	10
2.3.4 The Department Seminar	14
2.3.5 The Pre-Oral Meeting	14
2.3.6 Research Requirements (CHEM-9980)	15
2.4 Timeline for Submission of the Doctoral Dissertation	15
2.5 PhD Milestones to Completion	15
3. YOUR SUPERVISORY COMMITTEE	16
3.1 The Composition of Your Committee	16
3.2 Your Thesis Supervisor	16
3.3 Role of the Committee	17
4. OTHER INFORMATION	18
4.1 Seminars	18
4.2 Writing the Thesis or Dissertation	18
4.3 Other Responsibilities of Graduate Students	18
4.4 Graduation	19
5. SCHOLARSHIPS AND AWARDS	19
5.1 Federal and Provincial Awards	19
5.2 Scholarships from other sources	19
6. CUPE LOCAL 4580 INFORMATION	19
7 OTHER INFORMATION	19
7.1 Conflict Resolution	19
7.2 Conflict Resolution Contact List	19
7.3 Frequently Asked Questions:	20
Appendix A: The Thesis and Thesis Defense	21
A.1 Format of the thesis	21

A.2 Timeline to defense	21
A.3 The Oral Defense of the Thesis	22
Appendix B: University Standard Forms:.....	24
B.1 Committee Membership Form	24
B.2 Annual Report Form.....	24
B.3 Transfer to the PhD Form	24
Appendix C: Travel Support	25
C1. Faculty of Graduate Studies Conference Travel Award	25
C2. Faculty of Science Travel Award.	25
Appendix D: Contact Persons (2022-2023)	26
Appendix E: Extended Absences from campus	27
E.1 Extended leave from Campus to undertake research.....	27
E.2 Leave of absence for personal reasons	27

INTRODUCTION

As a new graduate student, you are welcomed to the Department of Chemistry & Biochemistry at the University of Windsor! This Handbook outlines our research-based MSc and PhD programs, and highlights the degree requirements you will need to meet in order to complete your qualification. We also outline a typical timeline and related information on transferring from the MSc to the PhD programs.

Graduate-level research-based programs require a more independent approach to research and study. It is important to recognize that it is **your responsibility** to organize your Supervisory Committee (hereinafter referred to as the Committee, see Section 3), arrange committee meetings, and ensure you maintain a progress towards your degree in a timely fashion. You should consult your supervisor and the Graduate Secretary for the Department of Chemistry and Biochemistry for help in this task, to identify deadlines and to submit any relevant required forms. **Do not rely on your supervisor, the Graduate Coordinator or the Graduate Secretary to ensure you stay 'on track'!**

We hope you enjoy your time in the Graduate School and look forward to working with you as you explore your science interest and develop the necessary skills to make yourself out as an accomplished independent researcher!

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1. THE MASTER'S PROGRAM

1.1 Duration:

- Duration = 1 – 3 years

The Faculty of Graduate Studies stipulates (i) a minimum duration of a Master's degree as one calendar year, and (ii) the MSc must be completed within three consecutive calendar years. The normal duration of a research-based MSc in Chemistry & Biochemistry is two calendar years (typically 6 – 7 terms).

1.2 Program Requirements:

- Students must complete at least **three** graduate-level courses satisfactorily prior to the thesis defense;
- Attend the Departmental Seminar Series;
- Undertake original research, write and satisfactorily defend an MSc thesis.

1.2.1 Courses

These courses are normally drawn from graduate-level courses offered within the Department of Chemistry & Biochemistry (CHEM-8xxx, BIOC-8xxx). Cognate courses must be approved by the Graduate Program Committee of the Department of Chemistry and Biochemistry. Consult the Graduate Secretary or Coordinator for more information, or look at www.uwindsor.ca/science/chemistry/455/graduate-studies.

Passing grade: For graduate students, the minimum passing grade is 70%. A single instance of a grade in the range 65–69% may be counted for credit upon approval of the graduate committee. **Two grades below 70% will normally require you to withdraw from the graduate program.**

Credit transfer: If you have taken graduate-level courses at another institution previously, then you should discuss the transfer of course credits with the Graduate Secretary in the first instance. Note that if the course credits were previously used towards a qualification at another institution, then they may not be valid for transfer. At least half of the credits earned for your Master's degree must be from the University of Windsor, i.e. you may have no more than one course credit transferred towards the MSc qualification.

1.2.2 Attendance at the Departmental Seminar Series (CHEM-8900)

- In each term, **you must** register for the Seminar Series, which will appear as IP (In progress) on your transcript until thesis submission, when it will be changed to P (pass). If you transfer to the PhD program, you will **continue to register** in the CHEM-8900 course.

Attendance at the Departmental Seminar Series is strongly encouraged, and students should register for this course each term of their graduate program. The seminar series comprises a set of research-based seminars across a broad range of topics in Chemistry and Biochemistry. These seminars are delivered by recognized experts in their fields as well as senior PhD students who are required to present a Departmental seminar on their research before defending their thesis.

1.2.3 Research Requirements – The Master's Thesis (CHEM-8970)

- In each term, you **must** register for the Master's Thesis, which will appear as IP (In progress) on your transcript until (i) thesis submission, when it will be changed to P (pass) or (ii) you complete a transfer talk to switch to the PhD program.

In addition to taking appropriate courses and attending required seminars (see **1.2.1** and **1.2.2** above), you will conduct research under your supervisor's direction and write a thesis. Your supervisor can advise on what is an acceptable quantity of material for an MSc student in your specific field of (bio)chemical research. They can advise you on drafting your thesis.

