THE UNIVERSITY OF BRITISH COLUMBIA

Irving K. Barber
Faculty of Science
Okanagan Campus

Chemistry Graduate Student Handbook

2024-2025

This handbook provides essential information & guidance for students in the CHEMISTRY Graduate Program.

Please don't hesitate to reach out to your supervisor, graduate program coordinator or graduate program assistant within your department for assistance.

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1. Contacts within the Chemistry Department

Graduate Program Coordinator Gino DiLabio	FIP 357	250-807-8225	Gino.dilabio@ubc.ca
Chem. Grad Program Assistant Sheila Williamson	SCI 155	250-807-8094	sheila.williamson@ubc.ca
Department Head Kirsten Wolthers	FIP 350	250-807-9566	kirsten.wolthers@ubc.ca
Chem. Dept. Admin Assistant Dario Villafuerte Vinueza	FIP 355	250-807-8769	everald.david@ubc.ca
Chem. Labs Manager (for TA's) Ieva Zigg	SCI 212	250-807-9568	ieva.zigg@ubc.ca

UBC Campus Security			
Non-emergency	ADM 101	250-807-9236	security.dispatch@ubc.ca
Emergency		250-807-8111	

2. Student Responsibilities at UBC

Upon registering, a student has initiated a contract with the University and is bound by the following declaration:

"I hereby accept and submit myself to the statutes, rules and regulations, and ordinances (including bylaws, codes, and policies) of The University of British Columbia, and of the faculty or faculties in which I am registered, and to any amendments thereto which may be made while I am a student of the University, and I promise to observe the same."

The student declaration is important. It imposes obligations on students and affects rights and privileges, including property rights. You must not enroll as a student at the University if you do not agree to become bound by the declaration above. By agreeing to become a student, you make the declaration above and agree to be bound by it.

Each student is required to provide the information necessary for the University record and to keep Enrolment Services informed of changes in name and contact information.

Students are required to learn the statutes, rules and regulations, and ordinances (including bylaws, codes, and policies) and to any amendments thereto applicable at the University. For more information , please see the Index of Board of Governors Policies and Senate Policies.

The University authorities do not assume responsibilities for others that naturally rest with adults themselves. This being so, the University relies on the good sense and on the home training of students for the preservation of good moral standards and for appropriate modes of behavior and dress.

The University and University authorities are not obligated to enforce any statutes, rules, regulations, or ordinances (including bylaws, codes, or policies) if discretionarily enforceable by law or made under its, or their, power or authority.

Please note that we used the information from the Graduate Policy and Procedure Manual prepared by the UBC Okanagan's College of Graduate Studies for this section. This manual can be found at https://gradstudies.ok.ubc.ca/policies-procedures/student-responsibilities/

3. The Role of the Supervisor

The critical relationship between a research graduate student and their supervisor should always be **academic and professional, with an emphasis on a mutually open, committed, and respectful relationship.** The supervisor should act as both an academic mentor, with an emphasis on guidance, instruction, and encouragement of scholarship and research, and as an evaluator of the student's performance. A fundamental duty of the supervisor is to impart to the student the skills necessary to plan and conduct original research.

Specifically, the supervisor should:

- Work with the student to establish a realistic timetable for the completion of the various requirements of the program of study;
- Discuss with the student and establish mutual expectations for the student's vacation time (students are entitled to three weeks of vacation during each twelve month academic year);
- Develop a relationship with the student conducive to research and intellectual growth;
- Guide and mentor the student concerning the research ethics approval process and concerning the intellectual property issues around their thesis or dissertation research;
- Guide the student in the pursuit of knowledge and provide constructive criticism in support of the highest standards of research and professional development;
- Mentor the student in areas such as, but not limited to, the development of appropriate professional skills, funding applications, networking, assistance with publications, and career development.

