



UNIVERSITY OF
ILLINOIS
URBANA - CHAMPAIGN

Graduate Manual

Department Of Chemistry

University Of Illinois Urbana-Champaign

chemistry.illinois.edu/grad-manual

Fall 2026

The policies in this manual were applicable at the time the manual was created. Other policies not explicitly included in this manual may also be applicable. Should departmental requirements be revised, continuing students may choose whether they wish to fulfill the requirements in effect when they began graduate study or the revised requirements. In a few cases, however, specific policies may be superseded for all students by later decisions or by other documents, such as official offer letters. Please consult the department office regarding all detailed policies and requirements.

Fall 2026
Graduate Manual
Department of Chemistry
University of Illinois Urbana-Champaign
109 Noyes Laboratory
505 South Mathews Avenue
Urbana, IL 61801

Table of Contents

Changes to the Graduate Manual	5
Welcome and Overview of the Ph.D. Program.....	6
Contact Information	7
Graduate College Guidelines for Graduate Student Mentoring.....	8
1. Degrees Offered	9
1.1 Doctor of Philosophy in Chemistry	9
1.2 Joint Degree Program – M.D./Ph.D. in Chemistry	9
1.3 Master of Science in Chemistry	10
1.4 Master of Science in the Teaching of Chemistry (MSTC)	10
1.5 Ph.D. Concentration in Computational Science and Engineering (CSE)	10
2. Admissions Policy	12
2.1 Contact Information	12
2.2 Deadlines for Applying.....	12
2.3 Admissions Requirements	12
2.4 English Proficiency	13
2.5 Office of International Student and Scholar Services (ISSS).....	13
3. Course Grades, Credit, and Registration.....	14
3.1 Grades	14
3.2 Credit.....	14
3.3 Required Credit Loads	14
3.4 Transfer Credits and Course Waivers	14
3.5 Obtaining Certification of Full-Time Student Status.....	15
3.6 Academic Warning Status.....	15
3.7 Registration for Courses	15
3.8 How to Add/Drop Courses	15
4. The Master’s Degree in Chemistry	17
4.1 Admission to a Master’s Degree Program	17
4.2 Transferring from the Ph.D. Program to a Master’s Degree Program.....	17
4.3 Department of Chemistry Requirements for the Master’s Degree	17
4.3.1 Coursework Master’s Degree	17
4.3.2 Thesis Master’s Degree.....	18
4.3.3 Master of Science in the Teaching of Chemistry (MSTC)	18

4.4 Transferring from a Master's Degree Program to the Ph.D. Program.....	19
5. The Doctoral Degree in Chemistry	20
5.1 Graduate College Requirements for the Ph.D. Degree	20
5.1.1 Credit and Residence	20
5.1.2 Time Limit	20
5.1.3 Preliminary and Final Examinations.....	21
5.1.4 Thesis	21
5.2 Department of Chemistry Requirements for the Ph.D. Degree	21
5.2.1 Deadline Extensions and Department Requirement Waivers.....	22
5.2.2 Orientation Program for Incoming Students.....	22
5.2.3 Registration Exams	22
5.2.4 Department Areas and Enrolling in Courses	22
5.2.5 English Proficiency	22
5.2.6 Coursework Requirements.....	23
5.2.7 Area-Specific Coursework Requirements.....	24
5.2.8 Foreign Language Requirement.....	25
5.2.9 GPA Requirement, Satisfactory Progress, and Good Standing	25
5.2.10 Graduate Student Annual Reviews	26
5.2.11 Teaching Requirement	26
5.2.12 Identifying a Faculty Research Advisor/Joining a Group.....	27
5.2.13 Identifying a Faculty Advisor from Outside the Department	30
5.2.14 Changing Faculty Advisors/Switching Research Groups.....	31
5.2.15 Changing Areas within the Department.....	33
5.2.16 Safety Examination.....	33
5.2.17 Professional Ethics Training	33
5.2.18 Literature Seminar	33
5.2.19 Choosing a Thesis Committee	34
5.2.20 Oral Preliminary Examination	34
5.2.21 Original Research Proposal (ORP)	35
5.2.22 Sixth-Year Meeting.....	37
5.2.23 Ph.D. Thesis	37
5.2.24 Final Examination (Thesis Defense).....	37
5.2.25 Ph.D. Thesis Deadlines	38
5.2.26 General Procedure for Depositing a Thesis	38
5.2.27 Final Exit Interview, Chemistry Exit Checklist, and HR Exit Checklist..	39
5.2.28 Overall Checklist for Graduating Ph.D. Students.....	39
6. Financial Support (Assistantships and Fellowships)	41
6.1 Appointments and Salaries	41
6.1.1 Registration Requirement	41
6.1.2 Tax Status of Salaries and Stipends	41
6.1.3 Resignation and Termination of Appointments.....	42
6.1.4 Time Extensions.....	42
6.1.5 Leaves of Absence (LOAs) Involving Suspension of Registration.....	43
6.1.6 Coverage Responsibility and Absence from Work.....	43

6.2 Benefits	44
6.2.1 Tuition and Fee Waiver	44
6.2.2 Personal Time Off (PTO) and Sick Leave	44
6.2.3 Bereavement Leave.....	44
6.2.4 Unpaid Personal Leave	44
6.2.5 Parental Leave.....	44
6.2.6 On-Campus Health Care	45
6.2.7 Off-Campus Health Insurance	45
6.3 Teaching Assistantships.....	46
6.3.1 Teaching Assignments	46
6.3.2 Teaching Loads	47
6.3.3 Campus Teaching Resources	47
6.3.4 Graduate Teacher Certificates.....	47
6.4 Research Assistantships	48
6.5 Fellowships	48
6.6 Emergency Loans.....	48
7. Appeal and Grievance Policy.....	50
7.1 Introduction.....	50
7.2 Scope and Coverage.....	50
7.3 Description of the Grievance Procedure	50
7.3.1 Informal Resolution	50
7.3.2 Written Grievance	51
7.3.3 Potential Outcomes of Intake Dean’s Review	51
7.3.4 Request for Panel Review	51
7.3.5 Panel Report.....	52
7.3.6 Final Decision	52
7.3.7 Appeal	53
7.4 Confidentiality	53
8. Services for Graduate Students	54
8.1 Department of Chemistry Graduate Student Advisory Committee (DCGSAC)	54
8.2 Career Counseling and Placement Services.....	54
9. What to Do When in an Accident	55
10. General Information.....	56
10.1 Mailboxes.....	56
10.2 Room and Desk Assignments	56
10.3 Conference Rooms.....	56
10.4 Keys	56
10.5 Student Identification Cards (i-cards).....	56
10.6 Computer and Graphics Facilities.....	56
10.7 GradLinks	56
10.8 Photocopying	56
10.9 Office Supplies and Services	57

10.10 Telephones	57
10.11 Chemistry Library	57
10.12 Personal Counseling.....	57
Sources of Information	58

Changes to the Graduate Manual

The changes summarized below begin with the 2026-2027 academic year. Not included are stylistic or formatting changes, or minor wording updates that clarify but do not fundamentally alter department policy.

1. Throughout the Graduate Manual, text referring to “probation” was changed to “academic warning status”, in accord with this change in Graduate College nomenclature.
2. In Section 1, the subsection on the Ph.D. Concentration in the Teaching of Chemistry was removed, along with all related references elsewhere in the Graduate Manual.
3. In Section 2.4, the text related to English proficiency for international applicants was updated.
4. In Section 4.3, the text was updated to state explicitly that the department does not award the M.S. degree to a Ph.D. program student, either along the path to the Ph.D. or at the end of the Ph.D. program. This is in accord with long-standing department practice.
5. In Section 4.3.1, the text was updated to state that a student who is switching from the Ph.D. program to the coursework M.S. program may be allowed to count up to 4 hours of CHEM 599 credit toward their regular coursework, subject to head/DGS approval. This replaces the former and administratively much more complicated procedure in which up to 4 hours of CHEM 599 credit was converted to CHEM 590 credit, which then counted toward the regular coursework.
6. In Section 5.2.9, the text was updated to include information on the CHEM 599 S/U grading newly mandated by the Graduate College.
7. In Section 5.2.12, the text was revised to describe the Fall 2026 rotation program.

Welcome and Overview of the Ph.D. Program

Welcome to the Department of Chemistry at the University of Illinois! This Graduate Manual outlines the general policies that govern the Ph.D. program of the department. With this knowledge, you can adapt the program to fit your individual needs and ensure a more successful graduate experience. Below is a brief chronological summary of the Ph.D. program activities and requirements.

Upon arrival: During orientation, incoming graduate students are introduced to the Ph.D. program, the Department of Chemistry, and the University of Illinois.

First year: Graduate students begin to take a total of 20 hours of graduate-level courses, not including a literature seminar course; the specific courses depend upon each student's chosen area of specialization. Each student identifies a thesis advisor during the first semester, after discussing research projects in depth with several faculty members. With certain exceptions, each student serves as a TA in the first fall and spring semesters and is supported as a research assistant in the first summer.

Second year: Students continue in their research, while completing the coursework and teaching requirements and presenting a literature seminar.

Third year: Students concentrate on their research. Before the end of the fifth semester, a written report of research progress is presented to the thesis committee (chosen by each student in consultation with their advisor) as part of the preliminary examination. This examination involves an oral presentation designed to provide a perspective on the student's progress, which is helpful in focusing on completion of the thesis.

Final years: In the fourth year, students write an original research proposal. Research progresses through its final stages. When the research project has reached completion, a thesis is written, and a final open seminar on the research is presented as part of the final examination. Ph.D. degrees in chemistry typically take a little over five years to complete. The final year also includes the interviewing process to find employment or to investigate postdoctoral opportunities. The staff of the Career Counseling and Placement Services Office of the School of Chemical Sciences is available to assist in resume production and interview preparation.

The University of Illinois has a long tradition of excellence in chemistry and in the development of Ph.D. chemists. Many of our students have become preeminent in their fields, and we are committed to continuing this tradition. We wish you every success in your endeavors!

Specific questions concerning these policies and programs should be addressed to the department's Graduate Program Coordinator.

All policies of the Department of Chemistry must be consistent with Graduate College policies. Two relevant Graduate College links, referenced throughout this Graduate Manual, are as follows.

Graduate College Handbook: grad.illinois.edu/handbooks-policies

Graduate College Calendar: calendars.illinois.edu/list/524

Contact Information (all area codes are 217)

Department of Chemistry 333-5071, 109 Noyes Lab, chemistry.illinois.edu

Head, Department of Chemistry Prof. Catherine Murphy
333-5071, 109 Noyes Lab murphycj@illinois.edu

Associate Head of Budget and Operations Prof. Scott Silverman
244-4489, 140 Roger Adams Lab sks@illinois.edu

Associate Head of Major Projects Prof. Josh Vura-Weis
244-4412, A124 Chemical and Life Sciences Lab vuraweis@illinois.edu

Associate Head of Undergraduate Instruction Prof. Prashant Jain
333-3417, A224 Chemical and Life Sciences Lab jain@illinois.edu

Director of Graduate Studies Prof. Jeffrey Moore
244-1646, 3351 Beckman Institute jsmoore@illinois.edu

Associate Director for Administration Jenny Cox
244-3915, 109 Noyes Lab jcox@illinois.edu

Assistant to the Head Jackie Miller
244-3334, 109 Noyes Lab jmill24@illinois.edu

Office Support Specialist Shelby Strehlow
333-5071, 109 Noyes Lab chemistry@illinois.edu

Graduate Program Coordinator Sean Drummond
244-4844, 109 Noyes Lab chem-gradprogramcoord@illinois.edu

Graduate Program Assistant Mackenzie Murray
244-6245, 109 Noyes Lab chem-gradprogramasst@illinois.edu

Assistant Director of Student Wellness & Advocacy in the Chemical Sciences Raylene Bentlin
333-6416, 109 Noyes Lab rayleneg@illinois.edu

Director of Undergraduate Studies Dr. Jordan Axelson
300-2392, 367I Noyes Lab axelson2@illinois.edu

Administrative Support, General Chemistry Office Greg Brannan
300-3170, 1026 Chemistry Annex gbrannan@illinois.edu

Administrative Support, Inorganic, Materials, Physical, and Analytical Chemistry areas Craig Johnson
300-9574, A131 Chemical and Life Sciences Lab craiglj2@illinois.edu

Administrative Support, Organic Chemistry and Chemical Biology areas Kara Metcalf
244-0769, 61 Rogers Adams Lab metclf@illinois.edu

School of Chemical Sciences 333-5070, 106 Noyes Lab, scs.illinois.edu

Office Administrator vacant
333-5070, 106 Noyes Lab tbd@illinois.edu

Assistant Director, SCS Human Resources Paige Wagner
300-1637, 312 Noyes Lab pawagner@illinois.edu

Director, Academic Advising and Career Counseling Patricia Simpson
333-1050, 105 Noyes Lab plblum@illinois.edu