Information on the thesis format, thesis submission and the defense process are given in Appendix A.

Before defending your thesis, you are strongly recommended to attend one or more MSc or PhD defenses so you can familiarize yourself with the process.

1.3 MSc Timeline

The Faculty of Graduate Studies stipulates (i) a minimum duration of a Masters degree as one calendar year and (ii) the MSc must be completed within **three consecutive calendar years**. The normal duration of a research-based MSc in Chemistry & Biochemistry is two calendar years.

Your supervisor is best placed to guide you in terms of the quantity/quality of research which is considered appropriate for an MSc in your specific field of (bio)chemistry. Students registered in the MSc program should consult regularly with their supervisors about timelines and progress towards completion.

In every term:

- Register for the Masters Thesis and Seminar Program (CHEM-8900-1, CHEM-8970-1)
- Sign up for Graduate Assistantship (GA)
- Check emails, Department website, the Bulletin Board outside the Graduate Office and the Faculty of Graduate Studies website for information on forthcoming scholarship applications. See Scholarships and Awards (Appendix C).

Term 1: Arrange your supervisory committee (see Section 3) and submit the committee form (see standard forms, Appendix B). The committee form must be submitted before the end of your first registered term.

Term 2: **Register for Seminar, Thesis and additional courses if required.**

Term 3: Arrange a meeting of your supervisory committee to discuss annual progress. Submit an annual Progress Report by May 31 (see Standard Forms, Appendix B). You may also wish to discuss with your supervisor and/or committee about a transfer to the PhD program at this time.

Term 4: If you wish to transfer to the PhD program (see Section 1.5 below), arrange a meeting with your supervisory committee to present a transfer talk. Submit a transfer form (see standard forms, Appendix B)

Term 5: Discuss a timeline for completion with your supervisor

Term 6-7: Arrange a meeting of your supervisory committee to discuss annual progress. Submit an Annual Progress Report prior to May 31 (see standard forms, Appendix B). Discuss a timeline for completion with your supervisory committee. Complete drafting of the thesis and defense of the thesis – liaise with the Graduate Secretary with respect to deadlines when nearing completion (see Appendix A). Once a thesis defense date has been set, you should apply to graduate.

1.5 Transfer from the MSc to the PhD program

This process allows a student to enter the PhD program without completing the Master's degree first.

To be eligible, the student must have completed all graduate courses for the Master's degree and must have obtained a minimum 80% average. The supervisory committee must recommend the transfer, in writing, based on demonstrated excellence in research and provide evidence of a complete plan of research for the doctoral degree. All applications must be approved by the Faculty of Graduate Studies.

***IMPORTANT*:** Recommendations from the program must be made **no earlier than Term 3**, and be approved **prior to the completion of Term 4** of the Master's degree. **Recommendations received beyond the end of Term 4 will not be considered.**

There are three approaches to transfer to the PhD program. Most students enrolled in the MSc Program follow route 1.5.2:

1.5.1 Students who already possess an MSc degree

If you already have an MSc, you should discuss this with your supervisor and seek further information from the Graduate Secretary/Coordinator. You may apply directly to the PhD if there is consensus from your supervisor, graduate secretary, and the graduate coordinator that your previous MSc qualification is in a relevant discipline and research area.

1.5.2 Students who do not have an MSc degree but wish to transfer to the PhD Program

Current MSc students who have performed well academically in both their coursework and their research may apply for admission to the PhD program without the completion of the MSc thesis provided they successfully complete a **transfer meeting**. There are both academic and financial implications of the transfer.

** If a direct transfer to the PhD program is considered, students should discuss with their supervisor, Graduate Secretary and Coordinator to get further information. The transfer should be initiated by the 3rd semester following admission to the MSc program.*

The transfer meeting: Your transfer from MSc to PhD must be approved by your Committee. While the participation of your Outside Reader **is optional**, the inclusion of an additional Internal Reader is strongly recommended. This additional Internal Reader will often become a member of your PhD committee if the transfer is approved. At the Transfer Meeting, you

should provide your Committee with a presentation outlining:

- a summary of your research progress to date;
- a summary of any publications and/or presentations arising from your studies to date;
- any awards or prizes relating to your MSc work;
- a list of courses completed/in progress.

If your Committee is satisfied with your progress, then they can recommend you transfer to the PhD. The Graduate Transfer Form (see standard forms, Appendix B) should be completed and submitted to the Graduate Secretary and uploaded to UWinsite.

To align with the general requirements of the Faculty of Graduate Studies, students must have successfully completed all the course requirements for the MSc (three courses which may include up to one course credited from previous experience/degree/institution) prior to commencing the PhD program with a minimum average of 80%.

It is vital that both you and your supervisor are 100% certain that transferring from the MSc to PhD is the right decision for you. Once you have transferred from the MSc to the PhD program, you cannot revert back to the MSc. If you subsequently fail to complete the PhD, then you will leave the University with no qualification.

Note for the Supervisors and Supervisory Committee: A student who is not going to be recommended for the MSc to PhD transfer should be given this decision as early as possible so that the student will not be delayed in completing their research and in writing up the Master's thesis. In this context, it is important to begin this discussion in the third term of study during the Annual Committee meeting and Annual Progress Report.