The College of Graduate Studies has developed a Checklist of Expectations for Graduate Student and Supervisor to define the expectations and responsibilities of the graduate student and the supervisor. The Faculty of Graduate and Postdoctoral Studies (Vancouver campus), in consultation with the Graduate Student Society and UBC Counsel office, has created several documents that outline the expectations of the student-supervisor relationship.

Please note that we used the information from the Graduate Policy and Procedure Manual prepared by the UBC Okanagan's College of Graduate Studies for this section. This manual can be found at https://gradstudies.ok.ubc.ca/policies-procedures/supervisors/#item2.

4. Scholarships & Financial Support

At UBC, full-time graduate students are supported financially to ensure they can dedicate the most time to their research.

For the Chemistry Graduate Program, the minimum stipends of the following:

MSc - $19,000 per year
PhD - $22,000 per year

The amount for these stipends is calculated on an annual basis, and will come from different sources: Scholarships, Awards, Teaching Assistantships (TA), and Research Assistantships (RA). The distribution is different for each student, as it depends on criteria like excellence, nationality, field of research, etc.

Of course, it is possible to receive more than these values if you accumulate scholarships and awards. If you cannot secure scholarships, then the combination of your TA and RA amounts will be adjusted by UBC to ensure your funding meets the program's promised level.

In Canada, the expected completion times for a graduate degree is 2 years for a MSc, and 4 years for a PhD. Consequently, your funding is aligned with these timeframes; meaning that if you exceed the time allotted to your research, UBC is no longer required to support you financially.

4.1 Scholarships & Awards

You are expected to apply to all scholarship and award opportunity for which you are eligible. In general, the more scholarships you obtain, the least teaching you are required to do, which helps you advance your research more efficiently.

This competitive process is a normal part of your academic life. It is important for two main reasons:

(1) Learning to write persuasive research proposals is an essential skill, and the earlier you start in your career, the better you become. Such skills are useful in both industry and academia.

(2) For your CV of resume, scholarships are an objective stamp of your excellence. They will make you more competitive for the next step of your career path.

There are four levels of scholarships: Institutional, Provincial, National, and International. The last three are "external": your application will compete with students from other universities. Sometimes, external scholarships may have quotas of institutional applicants, meaning the best candidates are selected by UBC to be sent at the next level. For "internal" scholarships, decisions are made at the institutional level, meaning the awards are only available for UBC students.

- **Institutional** (internal). Scholarships and awards are offered at the UBC level. The applicants are graduate students from different programs. They range from campus-level competitions to scholarships offered by private donors for selected disciplines.

The College of Graduate Studies (CoGS), the Faculty of Science (FoS), or the Chemistry program are responsible for recommending students for scholarships, fellowships and other awards. They base their recommendations on a range of factors such as academic achievement, leadership and UBC involvement.

Many opportunities will arise throughout the year for which you will need to submit an application. Information regarding internal awards issued by the Faculty of Science can be found here: FoS Graduate Student Awards

Information regarding internal awards distributed by CoGS (campus-wide) is found here: CoGS Award Opportunities

- **External.** The main funding source for chemistry graduate students in Canada is NSERC (Natural Sciences and Engineering Research Council). MSc students should apply for the **CGS-M** scholarship (deadline is usually around December 1), and PhD students should apply for the **CGS-D** scholarship (Deadline is usually around October 15). NSERC scholarships are the most prestigious awards, because they are selected at the country level. Depending on your research topic, you may be able to apply for CIHR scholarships (health-related), or other research foundations.

In British Columbia, the number of **Provincial** scholarships is very limited for scientific research. Scholarships opportunities are often specialized, e.g., MITACS, Michael Smith Foundation, etc.

- **International** level scholarships are often limited to PhD students, and most will involve a collaborative aspect with a research group in another country. CoGS will email you about these opportunities, but your research supervisor may be the best person to contact about those as they are often discipline-specific.

