Chemistry Graduate Student Handbook

2025-26

PURDUE UNIVERSITY®

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Department of Chemistry

About This Handbook

The *Graduate Student Handbook* reflects the policies of the ***Graduate Program in Chemistry***, as determined by the faculty and in accordance with rules outlined by the Purdue Office of the Vice Provost for Graduate Students and Postdoctoral Scholars (OGSPS) and the College of Science.

The Department Head, the Director of Graduate Studies and Mentoring (DGSM), the Assistant Head, and the Graduate Studies Committee share responsibility for oversight and implementation of policies related to all aspects of the graduate program.

This handbook includes both policies and supplementary information. Formal policies are contained in a grey box; a majority vote of the faculty is required to enact changes in policy and the dates of those meetings are shown.

The general objectives of this handbook are:

1. To provide graduate students with information about the expectations and requirements for completion of their graduate program of study
2. To guide students toward personnel who can assist them
3. To outline policies that relate directly to graduate students
4. To serve as a supplement to the Purdue University bulletins and policies governed by the OGSPS.

This is the 2025 version of this handbook.

In addition to this handbook, students are encouraged to review two OGSPS documents:

The **Graduate Staff Employment Manual** contains further details on employment related matters, including insurance, payroll, sick leave, vacation, and other benefits. https://www.purdue.edu/academics/ogsps/documents/gpo/graduate-student-employment-manual.pdf

The **Policies and Procedures for Administering Graduate Student Programs** contains further details on how graduate programs are structured and requirements of OGSPS for all graduate students. https://catalog.purdue.edu/content.php?catoid=18&navoid=23285

It is the responsibility of the James Tarpo Jr. and Margaret Tarpo Department of Chemistry to train graduate students – using course work, teaching assignments, and research – so that upon graduation their attainments are a credit both to themselves and to Purdue University.

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Graduate Program Milestones

This following table lists the major events that happen throughout the course of a student's graduate career, along with the page in this handbook describing the event.

Milestone	Timeline	Page
Advisor Match: process of initial placement with a major professor and research group	Selection Process: 1st semester: September to November. Final deadline for new students to find an advisor: end of 2nd semester	21
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Foundational Coursework*:* PhD students only: pass their division's Foundational Course with a grade of "B" or better.	Deadline: End of 2nd fall semester.	7
Annual Report and Individual Development Plan: Report of research progress and professional development plan	Every August	38
Preliminary Exam: PhD students only: Also requires completion of coursework, Foundational Course, and plan of study and establishes status as a PhD Candidate	Generally taken in the fall of the student's 3rd year. Final deadline: summer of the 3rd year.	12
Seminar presentations: PhD students only: exact schedules and expectations differ by division.	Dependent on the division	17
Thesis defense and deposit: MS and PhD students must submit an original thesis and pass a final examination. PhD students must defend their thesis.	See "Time to Graduation Limits" for deadlines.	29

The PhD Program

General Requirements

The following requirements must be successfully completed to earn the PhD in Chemistry. Details on each item are included in this section:

1. **Coursework:** Successful completion of 18 credits of graduate-level coursework, with the minimum required GPA, as outlined in an approved Plan of Study. Coursework must be completed by the end of the student's 2nd spring semester. The plan of study must be submitted for approval by the end of the student's first spring semester. 90 total credits, including coursework and research credits are required for the PhD.
2. Students entering the program after Spring 2023: must successfully pass the **Foundational Course** designated by their division with a B or better by the end of their 2nd fall semester.
   OR
   Students entering the program prior to summer 2023: must pass at least five **Cumulative Exams** within the first four semesters. Students entering in Summer 2023 or later will not be subject to this requirement.
3. **Preliminary examination:** Passing an oral and written preliminary exam, typically completed in the fifth semester. Deadline to complete: at the end of the student's third year by the summer OGSPS preliminary exam deadline.
4. **Seminar requirement:** Presentation of at least one departmental seminar.
5. **PhD Dissertation and Defense**: Submission of a dissertation of original research, including at least one peer-reviewed paper (or preprint), to be successfully defended in a public presentation and oral examination with a faculty committee.

Students unable to complete these requirements according to the deadlines established by the department will be placed on academic notice and may be dismissed from the program, see "Academic Notice and Program Dismissal." In addition to these requirements, all graduate students must have a major advisor from the Department of Chemistry for the duration of their graduate studies to remain in good academic standing. Additional requirements and deadlines are outlined throughout the subsequent sections.

PhD Coursework, the Plan of Study and Registration

Coursework Requirements and Plan of Study

The Department policy on course requirements is in the box below and outlined throughout this section.

POLICY: Coursework Required for the PhD:

Each student must earn credit (maintaining a grade-point average no less than 2.8) in a minimum of 18 hours of graduate courses (600 level or approved 500 level). The student is expected to gain approval of their Plan of Study from their Advisory Committee, once established, in order to ensure both depth and breadth in the scope of coursework. The decision to approve the Plan of Study will be performed exclusively by the Advisory Committee.

As part of the coursework, students must earn credit, with a grade of "B" or better, in at least one course designated by the faculty as a Foundational Course. Unless the Advisory Committee explicitly approves an exception, this course must be within the student's declared research division. Students are encouraged to take more than one Foundational Course.

It is strongly recommended that courses in at least three areas of study be completed during the first two semesters. At least nine of the eighteen hours must be in Purdue chemistry courses. No course grade lower than a "C" may be included in the Plan of Study. No changes may be made to a Plan of Study without approval of the student's Advisory Committee. Part of the course requirements may be satisfied by credit in graduate courses from another institution, subject to the approval of the Advisory Committee.

approved by the Faculty, March 23, 2017, amended October 26, 2023

Typically, the 18 credits of coursework in the Plan of Study are completed by taking six 3-credit courses. The Plan of Study (POS) should focus on technical courses with direct relevance to the student's research plans as guided by the major advisor. For a list of POS requirements and what can and cannot be included on the plan of study, please reference Appendix I.

The PhD requires 90 credits total, including both coursework and research (CHM 69900) credit. The student must complete their 18 credits of coursework by the end of their second spring semester in program. If a student fails to complete the coursework requirement by this deadline they will be placed on academic notice, which may lead to dismissal from the graduate program.

To submit a plan of study and to complete the PhD degree, students must have a minimum GPA of 2.8 on their plan of study. In addition, students must have a minimum cumulative GPA of 2.5 (out of 4.0) at the end of the first two semesters of graduate study to continue in the graduate program. Prior to taking the preliminary exam, the Main Office will review the student's plan of study again to ensure that the coursework listed on the plan has been completed and the POS GPA still meets the minimum requirement.

If the Plan of Study GPA does not meet the 2.8 minimum the student cannot take their candidacy exam and will be placed on academic notice.

Students may be able to use graduate coursework on the Plan of Study from a previously earned master's degree or from a graduate program that they did not complete. There are some restrictions, but typically up to three courses (nine credits) of MS coursework can be applied to the Plan of Study, with the approval of the student's advisory committee. However, courses used toward a previously earned degree will **not** be considered transfer courses. As a result, these courses do not count toward the plan of study GPA and will not appear on the student's Purdue transcripts.

The electronic Plan of Study needs to be submitted for committee approval by the end of the student's second semester of study. Students who missed the submission deadline will be put on academic notice. Students should complete the electronic Plan of Study through the OGSPS portal available in mypurdue.purdue.edu. See the Appendix I for instructions on submitting your Plan of Study.

If a student makes changes to the coursework or committee membership section of their Plans of Study after it has been approved (e.g. did not take a course that was originally listed or replaced a member of their advisory committee) an electronic Request to Change the Plan of Study form must be submitted via the OGSPS POS portal. All changes to the POS must follow the same guidelines and be approved by the student's major advisor and/or advisory committee.

Foundational Courses

Each research division will designate one course as a Foundational Course. The list of courses with this designation will be reviewed by research divisions regularly and published annually in the Graduate Student Handbook.

Foundational Courses (FC) are currently available each Fall. The Foundational Courses for Fall 2025 are:

Analytical: **CHM 69600: Fundamentals of Analytical Chemistry**

Biochemistry and Chemical Biology: **CHM 63400 Biochemistry: Structural Aspects**

Inorganic: **CHM 64100: Advanced Inorganic Chemistry**

Materials: **CHM 69600: Introduction to Soft Materials or CHM 64400: Solid State Chemistry**

Organic: **CHM 65100: Advanced Organic Chemistry**

Physical: **CHM 67100: Advanced Physical Chemistry**

Learning objectives and/or course goals for the current Foundational Courses are included in Appendix II.

At a minimum, students may meet the Foundational Course requirement by successfully passing their research division's Foundational Course with a "B" or better. However, students are encouraged to take more than one FC and the student's major advisor and/or advisory committee may, at their discretion, place additional expectations that a student take further Foundational Courses in other areas.

All first-year students should register for their Foundational Course during their first fall semester to ensure that they can retake the course if needed during their second fall semester. To maintain good academic standing, the Foundational Course requirement must be successfully completed by the end of the student's second Fall semester.

Students who change their declared research division will need to take the FC in their new research area, unless they receive expressed written approval from their Advisory Committee to meet the requirement with the FC from their old division.

Students may **not** meet this requirement through a "test-out" or transfer courses from other universities or MS programs.

Students who entered the program in **Spring 2023 or earlier** are not subject to this requirement (though committees may still require specific foundational courses through the normal Plan of Study approval process). These students are subject to the cumulative exam requirement as part of the requirements for taking the Preliminary Exams (ref. 2023 Chemistry Graduate Program Handbook for additional details about cumulative exam requirements).

Exception for Students Who Entered the Program in Summer or Fall of 2023:

As the Foundational Coursework requirement was approved by the faculty on October 24, 2023, after students entering the program in Summer or Fall of 2023 had registered for their courses, those students will be allowed the following exception to the above stated Foundational Coursework requirement:

- Students may meet the foundational course requirement **in any division** in the 2023-2024 academic year (the requirement to take the course from their own division will not be enforced). The following courses can be used: CHM 62100, CHM 63400, CHM 64100, CHM 65100, CHM 67100, 69600 Chemical Biology, and 69600 Chemistry of Polymers.

If these students do not take or pass their foundational course with a B or better during the Fall 2023 or Spring 2024 semesters, they must successfully complete the Fall 2024 Foundational Course for their division and cannot substitute a foundational course from another division.

No additional exceptions to the Foundational Course policy stated above will be made for students who entered the program in Summer or Fall of 2023. Students who enter the PhD program in **Spring 2024 or later** are not subject to exceptions and must meet the requirements as written in the regular Foundational Course policy outlined above.

Research Grade for CHM 69800 and CHM 69900

Students taking research credit (CHM 69800 for MS, CHM 69900 for PhD) will receive a grade from the advisor at the end of each academic period (summer included). These grades are listed as Satisfactory (S) or Unsatisfactory (U).

By OGSPS and Department policy, students and advisors should discuss expectations required to receive an "S" grade prior to the semester and provide any documents about expectations (if applicable) to students soon after they join the advisor's group. Neither the OGSPS nor the Chemistry Main Office collects and archives documents outlining expectations.

Following a grade of "U," the student and the advisor should meet to convey the reasoning for the unsatisfactory performance, and to establish clear goals and expectations for research work and productivity for the following semester. The Director of GSM will also issue the student and their advisor an Academic Performance Alert or Academic Notice Letter. Receipt of a second "U" grade for research is sufficient for dismissal of a graduate student from the program. In such cases, the student will be notified in writing about their dismissal from the program and the University or any conditions for continuation. This letter will also be provided to the student's advisor and OGSPS.

POLICY: Evaluation in Research Coursework

Enrollment in Chemistry 698/699 entails an expectation of reasonable progress in scholarly research. These expectations include: i) conducting independent research on the background, motivation, and prior work related to the primary subject of the research project, ii) actively participating in laboratory research at a level consistent with a professional research position, iii) contributing to overall laboratory operations, iv) following all safety guidelines and expectations associated with the research environment, v) following ethical research practices, vi) contributing to the written and oral dissemination of research findings, and vii) meeting the documented expectations of the thesis advisor. By signing up for the research credit, the student acknowledges agreement with the expectations set forth by the faculty member. By allowing the student to sign up for the research credits, the faculty member agrees that if the student completes the outlined tasks and deliverables, the student can expect a satisfactory grade for the research credits. Appropriate documentation will be provided by the advisor outlining reasons for the unsatisfactory grade.

Approved by the Faculty November 14, 2017

Registering for Courses

Students are responsible for course registration for each term they are on campus as a full-time student. Registration can happen up until the beginning of the term, but we prefer students register in April for the summer term, in June for the fall term, and in November for the spring term. The Main Office will send a notice to students when it is time to register and include target dates to complete registration. Please watch for these messages and respond in a timely way.

Students generally take 12 credits total in fall and spring, and 9 credits in summer. This includes any standard coursework, seminars, and enough research credits (CHM 69800 for MS or 69900 for PhD students) to bring the total to 12 credits. It is possible to take more than 12 credits in fall and spring in unusual circumstances.

If you are actively participating in any research activities and/or working in any research lab, you MUST register for research credits (CHM 69800 or CHM 69900) in every semester you are on campus. Even after finishing regular coursework, research registration maintains your status as a student at Purdue, and your eligibility to hold a graduate staff

appointment (TA or RA). Students with certain special registration types may be exempt from this requirement. Students who believe they may be exempt should confirm with the Sr. Graduate Program Administrator.

There may be occasions when it is appropriate for students to take more or fewer credits than twelve (or nine in summer); please consult with the Main Office if you would like to take a non-standard number of credits.

Students registering for their final semester before graduation should inform the Main Office of their intention to graduate. The Main Office will place the student on the appropriate "candidate list." Students in their final semester may register for either regular candidacy (CAND 99100) or degree-only candidacy (CAND 99200). Students should consult with the Main Office and their advisor to make the choice between the two candidacy registration types, based on timing, post-graduation plans, visa status, and funding needs. See "Thesis Requirements" for more information about candidacy registration types. Note that the Main Office will register all students for candidacy; students should not attempt to register for either candidacy type using Scheduling Assistant.

Additional Important Information about Registering:

- At the start of every registration period, the Main Office staff will provide all students with "Instructor Permission" overrides into the CHM 69800 or CHM 69900 section of their advisor.
- A registration PIN is necessary to register for courses each term. To look up your PIN, login to myPurdue, click on the main menu, click "All Cards," and enter "Registration PIN" in the search bar.
- The Scheduling Assistant may indicate that a student has "holds" that prevent registration. Students are responsible for taking care of the holds in a timely manner. The Main Office cannot access registrations to add courses on behalf of a student if they have holds on their account.
- Registration should be completed by established deadlines (these will be communicated by the Main Office every semester). Late registrants may incur a $200 Late Fee from the Bursar.
- Some courses may require additional approval (e.g., instructor and/or departmental approval). In the Scheduling Assistant, click "Request Approvals" in the lower right corner of the window when an error pops up, and the request will be automatically routed as appropriate.
- Each division will have two sections of CHM 69500 available for registration in the Spring and Fall. Students should register for the 0-credit section when they are attending seminars but not presenting. A student should only register for the 1-credit seminar in they are presenting that semester. Students registering for the 1-credit seminar will need additional approvals.
- **Students are responsible for ensuring that they register by the Registrar's deadline and that their registration is correct and complete.** However, the Main Office will monitor registration for several weeks after the registration window opens. Students who complete their registration during that time will be notified if any issues are found with their scheduling so they can make changes. In order to ensure that there is ample time to audit, students are asked to complete registration by the Department's stated deadline. The Main Office

will give students who fail to register by the department's deadline a reminder; students who register after the final reminder deadline will not be notified of registration errors.

- Students may drop a course using the Scheduling Assistant following the standard university deadlines (a course may be dropped in the first two weeks without any notation on the transcript or may be dropped through mid-semester with a grade of "W" on the transcript). Students should be aware that they must maintain at least 3 credits to be eligible to hold a Graduate Staff appointment (TA or RA), and international students typically must maintain full-time student status, which requires at least six credits.

The Preliminary Examination

Passing the oral preliminary examination establishes each student's candidacy for the PhD degree. The preliminary exam is typically completed and defended by the end of the fifth or sixth semester (fall and spring) of graduate study. In the Department of Chemistry, this examination consists of two parts, an Original Proposal (OP) and a Required Research Assessment (RRA). Each part will include written components and an oral presentation to the examining committee.

For most students, the entire preliminary exam process will happen over several months. A typical schedule is:

- Summer following second year: begin to plan and outline Original Proposal topic.
- August of second year: one-page "specific aims" document on the OP topic (see below) and research report due to the advisory committee as part of the second-year annual report.
- Fall of third year: completion of final Original Proposal and Dissertation Research Summary documents, scheduling of examination, distribution of documents to examination committee, and defense (see Scheduling Logistics section below).

Learning Objectives

The Graduate Studies Committee has established the following Learning Outcomes for the Preliminary Exam. Students will receive feedback from their advisor and committee about how well they have demonstrated these outcomes through their Original Proposal and Required Research Assessment Presentation:

Original Proposal Learning Objectives

1. Practice the skill of writing a proposal that is persuasive, thorough, and feasible.
    a. Articulate a hypothesis related to a problem of your choosing that: 1) has not been previously investigated, 2) does not **directly** relate to your current research, and 3) does not rely solely on techniques you are currently learning/implementing.
    b. Understand the pertinent literature related to the hypothesis and be able to discuss the merits and shortcomings of the existing work in the field. Be able to correctly cite this literature based on the style of the proposal.
    c. Suggest 2-3 Specific Aims that are related but independent to address the hypothesis; consider that the work should be achievable on an approximately 3-year timeline.
    d. Be able to design experiments to collect data for each Aim and propose what preliminary data would look like
        i. Be able to discuss the appropriate methodologies necessary to address the aims.
        ii. Be able to consider alternate approaches.

iii. Be able to explain how the knowledge gained through the experiments addresses the hypothesis.