It is the responsibility of both the thesis supervisor and the Master's Committee to identify students whose research-based performance and/or academic progress in coursework is unsatisfactory as early as possible. If the student has sufficient aptitude to successfully complete the MSc program, then they should continue in the MSc to completion but not be permitted to transfer. If there is clear evidence that the student will struggle to satisfactorily complete the MSc then there is no earliest date specified for asking students to withdraw from the MSc program on the grounds of poor performance.

Deadline dates for the MSc-to-PhD transfer: Your course enrollment and academic transcript are termly. If you successfully complete your transfer talk midway through a term, the transfer will not appear until a later date. It is important to note the transfer deadline dates shown in the Table below.

Intended PhD Start Term	Deadline Date for Transfer
Winter	October 1
Summer	February 1
Fall	June 1

Financial Implications of the Transfer: Please note the following financial support information which you should bear in mind before transferring: To be considered for an **Entrance Scholarship** upon transfer, cumulative GPA must be at least 80% or equivalent.

1.5.3 Students can transfer to the PhD Program after completion of the MSc

Upon completion of the MSc degree, you may apply for admission to the PhD program. Note that this is a new application, and there is no guarantee that you will be offered a PhD placement. This route is common for graduate students who wish to complete their current MSc studies and continue onto doctoral work in a different area or with an alternative PhD supervisor.

2. THE DOCTORAL PROGRAM

2.1 Course Duration

- Course duration 3 – 7 years

The Faculty of Graduate Studies stipulates (i) a minimum duration of a PhD degree is three calendar years of full-time study and (ii) a maximum of seven consecutive years if a student enrolled directly into the PhD program or six consecutive years if a student has one year's advance standing (e.g. already holds a masters qualification).

2.2 Entrance into the Doctoral Program

- Some students who already have an MSc may be eligible to apply and enroll directly in the PhD program.
- Most students will transfer from the MSc to the PhD during the fourth term of MSc study (see Section 1.5.2).
- Some students will complete their MSc and then re-apply for a PhD position (see Section 1.5.3).

2.3 Program Requirements

- Students must complete satisfactorily at least six graduate-level courses prior to the thesis defense, including any courses taken at the MSc level. Any students entering with completed MSc degrees must complete at least three courses;
- Attend the Departmental Seminar Series;
- Pass the Comprehensive Examination;
- Present a Departmental Seminar;
- Undertake original research, write and defend a PhD thesis satisfactorily.

2.3.1 Courses

A total of six graduate level courses are required prior to the thesis defense. These typically comprise:

- Five graduate level courses (this may include up to three course credits for students who already possess an MSc degree, or any graduate level courses already taken at the

University of Windsor for students who have transferred directly from the MSc program);

- The course CHEM-9900 ('the research proposal'). This is a compulsory course for all PhD students in Chemistry and Biochemistry and is discussed below.

The five graduate courses are normally drawn from graduate-level courses offered within the Department of Chemistry & Biochemistry (CHEM-8xxx, BIOC-8xxx), but appropriate courses offered in other Departments may be taken for credit with the consent of your supervisor, the Graduate Coordinator and the Faculty of Graduate Studies. Consult with the Graduate Secretary or Coordinator for more information, or look at www.uwindsor.ca/science/chemistry/455/graduate-studies.

Passing grade: For graduate students, the minimum passing grade is 70%. A single instance of a grade in the range 65–69% may be counted for credit upon approval of the Graduate Committee. **Two grades below 70% will normally require you to withdraw from the graduate program.**

Credit transfer: If you have taken graduate level courses at another institution previously then you should discuss the transfer of course credits with the Graduate Secretary and Graduate Coordinator in the first instance.

The Research Proposal (CHEM-9900): In the final year of your PhD you should register for the CHEM-9900 course. Unlike the Comprehensive Examination, which focuses on science within your research area, the Research Proposal will explore your ability to read more widely and develop ideas in an area of science outside your research area. This course focuses on the preparation of a novel research proposal based on the NSERC Discovery Grants or CIHR Project Grant programs. You will be required to develop a new research idea in an area of Chemistry or Biochemistry and prepare a research proposal including timelines, well-defined aims of the proposed program, structure of the project and appropriate methodology, develop decisions on the number of MSc and PhD students etc. which would be required for the 5 year program to succeed as well as training programs for your students and a budgetary framework!

The research proposal should not be a logical extension of your current doctoral studies or a closely related topic running concurrently in your supervisor's research group. You should seek guidance from your supervisor and the CHEM-9900 course instructor to ensure that your proposed idea is considered distinct from your previous studies. **Significant planning is required for this exercise, and you are strongly encouraged to have a clear vision of your research idea before you register for this course!**

Your research proposal and CCV (Canadian Common CV) will be assessed by your Doctoral Committee and the CHEM-9900 Instructor (usually the Graduate Coordinator) who will assess the merits of your proposal, including your ability to budget and plan a research program as well as developing an original, clearly written research proposal.

Note: The completion of the CHEM-9900 course must take place during the term of registration for this CHEM-9900 course *and* prior to the Ph.D. defense.

2.3.2 Attendance at the Departmental Seminar Series (CHEM-8900)

Attendance at the Dept seminar series is strongly encouraged and students should register for this course each term of their graduate program. The seminar series comprises a set of research-based seminars across a broad range of Chemistry and Biochemistry. These seminars are delivered by nationally and internationally recognized experts in their fields as well as senior PhD students who are required to present a Departmental seminar on their research prior to defending their thesis. The Seminar series will appear as IP (In progress) on your transcript until thesis submission when it will be changed to P (pass).