4.2 Graduate Teaching Assistantships (GTA)

TAs are hired as a salaried position for the duration of a semester. A full-time TA is hired for 12 hours per week over 16 weeks for a total of 192 hours for a semester, inclusive of the final exam period. The total hours do not need to be evenly spread over the appointment (e.g., higher workload of marking after an exam). See section 4.4 for hiring details.

Teaching Assistant Positions are posted in March of every year on each department's website. These are British Columbia Government Employee Union (BCGEU) positions and applications are due by April 30th. Late applications can be accepted; however, they will be reviewed after the applications received prior to April 30th.

Teaching Assistants (TAs) are assigned in preparation of each semester. An unofficial offer email will be sent out, and once accepted, an official offer letter and hiring documents will follow. • *Note: the actual hiring for Chemistry Labs is usually finalized after mid-August (when the exact undergrad numbers are known). So, it may take a while to hear back from the Dept about your TA.*

Teaching Assistant Application Form – Dept of Chemistry: Chemistry TA Application

Salaries are updated yearly and follow the BCGEU Collective Agreement schedule of pay. Teaching Assistant positions are paid bi-monthly by direct deposit. TA pay is 80% Regular (taxable) and 20% Fellowship (non-taxable). Contracts are four months at a time: between September 1 to December 31 and/or January 1 to April 30. You are required to be available for the full period of the TA contract. Do not plan absences during the period of your contract until you have explicit clearance from your research supervisor and lab manager. If you are ill during the teaching term and are unable to attend your assigned lab, email your TA supervisor and lab manager as soon as possible.

TA's must complete Teaching Assistant Foundational Training through the Centre of Teaching & Learning. The program consists of 10 hours of paid training and is offered to all new-to-UBC undergraduate and graduate TA's. For dates and more information, please visit this website: Teaching Assistant Foundational Training

Please follow up with the Lab Manager (Ieva Zigg) for any other relevant training that may be required.

4.3 Graduate Research Assistantships (GRA)

Your supervisor may assign you a Graduate Research Assistant (GRA) position. These positions are not within the BCGEU guidelines; therefore, the salary is independent from the TA salary. These positions are paid bi-monthly. See section 4.4 for hiring details.

The source of funding for a GRA is from the research grants of your supervisor. Each grant will usually have different amounts or salary limits, according to the type of research it is supporting. Some grants have limited time windows, or some may prevent the student from taking on another source of funding (like TA), etc.

GRA's are highly variable in how they are attributed—consequently, your supervisor is the best person to get information.

4.4 Hiring Information

If you are being hired as a RA or TA, here is a list of documents and steps required.

- Study Permit – For **international students** to work at UBC Okanagan, you need to have a Study Permit and present this original to the Department. **Your Study Permit must state 'May accept employment on or off campus if meeting eligibility criteria as per R186 (F), (V) or (W)'.**
- **Social Insurance Number** (SIN) – to be employed in Canada, you must have a SIN number. If you do not have a SIN, then take the required original proof of identity documents to Service Canada. The original application/document must be brought to the Department.
- Canadian Bank Account and **Direct Deposit** – Payment from UBC Okanagan is provided via direct deposit to a Canadian bank or Credit Union account. Set up a Canadian bank or Credit Union account and request the 'direct deposit' form from your bank. You will get an additional form from the Department with your offer letter.

For additional questions regarding student employment, please check out the Employee Handbook for Students

5. Program Timelines, Requirements & Milestones

If you join the program at the MSc level, your priority should be to get your research project underway, and to complete your course requirements within the first year. It is common to simultaneously serve as TA, so rigorous time management is essential to succeed. With your courses completed, you can focus on research for the last year. While PhD students do not have course requirements, it is possible to take courses to increase the knowledge in a new specialized field.

As mentioned in Section 4, UBC is not obligated to offer financial support if your degree completion exceeds the expected duration. Similarly, most scholarships have in-program time limits for eligibility.

