

# **GRADUATE PROGRAM IN CHEMISTRY**

Student Handbook 2023–2024

Graduate Program in Chemistry



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#### GRADUATE PROGRAM IN CHEMISTRY - YORK UNIVERSITY

The Graduate Program in Chemistry offers research in analytical, atmospheric, biological, inorganic, mass spectrometry, organic and physical chemistry. Opportunities are available in modern aspects of atmospheric and environmental chemistry, mass spectrometry, protein identification and characterization, organic/organometallic/inorganic synthesis, catalysis, reaction kinetics and materials chemistry. Our Department is vibrant with 12 new professors joining the ranks since 2017 for a total of 30 faculty members including 23 Research Stream and 7 Teaching Stream. In addition, we have 5 administrative staff, 7 technical staff, ~ over 70 graduate students and several post-docs and research associates.

# **RESEARCH FACILITIES**

The research is carried out in three buildings: the Petrie Science and Engineering Building (PSE), the Chemistry Building (CB) and the Life Sciences Building (LSB). The Department is also well serviced by support facilities such as stores (PSE 002), a machine shop (PSE 006), an electronics shop (PSE 018A) and a glassblowing shop (PSE 016).

Research groups have access to several modern nuclear magnetic resonance (NMR) spectrometers (300–700 MHz), Fourier-transform infrared (FTIR) spectrometers, analytical gas chromatograph/mass spectrometers (including a selected-ion flow-tube spectrometer), modern laser and electrochemical facilities, scanning tunneling and atomic force microscopes, instrumentation for monitoring trace atmospheric constituents and a combinatorial chemistry facility.

#### **PROGRAM ADMINISTRATION**

Column 1 has the position title of the administration, column 2 has their names, column 3 has their room numbers and the remaining two columns have their contact information.

Title	Name	Room	Telephone extension	email
Graduate Program Director	Prof. Ryan Hili	431A LSB	44207	chemgpd@yorku.ca
Graduate Program Assistant	Mandy Ramnaraine	126 CB	Ext. 77724	chemgpa@yorku.ca

#### **GENERAL INFORMATION**

- The information in this handbook is supplementary to the Faculty of Graduate Studies Calendar. Please read carefully the "Faculty Regulations" found in the Main Calendar (Regulations for the Faculty of Graduate Studies). The Handbook is for information purposes only and rules/regulations described herein may have changed, or may change in the course of your studies in the Program.
  - Correspondence and general enquiries pertaining to program requirements should normally be directed to the Graduate Program Assistant, Ms. Mandy Ramnaraine.
  - Students are advised to follow registration dates, the Program and Faculty deadlines, and to inform the Graduate Program Assistant of any changes in status and study plans to ensure that correct procedures are followed and deadlines are met.
  - It is very important to keep current on important dates. The Faculty of Graduate Studies online calendar is found at: <u>Important Dates</u>
  - Students should frequently check their York U email account for important announcements and deadlines, scholarship notices, bursary applications, etc. Mailboxes are located in CB 124C and should also be regularly checked for notices, paystubs, and any other Program information.

#### RESEARCH SEMINARS

A series of lectures on various topics in contemporary chemical research are presented by the faculty, visiting scientists and graduate students. All graduate students are expected to regularly attend research seminars while registered as a full-time student. This is a great opportunity for you to expand your knowledge of chemistry to areas that you may not be familiar with, and to mingle with your peers and with faculty members. By attending those seminars, you will also observe and learn what it takes to make a good public presentation. This will be helpful for delivering a world-class presentation during the Research Evaluation exercise, at conferences and eventually during your job interviews.

#### **GRADUATE RESOURCES**

#### **LIBRARIES**

There are five main libraries at York: Scott Library, Steacie Science and Engineering Library, Peter F. Bronfman Library, Leslie Frost Library and Osgoode Law Library. The Steacie Science and Engineering Library subscribes to most major chemical and biochemical journals with convenient electronic access. Back issues are also available at the Library itself. Many resources are available online. For access to paid services and journal subscriptions whenever not on campus, you will need to install Pulse, the preferred VPN (Virtual Private Network) client (How to Connect securely), on your personal computer. Information about library services and training is provided during the orientation session and can also be found online (York University Libraries).

#### **WRITING**

The Centre for Academic Writing offers sessions and workshops in all aspects of writing. Sessions such as individual and drop-in tutoring, and group workshops are available to all students in the Faculty of Graduate Studies. The Centre is located in Ross South 329. See Writing Centre for details.

#### **ESL CENTRE**

The ESL Open Learning Centre (ESL-OLC), located in Ross South 327, is open to all York students and offers support to those for which English is not their first language. To register, go to ESL.

#### **GO SAFE**

If you are working on Campus in the evening, you can take advantage of the complimentary Go Safe shuttle service that provides transportation around campus to parking lots, bus stops and residence. For information on route maps and schedules, visit <u>goSAFE</u>

Hours: 6:00 PM-2:00 AM (September to April)

8:00 PM-2:00 AM (May to August)

Contact info:

Phone: 416 736 5454 or EXT. 55454

By using any of the Blue Light Emergency phones

By payphone on campus (it's free)

By the go SAFE button on any campus Safety phone

By the "York U Safety" mobile app

#### INTERNATIONAL STUDENTS

York International is located in 200 York Lanes. The Office is a resource for incoming and continuing international students. They can address questions pertaining to health care plan, immigration status, study permits and all other related enquiries (York International).

# **FACULTY MEMBERS**

Faculty Member	Office	Email	Research Interests
Gerald Audette (PhD: Saskatchewan) Professor and Associate Dean Faculty	327C LSB	audette@yorku.ca	Protein Crystallography, Bio-nanotechnology, Nanomedicine, Structural Biochemistry
Thomas Baumgartner (PhD: Bonn) Professor and Canada Research Chair Tier I in Materials Chemistry	431B LSB	tbaumgar@yorku.ca	Main-group and organic Materials Chemistry, and Sustainable Energy
Christopher Caputo (PhD: Toronto) Associate Professor and Canada Research Chair Tier II in Materials Chemistry	354 CB	caputo@yorku.ca	Inorganic, Organic and Materials Chemistry
Jennifer Chen (PhD: Toronto) Associate Professor	456 CB	jilchen@yorku.ca	Analytical, Inorganic, Materials and Physical Chemistry
Logan Donaldson (PhD: British Columbia) Professor; Home department: Biology	49 FS	logand@yorku.ca	Structural Biology, NMR of Biological Molecules
René Fournier (PhD: Montreal) Professor	303 PSE	renef@yorku.ca	Computational Chemistry
Ryan Hili (PhD: Toronto) Associate Professor York Research Chair Tier II in Molecular Evolution	429B LSB	rhili@yorku.ca	Organic Chemistry Chemical Biology
Demian Ifa (PhD: São Paulo) Associate Professor	252 CB	ifadr@yorku.ca	Mass Spectrometry Imaging, Clinical Mass Spectrometry, Ionization Techniques, Biological Chemistry

# **FACULTY MEMBERS Continued**

Faculty Member	Office	Email	Research Interests
Philip Johnson (PhD: British Columbia) Professor	414 CB	pjohnson@yorku.ca	Biological Chemistry, Nucleic Acid Chemistry, Biophysical Chemistry, Biomolecular NMR
Bill Kim (PhD: Harvard University) Assistant Professor	148 CB	bkim271@yorku.ca	Biological Chemistry
Sergey Krylov (PhD: Moscow State University) Professor, York Research Chair in Bioanalytical Chemistry	340 PSE	skrylov@yorku.ca	Bioanalytical Chemistry
Gino Lavoie (PhD: Massachusetts Institute of Technology) Professor	145 PSE	glavoie@yorku.ca	Inorganic Chemistry, Polymers, Organometallics
Christine Le Assistant Professor	346 CB	cmle@yorku.ca	Organic Synthesis, Catalysis, Biological Applications
Robert McLaren (PhD: Alberta) Professor and Graduate Program Director (No longer accepting new students)	301 PSE	rmclaren@yorku.ca	Atmospheric Chemistry
Sylvie Morin (PhD: Ottawa) Professor	346 PSE	smorin@yorku.ca	Scanning Tunneling Microscopy, Electrochemistry, Metal Deposition, Nanostructures