2.3.3 The Comprehensive Examination

Students in the PhD program are required to complete an oral comprehensive examination:

- within the first twelve months following transfer from the MSc program
- within eighteen months if admitted directly into the PhD program (already having an MSc).

The Ph.D. Comprehensive Examination is intended to explore the breadth and depth of a Doctoral student's knowledge in (bio)chemical sciences and is considered one of the most important examinations in the doctoral training program. **Advancement to candidacy is contingent on the successful completion of this Examination.** The Comprehensive Examination should be regarded as a serious and important focal point of a Ph.D. degree in the Department of Chemistry and Biochemistry, and as the last major exam before a student prepares their dissertation for defense.

During the Examination, the student will be expected to demonstrate a comprehensive understanding of all aspects of their research project. The examining committee should expect that greater knowledge will be evident on topics closer to the student's area of expertise, although any aspect of (bio)chemical knowledge can be the focus of questions. This Examination is not an evaluation of the student's research proposal, nor exclusively of knowledge central to the student's research topic; it is a wide-ranging exam with the goal of evaluating the student's knowledge, with a focus on their area of special expertise.

Passing your Comprehensive Exam is a key milestone in your progression towards your PhD qualification. Questioning is typically challenging and is meant to review how you might perform in the oral defense for your PhD. The Examination is undertaken by your Supervisory Committee.

Format: In the Department of Chemistry & Biochemistry, the Comprehensive Examination takes the form of a presentation (typically 20 minutes) of your research to date, followed by a detailed question and answer session in which your depth of knowledge of your field of research and the underlying chemical and/or biochemical principles will be examined by your Committee.

You should have a firm grasp of all the undergraduate level material, which underpins your

research. Your supervisor may provide some directed reading in preparation for your Comprehensive Examination if it is felt you need some remedial reading in key areas. You will be expected to understand the subject matter and background of the topics discussed. A grade of pass or fail will be given.

In the event of a failing grade, two options occur:

- a) You may be allowed a second examination ***within one month*** which may include a specific assignment ('remedial work' to improve your knowledge in one or more areas where you are felt to be deficient). A second failure will result in the requirement to withdraw from the program.
- b) Suppose your initial performance is particularly poor (showing limited progress and/or limited insight into your research and the relevant scientific literature), then your Committee may determine that you will not be allowed to repeat the Examination. You may be requested to withdraw from the Ph.D. program immediately.

Note: If you are required to withdraw from the program, then you will leave the University immediately without a qualification. It is therefore important you prepare as thoroughly as possible for your Comprehensive Examination.

The Comprehensive Exam Report Form (see below) will be provided by the Graduate Secretary and must be completed, signed and returned to the Graduate Secretary in Chemistry & Biochemistry, who will upload the Form to UWinsite.

COMPREHENSIVE EXAM EVALUATION GUIDE

The following is a list of evaluation categories to help guide the Supervisory committee in formulating comprehensive exam questions and help graduate students prepare for the question period of the comprehensive exam.

Questions/Categories	Yes (Well Done)	Somewhat (Needs Improvement)	No (Needs much improvement)
1. Did the student demonstrate the ability to answer conceptual based questions related to fundamental topics in Chemistry or Biochemistry?			
2. Did the student demonstrate the ability to answer conceptual based questions related to candidate's specific research area of specialty in Chemistry or Biochemistry?			
3. Did the student demonstrate the ability to answer questions related to how their proposed research will advance the knowledge of their specific area of specialty?			
4. Did the student demonstrate the ability to answer questions regarding knowledge of background literature and notable research findings within candidate's specific research area of specialty?			
5. Did the student demonstrate the ability to answer questions regarding general principles of experimental techniques or methods proposed in candidate's thesis work?			
6. Did the student demonstrate the ability to answer questions on data analysis and analytical interpretation of proposed research findings?			
7. Did the student demonstrate the ability to display broad knowledge and articulate using scientific			

appropriate language that is level appropriate for this stage of the PhD degree?

8. Did the student appropriately explained applications and/or limitations related to the specific area of research in Chemistry or Biochemistry? (e.g., contributing to certain area of innovation or filling in the knowledge gaps etc.)

Comments/Notes:

2.3.4 The Department Seminar

In the last year of your program, you will be required to present a **seminar** to the Department and your PhD committee. This should describe your work within the context of current knowledge in the field. Your seminar should be about 45 – 50 minutes long, and you should be prepared to answer questions from both undergraduate and graduate students alongside faculty members and your Committee members. This provides you with an opportunity to prepare yourself for your PhD oral defense (see below). **The Departmental Seminar should be completed in the last year of the PhD program, no later than one semester prior to the defense.**

Note: You should specifically invite your Committee, including the external reader to your Department Seminar!

2.3.5 The Pre-Oral Meeting

About six months before the expected completion of the Ph.D. dissertation, you will present to the Doctoral Committee with an outline of all the research that will be included in your dissertation. This meeting should be held after the completion of all course and Departmental Seminar requirements. The pre-oral meeting is typically considered to be the final annual meeting before your defense.

Note: Your pre-oral meeting may often be held immediately after your Department Seminar, but it is possible to hold this meeting at a later date (6 months prior to defense)

You should provide a brief presentation to show the Committee where your research currently stands and an appropriate timeline for completion and thesis submission. You should include:

- A list of graduate courses attended and your grades
- A one-slide summary for each Chapter highlighting work which needs to be completed (if any) and the state of progress towards drafting each Chapter
- A list of any publications arising from your doctoral work to date
- A list of presentations (poster/oral) where you have presented your work
- A proposed timeline for completion

The Committee will advise you on what they believe you must finish so that you may produce a satisfactory dissertation, whether the proposed timeframe for completion is realistic and will suggest suitable external examiners¹ for the PhD defense. A pre-oral report form is completed, which provides a draft timeline and potential external examiner.