5.1 Program Durations

Program	*Components*	*Expected Duration*
MSc	Coursework and Thesis	24 months
PhD	Dissertation	48 months

Account for 2-3 months of dissertation writing time. Consequently, you should plan your research project carefully to ensure you defend your thesis within two or four years. In other words, the effective lab research time for a MSc is ~1.5 years, and for a PhD, it is 3.5 years.

5.2 Program Standards

- Students must maintain a standing of >76% (B+) in all coursework.
- The supervisory committee will gauge student progress towards the thesis annually.
- Students must present a departmental seminar (CHEM 540)
- PhD candidates must pass their Candidacy exam within 18 months of degree initiation; if they fail, they may retake the exam within 6 months, but a second failure will lead to termination in the program.

5.3 MSc Milestones & Requirements

- ❑ 1. Establish your **Supervisory Committee**. This committee consists of: your PI + at least 2 other professors who understand your research project. These Committee members will meet with you at least once per year for your Annual Progress Report. They will also be part of the evaluation committee at your thesis defence. Discuss with your supervisor to find appropriate members.
- ❑ 2. **Each semester** you must enroll in CHEM 549 **Master's Thesis** for your research-based thesis – this course is necessary to give you Full-Time student status at UBC. This is important since many scholarships are only accessible for full time students.
- ❑ 3. Register and complete a minimum of **7 credits** of coursework. Typically: two discipline-specific courses of 3 credits + the seminar course CHEM 540 (1 credit).

  Registering in these graduate courses can be done in September when you have met with your supervisor and discussed the options that will align best with your research project.

  The graduate Special Topics courses are often offered/created according to the interests of the incoming student cohort, and may not be advertised on the UBC registration portal. In terms of timeline, you should ideally aim to have completed all your courses within 12 months (the Seminar can be later).
- ❑ 4. Present a **departmental seminar**: CHEM 540. (wait to register between year 1-1.5). The Chemistry Seminar course CHEM 540 (1 credit) usually takes place in your third or fourth semester. Your goal is to teach the department about a literature topic at the forefront of your field. The topic can be related to—but cannot be exactly on—your research project.
- ❑ 5. Research, write, and defend your thesis.
- ❑ 6. Publish your research results.

5.4 PhD Milestones & Requirements

- ❑ 1. Establish your **Supervisory Committee**. *See section 5.3 for details.*
- ❑ 2. **Each semester** you must enroll in CHEM 649 **Doctoral Thesis** for your research-based thesis – this course is necessary to give you Full-Time student status at UBC. This is important since many scholarships are only accessible for full time students.

  At the PhD level, coursework is only required at the discretion of the student's supervisory committee, depending on previous course credits from prior MSC degree.
- ❑ 3. Present two **departmental seminars** (CHEM 540) at year 2 and year 4 of your PhD.

The first seminar usually takes place in your third or fourth semester. Your goal is to teach the department about a literature topic at the forefront of your field. The topic can be related to—but cannot be exactly on—your research project.

The second seminar should take place in your last year of your PhD. Your goal is to present to the department and colleagues the summary of your own research findings.

- ❑ 4. Pass the **Oral Candidacy Examination** that demonstrates breadth and depth of knowledge in one's chosen field and specialization.
- ❑ 5. **Publish** your research results. A *minimum* of three first-author peer-reviewed publications is usually expected for a PhD candidate to defend their thesis. It should be noted that these numbers are field-dependent; some standards for some disciplines may be higher.
- ❑ 6. Complete your research, **write** your dissertation, and **defend** your work.

5.5 Timeline Overview

	MSc	PhD
Year 1	• Establish your **Supervisory Committee**. • Complete coursework (2 x 3 cred.) • Start your research (CHEM 549). • Present at conferences.	• Establish your **Supervisory Committee**. • Start your research (CHEM 649). • Present at conferences.
Year 2	• Present a **seminar** (CHEM 540). • Complete your research. • Publish your research findings. • **Write** your MSc thesis (2-3 mo.). • **Defend** your MSc thesis.	• Present a **seminar** (CHEM 540). • Pass your **PhD Oral Candidacy Examination** • Publish your research. • Present at conferences.
Year 3	—	• Publish your research. • Present at conferences.
Year 4	—	• Present a **seminar** (CHEM 540). • Publish your research. • **Write** your PhD thesis (2-3 mo.). • **Defend** your PhD thesis & Graduate.