FACULTY	GRADUATE STUDENTS	GRADUATE PROGRAMS
<p>POSITIVE & SUPPORTIVE ENVIRONMENT</p> <ul style="list-style-type: none"> • Foster the overall wellbeing of students • Provide students a safe, supportive environment • Interact ethically and professionally with other members of the university community • Be responsive and receptive to students' requests for academic feedback and professional advice 	<p>POSITIVE & SUPPORTIVE ENVIRONMENT</p> <ul style="list-style-type: none"> • Interact ethically and professionally with other members of the university community • Seek guidance when feedback is needed • Communicate about needs and concerns regarding academic and professional progress 	<p>POSITIVE & SUPPORTIVE ENVIRONMENT</p> <ul style="list-style-type: none"> • Foster the wellbeing of students • Provide students a safe, supportive environment • Interact ethically and professionally with other members of the university community • Connect students with appropriate university offices and resources • Help resolve student problems and conflicts
<p>ACADEMIC SUCCESS</p> <ul style="list-style-type: none"> • Guide students in developing academic and research skills • Convey clear expectations for academic and research progress • Provide timely, constructive feedback and periodic evaluations • Evaluate students' performance fairly and objectively • Promote students' timely academic and research progress • Advise students on requirements for academic integrity, responsible conduct of research and other relevant policies 	<p>ACADEMIC SUCCESS</p> <ul style="list-style-type: none"> • Be receptive to academic and research direction and feedback from advisers • Take responsibility for knowing and fulfilling degree requirements • Take responsibility for knowing and executing ethical, professional norms • Understand and follow department, Graduate College and university policies, including academic integrity, student conduct and responsible conduct of research 	<p>ACADEMIC SUCCESS</p> <ul style="list-style-type: none"> • Provide information about degree requirements, academic policies and expectations • Share information about fellowships, awards and other academic opportunities • Monitor student academic progress, providing at least yearly evaluations and communicating these with students
<p>CAREER DEVELOPMENT</p> <ul style="list-style-type: none"> • Foster the professional development of students to prepare for a wide range of future employment options • Assist students in achieving their career goals • Encourage engagement in professional communities and meetings to foster potential career opportunities • Advise students regarding the ethics of their profession 	<p>CAREER DEVELOPMENT</p> <ul style="list-style-type: none"> • Identify professional development needs and pursue appropriate opportunities • Take initiative for career exploration and the job search 	<p>CAREER DEVELOPMENT</p> <ul style="list-style-type: none"> • Promote student engagement in professional development programs • Foster the professional development of students to prepare for a wide range of future employment options • Direct students to resources that can help them pursue and succeed in their careers of choice

1. Degrees Offered

Through the Graduate College of the University of Illinois, the Department of Chemistry offers the following degrees:

1. Doctor of Philosophy in Chemistry
2. Joint M.D./Ph.D. in Chemistry
3. Master of Science in Chemistry
4. Master of Science in the Teaching of Chemistry

Graduate students in some of the degree programs above may also elect to complete the following add-on component:

1. Ph.D. Concentration in Computational Science and Engineering (CSE)

1.1 Doctor of Philosophy in Chemistry

The Ph.D. program in Chemistry includes six technical specialties (areas): analytical chemistry, chemical biology, inorganic chemistry, materials chemistry, organic chemistry, and physical chemistry. Students typically complete the Ph.D. degree requirements in approximately five years. A total of 96 hours including thesis credit is required; details on formal coursework requirements are provided in Section 5. Students are required to give a literature seminar, pass an oral preliminary examination, write and defend an original research proposal, and submit a research-based dissertation (thesis), which is defended at an oral final examination.

1.2 Joint Degree Program – M.D./Ph.D. in Chemistry

A joint M.D./Ph.D. program (called the Medical Scholars Program, or MSP) is available for those who wish to combine medical training with doctoral research in chemistry.

The primary objective of the M.D./Ph.D. program is to train students for careers in academic medicine and research. To enter the M.D./Ph.D. program, students must apply to and be accepted by both the Carle Illinois College of Medicine and the Department of Chemistry.

Students usually declare a clinically related theme by the end of their second year, and they will have both a thematic and departmental affiliation. M.D./Ph.D. students have multiple advisors. The thesis advisor oversees the student's particular research project. Advisors from the medical school provide guidance and advice about medical practice issues related to the student's career and issues unique to future physician-scientists. All advisors are selected by the student.

Typically, students begin medical school studies and chemistry coursework during the first two years of the program. Students are expected to fulfill all of the degree requirements of both the Carle Illinois College of Medicine and the Department of Chemistry. Credit toward both degrees is given for the same coursework, and repetition is avoided. An intensive period of original research follows, usually for three years, under the direction of a member of the graduate faculty appointed to the M.D./Ph.D. Training Program. Students in this phase of the program work side-by-side with Ph.D. students in the basic sciences and meet all of the necessary departmental requirements for the Ph.D. degree.

For the final two years of the program, the M.D./Ph.D. candidates work with other medical students in clinical clerkships in a medical specialty area. Both the M.D. and Ph.D. degrees are awarded at graduation. The time limit for completing the Ph.D. is ten years, or nine years if the student has received a master's degree elsewhere. M.D./Ph.D. students receive a tuition waiver and salary for each year of the Chemistry graduate program as long as the student continues to make satisfactory progress.

1.3 Master of Science in Chemistry

Two tracks lead to the Master of Science in Chemistry. Currently the department does not directly admit students seeking the master's degree via either track. The coursework master's degree program is designed to be completed in one year of full-time study by students entering without deficiencies. For this track, 32 hours of formal coursework is required. The thesis master's degree program requires 20 hours of formal coursework plus the submission of a thesis based on original research; the research component usually takes an additional year. Details of the coursework requirements for both tracks are provided in Section 4.3.

1.4 Master of Science in the Teaching of Chemistry (MSTC)

The Master of Science in the Teaching of Chemistry (MSTC) program provides advanced studies for those interested in teaching chemistry at the secondary school or community college level. The program serves two different audiences:

- Those who already have educator licensure or will teach in situations that do not require licensure;
- Those who wish to obtain a master's degree and an Illinois Professional Educator License endorsed in chemistry (grades 9–12) simultaneously.

The MSTC degree when starting with licensure or when licensure is not required can be completed in one year. The MSTC degree when starting without licensure requires two years. Details of the coursework requirements are provided in Section 4.3.3. Questions concerning the Master of Science in the Teaching of Chemistry program should be addressed to Dr. Elise McCarren, emccarr2@illinois.edu.

1.5 Ph.D. Concentration in Computational Science and Engineering (CSE)

A student must fulfill the following requirements to be eligible for the CSE concentration in chemistry:

- Satisfy all of the regular Ph.D. requirements for one of the six technical specialization areas within the Department of Chemistry (analytical, chemical biology, inorganic, organic, materials, physical).
- Two core CSE courses (CSE 401 Numerical Analysis, CSE 402 Parallel Programming, CSE 510 Numerical Methods for PDEs, or CSE 527 Scientific Visualization)
- Two CSE courses offered in chemistry (CHEM 576 Computational Chemical Biology, CHEM 550 Advanced Quantum Dynamics, or CHEM 548 Molecular Electronic Structure) or in other departments.

- Relate the Ph.D. thesis to computational science as well as to chemistry, as judged by the thesis committee.
- Include on the thesis committee at least one faculty member affiliated with the CSE program.

The student must satisfy the 20 hours coursework requirement for one of the six specialization areas within the Department of Chemistry. The core CSE and the CSE courses in chemistry may count toward this total where appropriate. The following courses do not count as CSE courses in chemistry but do have a significant computational component: CHEM 442, CHEM 540, and CHEM 544/546. For further information, see cse.illinois.edu/cse-educational-programs or contact Prof. Zan Schulten, 217-333-3518, zan@illinois.edu.

2. Admissions Policy

2.1 Contact Information

You can obtain information about applying to our graduate programs in the Department of Chemistry by contacting the Chemistry Graduate Admissions Office at chem-adm@illinois.edu, 217-244-6245, or 800-516-0276 (U.S. only). Departmental information about the admissions process and application forms are also available at the website:

chemistry.illinois.edu/grad-adm

2.2 Deadlines for Applying

There is no firm deadline for submission of applications to our Ph.D. program; we strongly encourage early applications because there are a limited number of graduate student positions available. Those applications received before December 1 will receive full consideration for fall admission and are most likely to earn fellowships.

2.3 Admissions Requirements

The requirements for admission are an undergraduate degree with at least 25 semester hours in chemistry (suitably distributed) and a grade-point average of 3.0 or higher (4.0 scale). A student's academic record and recommendations must be a strong indicator of their fitness to pursue advanced study and research in chemistry.

Application materials to our Ph.D. program in chemistry should include:

- A completed online application form
- Personal statement
- Resume
- Three letters of reference
- Official transcripts of all previous undergraduate and graduate work (one transcript from each institution attended)
- Official English Language Proficiency test scores for applicants whose native language is not English; see Section 2.4 for more details
- GRE scores (general or subject) are not required and should not be submitted

Students applying to the Master of Science in the Teaching of Chemistry Program should also submit a completed supplemental application form for Graduate Admission to Teacher Education Programs, including an essay and resume (contact the College of Education for information).

A candidate for admission to the MSTC plus Certification Program must have passed the Illinois Licensure Testing System (ILTS) content area test for their intended teaching major and the ILTS Test of Academic Proficiency (TAP). Information for the ILTS content area and the Test of Academic Proficiency is at il.nesinc.com. A candidate's credentials will be evaluated to assure that they have a broad, general education background. Any noted deficiencies will need to be satisfied before the candidate will be recommended for certification.

2.4 English Proficiency

All students who are not native English speakers are required to fulfill certain requirements established by the university to receive admission with full graduate standing and financial aid. Non-native speakers are normally required to take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) before admission to the university.

Because serving as a teaching assistant (TA) is required by the Chemistry graduate program, there are special requirements for applicants whose native language is not English. To qualify for an exemption to these requirements, an international student must have continuously attended institutions in an approved country that conducts teaching in English from the age of 13 onward. An international student who does not qualify for this exemption can meet the English proficiency requirement by submitting a passing TOEFL iBT or IELTS score. To be valid, the English proficiency exam date must be within 2 years of the graduate program start date.

The minimum requirements to serve as a TA are as follows:

- TOEFL iBT (before January 1, 2026): Speaking score 24, overall score 103
- TOEFL iBT (after January 1, 2026): Speaking score 5, overall score 5
- IELTS: Speaking score 8, overall score 7 (with no subsection score less than 6)

The university's English Placement Test (EPT), administered by the Department of Linguistics, must be taken by any newly admitted international student whose overall TOEFL iBT or IELTS score is below the minimum listed above, or if the student does not have a valid score on file. The University of Illinois Urbana-Champaign establishes this requirement. A student will not be allowed to register without satisfactorily completing the EPT requirement. A student will be placed into or exempted from English as a Second Language (ESL) courses based on the results of the EPT. The EPT is typically taken during orientation, before fall instruction begins.

Any international student whose TOEFL or IELTS speaking score is below the minimum listed above, or if the student does not have a valid score on file, will be required to take the university's Oral English Assessment Interview (OEAI), also administered by the Department of Linguistics. Students who do not receive a passing OEAI score after three attempts may not be eligible for departmental financial support beyond the first year. The Graduate Program Coordinator will sign up each student who needs to take the OEAI, which is offered online during the summer. The Department of Linguistics will arrange the OEAI and contact the student with details.

2.5 Office of International Student and Scholar Services (ISSS)

The Office of International Student and Scholar Services (ISSS) is the campus office devoted to international students and provides a variety of services and advising. International graduate students must check in with ISSS when they arrive on campus to have their employment eligibility verified (Form I-20). ISSS provides such services as transportation assistance, orientation to campus and community life, housing assistance, and information about social opportunities. They also advise on such issues as income tax, immigration regulations and documents, optional practical training (OPT), and job search strategies. Their address is 400 Turner Student Services Building, 610 E. John Street, Champaign, IL 61820, and their office hours are 8:30 am-5:00 pm Monday-Friday. Their telephone number is 217-333-1303, and their website is iss.illinois.edu.

3. Course Grades, Credit, and Registration

3.1 Grades

To receive graduate credit, graduate students should enroll in 500-level or approved 400-level courses. At the University of Illinois, letter grades correspond to the following grade points:

Letter grade	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Grade points	4.0	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0

Although A, B, C, and D are passing grades, **no course in which a student has earned a C or D may be applied to any graduate degree in our department.** Grades of C are particularly serious when earned for courses in the student's specialty area. See Section 5.2.6 for more information. Credit/No Credit courses or grades do not count toward any graduate degree in our department.

3.2 Credit

Graduate credit at the University of Illinois is measured in hours. Courses in the 500 series, with the exception of some courses such as the 500 and 501 language courses, carry graduate credit and are restricted to graduate students except under special circumstances. Most courses at the 400-level carry graduate credit as well as undergraduate credit. Each course description indicates the credit available.

3.3 Required Credit Loads

To maintain full-time enrollment status, graduate students with waiver-generating appointments must register for a minimum of 8 hours each fall/spring semester and 4 hours each summer. Almost all graduate students have waiver-generating 50% appointments. For those rare students who lack a waiver-generating 25%+ appointment, the full-time minimum is 12 hours for fall/spring and 6 hours for summer. For some international students, the minima may be higher in order to comply with visa requirements. We request that all graduate students register for 14 hours in fall/spring and 6 hours in summer, so that full-time status is maintained regardless of visa considerations and even if various courses are dropped. Each semester, each student should register for CHEM 599 (Thesis Research) under the research advisor's course registration number (CRN) to make the course load equal to the indicated amount of credit. See Section 5.2.6 for coursework requirements.

There are many reasons to maintain full-time student status: to fulfill the requirements of the program, student loans, fellowship and traineeship appointments, and certain types of non-university medical insurance policies. In addition, graduate students not registered for at least a half-time load are subject to Social Security and Medicare deductions. International students may be required to maintain full-time status for purposes of Student Exchange and Visitor Information System (SEVIS) reporting.

3.4 Transfer Credits and Course Waivers

Graduate coursework taken at an accredited institution within the last five years with grades of A or B may be counted toward a graduate degree at UIUC, if approval is granted. There are two options: the coursework can be transferred (in which case it appears on the UIUC transcript), or UIUC course(s) equivalent to the one(s) taken elsewhere can be waived.