¹ The external examiner must be a tenured faculty member at another University whom you do not have a collaborative program of research with. They will typically work directly in your area of research or in a closely related field. The external examiner must be approved by the Dean of Graduate Studies and this approval must be done 8 weeks before the defense date. The Graduate Secretary in Chemistry and Biochemistry will arrange for the approval of the external examiner.

The Pre-Oral report form will be provided by the Graduate Secretary and must be completed, signed and returned to the Graduate Secretary after the Pre-Oral meeting.

2.3.6 Research Requirements (CHEM-9980)

In addition to taking appropriate courses and attending required research-based seminars, you will conduct research under your supervisor's direction and write a thesis. Your supervisor can advise on what is considered to be an acceptable quantity of material for a PhD student in your specific field of (bio)chemical research. They can advise you on drafting your dissertation. University templates are available online to ensure you complete the thesis according to the University standards:

<http://www.uwindsor.ca/graduate-studies/385/format-requirements>

It is important to use a University-approved template; a thesis requires a non-standard set of margins (particularly extra space on the left margin for binding). It is convenient to download a template at an early stage in the thesis writing process to ensure uniformity across the entire document.

Once dissertation writing is well underway, you should consult with the Graduate secretary on current timelines for thesis submission in order to meet financial deadlines (so-called Phase I or Phase II) and/or to ensure your thesis is defended in good time to attend a specific University Convocation where you will receive your qualification.

2.4 Timeline for Submission of the Doctoral Dissertation

The final Examination is the dissertation defense. This is conducted by your Committee to which the external examiner has been added. The external examiner is from another university and is normally an expert in your field of research. The timeline for the thesis submission and defense is quite specific and described in Appendix A.

Note: Dates and timelines do change year-on-year, and you must check with the Graduate Secretary on what timelines are current when you are nearing thesis completion. This should normally be done just before the pre-Oral Meeting with your Committee. You then have relevant timeline information to generate an informed discussion at that meeting.

2.5 PhD Milestones to Completion

You should keep a record of your courses taken and grades achieved. You should present information on your progress towards completing your coursework during your committee meetings, so your Committee can view these alongside your research progress.

Course	Course Code	Course Title	Grade
Course #1			
Course #2			
Course #3			
Course #4			

Course #5			
Course #6	CHEM-9900	The Research Proposal	
Milestone		Comprehensive Examination ²	
Milestone		Department Seminar ³	
Seminar	CHEM-8900-1	Seminar	(IP)
Milestone		Pre-Oral	
Thesis	CHEM-9980-1	Doctoral Dissertation	(IP)

3. YOUR SUPERVISORY COMMITTEE

All students registered in the MSc and PhD programs must have a Supervisory Committee. The role of the Committee is to monitor your progress towards your MSc or PhD qualification. You should consult with your supervisor about the composition of your Committee. You should then contact each potential Committee member for approval and signature on the committee form. The committee form (Appendix B) should be returned to the Graduate Secretary who will upload it to UWinsite for approval by the Graduate Coordinator and ultimately on to the Faculty of Graduate Studies for final approval.

Note: Selection of your Committee should be made in conjunction with your supervisor, and the form submitted to the Graduate Secretary within the first term of graduate school.

3.1 The Composition of Your Committee

The composition of your Committee should be as follows:

- **Master's Committee** consists of the thesis supervisor, at least **one** departmental reader and one outside department reader who is typically a non-expert.
- **Doctoral Committee** consists of the thesis supervisor, **two** departmental readers, and one outside department reader. At the dissertation defense an external examiner is added to the Committee. The external examiner will be an expert in your area of research from another University and will be appointed near the end of your doctoral program to assess your thesis.

The above committee membership is the minimum required by University regulations. In certain circumstances, additional committee members may be designated. These might include a co-supervisor or an additional committee member if it is felt beneficial to have additional expertise within your Committee.

3.2 Your Thesis Supervisor

Your supervisor must be a regular or cross-appointed member of the Departmental Graduate Faculty. Your supervisor is normally chosen prior to admission, and your offer letter will typically have highlighted your supervisor. In some circumstances, you may have two

² There is no grade for the Comprehensive Examination – it is pass/fail. Similarly, there is no grade for giving the Department Seminar – it is a milestone to be completed.

co-supervisors.

Your supervisor is the most important individual in your graduate education. Your supervisor is an advisor, counsellor and research director! In addition, your supervisor is also your employer and you will typically receive a Research Assistant (RA) salary which is paid from your supervisor's research budget. They will be your first port of call for guidance for everyday questions relating to your research. Your supervisor will help keep you on track to achieve the goals necessary to attain your M.Sc. or Ph.D. qualification. Your supervisor may also work with you to identify a future career after graduate school, help you prepare applications for Scholarships or other Awards, and write references for Professional Schools and other employment opportunities within and outside academia.

The Faculty of Graduate Studies encourages the establishment of clear expectations through open dialogue between graduate student and their research supervisor(s). They have designed a document to be completed by both the student and the supervisor to help avoid future conflicts and to ensure that all aspects of the supervisory relationship are being considered. A copy of this document can be found here:

<http://www.uwindsor.ca/graduate-studies/654/studentsupervisor-guidance-manual>

This document can be revisited any time throughout the degree program when there are changes to the student's program or direction of research. This document was adapted from the McMaster template and after guidelines and documents in use at other Canadian universities.