2. Practice the skill of orally defending your proposal.

    a. Be able to explain your proposal using approximately 20 slides.

        i. Be able to share essential background.
        ii. Be able to articulate how your proposal contributes to the knowledge in that field.
        iii. Lead a discussion about the content of your proposal.

    b. Be able to respond to questions related to your experimental design and on topics that are foundational for your project (i.e., core concepts in that field).
    c. Understand and expect that not all questions can be answered and to comfortably, but not always, express 'I do not know' and, at the same time, be able to propose predictions or thoughtful answers.
    d. Consider future directions that may be relevant once your goals are achieved.

Required Research Assessment Objectives:

1. Practice the skill of effectively and concisely communicating your research aims and progress, accomplishments, and future plans through a professional presentation.
    a. Be able to articulate your understanding of the subject and aims of your research clearly and precisely.
    b. Be able to concisely summarize your research accomplishments and main projects to date.
    c. Be able to analyze your research progress to date, including your successes and failures.
    d. Be able to succinctly discuss your research objectives and the steps you might take to achieve your aims in preparation for writing the thesis.
        1. The RRA presentation format is flexible. However, to encourage concise presentations, one possible timeline recommended by the Graduate Studies Committee is: a 20-minute presentation, similar to an ACS conference presentation, which consists of 5-minutes of introduction, 15 minutes of summary of main projects and accomplishments, and 5-minutes of discussion of future research plans.

Documents

The Preliminary Examination consists of three documents: a one-page "specific aims" document, the full Original Proposal (OP) and the Dissertation Research Summary:

Specific Aims Document

Students should submit a "One Page"/Specific Aims page, providing a broad outline of the Original Proposal idea, along with their second-year annual report, which is due by the beginning of August each year. The purpose of this document is to help students work towards preparing their original proposal idea early, and to get committee feedback before the formal report is written. This document will also serve as a model/tool for introducing students to the level of academic writing and ideas that the faculty will expect to see in their original proposals.

Committee members will read the Specific Aims document and indicate on the 2nd Year annual report committee member evaluation form whether they find the outlined idea to be a suitable topic for the Original Proposal. The committee members will also have the option to provide additional feedback on the evaluation form if, for example, the topic does not look suitable either due to being overly like the thesis research described in the student's 2nd year report or of low significance. Providing feedback to the student is encouraged as identifying issues with topic selection after the full proposal is written is disruptive for students and committee members alike. See "Reports & Evaluations" section for more information about the 2nd year annual report.

The topic of this one-page document is flexible; this document does not bind a student to this topic if they deem it no longer appropriate after additional research and consultation with committee members. See

The Original Proposal (OP):

The OP must originate with the student. Some divisions require that the OP not be related to the student's doctoral research or prior research work if the student entered the program with an MS degree. The relatedness of the topic to the group's research should be discussed with the major advisor.

The OP should include a concise statement of the problem or hypothesis to be tested, its significance and originality, why the proposal is superior to previous approaches (if applicable), how it is proposed to address the problem, what difficulties can be expected during the project (and their solutions), and what will be accomplished by addressing the project.

Although the student is expected to have a complete knowledge of the area(s) related to the OP, the written OP document should not include an extensive review of an area.
The OP should outline a research program, as opposed to a single experiment.

Students should format their Original Proposal according to a widely used academic method/model. Each student should check with their advisor to see which formatting method they deem appropriate, but some suggestions are below:

> The Graduate Studies Committee recommends the use of either an NIH R21 or NSF format with option for amendments for specific topic areas. Specifically, we encourage students to have a proposal that is between 10-15 pages double spaced or 8 pages single spaced. Images should be factored into the page count, but footnotes and citations should not be counted. The proposal should address the background, significance/intellectual merit, as well as the approach to solving the problem they propose.

Each research division has their own ideas about whether the advisor should be involved in the generation of the original proposal. Each student should clarify with the individual advisor prior to work on the full OP document to determine what the advisor's level of involvement should be.

A Dissertation Research Summary:

The purpose of the dissertation research summary and RRA presentation is to give the student's advisor and committee the opportunity to review their research progress and

accomplishments and provide feedback prior to the student's admission to PhD candidacy.

The student's second-year research report will serve as the foundation for the Dissertation Research Summary. However, as appropriate, students should add a supplement to update accomplishments completed after the second-year report but before the preliminary exam and include a discussion of directions that their future research might take. The Dissertation Research Summary should also discuss any improvements noted by the student's Advisory Committee when they received the second-year written report. Students who complete the preliminary exam prior to the fifth semester should submit the second-year research report early.

Proceedings of the Examination

The Examining Committee shall be composed of at least three members, at least two of whom hold appointments in Chemistry. A majority of the Committee must hold "regular" Graduate Faculty appointments with the OGSPS (others may hold "special" Graduate Faculty status, which is available to outside researchers or PhD-level scientists who are not members of the Purdue faculty). In Chemistry, the Examining Committee is typically composed of the same individuals who serve on the student's Advisory Committee, but this is not required in unusual circumstances where a substitute is needed (e.g., an Advisory Committee member is on sabbatical or unexpectedly absent due to illness or emergency). The examination is not open to the public, including only the student and the examining committee and typically proceeds as follows:

- The oral examination will begin with an original proposal presentation by the student, followed by the student's required research assessment presentation.
- The committee will discuss the original proposal and RAA presentations and the supplementary documents.
- The committee will feel free to interrupt the student at any time and probe, by detailed questioning, the depth of the student's understanding of the proposal and research.

At the conclusion of the examination, the Committee may consult briefly without the student, and will then inform the student of one of three outcomes:

- **Pass**
- **Fail** – In a failed exam, the examining committee will recommend whether the student should withdraw from the graduate program or continue in the department with conditions. Among other conditions, the examining committee may choose to recommend that a student be allowed to remain in the PhD program and make a second attempt or recommend that the student transition to the MS program. However, the second attempt (if approved) may not happen in the same semester as the first attempt. Students are allowed no more than two attempts.
- **Undecided** – if the committee believes that there are significant corrections or improvements needed, they may choose this option. The committee will then provide the student, in writing, feedback about the deficiencies in the exam and the necessary improvements. The committee must give the student a clear deadline for submitting new documents. The committee will then review and make a final decision. An exam may not remain "undecided" past the end of the

current semester; the OGSPS requires a final ruling of "pass" or "fail" before the last day of classes in a semester.

The examining committee will report the results of the examination and whether they recommend the student for candidacy in the Report of Preliminary Examination (G.S. Form 10). The committee chair will complete OGSPS's evaluation rubric through the Form 10, which rates the student's preliminary exam performance on a scale of "exceeds expectations / meets expectations / does not meet expectations" based on five items: (1) knowledge and scholarship, (2) communication, (3) critical thinking, (4) ethical and responsible research, and (5) professionalism. Committee members can review the Chair's evaluation and have the option to submit additional evaluation rubrics. All committee members must indicate whether they approve or disapprove of the student's candidacy recommendation decision via the Form 10. See Appendix IV for more information about OGSPS forms.

The primary advisor should meet with the student individually within 2 weeks of the completed preliminary exam. The purpose of this meeting is to go over the learning outcomes in relation to the student's original proposal and required research assessment. This should be done regardless of the outcome of the preliminary exam (pass, undecided, or fail).

Students must successfully complete their preliminary examination by the end of their third year, prior to OGSPS's summer preliminary examination deadline. See "Academic Progress and Program Dismissal" section for additional information.

Scheduling Logistics

Students should plan the examination several weeks in advance. Specifically:

- We recommend that students confirm a time for the exam with their committee members at least six weeks prior to the exam date. Faculty schedules are complex, and finding a time for all members of the committee can be difficult. Typically, a period of two hours should be scheduled for the exam (including both the OP and the RRA presentations).
- The Main Office should be informed via email to chemoffice@purdue.edu of the proposed exam date at least three weeks prior to the exam. The email should also include the exam time and list the three members of the examining committee. The Main Office will assist in reserving a room and will complete the OGSPS Form 8.
- The OGSPS requires all approvals on the Form 8 by two weeks before the exam date; starting early ensures time for your major advisor and Department Head proxy to sign.
- Your OP document and dissertation research summary must be emailed to Jordan Harris, harri698@purdue.edu, in the Main Office at least two weeks before the exam date.
- Dress on the day of the exam should be professional; snacks and refreshments for the committee are not necessary. The committee would like students to focus on the exam only.

Seminar Requirements

All PhD students will present a formal seminar in their research division's seminar series. The timing and content of the seminar must be consistent with the guidelines below (varying by area). Students should register in Scheduling Assistant for one credit hour of CHM 69500 in the semester when their seminar will be presented and should register for zero credit hours in the semesters when they do not present. In addition to formally registering, students giving a seminar should work with the CHM 69500 instructor to schedule their presentation date and time.

The following statements have been prepared by the respective research areas to outline seminar policies. All requirements and expectations are subject to change. For further information, consult with the faculty member charged with teaching the seminar.

Analytical Chemistry: Tuesdays, 3:30pm, WTHR 172

Faculty and student attendance at seminars is essential to the success of this program. First year graduate students will attend seminars and participate in discussion, but do not present seminars. Second year students present literature seminars of about 20 to 25 minutes. Fourth (or final) year students are encouraged to present a research seminar.

Biochemistry: Mondays, 3:30pm, BRWN 4102

Graduate students in Biochemistry must give one seminar open to the general academic community. This seminar shall be given in the fall semester of the fourth year, following advancement to candidacy. The subject of this seminar shall be an introduction to the student's research and their research accomplishments to date. The seminar should also present a clear outline and plan for finishing the dissertation work. A second seminar given in conjunction with the final oral examination and defense of the thesis shall be open or closed to the general academic community at the discretion of the major professor.

Inorganic Chemistry: Tuesdays, 12:30pm, BRWN 4102

Students present a literature seminar, ordinarily the semester after passing the preliminary exam, as well as a research seminar near the end of their studies.

- Prior to the literature seminar the student will submit a one-page abstract with references. The student will normally base the talk on several papers, critically evaluate the work, and put it into a broader perspective.
- Literature seminars should be approximately 25 minutes, including time left for questions.
- As much as possible, two students should be scheduled to present literature seminars within one regularly scheduled block.
- The focal points for the Faculty Evaluation will include the choice of topic, evidence of the command of the subject matter, organization, clarity of presentation, and effectiveness of the use of the time allotted.
- Attendance will be the primary criterion for satisfactory performance by non-presenters enrolled in the course.
- Faculty will choose an annual recipient(s) for the Ian P. Rothwell Award for the best literature seminar as well as the best research seminar. This distinction includes a small financial award.

- Thesis defenses will be open for the public and considered to be research seminars. To increase both student and faculty attendance, thesis defenses should be, whenever possible, scheduled for the normal inorganic seminar time slot of Tuesdays at 12:30 pm in BRWN 4102.

Materials Chemistry: Fridays, 11:30pm, BRWN 4102

Students and faculty interested in Materials Chemistry meet for the weekly Materials seminar. Because Materials Chemistry research is highly interdisciplinary, the series includes talks from speakers not only from Chemistry departments, but also from connected research disciplines including Materials Science and Engineering, as well as Chemical, Mechanical, and Biomedical Engineering. A central goal of the seminar series is that students learn to communicate across disciplinary boundaries, providing a strong foundation for their future research. Thus, it is expected that students attend all seminars, even when the research topic is not directly connected to their research project.

Typically, students conducting Materials-related research will present a research seminar in their second year. The talk is expected to be ~20 minutes in length, similar to a typical conference talk. The introduction should provide enough background for the broad range of materials chemists who attend the seminar to understand the importance of the research problem being addressed, and the experimental methods being used. The talk should also address new research findings that have emerged from the student's work to date, and briefly discuss future plans.

Organic Chemistry: Tuesdays, 4:30pm, WTHR 104

The Organic seminar is intended to provide a weekly gathering of the students and faculty at which significant material from the field of Organic Chemistry, as broadly defined, will be presented and discussed at the highest professional level. Such meetings and discussions are an important part of professional life and regular attendance at and participation in the seminars is expected of students and faculty alike.

The seminar program includes a wide variety of speakers from Nobel laureates to nervous graduate students; being asked to present a seminar is one mark of acceptance as a professional. Each doctoral candidate is expected to present one seminar within the Organic Chemistry seminar series.

The seminar requirement for Ph.D. candidates within Organic Chemistry is such that students have the option of selecting a topic from either (a) PhD dissertation research, or (b) independent literature search.

This requirement should be fulfilled not later than the end of the student's eighth semester. Earlier presentations are highly encouraged.

One or more recent reprints and/or preprints (in press or submitted) as well as approval by his/her research advisor and the seminar chair will determine if a student qualifies for the option (a). It is expected with option (a) that the student will include in his/her seminar a discussion of the current and background literature relevant to their laboratory accomplishments. For both options, a 1-2 page abstract, complete with references (titles included), along the lines of a long abstract for an ACS National Meeting must be distributed the week before seminar.

Physical Chemistry: Wednesdays, 12:30pm, BRWN 4102

The Physical Chemistry seminar provides a weekly forum for outside speakers, as well as faculty, students, and postdocs from Purdue, to present their latest research results. This gathering is well attended by faculty and students engaged in Physical Chemistry as well as individuals with related interdisciplinary interests from all over the University. Active participation by new graduate students is vital for the continuing success of the program.

Physical Chemistry graduate students are required to give at least one research talk, either in the Physical Chemistry seminar or in any one of the other seminars in the Department. The format for a Physical Chemistry seminar should be decided by consultation with the student's research advisor and the seminar chair. This requirement should be met by the end of the student's sixth semester, unless an extension is recommended by the student's research advisor.

The MS Program

With the exception of students who are active-duty military, veterans, or military-reserve and are funded by a military scholarship, the Department of Chemistry does not recruit or admit students for a master's degree.

In certain cases, students accepted into the PhD program may change their degree objective to an MS degree, either by their own decision or due to unsatisfactory academic performance/progress. Common reasons for a compulsory change to a master's may include:

- Failure to earn a B or better in their Foundational Course by deadline
- Failure to pass the Preliminary Exam
- Failure to earn a Plan of Study GPA of 2.8

Regardless of the reason, any student changing their degree objective needs to work with the Sr. Graduate Program Administrator to complete several steps required by OGSPS, including submitting a Form 17B (see Appendix IV) and preparing a new MS Thesis Plan of Study. The OGSPS deadline to have an approved MS Plan of Study is the Friday before the start of classes in the student's final semester. See Appendix V for a list of OGSPS Missed Deadline Penalties.

The two primary degree requirements for the Master's in Chemistry are coursework and the master's thesis.

MS Coursework Requirements

The master's thesis degree requires 30 credits total, including coursework and research credits. The minimum coursework requirement is 18 credits outlined in an approved MS Thesis Plan of Study. At least 12 credits of CHM 69800 MS Thesis research must be completed with a grade of "S," satisfactory.

The rules for establishing the Plan of Study are the same as the PhD, with four exceptions:

1. the MS Plan of Study GPA must be 2.5 or above.
2. at least 12 hours of 600 level courses are required.
3. a foundational course is not required
4. credit used to earn a previous MS degree may not be used as part of a Purdue MS Plan of Study.

MS students will follow the same course registration and plan of study submission processes as PhD students. As with PhD students, MS students must work under the supervision of a major advisor for the duration of their studies.

MS Thesis Requirements

The Chemistry Department does not offer "non-thesis" master's degrees. MS students must submit an approved research thesis, following the typical guidelines and schedule of the OGSPS and the Department. See "Thesis Requirements" for additional policies and procedures.

The Major Advisor and the Advisory Committee

Selection of the Major Advisor

According to OGSPS's *Policies and Procedures for Administering Graduate Programs*, "Every student in a degree program is required to select a major professor who acts as the chair of the advisory committee and who agrees to supervise the student's graduate study, research, and writing…The major professor/student relationship must be a mutually acceptable." (VII.A)

The boxes below describe the formal process and policies that all first-year graduate students who start their formal graduate studies during the fall will follow when selecting a major advisor.

POLICY: Selection of the Major Advisor

During the second week of the fall semester, the Head of Chemistry and Director of Graduate Studies and Mentoring will hold a CROP Kickoff information session for new graduate students to outline the policies and procedures for selecting a major advisor and formally joining a research group, which are as follows:

- Students will receive a schedule of Chemistry Research Opportunity Presentations (CROP) being given by R1 faculty who are accepting graduate students into their groups during the CROP Kickoff Session. The schedule will include the names of the faculty presenting, the dates and times of their CROP talk, the title of their presentation and the number of openings that each faculty member expects to have available. The CROP talks will begin in the third week of the fall semester and typically end by the sixth week.
- Each student must attend a minimum of 8 CROP talks. Students will complete an online check-in form for each presentation. The check-in forms will be used by the Main Office to keep track of the students' attendance at CROP presentations.
- In addition, students must have more in-depth interactions with at least three groups. The student must obtain signature verifications from the faculty they interact with on their Advisor Request Form. Students are strongly encouraged to visit individually with faculty and lab members at any time, including the weeks in which CROP talks are taking place and up until they must make their advisor selections.
- All first-year students must attend the requisite number of CROP talks and provide documentation of their three in-depth group interactions. Students who fail to complete these requirements will receive a U (unsatisfactory) grade for CHM 69900 at the end of the semester.
- Graduate students will submit their **two ranked choices for major advisor** on the Advisor Request Form. The deadline to submit the Advisor Request Form to the Main Office (BRWN 2100) will be announced during the CROP Kickoff Session; the deadline is typically scheduled for the third Friday of

Continued on next page

CONTINUED: Selection of Major Advisor

October by 5:00 PM. Students will also indicate which research division/s they will be joining on the Advisor Request Form. The student's divisional choice/s do not need to match the research division of their requested advisors. After the Advisor Request Form submission deadline, the Department Head, Director of GSM and division chairs will review requests and share the name/s of student/s who have designated a faculty member as their first choice for the faculty member's consideration. If a student's first choice for advisor does not accept them, the chair of the student's preferred research division will attempt to match the student with their second choice or find a suitable alternative. If the chair finds another faculty member willing to take the student, the student will be consulted to ensure that they are amenable to the match. Students who have been accepted by their first choice or have come to a mutual agreement with another faculty member during the first round of assignments will be notified of the lab group they are joining by the Director of GSM via formal advisor assignment letters. The letters are usually issued by early-November. Until a student has received an advisor assignment letter, they do not have an advisor.