For a transfer of credit, the coursework must not have been used toward another degree.

For a waiver of coursework requirement(s) at UIUC, there is no requirement to complete coursework at UIUC. Instead, students can apply for a waiver at any time, including before their first semester.

Generally, a maximum of 8 hours of coursework may be transferred or waived. In both cases, the student should fill out a petition form, attach any official transcripts if such are not already available in the student's file, and provide a syllabus of the course taken at the previous institution. Approval of the petition requires endorsement by the student's advisor, an appropriate faculty member in the area of the coursework, the department head, and (for transfer credit only) the Graduate College.

Note: Students in the coursework master's program are ineligible to receive course waivers, and any waivers they may previously have received (for example, while enrolled in the Ph.D. program) are cancelled. Transfer credit, however, may be applied to a coursework master's degree.

3.5 Obtaining Certification of Full-time Student Status

If certification of full-time student status is required (for example, for loans, immigration, or fellowships), the student must be registered for at least 12 hours per semester. International students should check with the International Student and Scholar Services office for details. Certification for full-time student status is obtained from the Registrar's Office, Transcript Section; 140 Admissions and Records Building, 901 W. Illinois St., or at registrar.illinois.edu/academic-records/enrollment-degree-verification/. For further information on credit loads, see Section 3.3.

3.6 Academic Warning Status

Academic warning status indicates that a student is not making satisfactory academic progress for one or more reasons that include, but are not limited to, performance in coursework, satisfactory and timely completion of all degree program milestones including preliminary examination, satisfactory progress in research, and overall GPA. A student can be removed from academic warning status by resolving the issue that led to the status or by the intercession of the department head.

3.7 Registration for Courses

The University Identification Number (UIN), which is assigned through the Admissions and Records Office, is required for online registration. Directions for accessing and using the online registration system are found at registrar.illinois.edu/registration-procedures. All graduate students must use the System HR Services website at hr.illinois.edu to record their appointment in order to assure proper application of tuition and service fee waivers.

3.8 How to Add/Drop Courses

A student may add or drop a course each semester until the deadline listed in the Graduate College Calendar. The graduate student should discuss any intent to add or drop a substantive course with the faculty advisor before the action is taken. The course instructor should be consulted if appropriate, but in many cases this is not necessary. *Before* the add/drop deadline, students may add and drop courses themselves online. *After* the deadline, the student must ask the Graduate Program Coordinator for assistance.

Generally, students who drop a course should increase their hours in CHEM 599 in compensation so as to maintain the required credit load (see Section 3.3).

Unless extenuating circumstances apply, the required courses in the student's specialty area may not be dropped without the consent of the instructor and the area's Budget and Operations representative.

4. The Master's Degree in Chemistry

4.1. Admission to a Master's Degree Program

The Department of Chemistry does not admit students directly into a coursework or thesis master's program, except for service academy (e.g., Air Force) master's students who will be paid by the service academy during the master's program. In certain circumstances, continuing students in the Ph.D. program may transfer out of that program and obtain a master's degree.

4.2 Transferring from the Ph.D. Program to a Master's Degree Program

In order to transfer from the Ph.D. program to any of the master's degree programs, please see the Graduate Program Coordinator. Students must fill out a petition to change degree programs and have it approved by their advisor and the Department of Chemistry before it is forwarded to the Graduate College. Students who wish to transfer into the Master's of Science in the Teaching of Chemistry program must be accepted into that program by the department head. Additional paperwork may be required depending on the M.S. program the student enters.

4.3 Department of Chemistry Requirements for the Master's Degree

There are three ways to fulfill the requirements for a master's degree in the Department of Chemistry: a coursework master's, a thesis master's, and a master's degree in the teaching of chemistry. The specific requirements for these degrees are detailed below.

Should the departmental requirements for these degrees be revised, continuing students may choose whether they wish to fulfill the requirements in effect when they began graduate study or those specified in the revised policy, unless otherwise stipulated.

The Department of Chemistry does not award the M.S. degree to a Ph.D. program student, either along the path to the Ph.D. (unless they formally transfer to the M.S. program and no longer pursue the Ph.D. degree) or at the end of the Ph.D. program. The faculty view is that two different degrees should represent two different bodies of work, such that providing an M.S. degree for the same work that was done for the Ph.D. degree is inappropriate.

4.3.1 Coursework Master's Degree

The minimum requirement for the coursework M.S. is 32 hours of formal coursework in chemistry or a related discipline at the 400 level and above. Of these hours, 20 must be at the 500 level, 16 of which must be in chemistry. Students who plan to graduate with a coursework M.S. should present a coursework outline to the Graduate Program Coordinator and the Director of Graduate Studies before registering. Students should also be mindful of the following:

- Application for graduation should be made before the appropriate deadline (see Graduate College Calendar).
- A minimum GPA of 3.0/4.0 must be maintained.
- Credit/No Credit courses or grades do not count toward the coursework M.S. degree.
- A grade lower than a B- in a graduate course (including a 400-level course taken for graduate credit) will not count toward the required hours.
- CHEM 440, 442, and 444 do not count as graduate courses, except in the event that the student has not taken undergraduate physical chemistry.
- "S" graded courses may count, subject to the provisions above.

- The CHEM 591 Introductory Professional Development for Chemists course (1 hour) counts toward the coursework M.S. degree. However, the CHEM 593 Advanced Professional Development for Chemists course does not count. The CHEM 592 Preparing Graduate Fellowships course (1 hour) also counts toward the coursework M.S. degree. However, like for the Ph.D. degree [see Section 5.2.6(e)], at most 2 hours of the 32 hours may be from 1 hour courses.
- CHEM 590 Special Topics can be used for up to 4 hours of the 500-level requirement.
- If CHEM 5x5 is taken, then it cannot count toward the 32 hours of required coursework.
- Students who began in the Ph.D. program may be allowed to count up to 4 hours of CHEM 599 credit toward their regular coursework. These CHEM 599 hours must have earned an S grade rather than a U grade, and formal approval is required from the department head or Director of Graduate Studies, who may first consult with the CHEM 599 instructor. The converted hours may NOT count toward the required 20 hours at the 500 level.
- Deferred grades. The Graduate College does not allow deferred (DFR) grades to remain as such on a student's permanent academic record. All students graduating with a coursework M.S. need to file a petition with the Graduate College to request an exception to this policy. The Graduate Program Coordinator can assist with this process.
- Update your address information in the appropriate campus online system. Your diploma will be mailed to your permanent address.

4.3.2 Thesis Master's Degree

The coursework requirement for the thesis M.S. is the same as the Ph.D. in Chemistry (see Section 5.2.6; the literature seminar course CHEM 5x5 is NOT required for the thesis M.S. degree, and if CHEM 5x5 is taken, then it cannot count toward the 20 hours coursework requirement). Students should also be mindful of the following:

- Application for graduation should be made before the appropriate deadline (see Graduate College Calendar)
- Credit/No Credit courses or grades do not count toward the thesis M.S. degree.
- Title Page Check in the Graduate College Thesis Office
- Departmental Format Review (Graduate Program Coordinator)
- Format Review in the Graduate College Thesis Office
- Upload thesis to the Graduate College before deadline. Additional items required:
 - One original Thesis/Dissertation Approval form, signed by the research advisor and the department head
 - Completed format review by the Graduate Program Coordinator
 - \$15 deposit fee will be charged to the student's account
- Update permanent address information in the appropriate campus online system. Your diploma will be mailed to this address.

4.3.3 Master of Science in the Teaching of Chemistry

There are two options for students in the M.S. in the Teaching of Chemistry (MSTC) degree program.

- a) MSTC degree, no education licensure. Candidates must earn 16 hours of credit in chemistry (400 or 500 level), 8 hours in education (400 or 500 level) and 8 hours of electives in either education or physical science. Of the 32 hours, 12 must be in 500 level courses, and 8 of

these must be in chemistry. The specific courses are selected in consultation with the graduate advisor for the program (Dr. Elise McCarren, emccarr2@illinois.edu). CHEM 495, Teaching Secondary Chemistry, is recommended for everyone completing the MSTC degree.

- b) MSTC degree, with education licensure. Both the requirements for MSTC degree and the requirements for licensure must be completed. The 400 and 500 level courses required in education to complete licensure can be counted toward the requirements for the MSTC degree. Candidates must earn 16 hours of credit in chemistry (400 or 500 level), 8 of which must be at the 500 level, and 16 hours in education, 4 at the 500 level of Curriculum and Instruction and 12 hours of licensure courses at the 300 level or higher.

In each option, the MSTC students must show proficiency in teaching as evaluated by the Feedback on the Learning Experience Survey (FLEX) completed by the undergraduate students, teaching evaluations made by the course directors for whom the MSTC student works, and teaching evaluations made by the MSTC program director.

A recommended sequence of courses is as follows. These recommendations are current as of the date of preparation of this Graduate Manual, but the recommendations may change as courses in various units, especially outside Chemistry, are changed.

Semester 1 (fall): CI 401 (3 hours), EOL 440 (1 hour), CI 335 (1 hour), CHEM course (4 hours), CHEM course (4 hours), CHEM 591 (1 hour)

Semester 2 (spring): CI 402 (3 hours), CI 473 (1 hour), EPSY 430 (2 hours), CHEM course (4 hours), EPS 400 level course (choose from among EPS 400, 403, 404, 405, 410, 411, 420, 423, and 426)

Semester 3 (fall): CI 403 (3 hours), EPSY 485 (2 hours), SPED 205 (1 hour), SPED 405 (2 hours), CHEM 495 (4 hours), CI 500-level (4 hours)

Semester 4 (spring): CI 404 (3 hours), EDPR 442 (8 hours)

Students who leave the Ph.D. program are not permitted to transfer to the MSTC program.

4.4 Transferring from a Master's Degree Program to the Ph.D. Program

Students in the master's program can petition to enter (or re-enter) the Ph.D. program. To initiate the process, a Graduate College petition must be filled out and approved by the student's intended new Ph.D. advisor. Upon receipt of the form, the Department will normally appoint an ad hoc committee of three faculty members, not including the intended new Ph.D. advisor, to make a recommendation. The ad hoc committee may ask to meet with the student, request additional written material from the student or the intended new Ph.D. advisor, or take other actions as needed to reach a decision. If the committee makes a favorable recommendation, then it will also specify new deadlines for any degree requirements that remain to be satisfied. Ph.D. requirements completed at UIUC do not normally have to be repeated, but they are subject to Graduate College time limits.

5. The Doctoral Degree in Chemistry

5.1 Graduate College Requirements for the Ph.D. Degree

All Graduate College requirements are included in the Graduate College Handbook, with key deadlines governed by the Graduate College Calendar. The links are provided on page 6.

5.1.1 Credit and Residence

Doctoral programs are divided into three stages, as described below, and must include a minimum of 96 hours of credit. At least 64 hours, including thesis credit (CHEM 599), must be earned in courses meeting on the Urbana-Champaign campus, at the Chicago campus, or in other locations approved by the Graduate College for graduate credit. After the residency requirement has been fulfilled, a student who plans to leave campus may file a petition with the Graduate College (via the Graduate Program Coordinator) for permission to register *in absentia* for thesis credit. Such registration is uncommon but may be appropriate when collaboration requires a student to work for extended periods away from the Urbana-Champaign campus or when a research advisor moves to another academic institution.

Stage I. The Graduate College considers a doctoral student to be in Stage I from initial enrollment in the Graduate College to completion of a master's degree or its equivalent. Transfer credit can only be applied to Stage I. At the end of their second year, all students in the Department of Chemistry will receive written communication regarding their completion of Stage I, which requires completing the department's 20 hours coursework requirement.

Stage II. In the Department of Chemistry, a student has completed Stage II after successfully presenting/passing their literature seminar (normally done in the second year) and passing the preliminary examination (normally done in the first semester of the third year). At the end of Stage II, the student is formally a candidate for the doctoral degree.

Stage III. Research and other activities (in the Department of Chemistry, this includes passing the original research proposal, ORP, normally done in the fourth year) culminating in passing the final oral examination and depositing an approved dissertation. Registration in CHEM 599 (Thesis Research) is required for the entire academic semester in which a student takes the final examination, regardless of when the thesis will be deposited with the Graduate College or when the degree will be conferred.

5.1.2 Time Limit

Doctoral candidates must complete all degree requirements within seven years after their initial registration in the Graduate College. A student entering directly into Stage II, with a master's degree from another university or with a significant lapse of time since earning a master's degree on this campus, has six years in which to complete degree requirements. For more information on the time limit policy, see the Graduate College Handbook.

5.1.3 Preliminary and Final Examinations

Preliminary examinations are taken at the end of Stage II of doctoral programs. Final examinations are oral and public. The Dean of the Graduate College appoints committees at departmental request to administer preliminary and final examinations. These committees must be composed of at least four voting members, including at least three members of the graduate faculty, two of whom must be tenured. The decision of the committee for the preliminary examination must be unanimous. Decisions of the committee for final examinations may include one negative (fail) vote. See the Graduate College website for details of committee composition and voting requirements.

Unless superseded by Graduate College policy, the Chemistry department policy is that audio or video recording of any part of oral Preliminary or Final Examinations is allowed only with the written consent of all participants, including the examinee, all committee members, and all audience members (if any). This policy also extends to department-specific examinations; e.g., original research proposals (ORPs).

5.1.4 Thesis

All candidates for the Ph.D. degree are required to write a thesis. In addition, all completed theses must be acceptable for deposit in the Graduate College; a thesis that fails to meet Graduate College standards will be rejected. The thesis must be the work of a single author.

If thesis research involves the use of human subjects, warm-blooded animals, or hazardous materials or procedures, the student must comply with the university's policies and procedures governing such work. See oprs.research.illinois.edu.