3.3 Role of the Committee

Your Committee should meet with you at least once a year to evaluate your progress. Additional meetings may be required at the discretion of the Committee. Other duties of the committee include:

- attending your transfer meeting (MSc to PhD) where appropriate;
- conducting the comprehensive Examination (PhD);
- evaluating your CHEM-9900 research proposal (PhD);
- attending the pre-oral meeting which normally follows your Departmental seminar (PhD);
- conducting the dissertation examination/defense (MSc or PhD).

The presence of the outside department committee member is optional at these meetings other than the thesis/dissertation defense, but you are strongly encouraged to invite them to attend so that they have the opportunity to be more proactive in following your academic progress.

Note: You will receive email reminders about Annual Reports from the Graduate Secretary. You should arrange to hold a committee meeting and upload Annual Report forms to UWinsite for approval by the Graduate Coordinator by May 31st every year.

In general, you are responsible for organizing your committee meetings and you are expected

to consult with the Graduate Secretary for the Department of Chemistry and Biochemistry for help in this task and to obtain any relevant required forms. Do not rely on your supervisor or the Graduate Secretary to ensure you stay 'on track'.

4. OTHER INFORMATION

4.1 Seminars

Presentations from graduate students, faculty and visiting researchers on a variety of research topics in chemistry and biochemistry. Students must register in this course (CHEM-8900) in each term of full-time registration in the M.Sc. /Ph.D. programs. All graduate students **MUST** attend all departmental seminars. **Doctoral students** must also present a departmental seminar on their research prior to their thesis defense. This is done in the last year of study.

4.2 Writing the Thesis or Dissertation

The time for writing the thesis or dissertation is determined by the student and the student's supervisor. Generally writing a thesis is time-consuming and identifying a timeline is important to completing your thesis in a timely fashion. More information on timelines to completion are presented in Appendix A.

The ***minimum residence time*** for each degree is set out in the Graduate Calendar. Almost all students require further terms of registration in order to complete their degrees. In practice, M.Sc. students can expect to take a total of approximately two years and Ph.D. students four to five years. The Graduate Calendar lists specific dates for completion of all requirements if a student wishes to obtain her/his degree at a certain convocation date.

4.3 Other Responsibilities of Graduate Students

- It is the responsibility of the student to **adhere to the published University deadlines** (eg. Those for scholarship and award applications, and tuition payment). The deadlines are yearly updated and published online which can be found on the webpages of either Graduate Studies (www.uwindsor.ca/graduate-studies/356/important-dates), or Cashiers' Office (www.uwindsor.ca/finance/767/important-financial-dates).
- **Safety and instrument usage.** All students must complete safety training provided by the Occupational Health and Safety Office. Please consult www1.uwindsor.ca/chemistry/safety/ for more details. Students must successfully complete the recommended training in order to obtain storeroom privileges and be allowed to work in any of the laboratories. Students **must** follow the safety procedures mandated for the laboratory(s) in which they are working, including the use of protective eyewear and clothing.

Each student must receive training from the appropriate technician or faculty member on any instrument that they wish to use prior to using that instrument. In most situations, the student must also obtain permission from the appropriate technician or faculty member responsible for an instrument before using the machine. All students must adhere to all rules concerning the use of each instrument. Such rules include: the proper use of sign-up sheets; adherence to the time-slot policies; the proper use of log books; following the correct shut-down procedures; etc. Any student who does not follow the rules for an instrument will lose their privileges on that instrument.

4.4 Graduation

In order to graduate, all students must apply to receive a diploma. Please visit the following website for more information: www.uwindsor.ca/graduation-convocation

5. SCHOLARSHIPS AND AWARDS

5.1 Federal and Provincial Awards

The announcement of available scholarships and awards is regularly updated and published online, which can be found on the web pages of the Graduate Studies: www.uwindsor.ca/graduate-studies/456/scholarships-and-awards

5.2 Scholarships from other sources

Eligible graduate students are encouraged to apply for scholarships specific to their research field, usually provided by academic societies, such as the Parkinson's Society Canada, Cancer Research Society, or travel awards of conferences. A track record of the ability to secure scholarships or awards will advance your career.

6. CUPE LOCAL 4580 INFORMATION

As a graduate student at the University of Windsor, you are guaranteed a support in the form of assistantships as outlined in your collective agreement. As a graduate assistant you are represented to the University by CUPE Local 4580 and have rights as well as responsibilities, outlined in this agreement. It is necessary that you familiarize yourself with the terms of this agreement. This agreement can be found on CUPE website at www.4580.cupe.ca. In addition, one can find executive, steward and committee representation lists, bylaws, upcoming events, summaries of current issues, meeting notices and agendas, links to other University locals and policies relevant to Graduate and Teaching Assistants.

If you believe that you require assistance or information from your Union representatives with regard to your duties as an assistant, would like to get involved, or are curious about what your union does, please contact them at: cupe4580@uwindsor.ca

7 OTHER INFORMATION

7.1 Conflict Resolution

Sometimes a graduate student may find themselves in a conflict arising from personal or professional interactions with others while performing their duties in research, laboratory supervision and other settings. For example, they may find themselves in conflict with another graduate student, their supervisor, or a staff member. Such incidents can be detrimental to students' morale and productivity. At all times they should be resolved in a timely, professional and respectful manner. Below is list of contact persons who you are advised to contact if you wish to seek advice or assistance in resolving such incidents.