- In no instance shall a faculty member be forced to accept a student whom he/she regards as inappropriate for their group, nor shall any student be assigned to a faculty member without consultation and agreement. To this end, if an assignment cannot be made based on a student's preferences during the first round of assignments, then that student will be requested to consult the Director of GSM and/or the chair of their division/s to discuss options and procedures for selecting a new advisor.
- This typically includes the students conducting additional interviews with prospective advisors. The Main Office may provide students with a revised list of faculty with group openings. The student's revised advisor choice should be submitted to the Main Office within two weeks of meeting with the DGSM and/or Division Chair.
- Students who are unable to find an advisor after submitting their revised choices must come to an agreement with a faculty member to join their group by the end of the student's second semester in the program. If the student is unable to find an advisor by this deadline they may be dismissed from the program. Students should provide the DGSM with frequent updates about their search. Students can also continue to discuss concerns with the Director of GSM, the Department Head, or his/her designee. However, the student is ultimately responsible for securing a suitable advisor by the Department's deadline.

Approved by the Faculty on May 10, 2011, with amendments on May 3, 2018 and September 6, 2025

The major advisor will serve as the Chairperson of a student's Advisory Committee and must be an R1 faculty member in the Department of Chemistry and employed by Purdue University. Consult with the Main Office for details about Courtesy Faculty in Chemistry serving as a Major Advisor. Other individuals (e.g., faculty in other departments or faculty

at other institutions) may serve on the Advisory Committee, if approved (see next section).

Until such time as a major advisor is selected and finalized, the Director of Graduate Studies and Mentoring serves as an advisor and source of an official signature when required for any University purpose.

Students are encouraged to review Appendix III, "Tips for Working with an Advisor," for advice that may help them optimize their relationships with their advisors.

Selection of Advisory Committee

In addition to their major advisor, it is important for a student to build a network of faculty members who can provide additional advice and a variety of perspectives to help broaden the student's knowledge and grow their support system as they progress through the program.

To this end, students should begin to recruit members to their Advisory Committee during the second semester of graduate study in consultation with their major advisor, following the policy guidelines below:

POLICY: Selection of Advisory Committee

Most students will select a major advisor during their first semester of graduate study. Each student's major advisor will guide him/her to select additional faculty to complete the Advisory Committee. The ultimate decision will be made by the student. All committee members must be approved by the OGSPS. The student is encouraged to include committee membership spanning areas outside those directly aligned with the major thesis work. Two members of the committee must be from the Department of Chemistry. The makeup of the committee must avoid any potential conflict-of-interest that could bias the process that leads to candidacy or completion of the degree. This would include having two closely related committee members on the Preliminary Exam committee, such as a spouse, domestic partner, etc. The committee and student will develop a plan of study for the remaining courses needed to satisfy the student's departmental requirements.

Approved by the Faculty, November 3, 2015

A committee of at least three approved members will be necessary to submit the coursework Plan of Study at the end of the second semester, and, in the case of PhD students, to complete the oral preliminary exam during the fifth semester.

It is the responsibility of the student to approach and invite faculty to serve on their committee. Students are advised to remember that Advisory Committee membership is a significant time commitment for faculty, and that it may be helpful to have a formal meeting with prospective committee members so that students may introduce themselves and their research interests. At the least, students should email faculty that they would like to include on their advisory committee to introduce themselves and state

their intentions. Students should not include a faculty member as a committee member on their plan of study without notifying them first.

Three Advisory Committee members (including the Major Advisor) are required for both the PhD and MS Thesis Plan of Study. Typically, the advisory committee members will also serve as examining committee members for a PhD student's Preliminary and Final Exams and an MS student's Final Exam, though there can be substitutions if needed.

It is possible to select an Advisory Committee member from another institution (including former Purdue faculty). However, these individuals must be approved by the OGSPS. The OGSPS approval process may require that the prospective committee member provide background information on their education, prior experience with graduate students, publications and a current CV. The Director of GSM can apply to the OGSPS for classification of this outside member as a "special" member (code S1), but this is not a rapid process. It may take several months or more, and there is no guarantee of final approval.

Students may also select a professor from another Purdue department to serve as a co-chair alongside their major professor from Chemistry or as a committee member, so long as they are R1 faculty and the student has two Purdue Chemistry committee members.

Major Advisor/Student Conflict Resolution Resources

It is not uncommon for misunderstandings or conflicts to arise between a student and their major advisor during the course of their graduate studies. Generally, it is recommended that students experiencing advisor problems address the issues first with their advisor. Most of these conflicts are short lived and can be successfully resolved through open communication.

Graduate students also have additional resources they may use for advice and consultation regarding conflicts or issues with their major advisor. In most cases confidentiality can be maintained, though further reporting and potential escalation is mandatory in certain situations. Students may choose to initiate a conversation with anyone on the following list:

1. A student's **Advisory Committee** is available to assist students with a variety of issues, from scientific questions to interpersonal issues like advisor/student conflict. Students are welcome to contact members of their committee directly and do not need the permission of their major advisor to consult with committee members.
2. The **Student Success Advisors** are internal to the Department of Chemistry and are trained to assist students with an array of issues, including advisor/student problems, in an informal setting. They can serve as a first contact and can help graduate students decide on a best course of action. In 2025-26, the Student Success Advisors are Jean Chmielewski, Scott McLuckey, Andy Tao and Adam Wasserman. Students may contact any of the Student Success Advisors directly.
3. The **Department Head** and **Director of Graduate Studies and Mentoring** (DGSM) can assist in situations where action may need to be taken and can assist in the escalation of issues to appropriate offices as warranted. The DGSM should be involved if the situation rises to the level where the student is considering switching major advisors.

4. The **Office of Graduate Assistance (OGA)** is available to meet with Purdue University graduate students to assist them in addressing a variety of issues that may arise during a student's time at the University, including Student/Major Professor related conflicts. The OGA will provide impartial, independent, and informal assistance with reference to student concerns based on their knowledge of University policy, practice and personnel without judgement and can help determine whether further action is warranted. Information students share when consulting with OGA is kept confidential when possible.

   Examples of concern that can be brought to the OGA include, but are not limited to:

   - Authorship disputes - Issues of credit, acknowledgement, citation (unless framed clearly as plagiarism)
   - Funding concerns
   - Grade concerns and/or appeals
   - Student - Major Professor relationship disputes, issues, abnormalities, mismatch of expectations
   - Mentoring issues - timely feedback, contradicting advice, oversharing, lack of advising (or time allotment)
   - Intellectual property disputes
   - Conflicts of interest
   - Questionable research practices

   Students seeking assistance from OGA can start the process by completing a Request for Assistance Form:
   https://cm.maxient.com/reportingform.php?PurdueUniv&layout_id=11

For concerns about any incident that may involve harassment, whether related to an advisor or another student, staff, or faculty member, please review the "Anti-Harassment Policy" for information, processes and resources.

Changing the Major Advisor

Per OGSPS, the student/advisor relationship must, at all times, be one of mutual agreement. When the relationship is no longer agreeable to one of the parties, the policies below outline the process for changing advisors, which differ depending on whether the student or advisor initiates the request to change.

POLICY: Student Initiated Major Advisor Change

Students should be aware that a change in advisor may result in:

- Limited choice of a new advisor, as fewer faculty may be available to accept students.
- Teaching assistantships may become the sole source of financial support. Graduation may be delayed, and extensions of financial support for more than five years are not guaranteed.

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[Student Initiated Major Advisor Change continued]

Students are strongly encouraged to discuss their situation with the members of their thesis advisory committee, the Graduate Studies Committee, their division head, or another trusted faculty member, depending upon how far they have progressed in the program. If there is concern about the discussion record, the student should clearly ask about confidentiality prior to the conversation. These advisors may wish to contact the student's advisor or schedule a meeting together with the student and their current thesis advisor.

If the student determines, after consultation, that they desire to find another research group, potential advisors should then be sought. The student should inform the potential advisor of all other faculty involved in the discussions, including their current thesis advisor, so that the new advisor can discuss the situation with them. The student should recognize that the potential advisor may wish to discuss the situation with the current thesis advisor and other faculty. The potential new advisor should ask for consent prior to contacting the current thesis advisor.

The student should then write a formal letter to the Head of the Department of Chemistry, requesting a change in advisors and justifying the change. After consultation with the faculty involved, the Head (or designated proxy) will issue a letter to the student, formally sanctioning the transfer. This letter will become part of the student's formal records and the graduate database will be modified accordingly. If the Plan of Study has already been approved, it is the responsibility of the student to initiate the formal Advisory Committee change with the OGSPS by submitting a revised Plan of Study.

Normal checkout procedures will apply to all transfers, including the required cleanup and verification with the departmental safety officer and return of keys.

Research materials including lab notebooks and electronic data must remain with the original thesis advisor, and students may arrange for access or obtain copies of these materials if sanctioned by the original thesis advisor. It is the choice of the original advisor if they will allow the student to include work from their laboratory in the student's thesis or in any public presentation or publication.

As students cannot make satisfactory academic progress if they are not working under the supervision of a primary advisor, if a new advisor is not identified within 16 weeks the student may be dismissed from the program.

Approved by the Faculty, September 2017, amended on September 6, 2025

POLICY: Advisor Initiated Major Advisor Change

As per the OGSPS handbook, advisors may terminate students unilaterally. In chemistry, when a thesis advisor requires a student to leave their research group, the thesis advisor must clearly document and communicate to the student the reasons for the change. Such a change will typically also result in a "U" grade for research credits. If the issues leading to the change are long-standing, it is expected

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[Advisor Initiated Major Advisor Change continued]

that the faculty member would have expressed the issues of concern in writing previously and warned the student that removal from the group is a possibility.

Faculty members must notify the Director of Graduate Studies and Mentoring (Director of GSM) in writing when a student is removed from a research group. No student may continue in the graduate program in chemistry without a thesis advisor. Unless further action is taken by the Dean of Students or OGSPS the student has the right to seek a new major advisor. However, the student also has the responsibility to take an active role in seeking a new advisor, with consultation from the Director of GSM, committee members or other faculty (including the division chair). No individual faculty member will be obligated to accept a student who has been removed from a different faculty member's group.

If a new advisor has been identified, the Head (or designated proxy) will issue a letter to the student, formally sanctioning the transfer, and stating all conditions of the transfer. This letter will become part of the student's formal records and the graduate database will be modified accordingly.

Normal checkout procedures will apply to all transfers, including the required cleanup and verification with the departmental safety officer and return of keys. Research materials including lab notebooks and electronic data must remain with the original thesis advisor, and students may arrange for access or obtain copies of these materials if sanctioned by the original thesis advisor. It is the sole choice of the original advisor if they will allow the student to include work from their laboratory in the student's thesis or in any public presentation or publication.

As students cannot make satisfactory academic progress if they are not working under the supervision of a primary advisor, if a new advisor is not identified within 16 weeks the student may be dismissed for the program.

Approved by the Faculty May 5, 2018, amendment added Sept. 6, 2025

Regardless of whether the student or advisor initiates the group change, it is the student's responsibility to secure a new major advisor. However, the DGSM or their proxy can recommend faculty that may be of interest to the student based on their research. All students must have an advisor or co-advisor with an appointment in Chemistry.

Students who plan to have a faculty member from another department serve as their new Major Advisor must transfer to that professor's department. To transfer, the new department must approve a Graduate School Form 17 (Request for Transfer of Department (Same Campus)); the Department of Chemistry will approve this form as the "current department." The Department does not assist students in finding advisors outside of Chemistry and it is the student's responsibility to meet with members of the new department to discuss their requirements and policies. If a student transfers to a new department, any funding (TA/RA) arrangements with the Department of Chemistry will

cease and all future appointments will be determined and provided by the student's new department.

Major Advisor Leaves Purdue University

There is no formal policy regarding next steps for students when their Major Advisor leaves Purdue, but the following offers guidance about the options that may be available depending on the circumstances. Students are encouraged to consult with their divisional chair or the DGSM for advice on which option may be their best course of action.

If the student has not yet completed the preliminary exam, he or she may choose to remain at Purdue and switch to a new advisor or may explore transfer to the new university with the Major Advisor. In the case of transfer, the Assistant Head can assist in transferring records. If the student has completed the preliminary exam, OGSPS considers them a PhD Candidate, and there are four options:

1. Stay at Purdue, find a new lab with a co-advisor: A professor who leaves Purdue cannot be a student's only committee chair, but he or she can be a co-advisor with another chemistry faculty member if there will be funding from your previous advisor and an ongoing collaboration with your new advisor.
2. Stay at Purdue, find a new lab and a new advisor: If the student has no ongoing research or financial support being provided by the departing advisor and if they will not have chapters in their dissertation related to that advisor, students should consider a shift to a new group. Students should be aware that this often requires the graduate support to be in the form of Teaching Assistantships; the support guarantee for five years from the date of initial enrollment continues to apply.
3. Move with the Advisor, but graduate with a Purdue PhD: The OGSPS allows PhD candidates to remain as Purdue students while they complete the thesis research at another institution through either the Research-in-Absentia or Off-Campus Research processes. Students considering either of these pathways should consult with the Assistant Head as soon as possible to develop funding plans and (if needed) handle visa and/or immigration issues.
4. Fully transfer to the new university with the Major Advisor. The student's degree requirements will be determined by the new institution as they will be granting the student's degree. In addition, all funding (TA/RA) will be determined and provided by the new institution.

Thesis Requirements

Candidates for both the PhD and master's degrees in chemistry must submit a thesis describing the results of their research. Regulations regarding the preparation of the thesis are described on the OGSPS's Thesis and Dissertation Office website at https://www.purdue.edu/academics/ogsps/research/thesis/.

The Thesis Defense

All graduation candidates for the PhD degree must defend their thesis. The following outlines the general policies for the PhD defense.

> **POLICY: Thesis Defense**
>
> The thesis defense will consist of two parts:
>
> The first part will involve a public presentation of the student's research accomplishments, with time and format arranged to permit questions from the audience. Immediately following the presentation, the candidate will be examined on the material in the thesis and on related topics by her/his examining committee which will consist of at least four faculty members, three members from the original plan of study committee plus one additional faculty member (this committee member does not need to be added to the Plan of Study).
>
> Unless otherwise approved by the graduate studies committee, the fourth committee member must meet the same criteria as the other three committee members. If it is deemed desirable by the student, after consultation with the existing committee members, an additional (fifth) committee member can be added, pending approval by the OGSPS (this additional committee member may be a person who would not normally qualify to be a primary member of the committee).
>
> Approved by the Faculty November 3, 2015

In the case of MS candidates, the major advisor will decide if the candidate must hold an oral defense of their master's thesis. Regardless of whether an MS candidate is required to hold a defense they must have an examining committee made up of three members (including their advisor and typically composed of the same committee members as those listed on the plan of study). MS Thesis candidates should consult with their major advisor about the scope and length of their thesis.

Deadlines and Preparation for the Final Examination and Depositing the Thesis

For students with regular candidate registration (CAND 99100) in the final semester, (as opposed to degree-only registration), two deadlines are fixed by the OGSPS:

- The thesis must be submitted to the OGSPS no later than 5pm two workdays before the final day of classes. Submission is through HammerRR and the ETAF (Electronic Thesis Acceptance Form). Students will receive access to this form after successful completion of the final oral defense.

- The final oral examination results must be reported to the OGSPS by the faculty using a Form 11 by 5pm on the Friday one week before the final day of classes (and two days earlier in summer). Note that this deadline refers to the reporting of the exam results, not to the holding of the oral exam. Therefore, this deadline applies to both MS and PhD graduation candidates. It is recommended that the exam be held well before this date to allow time for corrections following the exam, if the committee requires such corrections prior to signing the exam form.

For 2025-26 graduation, the anticipated exact dates are:

Graduating:	**Exam report (Form 7/11) due**	**Thesis submission using ETAF due**
Dec 2025	December 1, 2025	December 8, 2025
May 2026	April 24, 2026	April 29, 2026
Aug 2026	July 17, 2026	July 24, 2026

All other deadlines listed below reference to the planned exam date. Again, the due dates for the exam report form (with committee signatures) are in the table above. We recommend that the exam take place at least a week (and preferably several weeks) before that date.

Counting back from the exam date:

- The complete thesis should be delivered to the examining committee **two weeks** before the exam date.
- The OGSPS Form 8 (see Appendix IV), declaring the date and time and exam, and the members of the examining committee should be fully approved no later than **two weeks** before the exam date. The Main Office will complete this form after Final Format review. We recommend starting earlier, to allow time for faculty to approve the Form 8 before the deadline. After the Form 8 is approved, the student should initiate the OGSPS Form 9, save it, and submit it on the day of the exam.
- The exam should be scheduled, confirmed with committee members, and room reserved no later than **two weeks** before the exam date. For MS Thesis students the exam date refers to the agreed upon date that the committee should be completing their review of the student's thesis and completing the student's Form 7, Report of Final MS Examination
- The thesis should clear Final Format Review with the Thesis Format Advisor no later than **three weeks** before the exam date. Changes to the thesis after this date should be small and editorial. The thesis should be basically complete by this point.
- The initial format review with the Thesis Format Advisor should take place no later than **four weeks** before the exam date, though we recommend an initial review 6-8 weeks before. It is appropriate just to have portions of the thesis ready for the initial format review.