# **FACULTY MEMBERS Continued**

Faculty Member	Office	Email	Research Interests
Arturo Orellana (PhD: British Columbia) Professor	440 CB	aorellan@yorku.ca	Natural Products Synthesis, Synthetic Methods
William Pietro (PhD: California) Professor	138 PSE	pietro@yorku.ca	Inorganic Chemistry, Materials Chemistry
Pierre Potvin (PhD: McGill) Professor and Undergraduate Program Director	406 CB	pgpotvin@yorku.ca	Ligand Synthesis, Coordination Chemistry, Electrocatalysts & Photocatalysts relevant to energy sources
Valeria Tsoukanova (PhD: St. Petersburg State University) Associate Professor (on leave)	342 PSE	valeriat@yorku.ca	Physical Chemistry, Biophysical Chemistry, Biomaterials
Trevor VandenBoer (PhD: University of Toronto) Assistant Professor	344 CB	tvandenb@yorku.ca	Environmental Analytical Chemistry
Jennifer van Wijgaarden (PhD: University of Alberta, Canada) Professor, Chair	126 CB	vanwijng@yorku.ca	Computational and Experimental Chemistry
Derek J. Wilson (PhD: Western Ontario) Professor, York Research Chair in Molecular Mechanisms of Disease	318 CB	dkwilson@yorku.ca	Protein Dynamics, Microfluidics, Time- resolved Mass Spectrometry, Biophysical NMR

# **FACULTY MEMBERS Continued**

Faculty Member	Office	Email	Research Interests
Cora Young (PhD: Toronto) Associate Professor, Guy Warwick Rogers Chair in Chemistry	340 CB	youngcj@yorku.ca	Environmental Analytical Chemistry
Muhammad Yousaf (PhD: Chicago) Professor	431C LSB	mnyousaf@yorku.ca	Surface Chemistry, Biomaterials Nanoscience, Biological Chemistry, Organic Synthesis
Toby Zeng (PhD: University of Alberta) Assistant Professor	208 CB	tzeng@yorku.ca	Theoretical Chemistry

# **FACULTY MEMBERS Professor Emeritus**

Faculty Member	Office	Email	Research Interests
Diethard Bohme (PhD: McGill), Distinguished Research Professor (retired, not accepting new graduate students.	235 CB	dkbohme@yorku.ca	Biophysical and Bioanalytical Mass Spectroscopy, Gas Phase Chemistry, Kinetics and Energetics of Reactions of Bare Metal
Edward Lee-Ruff (PhD: McGill) Professor Emeritus (not accepting new graduate students)	235 CB	leeruff@yorku.ca	Organic Synthesis, Photochemistry
A. B. P. (Barry) Lever (PhD: London) Distinguished Research Professor Emeritus (not accepting new students)	235 CB	blever@yorku.ca	Bioinorganic Chemistry, Electrochemistry, Electronic and Vibrational Spectroscopy, Solar Energy Conversion
Clifford Leznoff (PhD: McGill) Distinguished Research Professor Emeritus (not accepting new students)	235 CB	leznoff@yorku.ca	Organic Chemistry, Synthetic Organic Chemistry
Michael K. W. Siu (PhD: Dal	235 CB	kwmsiu@yorku.ca	Cell and Molecular Biology

#### **REGISTRATION PROCEDURES**

All graduate students must maintain continuous registration in the <u>Fall, Winter and Summer terms</u> until graduation or withdrawal from the Program. Registration is done online at <u>Registrar's Office</u> (click on Web Registration and Enrolment and follow the prompts). An enrolment deposit is not required by the Faculty of Graduate Studies. You are registered as active when you accept your fees in the online Registration and Enrolment System.

#### **REGISTRATION DEADLINES**

August 20, 2023 for the Fall term (FA23) December 20, 2023 for the Winter Term (W24)

Registration after these dates will result in a \$200.00 late fee (Important Dates). All students expecting to receive an assistantship, fellowship, bursary or scholarship must register as "Full-Time" by the deadlines. Students cannot get paid until registration has been completed.

Graduate students are required to register in each term until the completion of their degrees as either a full-time or part-time student. Please note that dropping from courses does not automatically indicate that a student has withdrawn from the program. In order to withdraw from the Faculty of Graduate Studies, students must submit the Withdrawal Form and a letter to their Graduate Program Office. The effective date of withdrawal is the date the letter is received.

Students should consult with their supervisor before selecting and enrolling in their courses. Coursework MSc part-time students can meet with the Graduate Program Director for advising, if required.

Students may seek approval to take up to one full graduate course outside the Chemistry Program or outside York, as well as a Reading course. Very strict conditions must be met for FGS to allow courses outside York. More information about these possibilities can be obtained from the Graduate Program Office (126 CB).

#### WHAT'S NEXT?

**York Cards**: Pictures for the YU Cards are taken in 200 William Small Centre. See <u>YU Card Office</u> for details.

**Email Policy:** To activate your York U email account, go to <u>University Information Technology</u> **Keys:** Enquire with Pamela Fernandes in CB 126 as soon as possible.

Safety Training: Notifications will be sent on behalf of Brad Sheeller (<a href="mailto:sheeller@yorku.ca">sheeller@yorku.ca</a>) for required safety training (incl. WHMIS – Workplace Hazardous Materials Information System).

#### **FEES**

The following fees reflect the 2022–2023 academic year. They are only intended as a guide. For more details and information about **supplementary and additional charges**, please visit <u>Student Financial</u> Services.

#### **Tuition Fees**

#### Faculty of Graduate Studies - Masters

For students entering York University on September 6, 2023 or later.

There are 3 main columns; tuition, Supplementary Fees totals and total. Each main column is divided into two columns and these columns are Full-time and part-time. There are two rows, Domestic and International.

Per Term	Tuition	Tuition	Supplementary Fees Total	Supplementary Fees Total	Total	Total
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Domestic	\$1,435.51	\$717.75	\$292.03	\$148.51	\$1,727.54	\$866.26
International	\$6,275.00	\$3,137.50	\$292.03	\$148.51	\$6,567.03	\$3286.01

#### Faculty of Graduate Studies – PhD

For students entering York University on September 7, 2023 or later.

This table is per term as stated in the very first column heading. There are 3 main columns following the per term heading and they are tuition, Supplementary Fees totals and total. Each main column is divided into two columns and these columns are Full-time and part-time. There are two rows, Domestic and International.

Per term	Tuition	Tuition	Supplementary Fees Total	Supplementary Fees Total	Total	Total
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Domestic	\$1,435.51	\$717.75	\$285.62	\$142.78	\$1,721.13	\$860.53
International	\$6,000.00	\$3,000.00	\$285.62	\$142.78	\$6,285.62	\$3,142.78

Fees are paid each term, **3 times a year.** Please refer to the Office of Student Financial Services website (<u>Course and Program fees</u>) for methods of payment, late charges and your Student Account Statement.

Graduate fees are calculated according to a student's program and full-time or part-time enrolment status/activity level. Fees are not calculated on a per course basis. This is in contrast to fees calculated for undergraduate programs.

# FEES PAID BY AN EMPLOYER, GOVERNMENT OR AN EXTERNAL AGENCY (THIRDPARTY BILLING)

If your tuition fees are being paid directly to the University by a third party (e.g., employer, Government, Embassy, etc.) you must submit your sponsorship letter to the Office of Student Financial Services immediately following registration.

Please note that you are still responsible for all charges on your student account, and late charges or other sanctions will apply if the account is not settled promptly. Your account will not be credited until payment has been received.

#### **OUTSTANDING FEES**

Graduate Students who have an outstanding financial debt to the University of \$1,000 or greater will be blocked from registering. If this is the case, students should pay down their debts or speak with someone in the Student Affairs Office of the Faculty of Graduate Studies (230 York Lanes) before the beginning of the term and NOT after the registration deadline.