Because all theses are made available to the public, a thesis containing classified material, i.e., material deemed non-publishable under federal security regulations, cannot be accepted. However, theses may be withheld temporarily from public release under certain circumstances (for example, to protect a patent application). See grad.illinois.edu/forms and click the link to Thesis Withholding Request Form.

For more information about theses, see various subsections of Sections 5.2.

5.2 Department of Chemistry Requirements for the Ph.D. Degree

Should the department requirements be revised, continuing students may choose whether they wish to fulfill the requirements in effect when they began graduate study or the requirements specified in the revised policy, unless otherwise stipulated.

The primary activity of Ph.D. candidates is research. The specific requirements in our Ph.D. program constitute a series of steps in professional development, which leads to an individual who is prepared for an independent career. The first step, learning the techniques and concepts of a field, which provides the fundamental basis for a student's research and for future growth, occupies the first two years. The second step, passage to candidacy, certifies that an individual has acquired the basic skills, critical capacity and independence that are needed for Ph.D. research. Successful completion of this step is assessed at the preliminary examination, which is normally completed by the end of the fifth semester. The third step, the submission and defense of a thesis based on the student's original experimental and intellectual work, represents the individual's creative

contribution to new knowledge and usually requires about two or three additional years. The mean time to a degree in the program is 5.25 years.

5.2.1 Deadline Extensions and Department Requirement Waivers

Any extension of a department graduate program deadline (e.g. for literature seminars, preliminary examinations, or research proposals) or waiver of a department graduate program requirement must obtain the approval of the faculty advisor, the area faculty members (if appropriate), and the department head (or designee). Normally, area-specific issues will be discussed by the area faculty and the recommendation transmitted to the department head by the appropriate Budget and Operations Committee representative.

5.2.2 Orientation Program for Incoming Students

Before the beginning of the fall semester, an orientation program introduces incoming graduate students to the Department of Chemistry and its faculty, the operation of the graduate program, and the department's facilities. During this time, new Teaching Assistants attend a week-long orientation program and a campus-wide teaching symposium. Contact the Graduate Program Coordinator for more information about the orientation program.

5.2.3 Registration Exams

As of Fall 2025, no incoming graduate student in Chemistry is required to take a registration exam.

5.2.4 Department Areas and Enrolling in Courses

The department has six technical areas of specialty: analytical chemistry, chemical biology, inorganic chemistry, materials chemistry, organic chemistry, and physical chemistry. Incoming graduate students are assigned to a particular area during the admissions process, on the basis of the content of their application (e.g., their personal statement and research experience). During the summer prior to the start of the first year, incoming graduate students receive guidance from the incoming student advisor in their area to determine which courses they should take during their first semester. Advisors in other areas may also be consulted upon request. For information about how to add or drop courses, see Section 3.8. During orientation, incoming graduate students have the opportunity to attend meetings that provide information about the six areas. If an incoming student wishes to be formally part of a different area than assigned during the admissions process, then the student is required to consult with the Budget and Operations Committee representatives of both areas before any final decision about the change is made. For more information about changing areas within the department, see Section 5.2.15.

Throughout their graduate careers, students are expected to regularly attend the seminars in their area of specialty.

5.2.5 English Proficiency

Teaching is a requirement for most students in the Chemistry Ph.D. program, and the ability to communicate clearly in English is necessary for the students to provide effective instruction. Illinois state law and the university require all students who will teach and who are not native speakers of English to demonstrate competence in spoken English. These students must either pass the Test of English as a Foreign Language (TOEFL) with a score of 24 or greater before they arrive

on campus or receive a passing score on the Oral English Assessment Interview (OEAI) after they arrive. The OEAI is given on campus.

The OEAI typically is held during the first days of orientation, and non-native English speakers who have not obtained the required scores on the TOEFL (see Section 2.4) must arrive on campus in time to take this examination. The Graduate Program Coordinator will schedule your appointment and notify you in advance of the date, time, and location of your interview.

Students are expected to pass the TOEFL or OEAI before the beginning of their second year. Students who do not pass may be denied departmental financial support beyond the first year. In addition, they can only be given appointments that do not involve spoken interactions with students, such as serving as graders or as helpers for departmental personnel.

To improve spoken English skills, students have several options. They may enroll in graduate-level English as a Second Language (ESL) courses such as ESL 404, 406, or 410. Another option is to receive ten hours of private tutoring from a tutor approved by the Center for Teaching Excellence (CTE).

5.2.6 Coursework Requirements

The selection of courses is to a large extent an individual matter, with the student's research interests and long-range plans as the major factors in determining the selection. Courses both within and outside the Department of Chemistry can be selected. A cumulative grade-point average (GPA) of 3.0 must be maintained for the student to remain in good standing in the department. Credit/No Credit courses or grades do not count toward the Ph.D. degree. All Ph.D. candidates in the Department of Chemistry are required to complete the following coursework requirements before the preliminary examination is taken. The specific courses to be taken are to be chosen in consultation with the student's advisor.

- a) CHEM 591 (Introductory Professional Development for Chemists, 1 hour).
- b) Eight hours of 500-level coursework within chemistry, excluding the literature seminar course. For area-specific information about this requirement, see Section 5.2.7.
- c) Additional hours of graduate coursework in chemistry or in a physical, mathematical, or biological science to make a total of at least 20 hours, excluding the literature seminar course. The additional hours are to be chosen from among any of the following options:
 - i. CHEM 420, 472, 474, 480, 482, 483, 488, 492, or 494, provided these courses are not counted toward the declared area requirement.
 - ii. Any 500-level course in chemistry except the following, which cannot be used to satisfy the 20 hour requirement: the literature seminar CHEM 5x5, CHEM 599, and any 500-level credit associated with the Graduate College's Summer Pre-Doctoral Institute (SPI) or its equivalent. CHEM 590 Special Topics courses may or may not count toward the 20 hour requirement; consult the Budget and Operations Committee representative of the student's area.
 - iii. Any appropriate 400- or 500-level course in natural science or engineering departments other than the Department of Chemistry. The area's Budget and Operations Committee representative should be consulted to ascertain whether any such course is appropriate.

- d) Up to eight hours of credit toward the coursework requirement can be given for graduate-level work done at another accredited institution within the past five years. See Section 3.4 for details.
- e) At most 2 hours of the 20 hours may be from 1 hour courses. CHEM 591, CHEM 592, CHEM 494, and other such courses (including some CHEM 590 Special Topics courses, if approved) can count toward the 20 hours.
- f) A grade lower than B– in a graduate course (including a 400-level course taken for graduate credit) will not count toward the required 20 hours. For a graduate course in a student's specialty area, a grade lower than B– means that the same course must be retaken.
- g) The literature seminar course CHEM 5x5 (x = different number for each area), which must be completed before the student takes the preliminary examination. This course is taken in the second year and does not contribute to the 20 hours requirement.
- h) CHEM 593 (Advanced Professional Development for Chemists, 1 hour). This course is normally taken in the third year, spring semester, after passing the preliminary examination and does not contribute to the 20 hours requirement.
- i) CHEM 599 (Thesis Research) is taken every semester. It is general practice to register for the appropriate number of credits for CHEM 599 to raise the course load to or above the required amount (see Section 3.3). The course reference number (CRN) for CHEM 599 is different for every research advisor; the area offices and the Graduate Program Coordinator can provide these CRNs. Graduate students whose advisor is outside Chemistry still must enroll in CHEM 599, not any equivalent course in their advisor's home department. Graduate students who have a Chemistry advisor of record (AOR) should register for CHEM 599 under the Chemistry AOR's CRN.
- j) Unless extenuating circumstances apply, the required courses in the student's specialty area may not be dropped without the consent of the instructor and the area's Budget and Operations representative.

The above requirements are minima, not targets. Additional courses can be taken if they are beneficial to the student's career, even if they exceed the requirements.

For first-year graduate students, the recommended course load consists of at least two courses in each of the first two semesters, not counting CHEM 591, CHEM 592, or CHEM 599. No graduate courses are offered over the summer. Students are expected to complete their coursework requirement by the end of their fourth semester in residence and before taking the preliminary examination.

In addition to the formal coursework requirements, regular attendance at at least one of the area seminar series is required for all graduate students. A list of the seminars in the Department of Chemistry is available on the department's website at chemistry.illinois.edu/seminars.

5.2.7 Area-Specific Coursework Requirements

Each specialty area of the department has a different set of core courses that are required for students in that area. Unless extenuating circumstances apply, the required courses in the student's area may not be dropped without the consent of the instructor and the area's Budget and Operations representative. The area-specific coursework requirements are as follows.

Analytical Chemistry: CHEM 520 (Advanced Analytical Chemistry)

Chemical Biology: CHEM 570 (Concepts in Chemical Biology)

Inorganic Chemistry: CHEM 512 (Advanced Inorganic Chemistry), 516 (Physical Inorganic Chemistry)

Organic Chemistry: CHEM 530 (Structure and Spectroscopy), 532 (Physical Organic Chemistry), 534 (Advanced Organic Synthesis)

Materials Chemistry: CHEM 584 (Introduction to Materials Chemistry), 588 (Physical Methods in Materials Chemistry)

Physical Chemistry: CHEM 540 (Quantum Mechanics) is a prerequisite for all graduate-level Physical Chemistry courses. This requirement can be waived at the discretion of the course instructor only if the student demonstrates graduate-level knowledge of quantum mechanics. CHEM 544 (Statistical Thermodynamics) is also required and will not be waived.

5.2.8 Foreign Language Requirement

There is no foreign language requirement for the Ph.D. degree in chemistry. Individual research advisors may request particular foreign language competence for their students.

5.2.9 GPA Requirement, Satisfactory Progress, and Good Standing

Students are making reasonable progress towards degree completion in the Department of Chemistry if they maintain a cumulative GPA of 3.0 or greater, have each term (semester) GPA of 2.75 or greater, do not receive a grade lower than B- in any course, join a research group by the end of the first semester in residence, are in a research group in subsequent semesters, and make satisfactory progress toward the Ph.D. degree. Such students are in good standing in the department.

Students who have a cumulative GPA below 3.0, who have a term (semester) GPA below 2.75, or who are otherwise not making satisfactory progress toward the Ph.D. degree, including but not limited to insufficient efforts devoted towards research, are no longer in good standing in the department. Such students may be allowed to continue in the program, be placed on academic warning status (formerly “probation”) with the Graduate College, be transferred to the master’s program, or be asked to leave the department, depending on the recommendation of the Director of Graduate Studies and the decision of the department head. A student who is placed on academic warning status is provided a specified time window, by the end of which the student must have met certain criteria for remaining in the program. If these criteria are met, then there are no further consequences. If these criteria are not met, then the student may be transferred to the master’s program or be asked to leave the department.

Satisfactory progress toward the Ph.D. degree involves performing research. If a student is not in a research group after one semester in residence, or if research progress is inadequate as judged by the research advisor, then in consultation with the department head, withdrawal of financial support and termination of registration may follow. It is not the intent of this rule to dissuade any

student from tackling challenging research, but rather to highlight the necessity of sustained effort and accomplishment.

Any withdrawal of support, change in degree status, or termination may be appealed as described in Section 7, Appeal and Grievance Policy.

As of Fall 2025, the Graduate College requires that each research advisor assign a grade of S (satisfactory) or U (unsatisfactory) to each graduate student in CHEM 599 Thesis Research. The consequences of one or more U grades for the student are left to each department to decide. In Chemistry, a graduate student who receives one U grade in CHEM 599 will be put on academic warning status by the department. Receiving U grades in two consecutive semesters (fall, spring, or summer) results in the student being placed again on academic warning status and also requires a meeting of the research advisor and Director of Graduate Studies with the student before the tenth day of instruction of the next semester. Within three business days after the meeting, the advisor and DGS must provide the student their written expectations of improved progress for the next semester. Receiving U grades in three consecutive semesters results in termination from the Ph.D. program. Switching research advisors does not change the consequences of one or more U grades in CHEM 599. In general, the considerations of CHEM 599 U grades do not supersede the considerations in Section 5.2.14 with regard to switching research advisors. This includes the possibility that the research advisor can require the student to leave their group independent of U grades in CHEM 599.

5.2.10 Graduate Student Annual Reviews

Each graduate student in the Department of Chemistry will undergo a mandatory performance review by the research advisor at the end of each academic year. Each student is required to evaluate progress to date, and the research advisor will provide comments on the student's self-evaluation. Based on the nature of the review, each student has the option to agree with the review, disagree with the review, or disagree with the review and request a meeting with a departmental representative. The process is entirely electronic and is initiated by a notice to the student from the Graduate Program Coordinator.

5.2.11 Teaching Requirement

Unless there is a compelling circumstance (see below), each student in the Ph.D. program is required to teach for at least 1.0 FTE-semester, typically two semesters each at half-time (0.5 FTE). Many students teach for three or four semesters; any teaching past the second year requires prior approval by the Associate Head of Budget and Operations. See Section 6 for more information about appointments to teaching and research assistantships.

Under certain conditions, the teaching requirement may be reduced. Holders of multi-year fellowships may be able to have the teaching requirement deferred, reduced, or waived if the fellowship declares that the holder is not expected to teach or receive any funds in addition to those provided by the fellowship, or if the fellowship award amount meets or exceeds the department's normal salary. Students whose multi-year fellowships pay more than 75% of the normal salary may have their teaching obligation reduced, and students with fellowships that pay 100% of the normal salary will generally have their teaching obligation waived.