Finally, to avoid late fees with the OGSPS (see Appendix V), students should ensure that they are on the Candidate List for graduation by the end of the fourth week of classes in

the final semester. MS students should ensure that the MS Plan of Study is submitted for approval two weeks before the start of their final semester.

Required surveys become available on the Plan of Study portal during the term that a student is registered as a candidate and must be completed before depositing. The thesis may be submitted in the semester following the successful completion of the final oral defense examination. In this case, the date of degree conferral will be based on the date of the thesis deposit, not the date of the oral examination.

Degree-Only Registration

Students completing degrees early in a term or mid-term may be eligible for a privileged registration at a reduced fee through a degree-only registration (CAND 99200).

The benefit of these special registration types is that students do not need to register for research credits and therefore are not liable for tuition costs (there is a registration fee of approximately $200). This can potentially allow students to move on to post-graduate employment mid-semester.

Degree-only deadlines for final exam approval and thesis deposit are significantly earlier than those of regular candidacy.

Degree-only graduation date:	**Typical due date for Exam report (Form 7/11)**	**Typical due date for Thesis submission using ETAF**
December	early October	mid October
May	early March	mid March
August	early June	mid June

To qualify for degree-only registration, students must be registered for at least one earned credit in the previous semester.

Students may be allowed to hold a RA appointment while registered as a degree-only candidate but must resign the position on or before the date they deposit the thesis.

Because of implications for funding, insurance, and visa/immigration status (for international students), students should individually consult the Office of International Students and Scholars (ISS, iss@purdue.edu) and the Assistant Head, srh@purdue.edu, for details and planning related to OPT and funding if they are intending a degree-only registration.

Time to Graduation Limits

The following policies apply to graduation time limits:

POLICY: Time Limits to Graduation:

[For the PhD]

The Purdue Office of the Provost of Graduate Students and Postdoctoral Scholars permits each academic unit to establish an upper limit of time spent in the pursuit of a PhD degree. The policy of the College of Science and the Department of Chemistry shall be that seven years from entry into the graduate program (i.e., 14 semesters plus the intervening summers plus one additional summer to finish if necessary) be the maximum time allowed to complete the PhD in the College of Science. Students who exceed the maximum time limit may be dismissed from the program without a degree.

Approved by the Faculty of the College of Science, Feb. 22, 2000

[For the MS]

Students pursuing the Master's Degree at the West Lafayette campus must complete their degree program within six semesters from the date of entrance in the graduate program. Ph.D. student who change their objective to an M.S. Thesis must complete the degree within two semesters if they have been in the program for over six semesters. The student's major advisor may shorten this deadline at their sole discretion. In either case, students who exceed the maximum time limit may be dismissed from the program without their degree.

Approved by the Faculty, Feb 16, 1989, with amendments on Sept. 6, 2025

Students are reminded that funding time limits are distinct from graduation time limits. Departmental financial support is not guaranteed after the fifth year for PhD students or the third year for MS students.

Academic Notice and Program Dismissal

According to Purdue's *Policies and Procedures for Administering Graduate Programs*, each "student's progress should be reviewed each session by the student's department. The student's progress also may be reviewed by [OGSPS]. Should the student fail to perform in either coursework or research on a level acceptable to their advisory committee, the departmental graduate committee or the Vice Provost, he or she may be asked to discontinue graduate studies at Purdue." (VI. General Academic Requirements and Grade Appeals)

In the Department of Chemistry, all students are required to maintain satisfactory academic progress and meet all program requirements to remain in good academic standing in the Department. Students who fail to meet the program requirements, outlined below, may be placed on academic notice and dismissed from the program. Ph.D. students may, at the discretion of the student's advisor, examining committee, DGSM or head, be offered the option of transitioning to a master's thesis degree objective in lieu of dismissal when the student is unable to meet certain satisfactory academic progress and program requirements.

Good Academic Standing and Academic Progress Requirements

Grade Point Average Requirements

- All graduate students (Ph.D. and Master's) must achieve a cumulative 2.5 GPA at the end of the student's first two semesters in the program.
- Ph.D. students must achieve a cumulative 2.8 GPA for all courses on the student's plan of study. The plan of study GPA will be reviewed upon original submission of the plan of study and again prior to the preliminary examination.
- Master's students must achieve a cumulative 2.5 GPA for all courses on the student's plan of study by the semester in which the student plans to graduate.

Course Requirements

- Students entering the program after the Spring 2023 semester must successfully earn a grade of "B" or better in their research division's designated Foundational Course by the end of their second fall semester in the program.
- Students may not earn 2 or more unsatisfactory ("U") grades in CHM 69900 (Ph.D. Research) or CHM 69800 (M.S. Research) The U grades do not have to be received in consecutive semesters to warrant dismissal.

Plan of Study Requirements

- Students must submit their plan of study for approval by the end of their second semester in the program.
- Students must complete all coursework requirements for the plan of study by the end of their second spring semester in the program.

Preliminary and Final Examination Requirements

- Students must successfully complete their preliminary examination by their third year, prior to OGSPS's summer preliminary examination deadline.

- The examining committee has discretion to give the student the option to re-take the preliminary examination one time. Students may not retake the preliminary examination after two failed attempts.
- Students must pass their final examination within two attempts. Failure to do so will result in dismissal from the program.

Time Limits to Graduation

- Students must meet the time limits to graduation set by the College of Science and Department, as follows:
  - Ph.D. Students: Seven (7) years from entry into the graduate program (i.e., 14 semesters and corresponding summer terms, plus one additional summer to finish if necessary).
  - MS Students: Two (2) years from entry the graduate program (i.e., 6 semesters and corresponding summer terms. Applicable to military affiliated students granted direct MS admission under certain circumstances.
  - Ph.D. to M.S. Objective: Ph.D. students who change their objective to an M.S. must complete the degree within two semesters if they have been in the program for over 6 semesters. The student's major advisor may shorten this deadline at their sole discretion.

Regular Attendance and Communication

- Students are expected to maintain regular communication with their advisor and regularly attend lab and class. Students who discontinue communication with their advisor or do not attend lab for 10 or more weeks without an excused absence may be dismissed from the program.
  - Consideration will be given in instances where a medical condition makes notification difficult or impossible.

Faculty Advisor Requirements

- The Department offers the Advisor Selection Process to help first-year graduate students identify a suitable faculty advisor. The relationship between a student and faculty advisor is a mutual one, and students are ultimately responsible for securing a suitable advisor for the duration of the program. Failure to find a faculty advisor within the timelines outlined below will result in dismissal from the program.
  - First year students are expected to obtain a faculty advisor by the end of the student's second semester in the program.
  - Students who leave an advisor, either voluntarily or upon request of the advisor, are required to obtain a new advisor within 16 weeks.

The preceding is not an exhaustive list, and extraordinary circumstances may arise that warrant dismissal, including instances outside of the scope of academic standing. Students may also be disciplined or dismissed from the program for violations of the University's Code of Student Conduct, Academic Integrity Policy, Research Misconduct Policy, and any other applicable University policy. In such cases, the Graduate Studies Committee, Director of Graduate Studies and Mentoring (DGSM), the student's advisor, Department Head, or offices outside of the department, such as the Office for Graduate Students and Postdoctoral Scholars, Office of Students Rights and Responsibilities, Office

of Research Integrity, or Human Resources may be responsible for determining the course of action and consequences that may relate given the circumstances.

Academic Notice and Dismissal Procedures

Students are responsible for maintaining good academic standing. Ultimately, each student is responsible for understanding and monitoring their academic progress and standing to ensure that they remain in good standing within the program. The following procedures are designed to help students be aware of and address academic concerns that could threaten the student's ability to continue in the program.

Academic Performance Alert and Academic Notice

- The Academic Performance Alert memo, issued by the DGSM, is the first warning to a student regarding element(s) of their academic performance that, if not corrected, would impact the student's ability to be in good academic standing. For example, a student who does not earn a "B" in their first attempt at their division's Foundational Course might be warned that they need to earn a "B" or higher in that course by the fourth semester to maintain good academic standing. This memo is generally only issued in instances where the department has reason to believe a student may be in danger of failing to maintain good academic standing or satisfactory academic progress.
    - The memo will serve as a warning and is not tied to any immediate action by the department.
    - The memo will be provided to the student and their primary advisor in as timely a manner as possible. The DGSM and/or the primary advisor may also request a face-to-face meeting to further discuss the issue/s and develop plans to remedy the situation.

Departmental Academic Notice

- If a student fails to meet one or more of the requirements for maintaining good academic standing, they may be placed on academic notice.
- A Departmental Academic Notice Letter will be issued by the DGSM notifying the student that they are being placed on Academic Notice for failing to meet the standards of good academic standing.
    - The letter will identify the issue/s, the remedy for the issue/s, and the timeline by which the issue/s must be resolved.
    - The letter will state the consequence/s for failing to remedy the issue/s within the given timeframes.
    - The letter will be sent to both the student and their advisor.
- Academic Notice will not be noted on the student's transcript.
- If the cause of the Academic Notice is, in whole or in part, due to grades and/or GPA and the student has initiated a formal grade appeal, they should notify the DGSM as soon as possible after the Academic Notice Letter has been received.
- A notification of return to good standing will be made if the student successfully remedies the issue(s) by the deadlines listed in the Academic Notice Letter.

Program Dismissal

Dismissal Due to a Failure to Remedy Issues Related to Academic Notice

- If a student fails to remedy all issues outlined in the Academic Notice Letter by the deadlines set forth therein, the DGSM will issue a written "Recommendation for Dismissal" to the student and the major advisor. The "Recommendation for Dismissal" will restate the issues that needed to be resolved to return to good academic standing, what the student actually accomplished, and the DGSM's determination that dismissal is warranted.
    - If the student disagrees, the student may appeal the decision in writing by sending an appeal letter to the Graduate Studies Committee within 7 business days of the "Recommendation for Dismissal". The appeal letter should be emailed as an attachment to the Chemistry Main Office, chemoffice@purdue.edu.
    - The appeal letter must include the following:
        - Name, primary advisor (if applicable), Research Division/s and email address
        - A summary of why it was determined the student should be dismissed.
        - A statement outlining why the Graduate Studies Committee should consider an exception and allow the student to remain in the program
        - A description of any extenuating circumstances that may have affected the student's ability to successfully complete their probation.
        - The student's plan for ensuring that they will meet the requirements for good academic standing going forward if they are allowed to continue in the program.
- Within seven business days of receipt of the appeal, the Graduate Studies Committee will issue a written decision to the student.
    - If the appeal is granted, the student will continue on academic notice. The committee will provide new, final deadlines for completing any necessary requirements. If the student fails to successfully complete these requirements by the new deadlines, the student will be dismissed without further appeal.
    - If the appeal is not granted, the student will be dismissed from the program.
- If the student does not submit an appeal letter within seven business days of receipt of the Department's Recommendation for Dismissal letter, the student will be dismissed from the program.

Dismissal Without Academic Notice

- It is the Department's intention to provide students with Academic Notice whenever feasible. However, students may be dismissed for academic reasons without prior notice if there is a sudden change to a student's academic standing that was not anticipated by the advisor or DGSM and the Graduate Studies Committee. Examples might include an examining committee recommendation that a student withdraw from the program without a degree, or the Department not being made aware of a student's prolonged unexcused absence from their advisor's lab.

- In the event of a dismissal without Academic Notice, the DGSM will issue a letter to the student and advisor, outlining the issue(s) that led to the dismissal. The student may appeal this decision by following the process outlined above for appealing a dismissal decision following Academic Notice.
    - The process for reviewing the student's academic issue/s and determining the course of disciplinary action will be handled by another Purdue office or department, such as Office of Student Rights and Responsibilities or the Office of Research Integrity.
        - In such cases, notifications about dismissal or separation from the University and any appeal processes that may be available will be communicated in part or whole by the office or department reviewing the issue unless the investigating office gives the Chemistry Department a full or partial in resolving the matter.

Normal checkout procedures will apply to dismissed students, including the required cleanup and verification with the departmental safety officer and return of keys and lab coat. All research materials, including lab notebooks and electronic data, are the property of Purdue University and must remain with the primary advisor.

Academic termination may be handled separately from the student's teaching or research assistantship employment termination. Standard HR processes will be followed for the termination of employment. Additional information can be found in the "Support and Appointments" section of this handbook and in the Graduate Staff Handbook.

Students who have been dismissed from the Department of Chemistry's graduate studies program may have options to transfer to another graduate program. Students should contact the Office of Graduate Students and Postdoctoral Scholars for guidance on options for remaining enrolled at Purdue. Student who re-apply to the Chemistry graduate program are not guaranteed admission or, if offered admission, a position in their former advisor's lab. Please review OGSPS's Policies and Procedures section on General Academic Requirements for additional information.

Reports and Evaluation

Academic | Annual Report and Individual Development Plan

Academic success in graduate school requires regular feedback and evaluation, and the Department is committed to providing feedback and assisting students in their scholarly and professional development. This feedback provides the student an opportunity to assess his or her performance against the expectations of the Major Advisor and the Advisory Committee.

In addition to the semesterly evaluations students receive through their CHM 69900 or CHM 69800 grades, all graduate students will receive an annual evaluation on their progress based on the documents submitted as part of the student's Annual Report. These documents should be created in consultation with the major advisor, to ensure that everyone agrees about plans, goals, and progress.

Annual Report: Deadlines and Content

Annual Reports and Individual Development Plans (IDPs) should be submitted by the student and evaluated by any required advisory committee members by the final day of the summer semester. The steps of the process are outlined below.

Creating the documents for the report and having them evaluated might take significant time, so students are encouraged to work on their reports throughout the summer. Because the 2nd Year Annual Report includes extra components to assist students in preparing early for their preliminary exams and requires that all members of the advisory committee complete evaluation forms, students completing this type of annual report are advised to start working on their reports at the end of the Spring semester.

As part of their annual report, all students will create the following documents every year:

- CV (to be updated each year)
- An Individual Development Plan (appropriate to the student's year in the program): Templates for Individual Development Plans (IDPs) are available on the College of Science website at **www.science.purdue.edu/graduate/idp.html**. Students should read through the information and instructions provided on the main page and then click on "Chemistry" in the left-hand column. There are three different forms: one for first-year, one for second year, and one for third year and beyond.

In addition, 1st and 2nd Year Annual Reports must include a Research Report. The research report is optional after the 2nd year report. Students submitting 3rd+ year reports should ask their advisor if they would still like them to include a research report. Research report guidelines for all years are listed below:

- All research reports should summarize research questions and accomplishments and should set goals for research in the following year. Year-specific requirements include:
    - **REQUIRED: First year:** Two pages maximum
    - **REQUIRED: Second year:** The 2nd year report should be modeled on the format of a JACS Communication with the appropriate listing of citations

using ACS style. The report should be a minimum of 3 pages and should conclude with a brief section of future research plans. The 2nd Year research plan provides the foundation for the Dissertation Research Summary component of the student's Preliminary Examination.

- OPTIONAL: Third year: Five pages maximum
- OPTIONAL: Fourth year and beyond: Five pages maximum. The report should include a timeline for completion of the degree, and an outline of the planned dissertation.

Finally, all students expecting to take their preliminary exams in the fall or spring immediately after the submission of that year's annual report will complete a 2nd Year Report (regardless of their year in the program). As part of the **2nd Year Annual Report**, students should also compose the following document:

- "One Page"/Specific Aims document: A one-page document which provides a broad outline of an Original Proposal idea. The purpose of this document is to help students work towards preparing their original proposal idea early, and to get committee feedback before the formal proposal is written as part of the preliminary exam. This document will also serve as a model/tool for introducing students to the level of academic writing and ideas that the faculty will expect to see in their original proposals.

  As with the Original Proposal, student should write on a topic that 1) has not been previously investigated, 2) does not **directly** relate to their current research, and 3) does not rely solely on techniques they are currently learning/implementing. The idea must originate from the student, rather than the student's advisor or a member of their committee. The student should ask their advisor how unrelated the topic should be from their research, as divisions might have different expectations on that point.

  Unlike the Original Proposal, the student's idea for the Specific Aims document does not need to be completely thought out, a full program does not need to be outlined and the student does not need to have answers to all of the questions related to their topic.

Every year, students will receive feedback from their primary advisor via the Primary Advisor Evaluation Form, a copy of which will be provided to the Primary Advisor by the student.

In addition, students completing a 2nd Year Annual Report in preparation for taking their Preliminary Exams in the following fall, spring or summer will provide their Annual Reports to both of their advisory committee members along with a Committee Member Evaluation Form. Both of the student's committee members should complete a Committee Member Evaluation form.

Annual Report Submission and Evaluation Process

1. Students should discuss a review deadline with their advisor at the beginning of the summer, well before submitting their annual report documents. This deadline

may be several weeks before the final departmental deadline, to allow time for review and discussion.

2. Once the student has completed their annual report documents, they should be saved as PDFs. PDFs larger than 800kb should be reduced in size if possible.
3. To submit the documents, the student will login to the Department's Annual Reportal system, https://apps01.science.purdue.edu/chemistry/grad_program, and select "Submit Annual Report".
4. The student will complete the annual report submission form and upload their report documents.
    a. To ensure that the report is correctly routed for evaluation, students must enter their advisor and committee member (for 2nd year reports) email addresses according to the faculty member's Purdue alias, which may be different than the email address they commonly use. Purdue aliases can be found by going to the Purdue directory and looking up the individual.
    b. After completing all form fields and uploading the report documents, students select "Submit" to complete form submission.
5. Submitted forms will automatically route to the faculty members listed on the student's submission form. The student's advisor and/or committee members will be able to download all copies of the documents that have been uploaded.
6. The student's advisor and/or committee members will complete their evaluation forms through the Reportal. Students can view any completed evaluation by logging back into the Reportal and clicking "View Evaluation Data."