5.6 Forming your Supervisory Committee

Your supervisor and any co-supervisors are automatically members of this committee. Other committee members may be drawn from inside or outside the program in which the student is registered. The supervisory committee is responsible for the intensive mentoring, supervisory and examination work on the student's thesis proposal, comprehensive exams, dissertation prospectus, and dissertation.

To fully benefit from a supervisory committee, a student should:

- Ask the committee for advice and guidance on thesis or dissertation development and direction early in their program;
- Be in regular contact with their committee as research progresses and the thesis or dissertation develops;
- Ask for feedback on written materials from individual committee members;
- Request their supervisor call a full committee meeting at various stages in the development process.

5.7 MSc and Doctoral Students

The student's supervisory committee guides the student in planning his/her research and in preparing the thesis. Committee composition must conform to the following the guidelines:

- The committee must comprise at least three faculty members.

  For each supervisor/co-supervisor, there must be at least one committee member (ex. if there are three supervisors/co-supervisors, there must be at least three additional committee members).

- The committee may include faculty members from other graduate programs.
- The committee may include qualified non-faculty members or faculty external to UBC upon approval of the dean of the College of Graduate Studies.
- To reduce the risk of discontinuities in supervision, at least two members of the committee must be faculty members on the UBC Okanagan campus.

5.8 Changes to Committee Members

It may be necessary for a student to change committee members during the program. Reasons for committee member changes include, but are not limited to: change of research area, sabbatical, leave, retirement.

If a change in committee members is required, the student should complete and submit the Change of Student Supervisor Committee Member.

6. Annual Progress Reports

The annual progress report records the current status of the degree program progress of a student, and it indicates further steps on a path to successful completion of the program.

The progress report is initiated by the student and completed by the supervisor and the graduate program coordinator. The completed and signed report must be submitted to the College of Graduate Studies by June 1st for each year of study.

The process for completion of the annual progress report is as follows:

- The student completes their portion of the report, signs it, and submits it to their supervisor;
- The supervisor completes their portion of the report in consultation with the student and the supervisory committee;
- The supervisory committee, the supervisor, and the student meet to discuss the supervisor's comments. The student is made aware of the content of the report if they cannot be present at the meeting;
- The supervisor and student sign the report and submit it to the graduate program coordinator;
- The graduate program coordinator determines whether the progress of the student should be rated as satisfactory or not and marks the report accordingly, adds comments, signs it, and submits the original report to the College of Graduate Studies with copies going to the student and into the student's file in the department or program; If the graduate program coordinator determines that the academic progress of the student is unsatisfactory, they will convene a meeting with the student and the supervisor to discuss their concerns

7. Transferring from MSc to PhD

Exceptional MSc students can transfer to the PhD program after one year if they meet the following requirements:

- The student has completed one year of study in their master's program and applies for transfer prior to completing their second year of study
- The student has completed 12 credits of coursework or met the coursework requirements for a master's degree in their program with a minimum 76% average
- At least six of the 12 credits/coursework requirements are 500-level or above courses;
- At least six of the 12 credits/coursework requirements have final grades of 76% or above;
- The student shows clear evidence of research ability;
- The transfer is supported by the supervisor and program coordinator

This form must be completed in order to transfer: Transfer from Master's to Doctoral Graduate Program (ubc.ca)

For more information, please see the Graduate Policy and Procedure Manual.