#### **REFUND TABLES**

Students are responsible to pay tuition fees for all terms until completion of all requirements (including submission of the thesis/dissertation final copy to the Faculty of Graduate Studies) or withdrawal from the program. Refunds can be claimed according to the following schedules (Refunds).

#### All Graduate programs except those at Schulich School of Business

The first column is the term, the 2<sup>nd</sup> is full return, the 3<sup>rd</sup> and 4<sup>th</sup> columns are 20% program fee withheld and 60% Program fee withheld and the last column is No Refund. There are two rows after the column heading row and they are fall and winter.

Term	Full Refund (up to and including)	20% Program Fee Withheld	60% Program Fee Withheld	No Refund (Onward)
Fall	Sept. 30	Oct. 1 - 15	Oct. 16 - 31	Nov. 1 onward
Winter	Jan. 31	Feb 1 - 15	Feb 16 - 29	Mar. 1 onward

#### Term Withdrawal

Fee refunds/credit calculations are based on complete withdrawal from a term, not withdrawal from individual courses. MF fees are calculated according to a student's enrolment status in a particular program; fees are not calculated on a per course basis.

**Reminder:** Fees refunds/credit calculations are based on complete withdrawal from a term not withdrawal from individual courses. Please see page 11 for withdrawal procedures. Graduate fees are calculated according to a student's program and full-time or part-time enrolment status/activity level. Fees are not calculated on a per-course basis.

#### **BALANCE OF DEGREE FEES**

Doctoral students must pay fees for a minimum of the equivalent of six terms of full-time registration (or twelve terms of part-time registration).

MSc students in Chemistry must pay fees for a minimum of the equivalent of three terms fulltime for the research-based program, and six terms part-time studies for the coursework-based program.

Students who complete their program in less time than the Program length will be responsible for payment of the "balance of degree fee" (<u>Balance of Degree fees</u>).

# FINANCIAL SUPPORT (FULL-TIME STUDENTS ONLY)

Full-time Chemistry students who received funding letters usually receive funding packages consisting of a teaching assistantship (TA), research assistantship (RA) and a York Fellowship.

**Teaching Assistantships** (Entailing approximately 270 hours of teaching-related duties) Students will engage in assigned teaching-related work (laboratory demonstration, marking, invigilation) subject to availability and up to the above maximum. Teaching Assistants are represented by CUPE 3903. Please familiarize yourself with the Collective Agreement at: <u>CUPE 3 903</u>, including Article 8 and Appendix C. Please ensure that you know what your roles and responsibilities are as a TA (<u>TA Roles and Responsibility</u>).

**Research Assistantships**. Full-time graduate students receive support from their supervisors' research grants (as RA-ship and as York Fellowship); the student must be in a research group to receive this assistantship. Other than participation in research activities, there are no formal duties associated with this support.

#### **SCHOLARSHIPS AND AWARDS**

You will receive information about scholarship deadlines and application procedures via email by the Graduate Program and the Faculty of Graduate Studies. The Faculty of Graduate Studies also holds External Scholarship Information Sessions. We will inform you of the times and dates once they are available. See <a href="Funding">Funding</a> and <a href="Scholarship Opportunities">Scholarship Opportunities</a> for a complete list of funding opportunities.

### **External Scholarships**

When eligible, graduate students must apply to external scholarships during their studies at York University. A list of scholarships includes: Vanier Canada Graduate Scholarship (\$50,000), NSERC CGS Doctoral (\$35,000), NSERC PGS Doctoral (\$21,000), NSERC CGS Master (\$17,500), NSERC PGS Master (\$17,300), Ontario Graduate Scholarship (\$15,000), The Queen Elizabeth II Graduate Scholarships in Science and Technology (\$15,000).

#### **Internal Awards**

York offers a range of awards to incoming and continuing graduate students. Some internal awards include: the Enbridge Graduate Student Award (\$12,500), the Dalton Pharma Services/Dr. Douglas Butler Award in Organic Chemistry (\$12,500), the Michael M. Pollard Bursary in Organic Chemistry (\$15,500) the Susan Mann Dissertation Scholarship (up to \$21,000) and the Provost Dissertation Scholarship (up to \$21,000).

# RESEARCH/FIELDWORK/CONFERENCE SUPPORT

Full-time students may apply to the following funds:

#### Fieldwork Cost Fund

The Fieldwork Cost Fund (FCF) defrays costs directly connected with research carried out "in the field" by full-time registered York graduate students. There is one competition per year held in the spring.

Students are notified of the application deadline by the Graduate Program. See <u>Fieldwork Cost Fund</u> for details.

#### Eligible expenses may include:

- Travel and/or accommodation necessary for research;
- Incentive payments to research participants;
- Materials, supplies, photocopying and other services essential to the research;
- Disability accommodation costs.

#### Academic Excellence Fund

The Academic Excellence Fund (AEF) subsidizes students' travel costs to events for presentation of their scholarly or creative work. There is one competition per year held in the spring. See <u>Academic Excellence Fund</u> for details.

#### Eligible expenses may include:

- Transportation costs necessary for York graduate students to present their scholarly or creative work at recognized events, such as conferences, colloquia, poster presentations and exhibitions;
- Transportation expenses incurred for travel to/from an event taking place within seven (7) months prior to the application deadline or six (6) months after the application deadline.

#### Research Cost Fund

The Research Cost Fund (RCF) defrays costs directly connected to research undertaken by full-time registered York graduate students who are or have been members of CUPE 3903 Unit 1. There are two competitions each year—one in the fall and one in the spring. See Research Cost Fund for details.

#### Eligible expenses may include:

- Travel and/or accommodation necessary for research;
- · Incentive payments to research participants; and,
- Materials, supplies, photocopying and other services essential to the research.

Allocated funds are provided to successful applicants by reimbursement after eligible expenses are incurred and original, detailed receipts are provided (including incentives payments). Reimbursement claims must match the budget line items approved by the Committee.

#### **BURSARIES**

York University provides a number of bursaries to assist Graduate Students in financial need, which the Office of the Dean, Graduate Studies administers in partnership with Student Financial Services. Students wishing to be considered for available bursaries at York University must complete a Student

Financial Profile (<u>Student Financial Services</u>). Some bursaries may require additional documentation. See <u>Bursaries</u> details.

#### **BENEFITS**

Teaching Assistants (members of CUPE 3903 unit 1) and Graduate Assistants (members of CUPE 3903 unit 3) enjoy a number of extended health benefits (dental, prescription drug, and vision care).

York Benefits office expects all new TAs to enroll in the first month of their assignment. Otherwise, your benefits will not be active. The Benefit Enrolment Form is available at <u>Benefits Enrolment Form</u>

#### MASTER OF SCIENCE PROGRAM

#### **DEGREE REQUIREMENTS**

There are two routes by which a student may achieve an MSc degree in chemistry, either by research thesis or by coursework.

#### MSc Degree by Research Thesis

All entering students plan a research program with their supervisor at the start of their degree studies. Progress in research is monitored by a Supervisory Committee through annual enrolment in the Research Evaluation Course (CHEM 7000 3.0; formerly offered as CHEM 6020). This entails an annual progress report, consisting of a written paper, a public oral presentation, and an oral examination, usually in May. The student's progress will be documented on the "Research Evaluation Form" and signed by the Supervisory Committee and by the student. In cases where the annual progress report cannot be held at that time, approval for a delayed progress report must be request from the Graduate Program Director. An "Overall Rating" of "Pass" on the Research Evaluation Form is needed to receive credit for Chemistry 7000 3.0, up to a maximum of 6 credits, and a statement of the student's progress in the student's record. In the event of failure to achieve satisfactory progress, the student is required to withdraw from the Program. Failure to enroll in the annual CHEM 7000 course and/or to complete a Research Evaluation during the summer term will result in receiving an "F" in the course, and withdrawal from the program.

In addition to the Research Evaluation course, each student must complete a minimum of two "half" courses (2 x 3 credits) from those offered by the Graduate Program in Chemistry. These courses must be chosen in consultation with the student's supervisor.

Students may be required to take undergraduate courses if this is necessary to strengthen the student's background in relevant areas.