Employment | Teaching Performance and Progress Evaluations

Your teaching performance will be evaluated in two ways, through student evaluation and through evaluation from the instructor of the course.

Student evaluation: Student evaluations happen through the Purdue Course Evaluation and Survey (CES) system, which is administered by the Center for Instructional Excellence (CIE). Students will receive an automated email directly from CIE asking them to complete the evaluation. The exact questions asked may vary depending on the teaching assignment, and some TAs may not receive a student evaluation if their assignment includes limited direct contact with students.

Following the semester and the posting of final grades, TAs will receive an automated email with a link to the evaluation site. The Director of Undergraduate Studies and Teaching (Director of UST) and other teaching faculty and staff will also review these evaluations. Low evaluations may lead to a conversation between the Director of UST and the TA; the goal of the conversation will be to create a plan for improved performance in the future.

It is highly recommended that you download the evaluations from the CES site and archive them for your career portfolio. Historical evaluation data from the previous CourseEval system, 2008 to 2020, is available through Instructional Data Processing. Instructors and TAs may request evaluation data by emailing idp@purdue.edu.

Evidence of excellence in teaching may be very helpful for your job search and for applications for fellowship support.

Instructor evaluation: Your teaching supervisors (including one or more of the course professors, the course coordinator(s), and the TA Supervisors) will also provide written feedback and evaluation at the end of the semester. They will have an opportunity to document either exceptional or unsatisfactory work. The Department will follow up on any reports of unsatisfactory work with a goal of helping you become a better teacher.

As needed during the course of the semester, the course instructor and/or Director of UST may meet with or send written evaluation feedback to TAs. This will happen when there is a need to correct unsatisfactory performance while the semester is still in session. The department will use an approach of professional development, trying to help the TA become a better teacher.

Continued financial support as a teaching assistant requires satisfactory or better performance. Students who receive a rating of less than satisfactory (S-) will be expected to meet with the Director of UST and improve to satisfactory performance in future TA assignments. The goal of these meetings is to clarify expectations and create a plan for improved performance in the future. A second rating of S- indicates a consistent failure to meet expectations and will be counted as a rating of Unsatisfactory**.** A second U will make a graduate student ineligible for TA support; they must either secure RA support or bear the full cost of tuition and fees.

Students may view their evaluations by request; email chemoffice@purdue.edu for additional information about viewing evaluations.

Graduate Staff | Support and Appointments

The majority of graduate students in the Department of Chemistry have two primary roles within the graduate program: as a graduate student completing academic requirements to make consistent progress toward their degree and as a graduate staff member satisfactorily performing their employment duties as a teaching or research assistant.

At Purdue, Graduate Assistantships are a formal category of employee, with well-defined expectations, benefits, and policies. In their staff role Graduate Assistants perform a valuable service to the Department and the University through teaching, research, and service activities.

Graduate Assistants typically receive both a tuition remission and a stipend. Graduate Assistants are responsible for paying certain fees and maintaining their health insurance. Financial details of assistantships may differ from student to student and are explained in formal offer letters.

The "Graduate Staff Employment Manual," published by the OGSPS, is the definitive source of policies governing the employment of graduate students. The manual includes tuition remission, vacation policies, parental leave, spousal benefits, leaves of absence, parking, taxes and I-9 visa requirements, among other topics.

https://www.purdue.edu/academics/ogsps/documents/gpo/graduate-student-employment-manual.pdf

The Chemistry department guarantees five calendar years of graduate support, from the date of entry, for PhD students who maintain satisfactory performance as a graduate staff member and progress as a student toward the degree (see the section of this handbook on "Reports and Evaluation" for the mechanisms by which satisfactory progress and performance are assessed). Students who convert to a MS program will have guaranteed support for three calendar years from the initial date of entry into the program. In the final semester, degree-only students with assistantships will have their employment terminated after depositing their thesis. Regular candidates may be allowed to continue their employment until the final day of courses during their graduation semester.

This support typically comes in one of three forms: a teaching assistantship (TA), research assistantship (RA) or fellowship. Appointments that include more than one form of support may be allowed. The appointment and the amount of the stipend may change every semester as outlined in the following sections.

Continuation of support beyond the five-year graduation deadline (or three-year deadline for MS students) is not guaranteed. Late career students beyond the deadline may find support as an RA at the discretion of their major advisor.

Types of support

- **Teaching Assistantships** are the most common type of support for early-career students. TA roles vary by assigned course: some are laboratory only, some include recitation and help sessions, some are primarily grading support, and some are senior supervisory positions over other TAs. In addition, there are a

small number of "TA" assignments that assist the department with various initiatives and facilities (e.g., safety, NMR, X-ray). The Director of UST makes the exact assignment, in consultation with appropriate faculty and staff, typically in the week before the semester starts. All TA positions carry an expectation of up to 20 hours of work per week for a standard 2Q appointment. The TA appointment may, on occasion, require evening or weekend work, but department policy states that there will be no required TA activities outside of the hours of 6am to 10pm.

  - Note for International Students: International students are required to demonstrate proficiency in English before they are permitted to be the primary instructor of a section. International students (except those designated as English-speaking by the Oral English Proficiency Program (OEPP)) must qualify through the OEPP by one of four methods: (1) TOEFL speaking score of at least 28, (2) IELTS speaking score of at least 8, (3) Purdue Oral English Proficiency Test (OEPT) score of at least 50, or (4) successful completion of ENGL 62000. More information on this requirement is here: http://www.purdue.edu/oepp/about/policy.html. International students should consult with the Graduate Program Administrator with questions about the OEPT requirement. The Senior Graduate Program Administrator is the Department's liaison with OEPP, and he/she will work with the student to schedule the OEPT exam. Students who have not yet passed this requirement are allowed to hold TA appointments, but their assignment may involve alternative lab or classroom support, such as grading, facilitating office hours, course development, or administrative support.

- **Research Assistantships** allow students to work on funded research projects at the discretion of their Major Advisor. Within the departmental guidelines, the stipend rate for an RA is determined by the Major Advisor and is typically the same amount as the departmental stipend for a TA position.
- **Fellowships** provide funding that is not tied directly to research or teaching work. Fellowships come from several sources, both internal (departmental, college, OGSPS, Purdue Research Foundation, etc.) and external (federal agencies and major foundations). Most internal fellowships are administered by the business office as assistantships; this maintains the tuition waiver and provides students with the benefits tied to a graduate staff appointment (including graduate staff insurance eligibility). External fellowships are administered as an assistantship or as a true fellowship, based on the rules of the funding agency or organization. The department will ensure that total funding reaches at least the standard TA stipend for all internal fellowship holders, though it may require a partial TA or RA appointment to go along with the fellowship.

Other information about support

- **Fiscal Year Appointments:** Almost all Graduate Staff Appointments for Chemistry graduate students are Fiscal Year (or "FY") appointments, rather than Academic Year ("AY") appointments. This provides a continuity of employment throughout the calendar year, which leads to consistent year-round pay and eligibility for benefits that require a particular length of continuous employment (for example, paid parental leave).
- **Appointment periods:** The exact appointment may change every semester (for example, from TA to RA). Tentative appointment periods for the next two years are listed below. For new incoming students, the appointment will begin on the Monday preceding the first day of classes of the fall semester.

Appointment Period	Tentative Dates
Fall 2025	8/18/2025– 12/31/25
Spring 2026	1/1/26 – 5/08/26
Summer 2026	5/18/26 -8/07/26

- **TA vs RA appointment:** Unless a student holds a fellowship, the major professor and/or Assistant Head will determine whether a student will be offered a TA appointment or an RA appointment (or one that is split between the two). This decision is typically made about a month before the start of an appointment period, but it may change based on funding or assignment needs. For TA appointments, the Director of UST will make assignments into specific courses and roles. These assignments are typically made a few weeks prior to a semester but may change to meet course needs or to address scheduling conflicts.
- **Pay dates:** Graduate appointments are paid bi-weekly on alternating Wednesdays. The gross salary in each pay period is the annual rate divided by 26.
- **Allowable appointment level:** The standard appointment in Chemistry is 50% time (also called 2Q, for "two quarters"); some students may have other percent appointments. A 2Q appointment corresponds to 20 hours per week of *employment-related* work – students may spend further time working in the research lab for CHM 69900 course-related work. Graduate students may hold a total appointment greater than 2Q, though most international students are typically restricted 20 hours per week (2Q) total appointment (including Purdue and *all other employers*). See the Graduate Staff Employment Manual for details.
- **Pay rate:** The standard department stipend for a 50% (2Q) Graduate Assistantship (TA or RA) for 2025-26 is $31,518 (annual). The Department intends (when financially possible) to raise the standard stipend annually.

- **Health Insurance:** There are two primary options offered by Purdue. Graduate staff employed 2Q or more, and students on fellowships that are being administered as an assistantship, may enroll in the **Graduate Staff Health Plan** (see https://www.purdue.edu/hr/Benefits/gradstaff/). All students may enroll in the **Student Health Plan**, administered by PUSH, https://purdueship.myahpcare.com. Benefits are similar for the two plans, but costs may be different. Which plan is most cost-effective for students may depend on whether a partner and/or dependents are included in the plan. Additionally, premiums for the Graduate Staff Health Plan are payroll are auto-deducted monthly from a linked bank account or credit card, allowing students to pay the premium through the year, while premiums for the Student Health Plan are typically due in a single payment at the start of the academic year.

Conflicts of Interest and Conflicts of Commitment:

Graduate appointees may not engage in outside employment or other outside activities that would present a conflict of interest or conflict of commitment with their paid duties (TA or RA).

- A **Conflict of Interest** is any work, advice or service for an entity other than Purdue University that may potentially result in a Conflict of Commitment. This includes, but is not limited to,: outside employment or service where compensation is received; volunteer work that involves a time commitment that interferes with an employee's ability to fulfill their responsibilities to the University; and service or activities involving compensation from a foreign country or an agent of a foreign country from entities or persons based in, funded by, or affiliated with a foreign country.

- A **Conflict of Commitment** is a situation in which an employee's Reportable Outside Activities would likely interfere with the employee's ability to fulfill their commitment to the University, or if such employee's responsibilities, financial interest or opportunity for personal benefit in connection with such Reportable Outside Activity would likely interfere with the employee's professional judgment in exercising any University duty or responsibility.
    - Participation in activities or affiliation with any non-U.S. entity/entities that pose, or appear to pose, a risk to the detriment of the University and/or to the integrity and security of related research constitutes a Conflict of Commitment. Participation in activities or affiliation with Foreign Talent Recruitment Programs that pose, or appear to pose, a risk to the integrity and security of related research constitutes a Conflict of Commitment. Risks to the detriment of the University include, but are not limited to, activities prohibited by law, regulation, or other governmental orders.
    - In determining whether a Reportable Outside Activity constitutes a Conflict of Commitment due to the time devoted or proposed to be devoted to the activity, the University will consider whether such activity is to take place during the normal weekday business and/or instructional

hours of the University or when an employee is in paid or unpaid leave status.

Each year, graduate appointees must update their Conflict of Interest/Commitment Disclosure Profile in the Purdue Excellence in Research Administration's (PERA) system. In addition, graduate appointees must submit a Pre-Approval Request in PERA's system and obtain any required approvals before engaging in any Reportable Outside Activities.

For complete details of Purdue University's Conflicts of Commitment and Reportable Outside Activities (III.B.1) policy, see: https://www.purdue.edu/policies/ethics/iiic1.html

Absences, Leaves, and Vacation

The University and the Department recognize that there are often needs for students and employees (including graduate assistants) to be absent from campus and temporarily excused from their work responsibilities. Sufficient leaves and breaks are critical for long-term physical and mental health. This includes vacation time, sick leave, bereavement leave, and other miscellaneous leaves.

For absences, vacations, and leaves, it is important to remember that graduate students typically have two distinct relationships with the University: one as a student, and one as a Graduate Staff Employee. Procedures and rules for leaves are different between those two roles. Students needing to request the various types of leaves must complete the request process required of them in both their student and staff member roles

Absence policies, in the context of the student role

The Office of the Dean of Students manages processes for student absence related to coursework (see https://www.purdue.edu/advocacy/students/absences.html). For ODOS-managed absences, the student should contact the office directly. Documentation may be required. If approved, ODOS will notify instructors (including research advisors) of the type and duration of approved leave.

Leave policies include:

- the Grief Absence Policy for Students (GAPS), which excuses students from course attendance for up to 5 days for bereavement due to the death of a family member
- the Medical Excused Absence Policy for Students (MEAPS), which covers students with extended or emergency medical reasons for an absence (this is typically used for hospitalization or other in-patient care).
- the Military Absence Policy for Students (MAPS), excusing absence for mandatory military training (active duty or National Guard)
- the Jury Duty Absence Policy, covering up to 10 days of jury duty or court-compelled witness testimony per semester
- Students who are pregnant, have recently given birth, or need a leave of absence to care for a newborn, adopted, legal guardian, or foster care, may petition for a leave of absence through the Purdue University Office for Civil

Rights' (OCR) Title IX Coordinator, https://www.purdue.edu/vpec/ocr/title-ix/title-ix-pregnancy-parenting-guidance/

Individual faculty may set up absence rules or guidelines within the research group (this is especially important in areas of research where daily laboratory tasks are required 365 days a year, to ensure safety or continuity of biological samples). Advisors and students are strongly encouraged to set up clear expectations in advance for all absences. Because CHM 69800 and CHM 69900 are graded courses, a grade of "U" may be appropriate in cases where the student does not follow established absence procedures for the group.

Vacation policies within a research group (and within the context of CHM 69800 or CHM 69900) should be clearly stated by the advisor to group members.

Academic absence policies and procedures apply to all graduate students, including those receiving funding/fellowships from external agencies.

Absence policies, in the context of the Graduate Staff Assistantship

Graduate Staff Assistantships are considered employment; the Graduate Staff Employment Manual provides full information on the amount of various types of leave available. Note that most Grad Staff appointments in Chemistry are "FY" (Fiscal year) appointments.

Briefly, potential paid leaves include:

- **Sick leave:** 10 working days within a 12-month period
- **Family illness:** 3 working days per fiscal year
- **Bereavement:** 1-5 working days, depending on relationship to the deceased person
- **Jury/witness:** paid leave for summoned jury or witness duty (voluntary expert witness service is not included)
- **Military and workers' compensation:** as outlined in the leave policy for all University employees
- **Paid parental leave:** six weeks of paid leave for childbirth or adoption, provided at least one year of continuous employment prior to the leave. This applies to both parents and may be taken continuously or intermittently over the course of a year from birth/adoption date. Human Resources can assist with leaves of absence including Family Medical Leave Act (FMLA) and maternity. For more information on FMLA and Paid Parental Leave (PPL), visit https://www.purdue.edu/hr/paytimepractices/timeoff/fmla.php.

All of these leaves must be claimed in SuccessFactors, and will be routed to the student's employment supervisor for approval. For RAs, the employment supervisor is typically the major professor. For TAs, the employment supervisor is typically the Director of UST. Purdue HR (hr@purdue.edu) or the Assistant Head (srh@purdue.edu) can help with the logistics of requesting a leave.

- **Vacation:** FY appointments are not tied to the academic calendar, or to the dates when classes are in session. Students on FY appointments are expected to report for work on all weekdays except University Holidays and must formally

request vacation time and sick leave. Students are eligible for 22 days of vacation per year (see the Graduate Staff Employment Manual for details on how vacation days are accrued).

The employment supervisor must approve requested dates of vacation in SuccessFactors. For TAs, it is generally discouraged to take vacation on days when the TA is scheduled to be teaching. TAs should also seek approval from the instructor and/or leadership team of the course. SuccessFactors does not formally route vacation requests to the course instructor, but the Director of UST may consult with the instructor prior to approving.

Academic breaks (e.g., Fall Break, Spring Break, time between semesters) are not automatic vacation periods; these should be requested as part of the 22 days per year. Graduate Staff may not carry over more than 22 days of vacation and will not receive a pay-out for unused vacation days at the end of the appointment.

Please remember that the formal requesting of vacation time through SuccessFactors pertains to the Graduate Staff appointment (TA or RA).

In all SuccessFactors requests, leave allocations are made proportional to the percent appointment. Most Graduate Staff are 50%, so a "day" of leave is four hours, not eight. This is an issue most often for vacation time, which is tracked in units of hours. The 22-day maximum for most Graduate Staff therefore is recorded in SuccessFactors as 88 hours. Even though this may appear to be 11 days of vacation, it is actually 22, because only four hours need to be claimed for each day away.

Finally, students may request longer, unpaid, leaves for long-term needs, and may be eligible for FMLA protections. Students should consult with the Assistant Head and College of Science HR if a leave of longer than 22 workdays is needed.

Human Resources Business Partners: The goal of Purdue's HR Business Partners' is to build strong partnerships with employees and leadership to address people relations as a way of ensuring a balance of interests while providing guidance on a wide variety of HR related issues, such as benefits, leaves, compensation, and workplace conflict resolution. The HR Business Partner for the College of Science is Justine Sailors. Justine is available for consultation on any matter related to your graduate student employment. To contact Justine, email justine@purdue.edu or call (765) 494-0113.