5.2.12 Identifying a Faculty Research Advisor/Joining a Group

During the first semester of graduate studies, students will make what is probably the most important decision in their graduate careers: choosing a faculty research advisor and joining a group. To make the right decision, it is absolutely vital to learn who is in the department. Students must speak with faculty and with other graduate students at length. Every research group is different; for each group of interest, the student must find out what projects are available, how the faculty advisor interacts with the graduate students in the group, what funding is available, and any other factors that are of interest to the student. Ultimately, faculty advisor identification is a mutual agreement between faculty member and graduate student.

Questions students should consider when deciding on a research group

- How interested am I in the research?
- Is there a trend in the career path of recent graduates, and is the career path I am thinking of entering after graduate school consistent with this?
- Is the group culture one in which I feel comfortable working for an extended period of time?
- Is the advisor's personality and philosophy on education and achievement consistent with my own?
- Is the advisor's style (e.g., "hands-on" vs "hands-off") consistent with my needs and preferences?
- Is the graduation rate consistent with other groups in the department, i.e., rate of attrition, length of time to Ph.D. degree?
- Do the comments of new and senior students within a single research group conflict with one another?
- Do descriptions and opinions of a research group by members of another group conflict with those of the members of that group?
- How well-funded is the group, and how often are graduate students appointed to TA positions after their first or second year?
- How do I rank the importance of the issues in these questions?

When students can join groups

Graduate students who begin the Ph.D. program at the beginning of the spring semester may join a research group at any time after they have spoken to six faculty members (including all of the assistant professors in at least one area).

Graduate students who begin the Ph.D. program in the fall or summer may not join a group until the fall group-joining date, which is set annually by the department head.

For Fall 2026, the group joining date is Friday, November 6, 2026.

Although students do not have to join a group on the group-joining date, such action should be taken as soon as possible after the group-joining date, and no later than the end of the first semester. This action will ensure that the student will receive good advice about second-semester courses

from their research advisor and will have the opportunity to begin research during the second semester.

The department expects each first-year student to identify an advisor by the end of the first semester in residence, i.e., by December 31 of the fall semester. If this is not done, then the department head may elect to withdraw department financial support until the student identifies an advisor, or the department head may elect to terminate the student from the Ph.D. program. A student who has not identified an advisor by March 1 will be terminated from the Ph.D. program.

Several resources are available for students who are experiencing difficulty with the advisor identification process. The Director of Graduate Studies, the student's area faculty advisor, the Assistant Director of Diversity, Equity, and Inclusion in the Chemical Sciences, and the Graduate Program Coordinator are ready and willing to provide guidance.

In the event that a student cannot find a group to join, they should either complete a coursework master's degree or leave the program.

Graduate students who begin the Ph.D. program in the fall or summer semester must adhere to the following policy in identifying a research advisor and engaging in research:

- a) If an incoming student performs summer research, then it is without any obligation to join that group in the fall. Each incoming student who for any reason is already performing research prior to the fall semester must cease that research at the start of the August orientation activities as well as respect the fall group-joining date.
- b) Each student has the option to do rotations during the fall semester. See below for details about fall rotations.
- c) Independent of fall rotations, each student must either speak with or attend the presentation of a minimum of six faculty members. These six faculty members must include all assistant professors in at least one specialty area (analytical, chemical biology, inorganic, materials, organic, or physical chemistry). The Department of Chemistry provides a form to record these interactions, but obtaining physical or electronic faculty initials or signatures on this form is not required or expected.
- d) A list of faculty members with their area interests will be provided to all students. Students may discuss group-joining with any faculty members in the department, regardless of area.
- e) Faculty members will arrange and widely publicize formal research presentations or alternatively arrange to meet with interested students individually. Times and places of faculty presentations will be made available through the department website. For students doing rotations, these faculty presentations as well as individual meetings are excellent ways to obtain information about which labs to choose for rotations.
- f) The student should plan to have more in-depth discussions and ask questions of those faculty members in whom a student has significant interest. It is also appropriate to have

discussions with as many graduate students as possible in the research groups of those faculty members in which the student is interested.

- g) After meeting with at least six faculty members, including all the assistant professors in at least one specialty area, and the group-joining date has arrived (but not earlier), a student may join a group. To join a group, contact the faculty member and secure their consent. A faculty member is under no obligation to accept any particular student into his/her group. The faculty member signs the student's Research Advisor Identification Form and provides it to the department office.
- h) When a student joins the group of a research professor (non-tenure track) in Chemistry, a member of the tenured Chemistry faculty (50% or greater) must be appointed as the advisor of record (AOR). The AOR should be familiar in general terms with the area of research that the student will perform and will serve as the chair of the preliminary examination and final examination committees. The identification of the AOR is made by the student, in consultation with the prospective Ph.D. mentor, and requires the approval of both the faculty member who will serve as the AOR and the head of the Department of Chemistry. The AOR must agree to check at least twice a year (and more often if appropriate) that the student is making good progress toward completing a Ph.D. degree and fulfilling all of the Chemistry graduate program requirements.

Students may choose two advisors who will jointly supervise the thesis work. Such an arrangement, however, should be entered into only after all parties involved have defined the nature of the work to be done and the remedies to be implemented should problems arise.

In special circumstances, the group-joining process may be amended by the department head.

Fall rotations

In Fall 2026, the department encourages each first-year graduate student to participate in fall rotations. The rules of the Fall 2026 rotation program are as follows.

1. The department's group-joining date is Friday, November 6, which is the earliest date on which a student can join a group. By department policy, students have until the end of the fall semester (December 31) to join a group.
2. The schedule of three 3-week rotations is as follows. First day of Fall 2026 instruction: Mon 8/24/26. Rotation 1: 8/31-9/18 (weeks 2-4). Rotation 2: 9/21-10/9 (weeks 5-7). Rotation 3: 10/12-10/30 (weeks 8-10). After the three rotations there is a one-week gap (11/2-11/6, week 11), ending on the group-joining date of Fri 11/6/26.
3. Participating in rotations is optional but highly encouraged. Any non-participating student must notify their area office by Mon 8/17/26.

4. Each rotating student will come to agreement with each successive and different rotation advisor no later than the Wed prior to the start of that rotation. For Fall 2026 Rotations 1, 2, and 3, these three decision dates are Wed 8/26, 9/16, and 10/7.
5. Students are allowed to arrange Rotation 1 before arrival on campus or in August. Students are encouraged to attend the faculty research presentations at the start of the fall (in late August) before arranging Rotations 2 and 3.
6. Each rotating student must participate in at least two of the three rotations; which two rotations can vary from student to student. A student who chooses not to participate in a specific rotation will not have a lab desk during that rotation.
7. Each rotating student will be performing teaching assistant (TA) duties in addition to rotations and coursework, unless obviated by a fellowship. The faculty are aware of the many obligations of each first-year student in the context of rotations.
8. On or after the group-joining date, each student can join one of their two or three rotation groups, or another group. Without exception, all students must wait until the group-joining date to join a group.
9. A first-year student who does summer research before beginning their first year can still do fall rotations, without constraint on fall rotation advisors.
10. Independent of rotations, all first-year Chemistry students must follow the broader Chemistry rule about “meeting with” at least six faculty, as described earlier in this section. Attending a faculty presentation at the start of the fall counts as meeting with that faculty member. Faculty are generally available for individual meetings.
11. Rotations are permitted in non-Chemistry groups, i.e., where the research advisor has no formal appointment of any kind in Chemistry. The document entitled “Guide for Non-Chemistry Faculty with Chemistry Graduate Students” (which is in the department’s Policy Manual, chemistry.illinois.edu/policy-manual) is relevant to permanently joining any such group. Before any such fall rotation can proceed, the rotation research advisor must provide two items: (a) the brief proposal validating a significant chemistry component in the longer-term Ph.D. research, and (b) proof of funding sufficient to support the Chemistry student in years 3+. For both items, there is no point in the student doing the non-Chemistry rotation if the research advisor cannot actually take the student into their group, which is why these two items are required before doing a rotation. A practical consequence of this requirement is that it’s probably best not to do Rotation 1 in any such group, which gives the student time to obtain the necessary items before Rotations 2 and 3.

5.2.13 Identifying a Faculty Advisor from Outside the Department

Graduate students are welcome to identify any tenured or tenure-track member of a department in a chemistry-related discipline. When a graduate student in the Department of Chemistry wishes to earn a Ph.D. degree in Chemistry in which more than 50% of the work will be carried out under a

faculty member who has no formal appointment of any kind in Chemistry, the following policy applies.

- a) The student's research under the prospective Ph.D. advisor must have a significant chemistry component. The head of the Department of Chemistry will determine whether the prospective Ph.D. research meets this criterion, seeking advice from faculty members in the Department of Chemistry when warranted.
- b) If the prospective Ph.D. research does not have a sufficient chemistry component, then the student may work for the non-chemistry faculty advisor only if the student transfers out of the Chemistry graduate program.
- c) A member of the tenured Chemistry faculty (50% or greater) must be appointed as the advisor of record (AOR). The AOR should be familiar in general terms with the area of research that the student will perform and will serve as the chair of the preliminary examination and final examination committees. The identification of the AOR is made by the student, in consultation with the prospective Ph.D. mentor, and requires the approval of both the faculty member who will serve as the AOR and the head of the Department of Chemistry. The AOR must agree to check at least twice a year (and more often if appropriate) that the student is making good progress toward completing a Ph.D. degree with a significant chemical component and fulfilling all of the Chemistry graduate program requirements.
- d) The preliminary examination and final examination committees must have at least two faculty members who hold at least 50% appointments in the Department of Chemistry, one of whom is the AOR.
- e) The prospective Ph.D. advisor must provide proof of funding sufficient to support the Chemistry student in years 3+. TA positions in years 3+ are approved only in rare cases.

5.2.14 Changing Faculty Advisors/Switching Research Groups

Occasionally, a student and faculty advisor develop problems in their working relationship, or a student's research interests may change, and a student may consider changing research advisors. This option is always available; students are members of the Chemistry Ph.D. program and only by mutual agreement are members of a particular research group. Students who are dissatisfied with their current faculty advisor are strongly encouraged to ask one or more of the Department of Chemistry Graduate Student Advisory Committee (DCGSAC), an unbiased faculty member (one whose group the student is not interested in joining), the Director of Graduate Studies, and the Graduate Program Coordinator to serve as the student's advocate and counselor. It may turn out that a satisfactory working relationship can be reestablished with the original advisor, or it may be that a change in research groups is the best course of action. In either case, the student will benefit from the support and advice from a third party.

Because dissatisfaction with a faculty advisor can be stressful, graduate students are encouraged to contact the campus Counseling Center for personal support and help (see Section 10.12).

A student who (after all above discussions) wishes to change research groups must meet with the Director of Graduate Studies, who will coordinate with the relevant area faculty, the department head, and the Graduate Program Coordinator. The Director of Graduate Studies will manage any discussions about changing deadlines for degree requirements as a consequence of the timing of the change in research groups. The Graduate Program Coordinator has the Change of Advisor form, which must be signed by the original advisor and the new advisor. The Budget and Operations Committee representative for the student's area must also approve the change of advisor and any changes in the timing of completing the degree requirements. The department does not, beyond standard fall/spring TA appointments to first/second-year students, generally provide financial support to cover any costs of a student who changes advisors. This includes not covering RA costs of a student in any year and not providing TA appointments to a student beyond the second year.

If a student leaves one research group, then another group must be joined within 30 days to maintain "reasonable progress" status, i.e., for the student to remain in good standing in the department. See Section 5.2.9 for consequences of not being in good standing. In most cases, a student who switches research groups is automatically placed on academic warning status with the Graduate College for the first full semester in the new research group (fall, spring or summer), with expectations set out in a letter from the department to the student and new advisor. This academic warning status increases the opportunities for a student to find a new research group because of the decreased perception of financial risk by the new advisor. At a minimum of 30 days before the end of the academic warning semester (including summer when appropriate), the new advisor must inform the student and department whether the student did or did not meet expectations. If the student did meet expectations, then the student will continue on a long-term basis as a Ph.D. student in the new group, and the student will no longer be on academic warning status starting in the subsequent semester. If the student did not meet expectations, then student will not be in good standing in the Ph.D. program, and withdrawal of financial support and termination of registration will ensue at the end of the academic warning status semester.

An advisor who wishes to discontinue financial support of a graduate student because they wish to discontinue being the student's advisor must do so in writing, cc: to the Director of Graduate Studies and the Graduate Program Coordinator, using the form provided by the department office. This form must be signed by the advisor, the student, and the department head or designee. Once an advisor notifies a student in writing of the intention to discontinue financial support at any point during a particular semester (fall/spring/summer), and if the student wishes to continue in the Ph.D. program with a different advisor, then the original advisor must honor the appointment to the end of the particular semester. In any event, the advisor must provide the student with at least 30 days of financial support after giving written notice, and thus financial support may extend into the subsequent semester by up to 30 days if notice is given near the end of the semester. A decision on what happens after the end of the guaranteed financial support will be made by the department on a case-by-case basis. If a new advisor agrees to take the student before the semester or required time period into the next semester are up, then the financial support obligation is transferred to the new advisor. For the purpose of this policy, semesters are defined as equivalent to the graduate appointment periods, which are August 16-December 31 (fall), January 1-May 15 (spring), and May 16-August 15 (summer).

A student who has left two research groups is typically not permitted to join the group of a third advisor, unless extenuating circumstances lead the department head to make a rare exception.

5.2.15 Changing Areas within the Department

A student who is interested in changing areas within the department (e.g., from inorganic to materials) should first discuss the merits of this action with their research advisor (if already in a research group) or with the incoming student advisor for their area (if not yet in a research group). If student and advisor wish to proceed with a change of area, then the student must present the request to both the original and new areas' Budget and Operations Committee representatives. If the request is approved, then the student should see the Graduate Program Coordinator to obtain a Change of Area form, which must be signed by the original and new Budget and Operations Committee representatives. Any additional requirements and their deadlines will be sent to the student in writing along with the approval of the change in area.