Candidates must conduct a research study and report the results in an appropriate thesis form. The research and thesis should demonstrate the candidate's independence, originality, and understanding of the area of investigation at an advanced level. After the submission of the thesis, which must be formally approved by the Supervisory Committee, an oral examination, centered on the thesis and matters related to it is held in front of an Examination Committee behind closed doors.

#### **MSc Degree by Coursework**

Candidates for the MSc degree by coursework must either:

Successfully complete three full courses (6 "half "courses, 18 credits) chosen from those offered by the Graduate Program in Chemistry, and conduct a full-course literature survey (CHEM 6000 6.0) and write a review essay, which is submitted to an Examination Committee for approval; or

- (a) Successfully complete seven half courses (21 credits) chosen from those offered by the Graduate Program in Chemistry, and conduct a half-course literature survey (CHEM 6000 3.0) and write a review essay, which is submitted to an Examination Committee for approval; or
- (b) Successfully complete eight half courses (24 credits), chosen from those offered by the Graduate Program in Chemistry.

#### **Evening Courses**

Some courses within the Graduate Program in Chemistry are offered on a once-per-week basis during weekday evenings. The options of an MSc degree by coursework, or by coursework and review essay are therefore particularly suited to part-time candidates. Because of the special nature of research work, the MSc degree option by research is generally only open to full-time candidates.

#### **Time Limits**

Candidates may take up to four years to complete the requirements for the MSc degree by coursework, or coursework and review essay on a part-time basis but a shorter period is desirable. Full-time candidates are normally expected to complete the requirements for the MSc degree in two years. All requirements for an MSc degree must be fulfilled within 12 terms of registration, with a maximum of 6 terms enrolled as a full-time student.

#### **DOCTOR OF PHILOSOPHY PROGRAM**

#### **ADMISSION REQUIREMENTS**

Candidates with either an honours degree or a four-year undergraduate degree in chemistry or biochemistry (or its equivalent, with a minimum of 6 credits at the 4th year level), normally with at least B standing, may be admitted as candidates for the PhD degree. Normally, however, such candidates must first enroll in the MSc Program.

If their progress is satisfactory, they may be eligible for the PhD Program and advance in status to candidates (PhD I) for the PhD degree, generally after 24 months, and without necessarily completing the thesis requirements for the MSc degree. A graduate wishing to apply from the MSc Program for admission to the PhD Program must write a report of their research and submit this for approval to an Examination Committee, normally as part of the Research Evaluation exercise.

#### **DEGREE REQUIREMENTS**

Candidates (PhD I & II) for the PhD degree must fulfil the following requirements:

#### 1. Courses

All entering students plan a research program with their supervisor at the start of their degree studies. Progress in research is monitored by the Supervisory Committee through annual enrolment in the Research Evaluation courses (CHEM 7001; formerly CHEM 7020 3.0). This entails an annual progress report consisting of a written paper, a public oral presentation, and an oral examination, usually in May each year. The student's progress will be documented on the "Research Evaluation Form" and signed by the Supervisory Committee and by the student. In cases where the annual progress report cannot be held at that time, approval for a delayed progress report must be request from the Graduate Program Director. An "Overall Rating" of "Pass" on the Research Evaluation Form is needed to receive credit for CHEM 7001 3.0 and a statement of the student's progress in the student's record. In the event of failure to achieve satisfactory progress, the student is required to withdraw from the Program. Failure to enroll in the annual CHEM 7001 course and/or to complete a Research Evaluation during the term will result in receiving an "F" in the course, and withdrawal from the program.

In addition to Research Evaluation courses, each student must take a minimum of four half courses (4 x 3 = 12 credits) from those offered by the Graduate Program in Chemistry. Note: that no more than half of the required credits (6) can be 5000-level (integrated) courses. These must be chosen in consultation with the student's supervisor. The 12 credits must normally be completed by the end of the first six terms in the Program. Permission of the Graduate Program Director is required for an extension to this time limit for course work completion. For students entering the PhD program with an MSc degree, a maximum of six credits may be allowed for courses taken at York University or at another recognized university.

### 2. Dissertation and Oral Examination

Candidates must conduct a research study and report the results in an appropriate dissertation form. The research and dissertation should demonstrate the candidate's independence, originality, and understanding of the area of investigation at an advanced level.

After the submission of the dissertation, which must be formally approved by the Supervisory Committee, an oral examination, normally centered on the dissertation and matters related to it, is held behind closed doors in front of an Examination Committee.

#### **Time Limits**

The PhD degree should be normally be completed within four years. All requirements for a doctoral degree must be fulfilled within 18 terms of registration or 6 years as a full-time or part-time doctoral student.

#### RESEARCH PROPOSAL

All new graduate students must submit a thesis/dissertation proposal at the beginning of their second term of studies. Students converting to the PhD program after recommendation from the Supervisory Committee during the annual Research Evaluation must also submit an updated proposal.

Please use a template (see below) sent to students ahead of the submission deadline, without changing any of the formatting parameters (font, font size, margins, line spacing, etc.) All six parts must be filled out. The proposal must be at least 1.5 pages long but must not exceed 2 pages (not counting references in Section F).

\_\_\_\_\_

**Abstract/Executive Summary.** In this part, you are asked to summarize what your proposal is all about at a level that can be understood by someone holding an undergraduate degree in chemistry, but not necessarily in your specialized area. This should be no more than 5 lines long.

A. Objectives of the Proposed Research. In this part, you are asked to describe what the long-term and short-term objectives are, realizing that those may very well change over time as you generate data from your research. "Long-term" refers to the targeted length of the program you are enrolled in (6 terms for MSc degrees and 12/15 terms for PhD degrees). In other words, your long-term objectives relate to the question(s)/issue(s) you will be addressing in your thesis/dissertation. Your short-term objectives refer to the milestones you are aiming for over the next year. These long-term and short-term objectives are possibly best described in a bullet point form, as shown below.

For example, the long-term objective(s) of my MSc/PhD research is/are to:

- ...
- •

This will be achieved over the next year through a number of **short-term objectives**, which are to:

- 1. ...;
- 2. a) ...; and
  - b) however, many sub-bullet points are necessary;
- 3. ...
- **B.** Pertinent Literature. In this part, you are asked to describe literature pertinent to your research project that sets the foundation for your work. This will include, but will not be limited to, publications from your current research group. You must put your own research in perspective and describe how it fits in the current state-of-the-art.
- C. Methods and Proposed Approach. Sections C and D are the bulk of your proposal. In Section D, you are asked to give details on how you will tackle the objectives described in Section B above. Figures illustrating synthetic schemes, instrument layouts, etc. can be incorporated in this section. This is the road map that you will refer to over the next several months to help you achieve your objectives and progress throughout your program.
- **D.** Impact and Anticipated Significance of the Work. In this part, you are asked to briefly describe why your research is important and what impact it will have on the field, and hopefully on society too.

**E. References.** Make sure you cite literature appropriately. You are encouraged to adopt the ACS style. For more details, you can consult the ACS Style Guide, available online through York libraries.

# Graduate Research Evaluations in Chemistry at York University

Approved by Chemistry Department (Dec 08, 2022), minor changes Feb 21, 2023

#### **Prelude**

In accordance with the forthcoming regulation on Graduate Milestone Examinations (approved by Senate in June 2021 to take effect January 1, 2023), this document formalizes the requirements for research examinations in Chemistry for Research based Masters and Doctoral students in Chemistry. The requirement for Milestone examinations in Chemistry is largely centered around the "Research Evaluation" (RE) exercise that occurs annually for graduate students in Chemistry. Students must register in the Research Evaluation Course each summer, CHEM 7000A and 7000B for MSc students, and 7001 A, B, C & D for Doctoral students, with the expectation that RE's will be completed in early summer (usually May) with results communicated to students before the end of the summer term. For off-cycle entries into the Masters or PhD program (e.g., Winter or Summer starts), the timing of RE's can be modified (i.e., delayed) in the student's first year as deemed appropriate by the supervisory committee and Graduate Program Director (GPD).