Semesters off-campus

In addition to the shorter term leave or vacation options described in the previous section, there are several reasons why a student might be off-campus for one or more semesters, while still pursuing a degree. Each of the situation described below require students to follow different processes which may impact funding, benefits, and registration in various ways:

Internships

Students who plan an industry internship during their PhD program should consult with the Main Office for advice about all aspects of internships:

- All students taking part in an internship that will last for a semester should register for CHM 69699 (Chemistry Graduate Internship) for each term that they are away. This will maintain full-time student status, which may be important for insurance purposes and visa requirements (for international students). This will also maintain other services and benefits afforded to Purdue students, such as library access, email accounts, ITaP support, CAPS support, etc. CHM 69699 is a 0-credit registration that does not carry a tuition charge.
- Students who have not been registered for at least one semester or have been registered for CHM 69699 who intend to graduate during the semester they return must register for at least one credit of CHM 69900 (and potentially pay tuition, if an assistantship is not available). Degree-only registration is not available in a term immediately following a semester in which the student was unregistered or registered for CHM 69699.
- Students are not allowed to hold a Graduate Staff Assistantship, in paid status, during a period where they hold a full-time paid internship. Students should notify the Assistant Head, srh@purdue.edu, and the Business Office, chembus@groups.purdue.edu, in advance of their internship to let them know they will not be on assistantship for the semester in which they are interning.
- Students who intend to hold an internship should notify their advisor and the Main Office well in advance of the internship start date. The Main Office will request that the student complete an "Internship and CO-OP Information Form."
- If possible, students are strongly encouraged to line up the timing of paid internships with the semester schedule. Internships that start or end in the middle of a semester can make registration, tuition, and assistantships tricky, especially for international students.
- International students with an F-1 student visa may be able to hold a full-time paid internship using the Curricular Practical Training (CPT) program. Students should consult ISS for details and advice.

Research in Absentia

The "research in absentia" (RIA) status may be appropriate for students late in their PhD program who are completing the writing of their dissertation and may have employment elsewhere.

- RIA status is available only for students with PhD candidacy (they have passed the preliminary exam and all coursework).
- Students considering RIA status should notify the Assistant Head, srh@purdue.edu, and the Business Office, chembus@groups.purdue.edu, far in advance of the intended start of their absence.
- RIA students should register for 3 credits of CHM 69900; they will pay the RIA fee (currently $966) instead of regular tuition. Students are not allowed to hold Graduate Staff Appointments while in RIA status but are allowed to have external employment (subject to work authorization regulations for international students).
- Students may request RIA status with a OGSPS Form 12, which should be completed at least a month before the start of the first RIA semester. Contact the Main Office for details.

- Students in RIA status are eligible to schedule and take a final exam (dissertation defense), and to graduate while maintaining RIA.

Change of Duty Station

Change of Duty Station (CoDS) status is appropriate for students who are working off-campus (for example, at a National Lab, field research site, or partner university) for at least 22 days while retaining normal student status and a Graduate Staff Assistantship (usually an RA).

- Students with CoDS status maintain their Grad Staff appointment: they are employed and paid from Purdue accounts, register for normal CHM 69800 or CHM 69900 credit, and maintain eligibility for tuition remission.
- CoDS status is not appropriate if the student is employed or paid by another source, including the host institution. With external employment, students should see internship registration (see above).
- International students seeking CoDS status should consult ISS for advice about further rules and restrictions.
- Students should notify the Assistant Head, srh@purdue.edu, and the Business Office, chembus@groups.purdue.edu, far in advance of the intended start of their change of duty station absence.

Long-term Unpaid Leave

Students in good standing may take up to two consecutive semesters (summer term is included as one of the two semesters) away from the program for personal or professional reasons.

- This leave is unpaid, and students might not maintain full-time student status or student privileges while away. Because students with an unpaid leave typically do not register, no tuition is charged.
- Re-entry to the program is automatic (for up to two semesters), but membership in a particular research group is not guaranteed upon re-entry.
- Leaves of more than two semesters will require a new admissions application, and consideration for re-admission by the Graduate Admissions committee. Re-admission is not guaranteed in this case.
- International students should consult ISS prior to taking semester(s) away from the program.
- Students who have not been registered for at least one semester who intend to graduate during the semester they return must register for at least one credit of CHM 69900 (and potentially pay tuition, if an assistantship is not available). Degree-only registration is not available in a term immediately following an un-registered term.

Facilities

Conference Rooms in WTHR and BRWN

Students may reserve conference room space through the main office in BRWN 2100. The following conference rooms are available for student exams and activities such as grading, group meetings, etc. Those reserving a space are required to leave it clean and functional. Keys are checked out on paddles, available either from the Main Office (BRWN 2100) or the Chem Shop (WTHR 141). Keys should be returned in a timely manner.

Available conference rooms include:

Room	Seats	Comments
BRWN B106	12-15	projector, pull down screen, chalkboards
BRWN 1152	16	large screen TV, whiteboard
BRWN 2106	20	Projector, but no computer
BRWN 3106	19	No projector, chalkboard
BRWN 4102	60	Largest room, can be split in two with sliding partition. Seminars, faculty meetings, large-scale departmental events have priority. Projector, flat-screen display, computer, whiteboards, phone, kitchenette with refrigerator
BRWN 4106	10	No projector, chalkboard
BRWN 5130B	10	Available only during business hours, projector, no computer, noise must be kept at normal conversational level
WTHR 277	16	H.C. Brown Archives, primarily for faculty use, but may be available for student exams, no food allowed, computer and flat-screen display, camera, phone

Graduate Staff Lounge

The Graduate Staff Lounge is located in WTHR 216. The room includes a kitchen for graduate student use, tables for working or socializing, and lockers for first year students without advisor assignments. Locker keys must be returned to the Chem Shop as soon as a student's advisor has been assigned. This room is reserved for use by Chemistry graduate students: undergraduate students, non-Chemistry students, and non-Purdue affiliated individuals should not be allowed entry to the lounge. Chemistry graduate students can access the lounge by using their building keys.

Chemistry Shop: Building Deputy and Keys

The Chem Shop is located in WTHR 141. The Chem Shop is led by the Building Deputy, Ned Gangwer, who can assist with any questions or issues related to the physical building. Room and building keys are issued by the shop, and it is the primary location for Lost and Found. The Chem Shop is open daily 7:00 am-4:00 pm.

Chemistry Copy Center

The Copy Center is located in BRWN 2105. Printing services, including large format printing and printing of handouts for labs and recitations is available in the copy center. Contact Rob Reason (rareason@purdue.edu), Copy Center manager, with any questions. Please allow sufficient time for printing, especially large format. The Copy Center also has a scanner/fax.

Jonathan Amy Facility for Chemical Instrumentation (JAFCI)

JAFCI is responsible for multiple services and shops located within BRWN and WTHR, as well as satellite operations in the basement of DRUG. These include:

- Scientific Glass Shop (WTHR 427)
- Machine Shop (WTHR basement: WTHR 081)
- Mass Spectrometry Labs (WTHR 144-145-151-157 and DRUG B059)
- NMR Labs (WTHR 365-369 and BRWN B124)
- Shared Research Instrumentation Center (BRWN 3154)
- X-Ray Crystallography Lab (WTHR 101)
- Cell Culture – Flow Cytometry Lab (BRWN 3125)

Please visit these locations to learn more about these facilities or go to the JAFCI main office in BRWN 4151, or the website shown below. Request forms are available online to describe the nature of your project. JAFCI holds an open house each year to introduce these services to new graduate students.
https://www.chem.purdue.edu/jafci/

Library

The Department of Chemistry has access to a librarian specializing in chemical literature. Dr. David Zwicky is located in the Wilmeth Active Learning Center **WALC 3053N** and can be contacted at dzwicky@purdue.edu or phone 496-7279. Each spring, Prof. Zwicky teaches a comprehensive, graduate-level course in chemical literature (CHM 51300, 1 credit) which provides a significant boost to graduate students as they seek information for their preliminary exam, publications and final dissertation.

Mail

Each graduate student is provided with a postal mailbox address and a combination to a lockbox on the 1st floor of BRWN, adjacent to the General Chemistry office. If you lose

your combination, check with the main office in BRWN 2100. Postal mail, departmental letters and other correspondence (e.g. notification of awards, fellowships) are deposited in your mailbox throughout the year. The outgoing MAIL slots on the walls of the 1st to 4th floors of BRWN are active. Stamped mail dropped in these slots will be retrieved by the Copy Center staff and will be delivered to the post office.

People:

Department Heads and Directors

Department Head	Jianguo Mei	BRWN 2100	jgmei@purdue.edu
Director, Graduate Studies & Mentoring	Suzanne Bart	BRWN 4170D	sbart@purdue.edu
Director, Undergraduate Studies and Teaching	Paul Wenthold	BRWN B171B	pgw@purdue.edu
Assistant Head	Stephen Hoffmann	BRWN 2100C	srh@purdue.edu

Divisional Chairs, Committee Chairs, & Unit Directors

Analytical Chair	Julia Laskin	BRWN 4171C	jlaskin@purdue.edu
Biochemistry Chair	Chitta Das	BRWN 3131C	cdas@purdue.edu
Inorganic Chair	Jon Wilker	BRWN 4131C	wilker@purdue.edu
Materials Chair	Shelley Claridge	BRWN 4150C	sclaridg@purdue.edu
Organic Chair	Chris Uyeda	BRWN 4103B	cuyeda@purdue.edu
Physical Chair	Lyudmila Slipchenko	WTHR 265H	lslipchenko@purdue.edu
Graduate Studies Committee	Suzanne Bart	BRWN 4170D	sbart@purdue.edu
Mental Health Committee	Betsy Parkinson	BRWN 4103E	eparkins@purdue.edu

Graduate Fellowships Committee	Jeffrey Dick	WTHR 230B	jdick@purdue.edu
Graduate Recruiting Committee	Chris Uyeda	BRWN 4103B	cuyeda@purdue.edu
Safety Committee	Alex Wei	BRWN 4103D	alexwei@purdue.edu
Copy Center	Rob Reason	BRWN 2105	rareason@purdue.edu
Demonstration Lab	Paul Smith	WTHR 121	psmith4@purdue.edu
General Chemistry Office	Marybeth Miller	BRWN 1144D	mille201@purdue.edu
JAFCI	Mike Everly	BRWN 4151B	meverly@purdue.edu
Cell Culture Lab	Michael Alley	BRWN 3125	galley@purdue.edu
NMR Facility	John Harwood	WTHR 365B	jharwood@purdue.edu
Research Instrumentation Center	Ryan Hilger	BRWN 3154	rhilger1@purdue.edu
Prep Lab	Jeanne Meyer	CHAS B041B	jameyer@purdue.edu
X-ray Facility	Matthias Zeller	WTHR 101B	zeller4@purdue.edu

Opportunities and Awards

The following is an incomplete list of awards and opportunities available to Chemistry graduate students. See the section on Funding and Support for descriptions of fellowships.

Research Awards

The **Alice Watson Kramer Research Scholar Award in Chemical Biology** is presented annually to a worthy graduate student who is close to completing his/her studies at Purdue in chemical biology or a related line of research. Awardees are nominated by their major advisor and selected by the department's Graduate Fellowship Committee.

The **Bisland Dissertation Fellowship** is given annually and supported by the Purdue Office of Graduate Students and Postdoctoral Scholars and intended to support PhD students in their final semester before graduation. Awardees are nominated by their major advisor and selected by the department's Graduate Fellowship Committee.

The **W. Brooks Fortune Analytical Chemistry Fellowship** is given annually and recognizes outstanding 2nd Year analytical chemistry graduate students. Continuing graduate students are nominated by their primary advisor and selected by the Graduate Fellowships Committee. The typical award includes one semester of stipend support.

The H. C. Brown Organic Graduate Research Award is given annually recognizing excellence in research as evidenced by research productivity, quality of publications and the quality of the research presentation. Award winners give a 15-minute presentation as part of the H.C. Brown Symposium. The recipient is chosen by the faculty of Organic Chemistry.

The **Hass Memorial Fellowship** is given annually and recognizes excellence in research with a connection between academic and industrial chemistry. Continuing graduate students are nominated by the major advisor and selected by the Graduate Fellowships Committee. The typical award includes one semester of stipend support.

The **Thomas W. Keough Graduate Scholarship** annually honors an outstanding student pursuing graduate studies in the field of mass spectrometry. The recipient is chosen by the faculty of Analytical Chemistry.

The **Ian P. Rothwell Excellence in Inorganic Chemistry Award** is given annually and recognizes top PhD students in Inorganic Chemistry. Students are nominated by the primary advisor and selection is made by the faculty of Inorganic Chemistry.

The **Robert R. Squires Scholarship** recognizes outstanding scholarship in basic research by a graduate student in the Chemistry Department. The scholarship will provide a cash award to a graduate student who has demonstrated excellence in basic research in mechanistic, physical organic, physical inorganic, or physical chemistry. Nominees will be selected by their examining committee based on their research accomplishments at the time of the oral preliminary examination. Before

graduation, the award recipient is expected to give the Robert R. Squires Scholarship Seminar on his/her research achievements.

The **William L. Robinson Memorial Award in Organic Chemistry** is awarded annually to an outstanding upper-level graduate student in organic chemistry. The Organic Chemistry faculty choose the recipient.

The **Charles H. Viol Memorial Fellowship** is given annually and recognizes an outstanding 3rd Year chemistry graduate student. Students are nominated by the primary advisor and selected by the Graduate Fellowships Committee. The typical award includes one semester of stipend support.

Travel Grants

The **Purdue Graduate Student Government** (PGSG) offers grants for travel to present at a national conference: https://purduegradstudents.com/travel-grants.

The **Women in Science Program** offers travel grants for travel reimbursement up to $500. See https://www.science.purdue.edu/wisp/graduate/travel-grants.html). WISP Travel awards are typically made twice per year (in fall and spring semesters). Applications are solicited early in each semester.

Seminar Awards

The **Guy Mellon Award in Analytical Chemistry** is awarded annually. Nominations are solicited in the spring, and the selection is made by the faculty of Analytical Chemistry.

The **Ian P. Rothwell Inorganic Chemistry Seminar Award** is awarded to two individuals annually, one for the year's best literature seminar, and one for the best research seminar. Selection is made by the faculty of Inorganic Chemistry.

The **H. C. Brown Organic Graduate Seminar Award** is presented to the best Organic Graduate Student seminar each semester as judged by the Organic Faculty.

The **Physical Chemistry Seminar Award** is awarded annually in the spring. An award committee appointed by the Chair of the Physical Chemistry division selects the recipients.

Teaching Awards

The Department annually awards the **Arthur E. Kelly Teaching Award** and the **William F. Epple Teaching Award**. One set of awards is made for excellence in teaching in the previous year spring semester, and one set for excellence in the preceding fall semester. Selection is made by an ad hoc committee appointed by the Head, based on feedback from students in their written TA evaluations.

The **John J. Nash Instructional Development Award** is given annually and recognizes excellence as a Teaching Assistant among first year graduate student, often in their first semester of teaching experience. An ad hoc committee selects winners based on feedback from students in their written TA evaluations.

Anti-Harassment Policy

Statement of Policy

Purdue University is committed to maintaining an environment that recognizes the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding and mutual respect; and encourages its members to strive to reach their potential. The most effective way to work toward preventing Harassment is through education that emphasizes respect for every individual.

It is essential that Purdue University demonstrate its intellectual and ethical leadership by reaffirming its strong position against Harassment in all forms. All members of the University community must be able to pursue their goals, educational needs and working lives without intimidation or injury generated by intolerance and Harassment.

Harassment in the workplace or the educational environment is unacceptable conduct and will not be tolerated. Purdue University is committed to maintaining an educational and work climate for faculty, staff and students that is positive and free from all forms of Harassment. This policy addresses Harassment in all forms, including Harassment toward individuals (a) for reasons of race, religion, color, sex, age, national origin or ancestry, genetic information, disability, status as a veteran, marital status, parental status, sexual orientation, gender identity and/or gender expression or (b) based on actual or perceived shared ancestry or ethnic characteristics, and citizenship or residency in a country with a dominant religion or distinct religious identity and their association with this national origin/ancestry. This includes, for example, conduct towards another person or identifiable group of persons that is determined to have been motivated by Antisemitism, Islamophobia, Christianophobia or any other hatred, prejudice or discrimination against a particular religious belief. The University will not tolerate Harassment of its faculty, staff or students by persons conducting business with or visiting the University, even though such persons are not directly affiliated with the University.

Date Last Revised: June 1, 2025.

Definitions of Harassment

Harassment: Conduct towards another person or identifiable group of persons that is so severe, pervasive or objectively offensive that it has the purpose or effect of:

- Creating an intimidating or hostile educational environment, work environment or environment for participation in a University program or activity;
- Unreasonably interfering with a person's educational environment, work environment or environment for participation in a University program or activity; or
- Unreasonably affecting a person's educational or work opportunities or participation in a University program or activity.

Use of the term Harassment includes all forms of harassment, including Stalking, Racial Harassment and Sexual Harassment.

Racial Harassment: Conduct that demonstrates hostility towards another person (or identifiable group of persons) on the basis of race, color, national origin or ancestry and is so severe, pervasive or objectively offensive that it has the purpose or effect of:

- Creating an intimidating or hostile educational environment, work environment or environment for participation in a University program or activity;
- Unreasonably interfering with a person's educational environment, work environment or environment for participation in a University program or activity; or
- Unreasonably affecting a person's educational or work opportunities or participation in a University program or activity.

The University is strongly committed to providing a safe and Harassment-free environment for members of those groups that have historically been, and are still likely to be, at greatest risk of Harassment for reasons of prejudice.

Sexual Harassment:

A. Any act of Sexual Violence.
B. Any act of Sexual Exploitation.
C. Any unwelcome sexual advance, request for sexual favors or other written, verbal or physical conduct of a sexual nature when:

    1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, education or participation in a University program or activity;
    2. Submission to, or rejection of, such conduct by an individual is used as the basis for, or a factor in, decisions affecting that individual's employment, education or participation in a University program or activity; or
    3. Such conduct has the purpose or effect of unreasonably interfering with an individual's employment or academic performance or creating an intimidating, offensive or hostile environment for that individual's employment, education or participation in a University program or activity.