7.2 Conflict Resolution Contact List

- Graduate Student Representatives
- Graduate Co-ordinator

- Head of the Department of Chemistry and Biochemistry
- Associate Dean of Science - Graduate Studies
- Associate Dean of the Faculty of Graduate Studies

Please see Appendix D for the details of the contact.

7.3 Frequently Asked Questions:

Q: Why didn't I get an email announcement about a Departmental seminar?

A: *Please email the Graduate Secretary Ms. Marlene Bezaire (mbezaire@uwindsor.ca) to have your email address added to the email list.*

Q: Which graduate course is easy so that I can easily pass with top mark?

A: *Graduate courses are parts of your education. You should consider taking courses that will benefit your research and your future career. You are encouraged to consult with your supervisor about which courses might benefit your research as well as follow courses which might be of general scientific interest to you. As a doctoral student, some graduate level courses focus on specific research skills which are directly relevant to your research. These courses might develop your depth of knowledge which might be advantageous when it comes to your comprehensive Examination.*

Q: I feel my progress is slow, especially in comparison to some of my fellow students, and I am concerned about completing the course on schedule

A: *Research progresses at different paces depending on which field of Chemistry or biochemistry you are in. Some research areas produce results very quickly, others take time to develop methodology. Your supervisor is the person best placed to advise you on overall progress and they should provide you with constructive feedback to allay your concerns or develop a strategy to keep you on track to completion.*

Q: Who should I talk to when I have a problem with my supervisor?

A: *If the problem or conflict is related to research, you can contact any member of your graduate committee for a meeting to resolve or to outline the research activities. See section 8.1. If the conflict is related to personal and interpersonal skills, you can contact any of the persons listed in Section 8.2. There is no order of priority here, please approach whichever person you feel the most comfortable with for direction and advice.*

Q: Who should I talk to if I feel threatened by other graduate or undergraduate students?

A: *You can contact any of the persons listed in section 8.2. There is no order of priority here, please approach whichever person you feel the most comfortable with for direction and advice.*

Appendix A: The Thesis and Thesis Defense

A.1 Format of the Thesis

University templates are available on-line to ensure you complete the thesis according to the University standards: www.uwindsor.ca/graduate-studies/385/format-requirements.

It is important to use a university-approved template; a thesis requires a non-standard set of margins (particularly extra space on the left-hand side for binding). It is convenient to download a template at an early stage in the thesis writing process to ensure uniformity across the entire document.

Any questions regarding the preparation and formatting of a thesis or dissertation should be directed to Svetlana Georgieva (Faculty of Graduate Studies) at ext. 2104.

The thesis should contain both a declaration of originality and an approval page for signing by your Committee. Both these forms can be downloaded here:

www.uwindsor.ca/graduate-studies/360/student-forms

A.2 Timeline to the Defense

Final copies of the thesis must be in the hands of each committee member at least two weeks prior to the scheduled date of the Examination. Once thesis writing is well underway, you should consult with the Graduate secretary on current timelines for thesis submission in order to meet financial deadlines (so-called Phase I or Phase II) and/or to ensure your thesis is defended in good time to attend a specific University Convocation where you will receive your qualification.

Current information on timelines can be found under "Thesis and Dissertation Forms":

<http://www.uwindsor.ca/graduate-studies/360/student-forms>

Planning for your thesis defense starts several months before you intend to defend. The following is an approximate timeline but it is vital to consult with the Graduate Secretary to ensure you meet the relevant deadlines.

Eight weeks prior to tentative defense: After completing your Pre-Oral meeting, inform the Graduate Secretary in the Department of Chemistry and Biochemistry of your intent to submit and defend your thesis/dissertation. The Graduate Secretary can submit the name of the external examiner decided upon at the Pre-oral meeting for approval by Graduate Studies. If the examiner has not previously undertaken examining duties at the University of Windsor, then the external examiner will be asked to provide a *Curriculum Vitae* which will be considered for approval.

Seven Weeks before the defense: The Graduate Secretary will obtain formal approval for the External Examiner from the Dean of Graduate Studies.

Five weeks before the defense: You will need to bring a printed copy of the dissertation to the Graduate secretary and obtain the form "Approval to Submit a Doctoral Dissertation for External Examination". This form, along with the dissertation, needs to be reviewed and signed by each doctoral committee member. The Graduate Secretary will contact the committee members and confirm a defense date and time. This form can be found under "Thesis and Dissertation Forms":

Note: The date and time of the thesis/dissertation defense cannot be confirmed until the thesis is complete, so it is important to get your completed thesis/dissertation submitted as early as possible.

The Approval Form must be signed by all members of your Committee. Your committee have the right to read the thesis before signing the form. You should discuss this with them and allocate additional time if necessary for them to read the thesis.

At least four weeks before the defense: One hardcopy of the thesis/dissertation, along with the signed approval form, must be hand-delivered to the Office of Graduate Studies and Research. The Office of Graduate Studies will send the dissertation to the external examiner by courier. Ensure you give an extra day or two in addition to the four weeks in case of public/statutory holidays etc.

Note: If the external examiner requests an electronic copy, it is the Office of Graduate Studies who must send it out, not you!

Two weeks before the defense: An electronic or printed copy of the dissertation must be provided by the student to all members of the committee. The external examiner is required to provide a written report on the thesis/dissertation which must explicitly state whether the thesis can proceed to the defense.

One week before the defense: The Graduate secretary will post the defense notice.