All entering Masters and Doctoral students must plan a research program with their supervisor at the start of their degree studies. The student, in consultation with their primary supervisor, should specify their Supervisory Committee by filing a *Supervisor & Supervisory Committee Approval* form to the Chemistry Graduate office, by December 1 end of their first Fall term. By the same deadline, the student should also submit their research proposal to the Chemistry Graduate office, along with their *Form TD1: Thesis/Dissertation Research Proposal*, approved by their supervisory committee members.

#### **Research Evaluations**

A student's progress in their research is monitored by the Supervisory Committee through the Research Evaluation Courses (CHEM 7000 & 7001), which are offered every summer. The RE

has three components, consisting of a written paper, a public oral presentation, and an oral examination of the student's knowledge and research progress by the supervisory committee. The student should provide their research report (20-page maximum) to their supervisory committee at least 1 week in advance of the oral exam. The oral presentation by the student should be 15-20 min in length including questions from the audience. Presentations are usually run in a conference style format, typically in May of each year. The oral exam is scheduled separately and may fall on the same day or a different day than the student's oral presentation. The Schedule for Research Evaluations will be announced at least four weeks in advance of the exam, although students should anticipate their presentations and oral exams to fall in the middle to end of May every year. In cases where the annual research evaluation cannot be

held in the usual time slot, approval for a delayed RE must be requested and supported by the supervisory committee and the GPD. Students requiring accommodations are encouraged to contact the appropriate accessibility office at the university well in advance of the examination. The committee will support students who require accommodation, whilst ensuring the integrity of the examination process.

Other requirements and details of the three components of the RE are given on the *Research Evaluation Form*, an example of which is included in the Appendix. Students are evaluated on the quality and clarity of their written report, the oral presentation and response to general questions, their knowledge of the research topic, and their overall progress in research over the previous year, considering courses they have completed towards degree requirements over the previous year. Guidelines on what should be included in the Research Report and Oral presentation are sent out to all students on an annual basis. For each category, students will receive an assessment of: "Excellent", "Very Good", "Good", "Acceptable", or "Unacceptable", as well as an overall rating of "Pass", "Fail", or "Incomplete". In order to pass the evaluation, a student must receive a minimum of "acceptable" in all categories. The form is signed by the Supervisory Committee with comments/feedback to the student, and returned to the student for their signature and comments (if any).

An overall rating of "Pass" is needed to receive credit for Chemistry 7000 or 7001 courses, up

to a maximum of 6 credits for CHEM 7000 3.0 or 12 credits for CHEM 7001 3.0. As a guideline, students who have one or two ratings of "unacceptable" in any of the evaluation criteria will receive an "incomplete" in the course, with the student and Supervisory Committee reconvening within 3 to 6 months to reassess the student's performance with respect to any remedial action specified under "Comments from the Committee". If the student does not receive "Acceptable" in all categories after the remedial meeting, the outcome should be a Failure. Students who receive three ratings of "unacceptable" on their Research Evaluation

Form will be given a "failure" in the course. In the event of failure, the student is required to withdraw from the Program. Those who do not enroll in the annual CHEM 7000 course and/or do not complete a Research Evaluation during the summer term risk receiving a failure in the course and withdrawal from the program.

Graduate students must register in the RE course every year they are full-time students in the program. Masters students must complete two RE's (7000 A &B). PhD students must complete a RE (7001 A, B, C & D) every year while registered as full-time students in the program up until the time that they either have a defense date scheduled, they graduate, or have completed four RE's at the doctoral level. A PhD student who has completed four RE's at the doctoral level shall still submit a report and meet with their supervisory committee on an annual basis during the normal RE time (May/June) until such time that they have a final defense scheduled, or they have graduated.

#### **Oral Exams**

The oral exam is 30-45 minutes in duration. It should be attended by the student and the full supervisory committee. In a case where a committee member cannot attend the oral exam, every

attempt should be made to reschedule it to a later time in the summer. Students in the research Master's Program should expect that their first RE Oral Exam will be more heavily focused on testing their general knowledge in their field of Chemistry at an advanced undergraduate level, as well as knowledge of instrumentation and rationalization of experimental approach, since only 8-9 months have transpired (usually) since starting their program. In second and subsequent RE's, more emphasis on the Oral exams will be shifted to general knowledge of literature in the student's research field, questions about their research progress, experimental design, data analysis and interpretation of their results.

#### Transfer from Masters to PhD without completion of Master's Degree

Those students wishing to transfer from the Masters to PhD program without first completing their Master's Degree, would normally have completed two RE's. Their suitability for such a transfer should be discussed with their Supervisory Committee, who would indicate their support or not, for such a transfer. If the primary supervisor does not support such a transfer, then the student must complete their Master's degree requirements.

The RE Procedures will be reviewed if needed, by the Chemistry Graduate Program Executive, and if necessary, changes to the Procedures will be proposed by the Executive and approved at a Chemistry Departmental Meeting.

Appendix: Research Evaluation Form

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# GRADUATE PROGRAM IN CHEMISTRY

	RESEARCH EVALUATION FORM – MAY 2023  Name of student:				
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RSITY					
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	_	luate student at York			
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Cou	irses:		Τ		Τ~ .
	Term	Course Code	Integrate	Non-Integrate	Grade
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		ributed to the members o			ory Committee. The writter ore the presentation.
	☐ Excellent	☐ Very Good	$\square$ Good	☐ Acceptable	☐ Unacceptabl
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(che	eck one box) (	Completing all MSc degree requirem	nends conversion of the student to the PhD Program in ents is highly recommended. Regardless, candidates must before being recommended for conversion. An updated
pro	posal from tha	t originally submitted as an MSc can	didate must also be submitted by the student.
□F	F23 □ W24	☐ Decision to be made in future ☐	Not applicable    Will not recommend
7. For	both MSc an	d PhD candidates: Expected compl	etion of all degree requirements in (check one box)
	523 □ F23*	□ W24* □ Later*	
exp	ect to graduate	e beyond targeted timelines: 6 terms	nust be included with this form for candidates who for MSc candidates, 12 terms for direct-entry PhD verted from the MSc Program from the Department.
tim con Gra and	ely fashion and apleted form, duate Progran sign the form	d/or to provide further details on the with signatures from the Committee an Assistant within 2 weeks of the exact Students will receive a copy upon r	ow to help the student progress through the Program in a decision reached by the Supervisory Committee. The and from the student, must be submitted to the m. The Graduate Program Director will then review equest. This is an opportune time for students to rvisory Committee, the GPD and/or FGS.
		he Committee (attach additional paghe student (attach additional pages if	
ROLE	NAME	SIGNATURE	DATE
	Supervisor		
Commi	ttee Member 1		
Commi	ttee Member 2		·
Student			
Gradua	te Program Dire	ctor	

#### GRADES

Grades will be awarded for every course in which a student is enrolled in accordance with the following system:

### **Grading System**

This table has three columns and they are Grade, description of the Grade and Percentage Range.

Grade	Description of the grade	Percentage Range
A+	Exceptional	90% - 100%
Α	Excellent	85% - 89%
A-	High	80% - 84%
B+	Highly Satisfactory	75% - 79%
В	Satisfactory	70% - 74%
С	Conditional	60% - 69%
F	Failure	0- 59%
I	Incomplete	N/A

#### MINIMUM GRADES REQUIREMENT

# Combinations of 'C' Grades that Require Withdrawal Unless Continued Registration is Recommended and Approved

A student who receives in total any of the following combinations of grades for graduate courses may not continue to be registered in the Faculty of Graduate Studies and in a Graduate Program unless continuous registration is recommended by the Graduate Program Director concerned and approved by the Dean:

- (a) Two C grades for full (6-credit) courses;
- (b) One C grade for a full (6-credit) course and one C grade for a half (3-credit) course; (c) A total of three C grades for half (3-credit) courses.

### Combinations of 'F' and 'C' Grades that Require Withdrawal

A student will be required to withdraw from a Graduate Program and registration in the Faculty of Graduate Studies will be terminated if the student receives in total for graduate courses, any of the following combinations during enrolment at York University:

(a) One F grade for a full (6-credit) course or two F grades for half (3-credit) courses; or (b) One F grade for a half (3-credit) course and one C grade for a full (6-credit) or half (3-credit) course.