To view the full text and all policies related to Purdue University's Anti-Harassment Policy, visit:
https://www.purdue.edu/policies/ethics/iiic1.html

Procedures and Support Resources:

The Department of Chemistry has a zero-tolerance policy for harassment and aims to do everything it can to ensure that the effects of such cases are minimized and dealt with fairly and promptly. Those who may become victims of harassment must have a clear and supportive means to discuss, report, and/or seek appropriate and fair resolution of such conflict and are encouraged to do so.

Students are welcome to discuss concerns about harassment with their advisor, committee members, the Student Success Advisors (p. 24), Director of Graduate Studies,

the Head or other faculty or staff members they trust. Information students share when consulting with members of the Department can be kept confidential when possible. However, there are circumstances in which appropriately trained individuals can better advise students, assist them with the reporting, and/or facilitate a resolution. These individuals/offices include:

- In cases of suspected harassment, the **Office of Civil Rights (OCR)** will conduct a prompt, fair, and discreet investigations in accordance with University Procedures. OCR's **Title IX Coordinator** is responsible for coordinating the University's compliance with Title IX, including overseeing all complaints of sex discrimination, including sexual harassment and sexual violence. If the Title IX Coordinator or OCR determine that an individual or group of individuals have violated the University's Anti-harassment Policies, such individual(s) "will be subject to disciplinary or remedial action, up to and including termination of employment or expulsion from the University.", Faculty/employees/students should also be aware that, according to the University policy, "Disciplinary action will be taken against any person or group found to have brought a charge of Harassment in bad faith or any person who, in bad faith, is found to have encouraged another person or group to bring such a charge."

  The OCR is also home to the ADA Coordinator's Office. Links for reporting an incident that may violate the Anti-Harassment Policy, Equal Opportunity or Equal Access Policy, and/or the Title IX Harassment policy, can be found on OCR's website along with information about additional on- and off-campus support and assistance resources and comprehensive information about harassment policies and investigative procedures: https://www.purdue.edu/vpec/ocr/harassment-discrimination-title-ix/. Students can also request an appointment to talk to a representative from OCR: (765) 496-7255, ocr@purdue.edu, or https://www.purdue.edu/vpec/ocr/contact/

- Professional staff from the **Office of the Dean of Students** serve on-call rotations, and an on-call staff member may be activated by contacting the Purdue University Police Department non-emergency number (765-494-8221). Crisis support services are available 24 hours a day/7 days a week, including:

  - Informing student of available options regarding medical services, forensic evidence collection, and reporting to law enforcement.
  - Immediate student-centered support and advocacy
  - Addressing immediate safety concerns

- Professional staff from the **Center for Advocacy, Response and Education (CARE)** provide Complainants and potential Complainants with confidential, ongoing support and advocacy, including:
  - Support in accessing health and counseling services and community resources
  - Legal advocacy, including help with obtaining legal protective orders
  - Assistance with reporting to campus authorities and law enforcement

- Developing safety plans

Students can call CARE's 24/7 confidential hotline, (765) 494-2273 or make an appointment through their homepage, https://care.purdue.edu/.

Title IX: Confidentiality and Mandatory Reporting:

In many cases, information that students share with those listed above will remain confidential. However, it is important to note that "confidential" does not mean "secret," and information may be shared confidentially with individuals who need to know for the purposes of issue resolution, or because of mandatory reporting guidelines. There are several categories of mandatory reporting. Confidentiality will be maintained, as allowed by policy and law, by the offices that the issues or concerns are reported to. The following are the categories of mandatory reporting, either by law or by university policy:

Title IX: Any complaints related to the purview of Title IX (including discrimination on the basis of sex, sexual harassment, sexual violence/assault, relationship violence, sexual exploitation, unwelcome sexual contact, and stalking) can be reported to the campus Title IX Coordinator: Christie Wright, 765-494-7255, wrigh438@purdue.edu or titleIX@purdue.edu. Within Chemistry, the Department Head, employees in supervisory or management roles, and staff who have the authority to institute corrective measures on behalf of the University are mandatory reporters, and must, by law, report any Title IX violations that are observed or reported to them. Student employees (TA and RA) are encouraged to report potential violations but are typically not mandatory reporters.

Integrity in Research and Research Misconduct Reporting

Integrity in Research

[From OGSPS's Procedures for Administering Graduate Student Programs (Sec. IX.B)]

Integrity in research is an essential part of Purdue University's intellectual and social structure, and adherence to its spirit and principles must be maintained. These principles include commitment to truth, objectivity, fairness, honesty, and free inquiry.

Cheating, plagiarism, or knowingly furnishing false information to the University are examples of dishonesty. The commitment of the acts of cheating, lying, and deceit in any of their diverse forms (such as the use of ghost-written papers, the use of substitutes for taking examinations, the use of illegal cribs, plagiarism, and copying during an examination) is dishonest and must not be tolerated. Moreover, knowingly to aid and abet, directly or indirectly other parties in committing dishonest acts is in itself dishonest update Plagiarism consists in using another's words or ideas without clear and explicit acknowledgment. Self-plagiarism consists in using one's own previous work in a new context without clear and explicit acknowledgment of previous use.

Serious violations of integrity in research are rare. However, those that do occur strike at the very heart of scholarship and the concept of the University. The integrity of the research process must depend largely on self-regulation; it is the responsibility of all who engage in the search for knowledge. Procedures to be followed in any situation related to research misconduct are presented in Purdue University Policy III.A.2.

All graduate students are required to complete the CITI RCR training module within 120 days of starting a graduate program and every five (5) years thereafter.

Reporting Suspected Research Misconduct by Others

According to the University's Research Misconduct policy, research misconduct is defined as "conduct by a Purdue Associate (including students, staff, or faculty) taking place at Purdue or in connection with Purdue research that constitutes Fabrication, Falsification or Plagiarism with Culpable Intent in proposing, performing or reviewing research, or in reporting research results."

The Purdue Research Integrity Office addresses reports of potential misconduct in research carried out:

- by any Purdue associate (e.g., students, staff, post-docs, visiting scholars, faculty)
- within the last six years (with some exceptions)

Allegations of research misconduct should be reported to the Research Integrity Office for assessment of the need for an inquiry. Contact James Mohler, 496-6071 or jlmohler@purdue.edu.

The full text of the University's Research Misconduct Policy (III.A.2) can be viewed at: https://www.purdue.edu/policies/ethics/iiia2.html

Safety

Responsible People

The Safety & Sustainability Committee chair for 2025-26 is Professor Alex Wei. The Committee is comprised of the SSC Chair, the Chemistry Building deputy (Ned Gangwer), the Departmental Safety Coordinator (Paul Bower and Emile Batchelder-Schwab), and the Safety TA (Dane Wagner), and includes representatives from all departmental units. Each research group is responsible for appointing a Group Safety Representative, who serves as a liaison on safety matters with the SSC and as a safety resource within the research group.

The GSR is responsible for communicating details of the chemical hygiene plans of the research lab you have just joined. This includes safety updates and reminders, changes in policy, and best practices inside the laboratory.

Initial Training

During orientation week, each new graduate student receives an initial safety briefing that is relevant to their TA assignment during the first semester. Safety training continues in the CHM 60500 course offered during the last 7 weeks of the first semester. The course prepares students for entry into any research lab by providing practical instruction and assignments.

Ongoing Training

Laboratory safety must be considered throughout your career, starting with your graduate program and continuing into employment assignments. Those students who become actively involved with laboratory safety may find that this enhances their career opportunities substantially. Record your safety activities on your CV. Several of the corporations that recruit in the chemistry department have emphasized their need for chemists who have been seriously engaged with safe lab operations. It is common to expect that a starting chemist at a chemical manufacturer will face at least six months of training involving safe operations and it is highly desirable to hire chemists who have a positive and constructive attitude towards safe practices.

As you join a new lab, your research advisor will be responsible for ensuring that you receive:

- An orientation to the standard procedures and safety rules of that lab
- Specific training on the safe operation of instruments and devices used in your research
- Directives on the type and source of personal protective required
- Oversight on adherence to lab safety rules and safe operation
- Instruction on the proper disposal of reagents and materials in accordance with rules issued by Purdue EHS (Environmental Health & Safety)
- Reminders to complete annual safety recertifications

Potential Hazards Present in the Department of Chemistry

- Biological Hazards
- Radiation Hazards
- Optical Hazards (Lasers)
- Solvent and Reagent Hazards
- Electrical Hazards
- Fire Hazards

Additional training and certification from EHS is required if your research involves the first three hazards listed above. Contact EHS (https://www.purdue.edu/ehps/rem/) for assistance and questions.

Reporting

Anyone who observes any accident, injury, or incident (including near-misses), regardless of where the incident occurs (teaching lab or the research lab) should report what happened using the online ***Accident, Injury or Incident*** form at https://www.chem.purdue.edu/chemsafety/IncidentReport.php.

Additionally, If there was an injury requiring immediate –or subsequent – attention by a doctor or emergency medical personnel, you must also complete the REM form known as FROI: First Report of Injury. This is very important. Any claims against your medical insurance require that you have already filed a FROI. The First Report of Injury (FROI) & Supervisor's Incident Investigation (SII) form is available through DocuSign. The FROI form must be completed when a work-related injury occurs.

If you feel that there is potential for an accident in your laboratory, a teaching lab, or any situation that cannot be corrected by a alerting a supervisor, you can file an anonymous report at https://www.chem.purdue.edu/chemsafety/confidentialreport.php. This approach is offered for students who do not want to be identified, or those who feel that their concern may not be getting full consideration by their safety rep or research advisor. Key personnel in the Department of Chemistry will be able to read the report but will NOT be able to identify the sender.

Inspections

The Department of Chemistry is inspected throughout each semester by EHS, OSHA, the EPA and other agencies of the university, State of Indiana or federal government. There may be no warning about such visits, but you are entitled to ask the identity of anyone entering your lab and you should require such visitors to wear appropriate personal protective equipment during such visits.

Pay special attention to the following situations as examples of good practice and in anticipation of unannounced inspections:

- Every research supervisor is to have prominently posted a “Hazard Assessment Certification” which provides the rules for wearing of personal protective equipment (PPE) in the work areas. That document provides the rules for PPE wear. Compliance with its terms is mandatory.

- Do not work alone with hazardous materials. Those who work after normal working hours must make sure that there is someone nearby who will become aware of any need for assistance that may arise.
- Research and instructional laboratories should be maintained in a clean condition at all times.
- Keep refrigerators and freezers clean, inventoried, and defrosted.
- Do not store anything in the walking and working parts of the floor or aisles.
- Keep approaches to all doors and electrical panels absolutely unobstructed.
- Chemical reactions should not be left unattended if there exists the slightest possibility of their getting out of control.
- Reactions which involve continuous introduction of a gas should not be left without supervision. The reaction vessel must be separated from the gas source by an empty trap, and a flash arrestor incorporated in reactions using flammable gas.
- Toxic and corrosive compounds such as HCN, HF, HCl, H_2S, phosgene, NH_3, mercaptans, etc., which might form in a reaction must be trapped rather than allowed to escape into a room or into the outside environment via the hood.
- Careful consideration must be given to the location of a reaction. Reactions which require large amounts of flammable solvents, active metals, or metal hydrides should be carried out in the hood behind a safety shield. The heating of such reactions should be done electrically or by a steam bath; open flames must be avoided.
- Familiarize yourself with the location of safety showers, fire extinguishers, fire hoses, and first aid cabinets. Room No. 2150 in the Brown building has been designated as FIRST AID ROOM.
- Make sure that all fire extinguishers in your laboratory are <u>properly</u> sealed and placed in their holders. If seal is broken have the fire extinguisher exchanged in the Chemistry Shop (WTHR 140).
- Not more than 10 gallons of Class I plus Class II flammable and combustible liquids may be stored outside of approved flammable storage (flam cabs and safety cans). See the guidance provided by the Purdue Chemical Hygiene Plan and the REM web site.
- The storage in the laboratory of chemicals such as metallic hydrides, active metals, peroxides, and explosives must be kept to a minimum quantity which shall represent the smallest package available from the vendor.
- Condenser tubing must be in good condition and properly wired. Condenser tubing should be periodically inspected and replaced if in poor conditions.
- Aspirators should not be allowed to run overnight.
- No chemicals (any type) may be placed in waste baskets. Instead, they should be placed in suitable and properly labeled containers. A disposal form, available at the Chemistry Storerooms, should be completed and sent to EHS. EHS will pick-up your samples and dispose of them properly.
- Glass containers, after being thoroughly rinsed with water and labels removed or defaced may be placed in waste baskets.

- Do not take unnecessary chances when working with hazardous chemicals. Work in the hood behind a safety shield. There are experiments which may be too dangerous to perform anywhere in BRWN or WTHR and for which special arrangements must be made. In all cases of known dangerous procedures there must exist clearly written standard operating procedures which address all necessary safety precautions, equipment requirements, emergency procedures, and spill response contingencies.
- In the event of an accident or fire, telephone 911. Indicate the problem and its exact location to the operator. The operator will ensure that Police, Fire Department or Ambulance are dispatched to the scene of the accident.
- In the event that there in non-emergency risk/danger related to workplace safety, contact EHS at 494-6371, or ehps@purdue.edu.

Appendices

Appendix I: Filing your electronic Plan of Study

The Plan of Study is an online form that can be accessed through the myPurdue system. The Plan of Study is the formal documentation with the OGSPS that identifies the student's major advisor and other members of the Advisory Committee and lists the approved coursework for the PhD degree.

The Plan of Study does not need to include all courses taken at Purdue; it should include only those that the student and Advisory Committee think are critical to the coursework requirement of the degree. Hence, seminar courses (CHM 69500), training courses (e.g., CHM 60500, CHM 59900 (Teaching in Chemistry or Glassblowing)), professional development courses (e.g., Grant Writing), and undergraduate-level courses taken for fun or personal enrichment should not be included in the Plan of Study.

The typical Plan of Study will include six courses (3 credits each) to meet the 18-credit minimum, but you may include more than six courses if desired.

The Plan of Study can be amended at any point before the degree is conferred (including when there is a change to the membership of the Advisory Committee) by completing a Request for Change to Plan of Study form through myPurdue. All changes require the approval of the Advisory Committee and any appropriate departmental staff, with the OGSPS giving the final approval.

The Plan of Study is typically completed by the end of the first year (including summer) of study.

To complete the Plan of Study:

1. Determine courses in consultation with the Advisory Committee.
2. Create a DRAFT Electronic Plan of Study. From the "Academics" Tab in mypurdue.purdue.edu, click on "OGSPS Plan of Study" in the "Graduate Students" tile. Log in with your Purdue Career Account.
3. Click "Plan of Study Generator" and then "Create New Plan of Study." Enter information about the degree you are seeking and planned dates, and then click "Process and Continue."
4. Under "Research Area and Concentration," enter of the name of your research division (e.g., "Organic Chemistry"). The research area is for information only and is not transcripted in your formal record. Enter concentrations if needed (only a few students will have concentrations; these are formal university programs with listed requirements and do result in a notation on your final transcript).
5. Under "Course Work" list the courses to include in the Plan of Study, including courses completed, courses you are currently taking, and courses you plan to take in the future at Purdue.
    a. For students who entered the program after Spring 2023: Foundational Courses are the only ones that should be designated as "Primary" under Area and check marked "B or Better" under Grade.

All non-Foundational Courses should be designated “Related” and are not marked “B or Better”.

b. **Do not** list courses taken at another university as part of a Masters Degree program as “transfer” courses. See item 7 below on how to enter MS courses from another university.

6. Under “Advisory Committee,” list your Chair (or two Co-Chairs), and all members of your committee. All Graduate Faculty have a unique ID code within the Plan of Study system. There is a look-up tool on the webpage. If the look-up tool does not return an ID code for a professor, contact the Main Office.
7. If you are wishing to apply previously-earned graduate-level coursework to the Plan of Study (for example, from a Master’s Degree earned at a different institution), enter this as a note under “Comments and Special Notes.” The note should include the University where you took the course(s), the course number and name, the number of course credits, and your final grade in the course. Consult with the Main Office with questions. There are some restrictions about which courses may be used, but typically up to three courses (nine credits) of MS coursework can be applied to the Plan of Study, if the Advisory Committee approves.
8. Once complete, click “Submit as Draft”, and let the Main Office (chemoffice@purdue.edu) know that the draft is complete. We will review the draft and ask you to make any needed changes. We will then let you know that you may return to the system and click “Save as Final.”
9. The Plan of Study will then be automatically routed to the Department’s Plan of Study Coordinator, the members of your committee, the Chemistry Grad Program Authorization (Jianguo Mei) and then the OGSPS. You will be notified by email when the Plan of Study receives final approval. Depending on how long it takes for your committee to approve, final approval is usually recorded one to two weeks after submitting the plan.

Please reference the “Chemistry EPOS Instructions F23 Forward” document for more detailed instructions. An in-person Plan of Study Information and Q&A Session is presented by the Main Office in late November or Early December.

Appendix II: Foundational Course Learning Objectives by Division

Analytical Division:

CHM 69600: Fundamentals of Analytical Chemistry Course Objective:
The overall learning objective of this course is for the student to demonstrate an understanding of fundamental principles that underlie analytical chemistry. To meet this overall objective, relevant principles are organized within the following topical areas:

- The figures of merit commonly used to evaluate a quantitative measurement.
- Aspects of probability and statistics associated with quantitative measurement.
- Analytical separations.
- Principles associated with instrumental analysis (e.g., basic electronics, sources of noise, tactics to improve signal-to-noise, etc.)
- Underlying principles associated with common equilibrium and kinetic measurement approaches. E.g.:
    - Light spectroscopies
    - Electrochemistry
    - Mass spectrometry

Biochemistry/Chemical Biology Division:

CHM 63400: Biochemistry: Structural Aspects Learning Objectives:

1. Students will be able to interrogate proteins from the gene to the structure-function levels.
2. Students will gain an understanding of the roles of kinetic and thermodynamic limits of biomolecular systems.
3. Students will become familiar with software tools used in evaluation of protein structure and protein-protein interactions.
    a. Understand the limitations of software tools.
4. Students will be able to select, read, and evaluate manuscripts in the primary literature.
    a. Consider alternate approaches to those used in the original work.
    b. Determine reliability of sources by considering, for example, the rigor of experimental design and sampling, application of appropriate statistics, and effective citation of relevant literature.
    c. Be able to suggest future directions in the context of hypotheses and specific experiments.