8. PhD Comprehensive Exam for Admission to Candidacy

The purposes of the comprehensive examinations are:

1. to ensure that a doctoral student has a comprehensive understanding of the literature in their field(s) of study, including theories and methodologies;
2. to ensure that the student is fluent with past and current debates and anticipated future trajectories in this/these field(s);
3. to enable the student to develop and locate their own intellectual commitments within the debates of those fields;
4. to demonstrate scholarly breadth and depth of understanding that is wider than the specific topic of the student's research;
5. to prepare the student to convey their knowledge to both specialized and non-specialized audiences.

All doctoral students are required to successfully complete a comprehensive examination before being admitted to candidacy. Although the nature of the comprehensive examination may vary significantly between doctoral programs, it is the responsibility of each doctoral program to ensure that the comprehensive examination is consistent and equitable and that it meets the highest academic standards.

The basic requirements for a doctoral student to be admitted to candidacy are:

- All required coursework is successfully completed.
- The comprehensive examination(s) is/have been passed.
- The dissertation proposal has been approved by the supervisory committee.

Students are normally expected to complete their comprehensive(s) within twenty-four (24) months from the date of initial registration. Students who are not admitted to candidacy within 36 months from the date of their initial registration must withdraw from their program. In exceptional circumstances, the dean of the College of Graduate Studies may grant an extension to this deadline.

As soon as a student has satisfied all requirements for candidacy, the graduate program must recommend to the College of Graduate Studies that the student be admitted to candidacy. Candidacy status is listed on the student's academic record along with the date candidacy was achieved.

9. Thesis Defence

9.1 MSc Thesis Defence

The Thesis Oral Examination is an examination approved by the College of Graduate Studies. Prior to the final defence, candidates must have fulfilled all coursework, examination, and language requirements of the degree program. It is the responsibility of the candidate's graduate program to ensure that all of these requirements have been met and that the candidate's language proficiency is sufficient for the examination to be conducted with full communication between the committee and the candidate. The Thesis Oral Examination is a public event at UBC Okanagan, and as such will be conducted in English.
The thesis oral examination process is initiated once the student's supervisor(s) and supervisory committee have deemed the thesis ready to proceed to defence.

For all the criteria and scheduling details, please visit: 8.0 Program Requirements (ubc.ca)

9.2 PhD Thesis, Oral Presentation, Defence

A student's doctoral dissertation is a substantial piece of scholarly work that contains a significant contribution of new knowledge to the field of study. It presents the results and an analysis of the student's original research, and should be significant enough to be publishable in the refereed literature.

The dissertation must have a coherent structure that provides a complete and systematic account of the student's scholarly work. It may incorporate work from submitted, accepted, or published journal articles, which may or may not have co-authors. It may also include other scholarly artifacts such as creative writing, film and other audio, visual, and graphic representations, and application-oriented documents such as policy briefs, curricula, business plans, computer and web tools, pages, and applications, etc., so long as they are also described and analyzed in a scholarly context.

The dissertation should reflect the student's ability to do the following:

- Critically analyze the relevant literature
- Use and describe in detail the appropriate methodology for the scholarly work undertaken
- Conduct research and present findings that result in a significant and original contribution to knowledge
- Verify knowledge claims and sources meticulously
- Locate the work of the dissertation and its findings within the broader field or discipline
- Communicate the scholarly work and analysis effectively

For full criteria and scheduling details, please visit: 8.0 Program Requirements (ubc.ca)

10. Useful Links

Deadlines

For important dates including course withdrawal dates, final thesis/dissertation deadline dates, etc. Please see the CoGS deadline table: Deadlines

UBC Okanagan Academic Calendar

The Academic Calendar is a comprehensive guide to all programs, courses, services, and academic policies at UBC. The online Calendar is the official Calendar. This is an important guide for students and Faculty as campus-wide Policies and Regulations and important calendar dates.

Campus-wide policies and regulations:
http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,0,0,0

Graduate Student Resources

Useful information and links and forms that pertain to graduate students in the Irving K. Barber Faculty of Science: Graduate Student Resources