In no case will grades ever be averaged.

#### **PETITIONS**

The regulations of the Faculty of Graduate Studies generally apply to all students registered in a Graduate Program at York University. However, it is also recognized that, as a result of exceptional or personal circumstances, one or more regulation may be waived through the petitions process. Petitions are made to the Dean of Graduate Studies, through the Director of the Graduate Program. The petitioner must state the regulation, the requirement that is subject of the petition and the grounds of the petition. See Petitions guidelines for details.

#### Common Petitions may include:

Advanced standing
Change of registration status
Extension of Program time limits
Leaves of absence
No course available petition
Reinstatement
Reinstatement to defend
Waive a program requirement

#### **PETITION DEADLINES**

Petitions should be submitted 4-6 weeks prior to the start of the term.

The deadlines for the Summer, Fall and Winter terms are March 15<sup>th</sup>, July 15<sup>th</sup> and November 15<sup>th</sup>, respectively. Students who plan to submit a petition and/or change status should inquire with the Graduate Program Office for the exact deadline as those dates are subject to change.

#### **PROCESS**

- 1. Academic petitions in the Faculty of Graduate Studies are initiated by students, by submitting a completed academic petition through the <u>graduate petitions portal</u> (Login using your passport York credentials). Please see the <u>Step-by-step guide</u> for detailed instructions. Ensure to attach all required and relevant supporting documentation before submitting your petition. When preparing a petition, petitioners should seek the advice of the Graduate Program Director or the Graduate Program Assistant. Note: for Retroactive petitions: please fill out the <u>Retroactive Academic petition form</u> and attach any relevant supporting documentation and send it to the <u>GPA's email</u>.
- 2. Following submission of the completed petition to the Graduate Program Office, the Graduate Program Director reviews the petition and makes a positive or negative recommendation to the Faculty of Graduate Studies. This recommendation, including the completed petition form and any required or relevant supplemental documentation, is forwarded to the secretary of the Faculty of Graduate Studies Petitions Committee.
- 3. The Committee Secretary, or designate, may record on the petition form information pertaining to the petitioner's standing in the Faculty.

This information includes Leaves of Absence, the number of courses that are Incomplete, any other pertinent information (e.g., the number of C or F grades), and a statement of any fees owing. If a petitioner is not in good standing, the petitioner will be asked to address the issue that is placing them in poor standing. For example, if the petitioner holds a combination of grades requiring withdrawal from the Program, the petitioner must file a petition addressing how good academic standing will be achieved along with their original petition.

- 4. Petitions received in the Faculty of Graduate Studies are reviewed by an Administrative Officer who conducts an initial assessment of the petition.
- 5. Notification of decision. The Graduate Program Office notifies petitioners in writing through the online petition's portal of petitions decisions. E-mail communication may contain only a statement of what was being petitioned and the decision (i.e., granted or denied) and the letter attached usually contains the commentary relating to the decisions made. Petitioners are responsible for notifying the Graduate Program Office of the means by which they can be reached throughout the petition process and must notify the Graduate Program of any change in the relevant contact information.

#### **ACADEMIC HONESTY**

Students in the Faculty of Graduate Studies are expected to adhere to the strict standards of academic honesty as specified in the Senate Policy on Academic Honesty (<u>University Secretariat Policies</u>).

The following information is available on the Faculty of Graduate Studies website (Academic Honesty).

#### WHAT IS "ACADEMIC HONESTY" AND WHY IT IS IMPORTANT?

York University's Senate Policy on Academic Honesty (<u>Academic Honesty Policy</u>) is an expression of the academic conduct appropriate to and expected of students studying and researching in Academe. These expectations, particularly with respect to plagiarism, are grounded in a principle and practice that forms the basis of the academic enterprise—namely, that the work one submits for evaluation is the product of one's own original ideas, and that any material that belongs to someone else, because he or she first produced and/or presented it, must be properly **referenced and cited**. If there is no way for a reader to tell which words and ideas are those of the author and which are those of others, then the work demonstrates plagiarism. It loses its integrity as a document of original scholarship and is academically dishonest.

#### HOW TO AVOID ACADEMIC DISHONESTY

York's Academic Integrity Tutorial (<u>Academic Integrity</u>) is designed to test and inform students about academic integrity expectations and what to keep in mind in order to avoid academic dishonesty. At York University, a foundational expectation is that students are aware of and respect the principle of proper representation in one's work, including how to avoid plagiarizing the work of others. Relative to the existence of misrepresentation in work that has been submitted for evaluation (which includes drafts) as one's own, intention does not matter. Simply put:

• If work containing misrepresentation is submitted for evaluation, then one is responsible for the misrepresentation, regardless of intent.

There are a number of citation styles that describe in detail how to reference and cite the work of others properly in one's own work. Graduate students are responsible to ensure that they are aware of and properly follow an appropriate citation style. Uncertainty about which citation style should be followed can be cleared up by consulting with one's course director or Program Director.

The York University Libraries Graduate Student Library Guide

(York Libraries Graduate Student support) provides a number of useful resources, including links to the guides for the most popularly used citation styles, access to RefWorks (which is a web-based bibliographic management/citation manager tool), and links to research and writing guides. The York University Libraries also offers a Guide for International Students (Library Guide for International Students) that is intended to help international and exchange students find information about resources and services available at the Libraries.

#### WHOM TO TALK TO ABOUT OPTIONS AND SUPPORT

Graduate students are often faced with pressures—from competing timelines to personal issues to feeling or being unprepared to perform at the expected level—that may lead one to choose to act in a way that is academically dishonest. It is important to know that there are a number of choices one can make rather than a dishonest one, and that there are people who you can speak with about making these choices.

- The Graduate Students' Association (325 Student Centre, 416-736-5865, <u>info@yugsa.ca</u>) can provide support, including information and confidential advice about coursework extension and leave options available to graduate students.
- Even if the deadline for submission of an assignment or piece of work is at hand, talk to the professor about an extension. Explain your situation honestly and fully. There is no shame in asking for assistance.
- The Graduate Program Director is available to provide students with advice, guidance and support, and can be of particular assistance if conversations with individual course directors or supervisors have not been fruitful. If an extension of an assignment or piece of work will not provide the necessary relief, one option is to speak with the Program Director about a leave of absence.
- Student Accessibility Services (<u>Student Accessibility Services</u>) provides a range of services, from personal counseling to support (including requests for academic accommodation) for students with disabilities.
- Attending university and coping with all the expectations, over and above other responsibilities you may have outside school, can be very challenging. A number of options are available to you, on and off campus, to help you deal and cope with difficult situations. For example, York University offers personal counselling services (Individual Counselling). They are located in Room N110 of the Bennett Centre for Student Services and can be reached at ext. 55297. Alternatively, postsecondary students in Ontario can call 1-866-925-5454 to reach the Good2Talk helpline (Good2Talk). Other noteworthy services include the Community Crisis Response Program (416-498-0043), the Mood Disorders of Ontario (MoodDisorders) and the Mental Health Helpline (mental health help line; 1-866531-2600)
- The Writing Department offers group workshops that focus on major elements of effective academic writing.

#### WHAT IS THE PROCESS IF THERE IS A SUSPECTED BREACH OF ACADEMIC HONESTY?

The Faculty of Graduate Studies Procedural Guidelines

(<u>Academic Honesty Guidelines</u>) provides a detailed description of the investigation and hearing process. The FGS Procedural Guidelines are consistent with those specified in the Senate Policy on Academic Honesty. For ease of reference, the numbering used in the Procedural Guidelines is consistent with the numbering used in the Senate Policy.

Students suspected of a breach of academic honesty will be invited to attend an exploratory meeting, which is normally chaired by the Graduate Program Director. The exploratory meeting is intended "[...]

to determine whether or not there are reasonable and probable grounds to proceed with a charge of breach of academic honesty" ("Senate Policy on Academic Honesty." York University Secretariat. York University, n.d. Web. 9 Apr, 2012.). Although the meeting is intended to be exploratory in nature, it is a formal stage in the investigation/hearing process and should be treated seriously. At the exploratory meeting, students will be presented with the evidence that led to the complaint and will be expected to respond to the suspected breach of academic honesty. Given the significance of the exploratory meeting in the investigation/hearing process, students may be accompanied by someone who can offer support and comfort, as well as act as a witness to the meeting.