Inorganic Division:

CHM 64100: Advanced Inorganic Chemistry Learning Objectives:
This course will focus on the structure, properties, and reactivity of inorganic complexes and materials. We will study concepts in bonding, electronic structure, symmetry and spectroscopy, coordination chemistry, and inorganic reaction mechanisms. In covering these concepts, we will utilize examples in catalysis, organometallic chemistry, materials chemistry, electrochemistry, and photochemistry. By the end of the course, students will

be able to apply fundamental structure and bonding concepts in inorganic chemistry to understand and interpret relevant examples from the literature.

Materials Division:

CHM 64400: Solid State Materials Course Goals:

To provide students with the background knowledge and tools for designing, characterizing, and measuring the properties of solid state materials. In the course, students will develop:

1. A conceptual framework for understanding structure and bonding in the solid state
2. An understanding of high temperature and soft chemical synthetic approaches to making solid state materials
3. A foundation of electronic structure theory of extended solids
4. An intuition for probing/mapping/interpreting structure-function relationships in inorganic solids
5. An intuition for the properties (mechanical, photophysical, electronic, magnetic) expected for the most common classes of solid state materials
6. A broad understanding of characterization techniques available at Purdue and synchrotron/national lab facilities for solving

CHM 69600: Soft Materials Course Goals:

Upon completion of the course, students will have sufficient breadth of knowledge to:

1. Peruse the scientific literature in diverse topics of materials chemistry
2. Be conversant with members of the materials science and engineering communities
3. Be capable of critical analysis using fundamental knowledge derived from organic and physical chemistry and materials property measurements.

Soft Materials Learning Objectives:

1. To achieve a **comprehensive lexicon** used to describe all major concepts and physical properties studied by the materials science community;
2. To correlate molecular or low-dimensional structure with physical properties of their materials state, and to make qualitative predictions based on **structure–process–property relationships**;
3. To design **mono- and multi-component materials** with rational control over their thermodynamic stability and physical properties;
4. To be adept at **integrating materials properties** associated with molecular/nanoscale and macroscopic (bulk) length scales;
5. To identify the appropriate **measurement tools** for physicochemical analysis and properly interpret measurement results and data quality.

Physical/Theoretical Division:

CHM 67100: Advanced Physical Chemistry Learning Objectives:

This course aims to provide a review of important concepts in physical chemistry. There are three main topics in this course: quantum mechanics (60%), optics and spectroscopy (20%), thermodynamics and statistical mechanics (20%). We believe

that all graduate students in physical chemistry should be familiar with these topics, regardless of research interests and specialty. This course will also help students understand the broad topics presented in the weekly physical chemistry seminar.

Organic Division:

CHM 65100: Advanced Organic Chemistry Course Goal:

Upon completion of the course, students will be able to analyze the mechanisms of organic reactions using fundamental principles of structure and reactivity.

Advanced Organic Chemistry Learning Objectives:

1. Given any organic transformation, students are able to propose a plausible **arrow-pushing mechanism** that avoids intermediates that are energetically inaccessible.
2. Students can identify donor/acceptor **orbital interactions** and use them to understand conformations and reaction geometries.
3. Students can use their knowledge of steric and stereoelectronic effects to evaluate the relative energies of different **conformations** of cyclic and acyclic molecules.
4. Students can develop three-dimensional **transition state models** to account for the stereoselectivity and regioselectivity of organic reactions.
5. Students can use their fundamental knowledge of **reactive intermediates** (carbanions, carbocationic, and radicals) to propose reaction mechanisms and understand selectivities.
6. Students can use **orbital symmetries** to predict whether a pericylic process is allowed or forbidden.

Appendix III: Tips for Working with an Advisor

(Adapted with gratitude and permission from the Purdue University College of Education.)

Frequent communication with your faculty advisor to discuss your progress and plan future steps to meet requirements is essential for success. Working with an advisor should be a rewarding experience (for BOTH of you). Here are a few tips that will help you get the most from this experience.

GET CONNECTED AS SOON AS POSSIBLE:

With Your Advisor

Talk with your advisor about their research interests and passions, as well as yours. Find out how to get involved early on in research projects (with your advisor or with other faculty members), writing efforts, and other activities that will help you to grow and develop. Attend the various seminars that are offered in the college and university. Join professional organizations and attend conferences in your field. Keep your advisor apprised of your activities.

With Other Students

Get involved with other graduate students to form mutual support groups. This can occur informally within the program/department or through student organizations such as ISP, PLU, GSAB, and others. You can help each other to understand the academic culture of the college and department and learn what you need to do to succeed. In addition, you can help each other by proofreading each other's work, giving feedback on research ideas, and working together on projects. This helps to build graduate student camaraderie and it eases the burden on the faculty.

BECOME FAMILIAR WITH:

Graduate policies and procedures

Review the Office of the Vice Provost for Graduate Students and Postdoctoral Scholars (OGSPS) website. Be responsible for knowing the rules. Do the legwork necessary to schedule committee meetings, get copies of materials to the committee to review, make sure forms are completed, etc.

Your advisor's style and schedule

At a minimum, try to meet with your advisor at least once per semester to register for classes and keep him/her apprised of your overall progress. More frequent meetings will be needed as you progress to discuss projects, research, and writing. Keep good records, and document your decisions. Avoid making appointments or doing business in the hallways; things may slip through the cracks.

SET REALISTIC EXPECTATIONS

Set goals and expectations for yourself and use them to keep you on track. Clearly lay out what you are doing and what your expectations are along the way. Set up milestones and keep your advisor in the loop. Many headaches can be avoided by doing some advance planning. Setting daily, weekly, and monthly goals is a good idea, and works even better if you use a "buddy system" where you and another student meet at regular intervals to review your progress. Try to find people to work with: doing research is much easier if

you have someone to bounce ideas off of and to give you feedback. Breaking down any project into smaller pieces is always a good tactic when things seem unmanageable. For example, instead of focusing first on writing an entire paper, focus on the goal of writing a section or an outline.

HOLD YOURSELF ACCOUNTABLE

Develop a contract with your advisor or otherwise set requirements for what you will accomplish. Take it upon yourself to report your progress to your advisor and talk to him or her often enough to assure that you are moving along on a reasonable timeline. If you don't care about your progress enough to keep it on track, who will? Head off problems in advance. Seek to resolve small problems before they become big ones. If you experience specific problems in your program, talk with your advisor and take steps to remedy the problem early on. Be careful about doing things that will impede your progress such as taking on too much work or accepting a faculty position before completing your dissertation. Realize that you are your own best friend and ally (and conversely, your own worse enemy) in the graduate school process.

BE RESPECTFUL OF YOUR ADVISOR'S TIME (make appointments, don't abuse email, get info from other sources if possible).

When requesting a meeting, send an email indicating the purpose of the meeting and the amount of time needed. Come to the meeting with an agenda in hand. Make sure that the most important topics are covered first. If you don't get to some of the smaller items, follow up with email. You don't necessarily need to meet face-to-face to answer minor questions or address every detail. Don't give work to your advisor that has not been proofread or edited. If this is not your strength, ask a colleague to read your work first and/or use a professional editor. Names of professional editors are available through the Writing Lab here on campus. Find out when your advisor is available to meet and to give feedback on your work. Many faculty members take breaks when there are breaks in the academic calendar (Christmas, Spring Break, summer). As a general rule, students should submit work to faculty members for review at least two weeks in advance of a scheduled meeting (e.g., prelim or proposal defense). Finally, listen very carefully and take heed to the advice you are given. You don't have to learn things the hard way!

Dr. Peggy A. Ertmer/Professor Emerita, Curriculum & Instruction
August 18, 2008
(Adapted from "Tips for Chairing a Graduate Student Committee" presented by C&I Faculty, April 2007)

Appendix IV: List of Common OGSPS Forms

The following list includes OGSPS Forms that students may commonly see. The staff in the Main Office can assist with any of these forms.

Form 7: Report of an MS Final Exam. [electronic] This form will be used by the examination committee to report the results of an MS final exam. The electronic form is automatically generated after acceptance of a Form 8.

Form 8: Request for Appointment of an Examining Committee. [electronic] This form is used to establish the committee for a formal examination. It is used for both the preliminary exam and final dissertation exams for both the MS and PhD degree. The date and location of the exam is required for this form. The form should be fully approved two weeks before the exam, so students are encouraged to start early. The Main Office will initiate this form on behalf of students. This form is required for MS students, even though the plan for the defense may be written only.

Form 9: Electronic Thesis Approval Form (ETAF). [electronic] This form will be initiated by the student and saved for final submission on the day of the final dissertation exam, for both the MS and PhD degrees.

Form 10: Report of a PhD Preliminary Exam. [electronic] This form will be used by the examination committee to report the results of a preliminary exam. The electronic form is automatically generated after acceptance of a Form 8.

Form 11: Report of a PhD Final Exam. [electronic] This form will be used by the examination committee to report the results of a PhD final exam. The electronic form is automatically generated after acceptance of a Form 8.

Form 12: Research in Absentia Request. [electronic] This form should be completed for any student requesting Research in Absentia status (see p. 49). It must be completed one month before the start of RIA status. The form may be initiated by the student in myPurdue.

Form 17B: Change of Degree Objective. [paper] This form must be completed when a student switches from the PhD program to the MS program. It is initiated by the Main Office.

Form 19: Off-campus Research Request [electronic] This form should be completed when a student will be conducting research for credit off-campus for more than 22 days. It should be used only for students who are not eligible for Research in Absentia (Form 12). If the student will retain an assistantship while off-campus, they also need to submit a Change of Duty Station request with the payroll office. The form can be initiated by the student in myPurdue. See also “Change of Duty Station” on pgs. 49-50.

Appendix V: List of Penalty Fees Associated with Graduation Candidacy

The OGSPS assesses penalty fees of $200 for any of the following situations. Missing key deadlines could result in removal from the candidate roster in the current term, unless an exception is given and the applicable late fee is paid. Please note that filing for graduation candidacy is different than establishing PhD candidacy: the former type of candidacy applies to those who will be taking their final exams and submitting their thesis during the semester in which they intend to graduate, while the latter is a designation that is automatically applied to PhD students who have passed their oral preliminaries and is not subject to any penalty fees.

- Late addition to the Candidate List: Students must be registered in the session of graduation and declare their intention to graduate by the Candidacy Deadline (as established by the OGSPS) in the session of anticipated graduation in order to avoid a late fee charge. The candidate deadline typically falls within the third week of Module 1 of the summer session, and within the fifth week of the fall/spring sessions. Please note that filing for candidacy with the intent to graduate is different than establishing PhD candidacy: the former type of candidacy applies to those who will be taking their final exams and submitting their thesis, will the latter.
- Registering for Candidacy Three Times: Students may withdraw from candidacy twice after being added to the candidate list without penalty if thesis writing or graduation is delayed. However, a penalty fee will be assessed if a student is added to the candidate list a third time.
- Missed Plan of Study Deadline: An original plan of study must be received by the OGSPS prior to the first day of the academic session of graduation. In order to avoid a late fee for missing the deadline, the plan must be submitted by the student, signed by all advisory committee members and all appropriate department staff, and is awaiting on OGSPS processing by 11:59 pm on the Sunday before the start of classes. If a student has an approved plan of study on file but needs to submit to make amendments to the plan, a late fee will not be incurred if a Request to Change the Plan of Study is submitted after the plan of study deadline.
    - Students wishing to change their degree objective from PhD to MS the semester before they graduate should schedule a meeting with the Director of GSM to discuss their plans well before the beginning of their intended graduation semester. After the meeting the Main Office will assist the student in getting their Form 17B (see Appendix 2) processed and their PhD plan of study archived by the OGSPS so that the student can submit a new MS degree objective plan of study. Failure by the student to provide the Director of GSM with timely notice and/or submit a new MS plan of study far enough in advance to get the required approvals by the OGSPS's Plan of Study deadline may result in a late fee assessment.
- Missed Thesis Deposit Deadline: Following a successful final defense examination, the completed and corrected deposit copy of the thesis must be delivered to the Thesis/Dissertation Office on or before the last day of classes

of the session in which the student is to graduate in order to avoid the late fee. Note that even with the late fee, the timeframe for late deposit is limited.

Related: Degree-only candidates who miss the early mid-semester deadline for completing their requirements, will be re-registered as regular candidates (CAND 99100) with 1 credit of CHM 69900/69800 by the OGSPS and Registrar's. The student will need to pay any difference in tuition resulting from the changed registration but will be given the end of session CAND 99100 defense and deposit deadlines to meet the requirements for graduation in the current term.

Appendix VI: Disability Accommodation Resources

Purdue University is committed to making education, employment, services, programs and activities accessible. Purdue University offers numerous resources to employees, students and visitors who may need additional assistance while attending, visiting and/or working for the University. The Purdue Community works together to remove any barriers that prevent equal opportunities to individuals who have disabilities.

Accommodations for Students:
The Disability Resource Center (DRC) is responsible for the student ADA accommodation request process. To request ADA accommodations, students must contact the DRC and complete the online Accommodation Request Form and relevant documentation. Once those documents have been received, an Access Consultant will reach out to schedule a meeting. The Access Consultant will engage in the interactive process and will make a determination.

Visit DRC's Student Accommodation Request Process for step-by-step instructions for submitting an accommodation request,
https://www.purdue.edu/drc/students/accommodations-services.php.

The DRC can be contacted at: drc@purdue.edu or 765-494-1247.

Accommodations for Graduate Staff:
Human Resources is responsible for the staff member ADA accommodation request process. To request ADA accommodations, faculty and staff must contact Human Resources by emailing adarequest@purdue.edu.

Appendix VII: Mental Health Resources for Graduate Students

On Campus Options

Center for Counseling and Psychological Services (CAPS):

- Provides students with an opportunity to explore concerns and problems in a *confidential* setting.
- Team consists of a multidisciplinary team of mental health professionals who deliver accessible, culturally competent, and high-quality psychological services to Purdue students.
- Has enhanced services over the past few years including increased staffing, new flexible and accessible services, and expanded campus-based prevention programming and partnerships
- Website with more information about CAPS: https://www.purdue.edu/caps/about/faq_caps/index.html
- Phone number: 765-494-6995
- Some of the options at CAPS (all are free)
    - Short term individual therapy—help you either overcome the issue, gives resources for you to address the issue, or gives you a referral to an outside therapist
    - Group therapy—as many as you want to attend; there are Grad student specific ones; see https://www.purdue.edu/caps/students/services-and-therapies/group/faq.php
    - Referral to outside therapist—CAPS can help you to identify an outside therapist covered by your insurance
    - Let's Talk— www.purdue.edu/caps/students/workshops/lets-talk.php, not formal therapy
    - Uwill offers students at Purdue free and flexible access to a therapist of their choice through proprietary technology that facilitates direct appointments with licensed mental health counselors-regardless of location. Uwill services can be initiated after a brief screening and referral from CAPS. CAPS offers same-day/next-day services for any student seeking care. For more information, call CAPS at 765-494-6995.

Purdue Psychology Treatment and Research Clinics:

- A training and research facility for the Clinical Psychology program at Purdue University. Staff members are qualified psychologists in-training who are supervised by faculty from the Clinical Psychology graduate program.
- More information at https://hhs.purdue.edu/about-hhs/community-resources/clinics/psychology-treatment- and-research-clinics/
- Phone number: 765-494-6977
- $25 for the first session. Fees for any additional assessment and treatment are determined on a sliding- scale basis, according to your ability to pay.

Off Campus Options

Apps

- iPhone: Better Help
- Android: Grow Therapy

Other options outside Purdue

- See https://www.chem.purdue.edu/health/prof.html for list of local mental health providers
- https://purdue.thrivingcampus.com/ and https://www.psychologytoday.com/us and https://findtreatment.gov/ are other good places to search

Crisis Resources

Note: Call these if you feel like you are in crisis. In crisis means different things for different people.

- **CAPS:** (765)-494-6995 (then 1 if outside normal business hours)
- **Local crisis center** (https://mhawv.org/crisis-center/): Call or text (765)-742-0244
- **988 Suicide and Crisis Lifeline:** Call 988 or https://988lifeline.org/
- **Call Blackline (BIPOC crisis line):** Call or text 1 (800) 604-5841 (will NOT share with law enforcement); https://www.callblackline.com/
- **Trevor Project (LGBTQ crisis line):** Call 1-866-488-7386 or online instant messaging https://www.thetrevorproject.org/get-help/

Other Mental Health Resources

- ACS Webinar: Demystifying Mental Health Support: *https://www.youtube.com/watch?v=RDXMe5BAaGg*
- CAPS online resources: https://www.purdue.edu/caps/resources/digital-resources/index.html
- COREC Wellness Center: https://www.purdue.edu/recwell/fitness-wellness/wellness/index.php
- Chemistry mental health website: https://www.chem.purdue.edu//health/index.html
- GSAB mental health committee: https://www.chem.purdue.edu/gsab/committee.html

Concerns about Other Students:

- An Office of the Dean of Students Student of Concern report (on the main ODOS web page at www.purdue.edu/odos) can be used whenever someone is concerned about the health or well-being of a student. ODOS staff will reach out confidentially to the student of concern after receiving the report.

Questions?

Contact the Main Office:

Email | chemoffice@purdue.edu

Phone | +1 765-494-5200