A.3 The Oral Defense of the Thesis

For a PhD defense a faculty member from another Department will chair the Examination. For an MSc defense the Graduate Coordinator or another delegated Faculty member will chair the defense. In other respects both MSc and PhD defenses follow the same format.

The defense is open to the general public. The exam should consist of:

- A 20–30 minute presentation of your research. You may elect to talk about selected highlights of research rather than try and cover all aspects of your doctoral work.
- After the presentation is complete, the chair of the defense will invite questions from the audience.
- After any questions from the audience have been answered, there will then be an opportunity for the audience to withdraw. If they elect to stay, then they must stay for the whole of the questioning period by the committee which may last several hours.
- Typically, the questioning period will comprise a series of questions from each committee member for ca. 15 – 20 minutes each. The external examiner will take the lead. Two rounds of questioning are common.
- The external examiner who is an expert in your area of research will normally ask technical questions challenging your knowledge of the field and specific details relating to your research, methodologies, techniques and so on.
- Your external reader will normally ask more general questions, so be prepared to explain both your research and its impact to a non-expert or perhaps be prepared to explain how key pieces of instrumentation you use work, bearing in mind the external reader is a non-specialist in the area. If your external reader is in a different science

discipline it is not uncommon for them to ask questions based on aspects of science common to all science disciplines such as errors and error propagation or ask about the theory of how a particular experiment fundamental to your research works.

- Your remaining committee members will also be familiar with your work and may ask similar questions to the external to test your knowledge and understanding of the work and underpinning theories.

Once questioning is complete, you and any members of the public are requested to withdraw and the committee will deliberate your performance. You will then be called in and will be informed of the decision.

Note: You are encouraged to attend the defense and questioning period for other MSc and PhD candidates to familiarize yourself with the procedure. You might also find it useful to attend other defenses which involve members of your Committee so you can identify potential lines of questioning which they may favor.

Appendix B: University Standard Forms:

Current versions of standard forms can be downloaded from the Faculty of Graduate Studies website.

www.uwindsor.ca/graduate-studies/360/student-forms

The forms are currently stored under four categories:

Student Forms

> Enrolment, registration & other general use forms:

> GA/TA and funding related forms:

> Thesis and dissertation forms:

> Thesis deposit forms (post defense):

- Download and complete the current version of the form, and obtain signatures from your supervisor and/or committee members and the Graduate Coordinator.
- Once complete the form should be returned to Marlene Bezaire the Graduate Secretary in EH-273 so that your Departmental record can be updated.
- The form then needs to be uploaded to UWinsite for formal approval by the Faculty of Graduate Studies.

B.1 Committee Membership Form

There are two Committee Membership Forms. Normally you will have a sole supervisor and you should complete the sole supervisor form. On some occasions you may work on a joint project with two supervisors and should instead complete the co-supervisor form. These forms can be found under **Thesis and dissertation forms**.

B.2 Annual Report Form

At the end of each academic year, you should complete an Annual Report Form highlighting your progress and a commentary from your supervisor on how they perceives your progress. The annual report form can be found under **Enrolment, registration & other general use forms**.

B.3 Transfer to the PhD Form

At the very beginning of the fourth semester of study, many students will transfer from the MSc to PhD program. You will need to complete a Transfer to PhD Form. This does not currently appear on the standard students forms webpage but can be found here:

https://www.uwindsor.ca/graduate-studies/sites/uwindsor.ca.graduate-studies/files/transfer_masters_phd.pdf

Appendix C: Travel Support

C.1 Faculty of Graduate Studies Conference Travel Award

Master's students are eligible for a maximum of one (1) reimbursement within the first 6 terms of registration. Doctoral students are eligible for a maximum of two (2) reimbursements within the first 12 terms of registration.

Visit the following website for more details:

<https://www.uwindsor.ca/communication-media-film/325/conference-travel-fund>

C.2 Faculty of Science Travel Award.

Students must apply for this award 30 days before attending a conference.

Link to this application:

www.uwindsor.ca/science/sites/uwindsor.ca.science/files/2022_student_travel_fund_application_form.pdf

Contact Laura McLean in the Dean's Office for further information.

Appendix D: Contact Persons (2022-2023)

Graduate Co-ordinator:

Simon Rondeau-Gagné (srondeau@uwindsor.ca, ext 3556)

Head of the Department of Chemistry and Biochemistry:

James Gauld (gauld@uwindsor.ca, ext 3526)

Associate Dean of the Faculty of Graduate Studies:

Lori Buchanan (adgs@uwindsor.ca)

Appendix E: Extended Absences from Campus

E.1 Extended Leave from Campus to Undertake Research

It is understood that a graduate student may be absent from the University while still under supervision, e.g., visiting libraries, attending a graduate course at another institution, doing field work, etc. **If such period of absence exceeds four weeks in any term, written evidence must be made available to the Office of Graduate Studies to the effect that the absence has the approval of the program coordinator.**

E.2 Leave of Absence for Personal Reasons

From time to time, students may need a leave of absence from their studies for medical, health or other personal reasons. Students should consult with the Graduate Coordinator or the Associate Dean of Graduate Studies (see Appendix D) for advice about a Leave of Absence. Students seeking a Leave of Absence should submit a Leave of Absence application. The Leave of Absence application form can be downloaded from the Faculty of Graduate Studies website:

<http://www.uwindsor.ca/graduate-studies/360/student-forms>

The Leave of Absence application form is under **Enrolment, registration & other general use forms**.