As it is a formal stage of the investigation/hearing process, the expectation is that the exploratory meeting will result in one of the following four outcomes, which will be reported by the Chair of the exploratory meeting (normally the Graduate Program Director) to the Faculty of Graduate Studies Appeals & Academic Honesty Committee. Except in cases where the student and Program reach agreement that no breach of academic honesty occurred, a confidential record of the investigation/hearing will be kept in the Office of the Dean, Graduate Studies. The Graduate Students' Association (325 Student Centre, 416-736-5865, info@yugsa.ca) can provide confidential advice and support to students who would like to speak to a third party prior to the exploratory meeting.

The four possible exploratory meeting outcomes are:

- A student admits to a breach of academic honesty and reaches agreement with the program
  with respect to recommended penalty. The Faculty of Graduate Studies Appeals & Academic
  Honesty Committee will either accept the recommended penalty, or arrange for a formal hearing
  in cases where they are not convinced that the agreed-to penalty is appropriate or the breach is
  not the first incident of breach of academic honesty by the student.
- A student admits to a breach of academic honesty but does not reach agreement with the Program with respect to recommended penalty. The Faculty of Graduate Studies Appeals & Academic Honesty Committee will arrange for a formal hearing.
- A student does not admit to a breach of academic honesty but the Program concludes that sufficient grounds exist to proceed with a formal charge. The Faculty of Graduate Studies Appeals & Academic Honesty Committee will arrange for a formal hearing.
- A student and Program reach agreement that no breach of academic honesty occurred.

Although the expectation is that the exploratory meeting will result in one of four outcomes described above, students should not feel coerced to agree to something which they do not believe. At the same time, however, it is important to keep in mind that a breach of academic honesty, particularly plagiarism, concerns the existence of misrepresentation in work submitted as one's own and does not address intention or cause.

In cases where a formal hearing is the outcome of the exploratory meeting, the evidence provided to the Faculty of Graduate Studies Appeals & Academic Honesty Committee will include the exploratory meeting report submitted by the meeting Chair. If a student has not accepted responsibility and admitted to the breach of academic honesty, the role of the committee first will be to determine whether or not there was a breach of academic honesty. If a student has accepted responsibility and

admitted to the breach of academic honesty, the role of the committee will be to determine the appropriate penalty.

Students will be invited to attend the formal hearing, and may be accompanied by someone who can offer support and comfort. The Graduate Students' Association (325 Student Centre, 416-736-5865, <a href="mailto:info@yugsa.ca">info@yugsa.ca</a>) can provide confidential advice and support to students who would like to speak to a third party prior to the formal hearing.

Any penalty recommended at or agreed to at the exploratory meeting is subject to review and approval by the Faculty of Graduate Studies Appeals & Academic Honesty Committee. In its review of jointly recommended penalties, as well as consideration of penalties following a finding of academic misconduct at a formal hearing, the Senate Policy directs the committee to consider a number of factors, including the extent of the violation, the student's academic background, and any extenuating circumstances that may help explain the breach including the extent to which these circumstances should inform the penalty. Determination by the committee of the "appropriateness" of penalty will include consideration of both the unique circumstances of each case and consistency with respect to the range of penalties given for similar types of breaches.

For further information about the investigation/hearing process, please contact:

Academic Affairs Officer
Office of the Dean Faculty of Graduate
Studies <a href="mailto:fgsadacd@yorku.ca">fgsadacd@yorku.ca</a>
416-736-2100 ext. 66958

# GUIDELINES FOR THE PREPARATION AND SUPERVISION OF THESES AND DISSERTATIONS

Detailed information about the preparation of theses and dissertations is available at <u>Thesis and</u> <u>Dissertation</u>

Below are general requirements and important points to be considered when setting up your Supervisory Committee. The Graduate Program Assistant will contact students when it is time to set their Supervisory Committee and submit their proposals to the Graduate Program Director and the Faculty of Graduate Studies (2nd term of studies). However, it is the students' responsibility to follow deadlines and submit all paperwork within the established deadlines.

#### THESIS SUPERVISORY COMMITTEES

A thesis Supervisory Committees will normally consist of a minimum of two faculty members appointed to the Faculty of Graduate Studies, at least one of whom must be from the Program in which the student is enrolled, and who serves as the principal supervisor. In exceptional circumstances, and with the prior approval of the Dean, one additional member may be appointed who is not a member of the Faculty of Graduate Studies.

#### **DISSERTATION SUPERVISORY COMMITTEE**

A Dissertation Supervisory Committee will consist of a minimum of three members from the Faculty of Graduate Studies, at least two of whom must be members of the Graduate Program in which the candidate is enrolled. The principal supervisor must be a member of the Graduate Program in which the candidate is enrolled. In exceptional circumstances and with prior approval of the Dean, the third, or an additional member, may be appointed who is not a member of the Faculty of Graduate Studies.

Please ensure that the Graduate Program Assistant has accurate information about the names of your Committee members. If you wish to change the membership of your Supervisory Committee, it is your responsibility to discuss with your supervisor, find a replacement and notify that person and the Graduate Program Assistant. The change must be submitted in writing and signed by the student, the supervisor and the Graduate Program Director.

#### Supervisor's Roles and Responsibilities

A thesis/dissertation research supervisor shall:

- be reasonably accessible to the student, normally meeting at least once a month and never less than once each term.
- ensure that a copy of the student's thesis/dissertation is sent to each member of the student's thesis/dissertation Examination Committee as far as possible in advance of the date of the student's oral examination, but no later than four weeks prior to the date set.

#### Supervisory Committee Roles and Responsibilities

A thesis/dissertation Supervisory Committee shall:

- review the student's research proposal and recommend its approval to the Graduate Program Director and the Dean not less than six months prior to the date set for the oral examination;
- if deemed appropriate, review the student's progress normally each month and never less than once each term. (Reports to the Graduate Program Director of unsatisfactory progress may require a student to withdraw from a program of studies or withdraw from the Graduate Program in which the student is enrolled);
- meet annually with the student, normally in the spring, to evaluate the
  Progress Report submitted by the student and submit a completed and signed copy of the
  Report to the Graduate Program Director after the meeting; and,
- read the thesis/dissertation and make a formal recommendation to the Graduate Program Director regarding the oral defense.

#### **EXAMINATION COMMITTEES**

Once the Supervisory Committee has agreed to the thesis/dissertation being examinable, an Examination Committee will then be formed with consultation with the student's supervisor. The make-up of the Examination Committee is dependent on whether a thesis (MSc Program) or a dissertation (PhD Program) is considered.

Detailed information about oral exams and Examination Committees is available online (Oral exams and other forms).

#### **MSC THESIS EXAMINATION COMMITTEE**

#### **Composition of Committee**

A thesis Examination Committee shall consist of at least three voting members, including the Chair, as follows:

- a. two FGS faculty members chosen from the Program and/or Supervisory Committee, at least one of whom must be from the Supervisory Committee;
- b. one FGS faculty member at arm's length from the thesis from outside the Program.

The Chair of the Examination Committee shall be chosen from among the voting members. Members of the student's thesis Supervisory Committee may be members of the Examination Committee, but the principal supervisor may not serve as the Chair of the Examination Committee.

#### **Approval Timelines**

The membership of the thesis Examination Committee, including designation of the Chair must be submitted to the Graduate Program for the Graduate Program Director's recommendation no later than **four weeks** before the date set for the oral examination.

Copies of the MSc thesis approved by the Supervisory Committee must be provided to the members of the Examination Committee no less than **three weeks** before the date of the oral examination.

#### **Approval Process**

Prior to the establishment of a MSc thesis Examination Committee, the student's Supervisory Committee must read the thesis and agree that the version read is ready to proceed to oral examination.