5.2.16 Safety Examination

Before students are issued keys to their research laboratories and begin research, the department requires that students pass an online safety examination proctored by the School of Chemical Sciences.

5.2.17 Professional Ethics Training

The Graduate College under university guidelines requires that all graduate students receive training in professional ethics. The Department of Chemistry fulfills this requirement through a course, CHEM 591 Introductory Professional Development for Chemists, which is offered every fall. All first-year graduate students are required to enroll in this course. See also ethics.uillinois.edu.

5.2.18 Literature Seminar

Each student must present a seminar on a topic from the current literature, distinct from the student's developing topic of thesis research, and prepare a written abstract for this seminar. The seminar must be given before the end of the fourth semester, but some areas (inorganic, materials, physical) have earlier deadlines. For possible exceptions to this deadline, see Section 5.2.1. The literature seminar course must be completed before the student takes the preliminary examination. The literature seminar course in all areas confers 1 hour of credit, which does not contribute to the required 20 hours of credit for the Ph.D. degree.

Students who intend to give a literature seminar during a particular semester must register for one hour of credit in the seminar course corresponding to their area (CHEM 515: Inorganic Chemistry Seminar; CHEM 525: Analytical Chemistry Seminar; CHEM 535: Organic Chemistry Seminar; CHEM 545: Physical Chemistry Seminar; CHEM 575: Chemical Biology Seminar; or CHEM 585: Materials Chemistry Seminar). The seminar topic should be approved by the faculty advisor and by the faculty member in charge of the seminar course. See the individual areas for information about the format for the abstract and other information about the literature seminar. Faculty and graduate students attend these seminars.

5.2.19 Choosing a Thesis Committee

The Graduate College distinguishes between the Preliminary Examination Committee and the Final Examination Committee. The universal practice in the Department of Chemistry is that the membership of these two committees is identical, although strictly speaking this is not required. For this Graduate Manual, the generic term “thesis committee” is used to refer to both committees.

The thesis committee consists of at least four faculty members. The student’s advisor must be a member of the committee, and the other members are chosen by the student in consultation with their advisor, subject to the approval of the area faculty and the department head (or designee). The Graduate College places some restrictions on the constitution of the committee (see Section 5.1.3). In addition, the department requires that the thesis committee must have at least two faculty members who hold at least 50% appointments in the Department of Chemistry. If the student’s advisor is outside of Chemistry, then see Section 5.2.13 for additional considerations.

At least three committee members must be chosen by the end of the first year (typically in July, with the exact date depending on area) and their names submitted to the appropriate area office. This maximizes the time available for student and committee members to interact. The names of all four committee members must be submitted to the area office staff at least three weeks in advance of the preliminary examination, so that the appropriate forms can be obtained from the Graduate College.

Usually, the thesis committee continues to monitor the student’s progress after the preliminary examination, for example by reviewing the fourth-year original research proposal and constituting the final examination committee. Under appropriate circumstances, members of the committee can be changed. If a committee member is changed, then it is the student’s responsibility to find a replacement. This final examination committee attends the final defense, approves the thesis, and signs the Thesis/Dissertation Approval form.

5.2.20 Oral Preliminary Examination

By the last day of instruction of the fifth full semester in residence (normally fall of the third year), each student in the Ph.D. program must pass an oral preliminary examination, where the exam itself is a requirement of the Graduate College. For possible exceptions to this deadline, see Section 5.2.1.

The preliminary examination assesses the student’s basic knowledge of the thesis area, including relevant literature. Normally, the exam lasts between one and two hours. The student is ultimately responsible for choosing the exact day and time of the exam, although the area office staff can consult faculty schedules and provide possible prelim times. The student should ensure that the faculty members are reminded of the exam, either the day before or on the morning of the exam.

The examination is designed to answer two questions:

- Is the student sufficiently knowledgeable about science to warrant admission to candidacy for a Ph.D. degree?
- Has the student accomplished enough in their thesis research and thought enough about the direction their research should take (and why) to warrant admission to candidacy?

▪

The examination will have one of three outcomes:

- **Pass** The candidate may proceed to Stage III, independent dissertation research.
- **Fail** The student may or may not be granted another opportunity to take the examination after completing additional work. The decision will be made by the department head in consultation with all relevant people as necessary.
- **Defer** The committee will reconvene within 180 days of the exam and determine the outcome (pass or fail).

The Preliminary Report. At least a week in advance of the examination, the student must present to the examination committee a written progress report, which summarizes the salient background literature as well as research progress and plans. The specific form of both the written document and the oral examination vary among specialty areas, but the following is typical.

- In five single-spaced or ten double-spaced pages (including figures but not including literature references), give the background to your thesis topic, describe in detail your thesis research to date, and briefly outline your plans for completing your thesis research. Literature citations need not be encyclopedic; cite only the most relevant work. Include article titles in the citations. Supporting information (e.g., detailed experimental procedures) and preprints or reprints may be included as appendices if appropriate.

5.2.21 Original Research Proposal (ORP)

Each Ph.D. student must prepare an original written research proposal (ORP) on a topic distinct from the student's thesis research. Area requirements for this benchmark vary; a student should seek assistance from their advisor or their area's Budget and Operations representative. The departmental deadline is the last day of instruction of the eighth semester (normally spring of the fourth year), but some areas have earlier deadlines. Under extenuating circumstances, time extensions can be requested by submitting a suitably endorsed petition to the department office via the Graduate Program Coordinator. The preliminary examination must be passed before the ORP may be completed. The ORP must be completed before the final examination may be held.

The original research proposal is designed to give students experience in one of the critical activities expected of all professional leaders: to identify (largely on your own) an important area for future endeavor and convince others to provide the resources necessary to carry out that endeavor. Industrial Ph.D. chemists – as well as academicians – are expected to prepare proposals; in industry, proposals often influence the expenditure of millions of dollars of company assets.

The specific details of the original research proposal process may vary among the area specialties. The student should consult the area office for procedures and deadlines. All areas have an oral ORP presentation component with the thesis committee.

The original research proposal should identify a significant problem within the broad field of the student's area of specialization. It should be significantly distinct from the student's thesis research in that the student:

- Must read a portion of the literature unconnected with the student's own research.
- Must devise scientific questions unlikely to be proposed by their research advisor(s).

The report should follow the general format below (individual areas may differ in details):

- The abstract, not to exceed 250 words, should present the scientific objective, the route to that objective, and the potential significance of the prospective results.
- The body should cover the following points:
 - **Specific Aims** (1 page). List the long-term objectives and describe concisely what the research project is intended to accomplish.
 - **Background and Significance** (2 pages). Evaluate existing knowledge and specifically identify gaps that the project is intended to fill.
 - **Research Design and Methods** (6 pages). Outline a two-year plan for key experiments, explain any new methodologies and their advantages over existing approaches, discuss potential difficulties, and summarize contingency plans and alternative approaches should obstacles be encountered. Discuss whether special resources are needed (e.g., supercomputer time, national laboratory facility beam time).
- The literature references, not to exceed one page, should be relevant and current.

Model proposals may be available from faculty advisors, and students may use them for guidance on format and style. As students prepare the proposal, they are welcome to seek advice from and discuss ideas with their advisors or other faculty, as long as the ideas in the finished proposal are the student's own.

The report will be evaluated according to the following criteria:

- **Significance** (Is the problem important and how will scientific knowledge be advanced?)
- **Approach** (Are the design, methods, and analyses adequately developed, well-integrated, and appropriate?)
- **Innovation** (Does the project employ novel concepts, approaches, or methods?)

Feedback will be given to the student with one of the three committee decisions:

- **Acceptable**: The proposal is of sufficient quality to satisfy the requirement.
- **Revise and Resubmit**: The general tenor and topic of the proposal is adequate but there are specific areas where the committee would like to see improvement which will be outlined in the committee's feedback comments. The student should then modify and redo the proposal, incorporating the committee's feedback. The report will also provide a time scale for revising the proposal.
- **Unacceptable**: The student should develop a new topic for the proposal involving a completely new proposal. The committee will then reevaluate the new proposal.

5.2.22 Sixth-Year Meeting

Any graduate student who enters the 12th semester (second semester of the 6th year) and does not yet have their final examination (thesis defense) formally scheduled will meet with their thesis committee to discuss their graduation plans. The main purpose of this meeting is to ensure for both student and research advisor that everything is on track for a timely graduation, and to aid in resolving any challenges that might be preventing such an outcome. This meeting will take place annually if needed.

5.2.23 Ph.D. Thesis

All candidates for the Ph.D. degree are required to submit theses. The Ph.D. in Chemistry is given for making an original and significant contribution to chemical science as evidenced by a thesis on original research, which must be defended in the final oral examination. The choice of the thesis topic is a decision mutually agreed on by the student and the advisor.

5.2.24 Final Examination (Thesis Defense)

During the last year of residence, each Ph.D. student is required to take a final examination (thesis defense) on the student's research. See the individual area office for information about the format for the abstract and other information about the final examination.

At least three weeks before the date selected for the final examination, the student should contact the appropriate area office to schedule the final examination and ask that the required documents be obtained from the Graduate College.

The final examination can be no sooner than one week after an advanced draft of the entire thesis has been submitted to the final examination committee. The thesis defense is advertised throughout the School of Chemical Sciences and is attended by interested faculty and students.

It is the responsibility of the student to arrange with the committee members a date that is acceptable to all of them. If all committee members' schedules cannot be accommodated, then the Graduate College allows voting members to participate via synchronous remote participation. The thesis committee must meet immediately after the final seminar to vote on whether or not to accept the thesis.

Decisions of the committee for final examinations may include one "fail" vote. See the Graduate College website for details of committee composition and voting requirements. If two or more members of the final examination committee are unwilling to approve the thesis and sign the Thesis/Dissertation Approval form, then those members will specify the reasons for their refusal and propose a course of action. Possible courses of action include, but are not limited to, suggestions for additional work or resignation of one or more members from the committee. This information will be communicated promptly in writing to the other committee members and to the student.

The Graduate College defines the format for Final Examinations (thesis defenses) as follows:

“The examination consists of an oral examination open to the academic community of the university followed by a private deliberation of the committee. The student is informed of the result immediately following the deliberation.”

Per the Graduate College, there is no basis for a closed-door, private examination of the student by the committee between the student’s public seminar/examination and the committee’s deliberation. After the student has been informed of the result of the examination, if they wish the committee members may have further discussions with the student, for example related to the student’s career interests and directions.

5.2.25 Ph.D. Thesis Deadlines

The Graduate College requires that the Ph.D. degree be completed by the end of the seventh year, or by the end of the sixth year if the student has received a master’s degree elsewhere. After that time, the student is prevented from further registration. Extensions of this time limit may be granted in exceptional cases by petitioning the Graduate College.

If more than five years elapse between a student’s preliminary and final examinations, the student will be required to demonstrate current knowledge by passing a second preliminary examination, which is a prerequisite for admission to the final examination. The form of the second preliminary examination need not be identical to that of the first.

The Graduate College sets several deadlines during the academic year that dictate in what semester and year the Ph.D. degree will be officially conferred. Students may deposit their thesis in advance of any one of these deadlines. See the Graduate College Calendar for the dates of these deadlines for the current academic year.

The Graduate College requires registration in CHEM 599 in the semester in which the student takes the final examination for the doctoral degree. There is, however, a period after the end of each semester during which the final exam may be taken without the need to register for the next semester. See the Graduate College Calendar for specific deadlines.

5.2.26 General Procedure for Depositing a Thesis

Several procedural requirements for depositing a thesis must be strictly followed. Before the thesis is in final form, the student should go to the appropriate area office and inform them of intent to graduate. The area office staff will prepare paperwork to request the final exam committee with the Graduate College. After the final exam, the Thesis/Dissertation Approval form must be signed by the final examination committee and then by the department head. There can be no errors or corrections of any kind on these pages. After the thesis is in final form, it must receive a format check in the departmental office by the Graduate Program Coordinator. The thesis is then electronically submitted to the Graduate College for further review. Once the thesis is approved by the Graduate College and all necessary paperwork is on file with the Thesis Office, the deposit process is complete.

Style and Format Requirements. Before the thesis can be submitted to the Graduate College Thesis office, the student must submit a near-final copy to the Graduate Program Coordinator for review of the general format of the thesis, including the style to be followed in footnotes,

bibliographies, tables, chapter headings, and similar matters. The final examination committee will hold the student responsible for spelling, grammar, organization, stylistic consistency, correct sequence of pages, and agreement between the table of contents and the body of the thesis, as well as content. The department will check to see that these requirements have been met. Every candidate should consult the Graduate College website at grad.illinois.edu/thesis/format for thesis formatting requirements. There are no department-specific formatting requirements.

All completed theses must be acceptable for deposit in the Graduate College Thesis Office. This office has primary responsibility for processing, binding, and storing theses as well as for maintaining uniformity in thesis format and organization. The Graduate College Thesis Office will reject any thesis that fails to meet Graduate College standards.

Publishing of Findings before Degree Conferral. Before the degree is conferred, a student may find it desirable or expedient to publish some of the findings that will later be incorporated in the thesis. If this is done, then an appropriate acknowledgment of the earlier publication should be included in the thesis. The Graduate College encourages such publication, but the thesis may not be published in its entirety before all degree requirements have been met.

Copyright. Copyright is a legal protection of a person's work that is recorded with the U.S. Copyright Office in the Library of Congress. The Graduate College webpage describes copyrighting in greater detail. Students may register for a copyright on their own, by completing an application form, paying the basic fee, and submitting an extra copy of their thesis to the U.S. Copyright Office. Doctoral candidates may choose to ask ProQuest to complete these steps for them for a slightly higher fee.