Following agreement by the Supervisory Committee that the thesis is ready to proceed to oral examination, recommendation for membership of a MSc thesis Examination Committee (as well as the date and location of the oral exam) is formally initiated by the Graduate Program Director via submission of a Recommendation for Oral Examination Form to the thesis coordinator in the Office of the Dean, Graduate Studies.

Final approval of master's thesis Exam Committee membership recommendation rests with the Dean of the Faculty of Graduate Studies.

#### Reporting of Results

The Examination Committee must reach one of the following four decisions:

- 1. Accepted with No Revision
- 2. Accepted Pending Specified Revisions
  - The nature of the revisions should be agreed to by the Exam Committee and reported in detail on the Oral Examination Report Form under "comments". Specified revisions must be completed within six months of the date of the oral exam. Specified revisions must be completed within six months of the date of the oral exam. It is the responsibility of the supervisor to ensure that all of the specified revisions are made and the Chair will confirm that this is the case. Approval of specified revisions should be reported to the Office of the Dean, Graduate Studies.
- 3. In cases involving a referred pending major revisions decision, one of the following procedures must be used to finalize the oral results: a) the committee will reconvene within twelve months to continue the oral examination, or b) the revised thesis will be circulated within twelve months to all members, who will inform the Chair whether they feel the stipulated requirements have been met. Please note that a clear consensus must be reached by the Exam Committee as to the extent and nature of the revisions required. Detailed reasons for referring pending major revision must be supplied in writing by the Chair of the Exam Committee to the Dean, the Program Director and the candidate concerned within two weeks.
- 4. Failed
  In the event of failure, detailed reasons must be supplied in writing by the Chair of the Exam
  Committee to the Dean, Program Director and candidate within two weeks.

#### PHD DISSERTATION EXAMINATION COMMITTEE

#### **Composition of Committee**

A dissertation Examination Committee shall consist of at least five voting members, including the Chair, as follows:

- a. One external examiner, from outside York University, at arm's length from the dissertation, recommended by the Program Director;
- b. one FGS faculty member at arm's length from the dissertation, and normally from outside the Program, recommended by the Program Director
- c. two FGS faculty members from the Supervisory Committee, or one member from the Supervisory Committee and one FGS faculty member from the Program;
- d. one FGS faculty member will serve as Dean's Rep/Chair of the Examination Committee. The Chair may be a member of the student's Supervisory Committee but the principal supervisor may not serve as the chair of the Examining Committee.

#### **Approval Timelines**

The membership of the dissertation exam committee, including designation of the Chair must be submitted to the Graduate Program for the Graduate Program Director's recommendation no later than **five** weeks before the date set for the oral examination.

Copies of the doctoral dissertation approved by the Supervisory Committee must be provided to the members of the Examination Committee no less than **four** weeks before the date of the oral examination. (The oral exam may be held less than four weeks from the time copies are sent to the Examination Committee provided all parties agree.)

#### **Approval Process**

Prior to the establishment of a dissertation Exam Committee, the student's Supervisory Committee must read the dissertation and agree that the version read is ready to proceed to oral examination.

Following agreement by the Supervisory Committee that the dissertation is ready to proceed to oral examination, recommendation for membership of a dissertation Exam Committee (as well as the date and location of the oral exam) is formally initiated by the Graduate Program Director via submission of a Recommendation for Oral Examination Form (Oral exam Doctoral)

Final approval of the dissertation Exam Committee rests with the Dean of the Faculty of Graduate Studies.

#### Selection of External Examiner

External Examiners are expected to be established academics, normally members of a graduate faculty at another university. Students may not initiate the invitation to External Examiners. This is the responsibility of the Program Director and/or the Supervisor.

Following approval by the Dean of the Program's External Examiner recommendation, a formal letter of invitation will be written by the Dean to the External Examiner, offering the Examiner an honorarium and indicating how to claim expenses. Program directors must obtain prior approval from the Office of the Dean, Graduate Studies of external examiners' expenses above \$350. Therefore, External Examiners should not be invited unless approval has been obtained.

The Program Assistant or the Supervisor (not the student), should send the External Examiner's copy of the dissertation. The copy must be received by the External Examiner at least 4 weeks prior to the exam.

The External Examiner will be asked to submit written comments one week in advance of the oral examination. These comments may be made available to the candidate after the oral, but not before, with the External Examiner's permission.

#### Reporting of Results

The Oral Examination Report Form requires that the committee reach one of the following four decisions:

#### 1. Accepted with No Revision

#### 2. Accepted Pending Specified Revisions

The nature of the revisions should be agreed to by the Exam Committee and reported in detail on the Oral Examination Report Form under "comments". Specified revisions must be completed within six months of the date of the oral exam. Specified revisions must be completed within six months of the date of the oral exam. It is the responsibility of the supervisor to ensure that all of the specified revisions are made and the Chair will confirm that this is the case.

#### 3. Referred Pending Major Revisions

In cases involving a referred pending major revisions decision, one of the following procedures, agreed upon by the committee before the examination is adjourned, must be used to finalize the oral results: a) the committee will reconvene within twelve months to continue the oral examination, or b) the revised dissertation will be circulated within twelve months to all members, who will inform the Chair whether they feel the stipulated requirements have been met.

Please note that a clear consensus must be reached by the committee as to the extent and nature of the revisions required. Detailed reasons for referring pending major revision must be supplied in writing by the Chair of the Exam Committee to the Dean, the Program Director and the candidate concerned within two weeks.

#### 4. Failed

In the event of failure, detailed reasons must be supplied in writing by the Chair of the Exam Committee to the Dean, Program Director and candidate within two weeks.

#### SAFETY TRAINING

#### **REQUIREMENTS**

The Faculty of Science and the Department of Chemistry have established a training outline for TAs that is compliant with the Occupational Health & Safety Act. In keeping with York's obligation to provide proper instruction and training, all required courses should be completed before the commencement of duties. Graduate students will **not** be able to commence their teaching assignment and research until they complete the mandatory training requirements. Please go to yulearn.yorku.ca to access all courses and use your passport York to login.

For new graduate students and new TAs in the Department of Chemistry, the following sessions are mandatory:

Health & Safety Orientation: (you only need to complete the first module Health & Safety Orientation for Faculty and Staff, self-paced)	YU Learn
WHMIS II (self-paced)	YU Learn
Chemical Handling & Volatile Rooms	Aug. 30, 10:00 – 11:00
(instructor led online)	<u>Sept. 11:00 – 12:00</u>
	Sept. 13, 1:00 – 2:00
	<u>Sept, 1:00 – 2:00</u>
Laboratory Fire Safety (In-Person)	Aug. 31, 11:00 – 12:00
	<u>Sept. 8, 11:00 – 12:00</u>
	<u>Sept. 18, 2:00 – 3:00</u>
Compressed Gas Cylinder Safety	Sept. 12, 2:00 – 4:00
(instructor led online)	<u>Sept. 28, 10:00 – 12:00</u>

•	Biosafety (Instructor led)	<u>Sept. 15, 9:00 – 12:00</u> Sept. 21, 9:15-12:15
•	Laser Safety	(Contact Laser Safety Officer at
		hslearn@yorku.ca)

#### **Training Record**

For better tracking of your training record, you should use an Employee ID based Passport York account (different from a Student ID based Passport York account).

If you do not have an Employee based Passport York account, go to:

https://www.yorku.ca/uit/instructions-for-setting-up-passport-york/

**DISCLOSURE:** This Handbook was prepared to help student navigate through aspects of the Program with convenience. Information provided in the Handbook may however not align with that provided in official University policies or other documents. In such cases, the information provided in official documents always takes precedence over the Handbook.



# Graduate & Postdoctoral Professional Skills

The Graduate & Postdoctoral Professional Skills (GPPS) Program offers 12 workshops designed to provide specialized professional development opportunities to York's grad students and postdocs.

- Explore career paths by meeting mentors in a range of fields, both non-academic and academic
- **Build** non-academic and academic job search skills through career conversations sessions and job search workshops
- Gain key professional development and resume-building opportunities in areas such as editing, project management, communicating assertively, and proposal writing

GPPS workshops are offered in these core areas:

- Knowledge Transfer Strategies
- Career Pathways & Options
- Transferable Professional Skills
- Writing Success