Compliance with Research Policies. If thesis research involves the use of human subjects, warm-blooded animals, or hazardous materials or procedures, then the student must comply with the university's policies and procedures governing such work. Doctoral degree candidates should obtain more information at research.illinois.edu.

5.2.27 Final Exit Interview, Chemistry Exit Checklist, and HR Exit Checklist

Once their final examination is scheduled, students must schedule a final exit interview with the Associate Director of Graduate Diversity and Program Climate or designee. The exit interview is one of the items on your Chemistry Exit Checklist, and it should be scheduled before your final examination. For flexibility, the exit interview may take place before or after the final examination, but it must be completed before the thesis deposit. The Chemistry Exit Checklist and the HR Exit Checklist may then be submitted after the exit interview has occurred, their thesis has officially been deposited, and the student has checked out with their advisor. The form may be obtained from the Graduate Program Coordinator. For information about resigning your appointment because you are defending your thesis and departing, see Section 6.1.4.

5.2.28 Overall Checklist for Graduating Ph.D. Students

- Register for CHEM 599 during the semester in which defending
- Schedule exit interview
- Defend before deadline for semester
- Apply for graduation before deadline (see Graduate College Calendar)

- Title page check in the Graduate College Thesis Office
- Departmental format review
- Format review in the Graduate College Thesis Office
- Complete exit interview
- Deposit before deadline. Materials required:
 - One original Thesis/Dissertation Approval form, signed by entire committee
 - ProQuest Agreement form
 - A deposit fee will be charged to the student's account
 - Survey of Earned Doctorates completed
 - Doctoral Exit Survey (Graduate College)
 - Optional: \$45 cashier's check to license copyright
 - Update address information in the appropriate campus online system; your diploma will be mailed to your permanent address
- Check out with research advisor
- Submit Chemistry Exit Checklist and HR Exit Checklist & Resignation.

6. Financial Support (Assistantships and Fellowships)

6.1 Appointments and Salaries

As long as a graduate student is working for a faculty member within or affiliated with the Department of Chemistry and making satisfactory progress toward the Ph.D. degree in Chemistry, the student is guaranteed academic year and summer financial support. Support is given primarily in the form of Teaching Assistantships and Research Assistantships, which may be supplemented or replaced by merit-based fellowships. Very few Teaching Assistantships are available for summer sessions.

Those students in a master's program are not guaranteed financial support, but the department strives to award assistantships to M.S. candidates whenever possible.

All appointments at the university are made in fractions of a "full-time equivalent" or FTE. Essentially all graduate students in the Department of Chemistry are appointed to half-time (also known as 50% or 0.50 FTE) appointments. The appointment can be divided in several ways: the most common are 0.50 FTE on a Teaching Assistantship (TA), 0.50 FTE on a Research Assistantship (RA), or 0.25 FTE on a TA plus 0.25 FTE on an RA. The Teaching Assistantship salaries come from the department; Research Assistantship salaries come from funds provided by faculty advisors, usually through federal or private grants made to support their research program.

Summer appointments cover two months, but the payments will generally be paid over a three-month period.

6.1.1 Registration Requirement

Recipients of assistantships and fellowships must be registered during the semester they are appointed. The Department of Chemistry requires those holding summer assistantships or fellowships to register during this time period.

6.1.2 Tax Status of Salaries and Stipends

The income tax liability of graduate students is determined by the Internal Revenue Service (IRS) and the State of Illinois Department of Revenue (IDR) and not by the university. The information provided in the remainder of this subsection is based on the present understanding of the tax code.

Assistantship salaries are taxable income to the recipient. The value of any tuition and service fee waiver associated with the assistantship is not taxable income. The university withholds taxes on assistantship salaries and reports the taxable income (and the tax withheld) to the IRS and IDR.

Fellowship stipends are taxable income to the recipient. The value of any tuition and service fee waiver associated with the fellowship is not taxable income. At this time, the university does not withhold income taxes on fellowship stipends unless the University Payroll & Benefits Office is explicitly requested to do so. Also, it does not report fellowship stipends as income to the IRS or IDR. It is the fellow's responsibility to declare the fellowship stipends as taxable income on the appropriate income tax returns, and to make arrangements for paying any taxes due on this income.

Graduate Students on Non-Immigrant Visas are taxed as non-residents (and thus somewhat differently from U.S. residents). The U.S. also has tax treaties with many countries, and these treaties affect the tax liabilities of graduate students who are citizens of these countries. In such cases, the graduate student may arrange with the Payroll Office for increased (or reduced) withholding that will more closely approximate the estimated tax liability.

6.1.3 Resignation and Termination of Appointments

To resign an appointment, students must contact the School of Chemical Sciences (SCS) Human Resources office (312 Noyes Lab). If a student is resigning an appointment because the student has defended and will be depositing a thesis, then the thesis must be deposited no more than seven calendar days after resignation; otherwise, the student will be charged tuition. See the Graduate Program Coordinator or SCS Human Resources for details.

A student who resigns an appointment or whose appointment is canceled before service is rendered for at least three-fourths of the semester (91 days during fall/spring semester or 41 days during summer semester) is required to pay the full amount of appropriate tuition and fees for that semester. Payment for tuition is not required if the student withdraws from the university on the same date or before the last day of the assistantship, or if degree requirements for graduation are completed within seven calendar days after the resignation date.

An appointment remains in effect only if the student maintains good academic standing, makes satisfactory academic progress, and provides satisfactory service.

An assistantship or fellowship appointment may be terminated during the period of the appointment if the graduate student is no longer a student, is no longer making satisfactory progress, or substantially fails to perform assigned responsibilities. The graduate student will be provided with written notice and an opportunity to respond to the department head prior to termination. For additional information about the appeals process, see Section 7.

6.1.4 Time Extensions

A student who petitions the Graduate College for a time extension to complete a degree should summarize progress made to date, remembering that the Graduate College staff will not necessarily be aware of the standard milestones in a particular degree program. The student should also provide a detailed and realistic timetable for completion of the degree. The petition must be signed by the student's advisor and by the Director of Graduate Studies or designee. Petition forms are available online at the Graduate College website. Students with questions about completing petitions should see the Graduate Program Coordinator.

If the extension requested is for a period longer than one academic year, then only the first 12 to 15 months will normally be granted. Any subsequent extensions will be dependent on the student achieving substantial progress toward the degree, as measured by the timetable provided in the previous time extension petition(s). Doctoral program extensions beyond the eighth year are discouraged; beyond the ninth year of study they are unlikely to be granted except to hold the final defense.

6.1.5 Leaves of Absence Involving Suspension of Registration

A graduate student who is facing a personal situation that would severely disrupt their progress in the program (e.g., a serious medical issue, a death in the family) may consider taking a formal Leave of Absence (LOA) from the graduate program for one or more full semesters. The LOA mechanism, which by definition involves a formal process through the Graduate College, allows a student to address their personal issues and come back to the program without reapplying. To make arrangements for a LOA, the graduate student needs to work closely with their research advisor, the Director of Graduate Studies, and the Graduate Program Coordinator. With departmental approval, a student may re-enter at any time within one year of last registration. Any lapse in registration may result in the loss of the full-tuition-waiver privileges that may have previously accompanied a particular student's appointments. Whether leaving for one or more semesters, a student with educational loans should consult the Financial Aid Office and/or the lender before terminating student status. International students who are considering a LOA are required to secure clearance from the Office of International Student and Scholar Services (ISSS).

A graduate student wishing to return from a LOA within the time limit specified must first contact the Graduate Program Coordinator. A graduate student who interrupts their program of study for more than one year must also petition for re-entry to the Graduate College.

When a student takes a formal LOA, a written agreement between the student and research advisor must be signed by both and submitted to the department for approval before the LOA is finalized. The agreement must indicate explicitly whether or not the student will be returning to the advisor's research group at the conclusion of the LOA. The agreement must also indicate explicitly the expected duration of the LOA and the source of financial support for the student after returning. If the student will be returning to the advisor's research group, then the advisor is expected to provide at least one full semester (fall, spring, or summer as appropriate) of financial support upon the student's return, for any student who will be beyond their second year upon their return at the start of a fall or spring semester, or for a student of any year returning at the start of a summer semester.

For a student who lacks a research advisor, a formal LOA will be considered only under extenuating circumstances, with any such case considered individually by the department head based on the facts specific to the student's situation.

A LOA is associated with a formal suspension of registration, and therefore the duration of a LOA is always one or more full semesters. However, sometimes a student and research advisor agree on an extended personal absence (beyond normal personal time off and sick leave) for a duration of less than a semester. The department must be notified of such an absence by informing the Director of Graduate Studies in writing, signed by both student and advisor.

6.1.6 Coverage Responsibility and Absence from Work

When a student who has assigned teaching duties must be absent from work, it is the student's responsibility to follow established departmental policies and procedures. This may include a responsibility to inform a teaching supervisor in advance of the absence, to explain to the supervisor the reason for the absence, to secure the supervisor's approval of the absence, and to follow the employing unit's policies concerning arranging for substitutes to perform the student's

duties. The same responsibilities apply to informing the student's research advisor of an absence that would significantly affect research performance.

6.2 Benefits

6.2.1 Tuition and Fee Waiver

Assistants with appointments between 25% and 67%, inclusive, for at least three-quarters of the semester are exempt from paying tuition and certain other fees. For assistants holding such appointments in the spring semester, the exemption extends through the summer semester.

6.2.2 Personal Time Off (PTO) and Sick Leave

In 2020, the Department of Chemistry developed a formal, comprehensive policy on Personal Time Off (PTO) and Sick Leave. Please see the department's Policy Manual (chemistry.illinois.edu/policy-manual) for the policy.

6.2.3 Bereavement Leave

Assistants are eligible to receive up to three days of paid leave to travel to the funeral associated with the death of an assistant's immediate family member, same-sex domestic partner or household member, in-law, grandchild, or grandparent; and one day of paid leave for a relative other than the above who is not a member of the assistant's household.

6.2.4 Unpaid Personal Leave

An assistant may be granted an unpaid personal leave during the term of his/her appointment, upon request to and at the sole discretion of the employer (either the advisor or the department, depending on the source of funds) and subject to such terms and conditions as the employer may establish.

6.2.5 Parental Leave

Eligible graduate research and teaching assistants are entitled to up to six weeks of parental leave without loss of salary immediately following the birth of a child, or upon either the initial placement or the legal adoption of a child less than 18 years of age. Eligible graduate assistants are those graduate students with a current assistantship appointment for at least one semester and who hold an active appointment at the time the parental leave is taken.

The requirement that academic staff members must have six months of service to receive this benefit does not apply to graduate assistants. Graduate students who hold only an hourly appointment are not eligible for parental leave. A graduate assistant who resigns the appointment before or at the expiration of the parental leave normally will be required to reimburse the university for the cost of the salary paid during the leave.

Parental leave for graduate assistants will be counted as part of the twelve-week entitlement accorded by the Family and Medical Leave Act (FMLA) for FMLA-eligible individuals and may be used in conjunction with other paid or unpaid leaves for which the individual is eligible. Consult the Campus Administrative Manual at cam.illinois.edu for more information about the FMLA policy.

There is no application form for parental leave other than that used for FMLA leave. As with any leave, graduate assistants should communicate as soon as is practical with their unit regarding the timing of the proposed leave. Arrangements for the leave are coordinated between the student and the research advisor in conjunction with the School of Chemical Science's Human Resources Office. Consistent with the FMLA policy, units may request documentation of the birth or adoption. Parental leave should be taken in full at the time of birth or adoption and not on an intermittent or reduced leave schedule for a period lasting longer than two weeks.

Questions regarding this policy should be directed to the Office of Academic Human Resources (217-333-6747 or 807 South Wright Street, Room 420).

6.2.6 On-Campus Health Care

The Health Services fee is paid on behalf of graduate students. Students are entitled to free office visits at the McKinley Health Center with doctors, nurse practitioners, mental health therapists, and health educators, along with free access to most X-rays, laboratory tests, and prescriptions.

The Health Service fee does not pay for care received outside McKinley Health Center (e.g., hospitalizations and referrals), for immunizations required by law prior to entrance to the university, or for travel immunization.

Coverage extends, including breaks, from the first day of the semester to the first day of the following semester. When you discontinue enrollment at the university, you can extend your health care coverage for one additional semester if an extension is purchased by the semester deadline.

Health care at McKinley Health Center for spouses of graduate students is available for purchase. To purchase coverage for spouses, you need to bring the following items with you when you apply: (1) a copy of your marriage license; (2) proof of major medical health insurance; (3) immunization records that meet State of Illinois requirements.

Unfortunately, there is nothing available under this coverage for children of graduate students.

For more information about health care at McKinley Health Center, call 217-333-2719 or visit them at 1109 South Lincoln Avenue, Urbana or online at mckinley.illinois.edu.

6.2.7 Off-Campus Health Insurance

The university provides and administers the Student Health Insurance Plan, which covers care that is not available at McKinley Health Center, such as hospitalization, specialty care, and care away from campus. This plan is mandatory for those students who have not provided proof of other equivalent health insurance coverage.

Students who wish to enroll in the Student Health Insurance Plan must pay a health insurance fee for every semester of coverage. Coverage is worldwide and extends, including breaks, from the first day of the semester to the first day of the following semester. Insured students who do not plan to enroll in courses for the next consecutive semester may elect to extend coverage for themselves and for insured dependents for one semester beyond the last semester enrolled. Graduating students may elect to extend coverage for two semesters.

If you opt out of the Student Health Insurance Plan because you have your own health insurance, then you should be aware that there can be some unexpected consequences. For example, many insurance plans require service to be provided in the home community, which may require you to travel home to see a specialist or receive other treatment.

Health insurance for spouses and children is available and must be applied for each semester, provided that the student is also insured. Coverage takes effect on the date of application and receipt of proper premium by the University of Illinois, or the appropriate semester start date, whichever is later. Dependents insured for the prior semester will have no lapse in coverage, provided that applications and premium are received by the appropriate semester deadline date.

The University of Illinois Urbana-Champaign offers a dental insurance plan to graduate students and dependents of these individuals. See si.illinois.edu/benefits/dental-insurance-policy. The dental benefits summary is available at that webpage.

The University of Illinois Urbana-Champaign also offers a vision plan at no charge for graduate assistants and fellows whose appointments generate tuition waivers. See si.illinois.edu/benefits/vision-insurance-policy. The vision benefits summary is available at that webpage.

For more information about the Student Health Insurance Plan, dental plan, or vision plan, call the Student Insurance Office at 333-0165, or visit the websites listed above or at uhcsr.com/illinois.

6.3 Teaching Assistantships

In order to give students a well-rounded education and to meet the instructional demands of our first-year and second-year courses, most students in the Ph.D. program are required to teach at least two semesters at half-time (50% FTE). International students must first pass the English Proficiency Interview (EPI) with a score of 4 Conditional Pass (CP) or higher (see Section 5.2.5). All students must have completed the Department of Chemistry TA Orientation, a comprehensive program covering not only educational principles and practice teaching, but also laboratory safety and procedures.

Three TA-related department policies, which govern TA Appointments, TA Duties, and TA Performance, are included in the department's Policy Manual (chemistry.illinois.edu/policy-manual).

6.3.1 Teaching Assignments

Once students are certified to teach, their special training and interests are matched with available assignments. Selection is made on the basis of ability, interest, availability, and need. Most first-year graduate students will teach in General Chemistry.

A few Teaching Assistants grade papers for undergraduate courses, but most have classroom or laboratory teaching assignments. All Teaching Assistants are provided with a faculty supervisor who will be responsible for setting course policy, determining the syllabus, and assigning final grades.

Teaching Assistants may participate in instruction for courses offering graduate credit, but they may only routinely assist the responsible instructor in grading, laboratory supervision, and similar activities. Infrequent lecturing is permissible.

Professional service is required of all Teaching Assistants, to the best of their abilities. Substandard performance will not be tolerated. Examples of substandard performance include not arriving on time, not being properly prepared, and not properly supervising laboratory sections. Consequences for substandard performance will be determined on a case-by-case basis.

6.3.2 Teaching Loads

A half-time appointment corresponds to no more than 20 actual hours of work per week. A half-time Teaching Assistant (TA) appointment typically consists of approximately 8 hours teaching in a classroom or laboratory, 4 hours of grading, 1 to 2 office hours, and several hours of preparation per week. Students should expect that in the first semester when they teach a particular course, more preparation time will be required than in subsequent semesters.

6.3.3 Campus Teaching Resources

In addition to being supervised by faculty in the department in which they teach, Teaching Assistants can obtain help from the Center for Innovation in Teaching and Learning (CITL), a campus-wide unit responsible for assisting colleges, departments, faculty, and TAs) in improving and facilitating instruction. The staff works closely with colleges and departments while working with TAs, but they may also work solely with TAs upon request. The staff also invites consultation and discussion on a wide variety of instructional issues including classroom pedagogy, classroom management, student achievement, assessment on issues related to instruction, teaching portfolios, academic integrity, creating an optimal learning environment, and active learning. All of these activities provide Teaching Assistants with many opportunities for follow-up consultation. Walk-ins are encouraged. The Center also provides formal and informal programs and workshops on these and other topics for faculty, staff, and student groups. The main office of the Center for Innovation in Teaching & Learning is located in the northeast corner of the Armory: 249 Armory Building, 505 East Armory Avenue, Champaign, IL 61820 (217-333-3370). See citl.illinois.edu.

6.3.4 Graduate Teacher Certificates

In order to encourage graduate students to develop their teaching skills while simultaneously documenting their teaching experience, the university has created the Certificate in Foundations of Teaching, Graduate Teacher Certificate, Teacher Scholar Certificate, Certificate in Technology-Enhanced Teaching, and Citizen Scholar Certificate programs. These certificates provide documentation of a graduate teacher's involvement in teacher development, as well as in hands-on teaching activities such as instructional orientations, workshops, classroom teaching, classroom visitation by a peer, and videotaping of teaching followed by consultative and student feedback. Additional information and the specific requirements for these programs can be obtained from the Center for Innovation in Teaching and Learning, 249 Armory Building, 505 East Armory Avenue, Champaign, IL 61820 (217-333-3370).

6.4 Research Assistantships

Once students join a research group and have completed their teaching obligation, and while they remain in good standing in the department, they are typically supported by their research advisors on research assistantships. A student identifies an advisor based on the work done in the research group and how closely that matches the student's own research goals. As their research progresses, students are making significant progress toward not only achieving their own goals, but toward adding to the collective scientific advancement of the group. The work of the group is supported primarily through grants secured by the faculty advisor, and each student is then paid by a grant that supports research in the area of interest.

In the event that a faculty advisor has insufficient funds to pay all members of the group as Research Assistants, some of the students in the group may be supported as Teaching Assistants until grant funding is restored to a sufficient level.

6.5 Fellowships

The Department of Chemistry has a well-developed program of fellowship support that supplements assistantships. Fellowship funds are derived from university funds, departmental gift funds, endowments, and corporate support. Annually in the spring, first-year students are automatically nominated for fellowships, and faculty members are welcome to nominate their best students second and third-year students for these awards. Depending on their status in the program, students are selected to receive departmental fellowships on the basis of graduate coursework, research performance, and recommendations from their advisors.

In evaluating a first-year student, major emphasis is placed on coursework. All first-year students are automatically considered for a fellowship. The Graduate Fellowships and Progress committee will also review letters of reference submitted when the student entered the program and recommendations from UIUC faculty. For students in their second and third years, evaluation of research progress, along with the recommendations, plays an increasingly important role. Advanced students who have been outstanding at research, but who may not have had the highest records in coursework, can now be competitive. Thus, first-year students are not placed in direct competition with second and third year students. For all students, the committee pays particular attention to each applicant's record of accomplishment in the preceding twelve to eighteen months. With few exceptions, departmental fellowships are not awarded to students entering their fifth year or later.

The committee will review records for all applicants and will create a list that ranks students by year, by objective measures and by quality of research. Fellowships are then awarded based on numbers of eligible students and available funds.

6.6 Emergency Loans

Students can request interest-free (zero-interest) loans from the Department of Chemistry in emergency situations. See the Graduate Program Coordinator for information.

Loans can also be obtained from the Office of Student Financial Aid at 620 E. John Street, Champaign, IL 61820 (217-333-0100).

Banks and credit unions can provide loans for non-emergencies such as buying a computer or a car. The website of the University of Illinois Community Credit Union (UICCU) is uoficreditunion.org. The main office is at 2201 S. First St., Champaign. There are branch offices in the Illini Union and at 206 E. University Ave., Urbana.

7. Appeal and Grievance Policy

7.1 Introduction

All members of the university community are expected to observe high standards of professional conduct and ethical behavior in graduate education and in the supervision of graduate research and teaching (*Guiding Standards for Faculty Supervision of Graduate Students*, March 31, 1997). In a large and heterogeneous scholarly community, however, problems may arise. Therefore, the university articulates its policies and provides effective informal and formal procedures for resolving these problems when they involve graduate students.

The purpose of this policy is to protect the interests of all graduate students by providing informal and formal means of seeking resolution in case of an inappropriate action of a member of the faculty or administrative staff or an inappropriate application of a department policy. Any graduate student may informally pursue or formally file a grievance when the student believes that a decision or behavior adversely affects the student.

The Department of Chemistry follows the Graduate College's policy on Problem Solving. This policy (which can be view in entirety in the Graduate College Handbook) does not apply in cases involving challenges to Graduate College petition decisions, the exercise of professional judgment in evaluating student academic performance/progress, student-to-student conflicts, academic misconduct, employment specific issues, cases that arise under the *Student Code*, or cases involving alleged discrimination or sexual harassment.

7.2 Scope and Coverage

A grievance may arise when a graduate student believes that his/her status as a graduate student, or university appointment based on student status, has been adversely affected by an incorrect or inappropriate decision or behavior. Examples include, but are not limited to the following:

- Failure to follow a departmental or Graduate College policy in a manner that results in significant prejudice against the student
- Failure to follow departmental or Graduate College procedures for assessing degree milestones such as preliminary examinations
- Improper termination from a program
- Requiring personal services unrelated to academic duties
- Retaliation for exercising his/her rights under this policy

Practices or actions by a student's supervisor, another faculty member, or another member of the university community that seriously deviate from ethical or responsible professional standards in the supervision of graduate student work may constitute professional misconduct in violation of university policy.

7.3 Description of the Grievance Procedure

7.3.1 Informal Resolution

A graduate student wishing to initiate the Graduate College grievance process must start with an Intake Dean. The student will meet with an Intake Dean, who will review the matter and materials

and attempt to assist the student in resolving the issue at the informal level through discussion or mediation. This process must be initiated within **60 business days** of the decision or behavior resulting in the grievance. The Intake Dean may attempt to mediate a resolution for matters that do not meet the deadline, but such matters will not be submitted for formal review.

7.3.2 Written Grievance

A student may file a written grievance if an informal resolution is unsuccessful, provided the written grievance is filed within **10 business days** of the date the Intake Dean advises the Grievant and the Subject that no further efforts will be made at the informal stage. The grievance should be delivered to the Dean of the Graduate College.

The written grievance should include at least the following:

- a statement by the student summarizing the concern(s)
- the name(s) of the university faculty, staff or administrators involved
- the date(s) of the alleged incident(s)
- a statement concerning what outcome or action the student would like to see result from the grievance

7.3.3 Potential Outcomes of Intake Dean's Review

Once a written grievance has been submitted and reviewed, the Intake Dean will contact the student to arrange a meeting to discuss it. The Intake Dean will review the written grievance and supporting documentation provided by the Grievant and may conduct further inquiries and/or solicit additional information as warranted. The Intake Dean may also facilitate additional discussions between the Parties to try to resolve the matter at the administrative level. The potential outcomes of this review are the following:

- **Agreed Disposition.** If the Intake Dean is successful in resolving the matter by agreement, then the Intake Dean shall prepare a Report which includes the grievance(s), the response(s), the finding(s), and the resolution.
- **Unresolved Grievance.** If the Intake Dean is unsuccessful in resolving the matter by agreement, then the Intake Dean shall prepare a Report which includes: the grievance(s), the response(s), the finding(s), and what efforts were taken or proposed to resolve the matter administratively.

The Intake Dean's Report of Administrative Action will be submitted to the dean with copies to the Grievant and Subject(s) of the Grievance.

7.3.4 Request for Panel Review

The Grievant or the Subject(s) may request a panel review of unresolved grievances by submitting a request to the dean within **10 business days** from the date of the Intake Dean's Report of Administrative Action.

Upon receipt of a request for formal review, the dean will review the request along with the Intake Dean's Report of Administrative Action and other relevant materials to consider whether any

issues merit further investigation and review. If the grievance is declined, the dean will notify the person seeking review in writing and explain the decision.

If the grievance is accepted, then the dean shall appoint a panel of five (5) people to investigate the matter and provide recommendations. The Panel shall consist of:

- one member of the Graduate College Executive Committee;
- one faculty member from the unit in which the matter originated;
- one faculty member at large; and
- two active graduate students at large.

The faculty member at large will chair the panel.

The dean shall define the subject matter of the review in a written charge. The charge may, but need not, address every allegation contained in the request for formal review. The charge may also include additional matters that, in the opinion of the dean, warrant investigation.

7.3.5 Panel Report

The panel shall submit a written report to the dean as soon as practical that includes at least the following:

- a copy of the written charge from the dean;
- a statement of the relief sought by the Grievant;
- the response of the Subject(s);
- a general description of the investigative process;
- a citation of relevant policies;
- findings of fact that support the Panel's conclusions;
- a recommendation of appropriate redress for the Grievant(s), if applicable;
- and any recommended changes in policies and procedures to minimize the probability of recurrence, if applicable. Both parties will have the opportunity to respond to the panel report and submit written comments to the dean within **5 business days** of receipt of the report.

7.3.6 Final Decision

As soon as practical following the receipt of the report and all written comments concerning the report, the dean shall determine what disposition to make of the case. The following are potential outcomes of the final decision:

a) If the dean concludes that the grievance has not been proved, then the grievance will be deemed not sustained and dismissed.

b) If the dean concludes that the grievance has been sustained, then the dean will proceed in accordance with the University Statutes and relevant university rules and regulations. The dean may prescribe redress for the grievant, recommend modification of policies, or recommend changes in the procedures for implementation of such policies, as appropriate.

c) If the dean concludes that these procedures have not been followed, or the interests of fairness or thoroughness require further investigation, then the dean may direct the Panel to revisit any relevant issues and submit a revised Report within a certain time frame. The dean shall identify the specific errors or concerns and provide direction to the Panel as to appropriate corrective measures. The Panel will only address the issues raised by the dean and submit a supplemental report to the dean for consideration.

The dean's final decision will be provided to both parties in writing. The dean's disposition is final unless appealed.

7.3.7 Appeal

A party may file an appeal to the Urbana-Champaign provost within **10 business days** from the date of the dean's Written Disposition. The sole grounds for appeal are material violations of these procedures that have resulted in significant prejudice against the party appealing. The appeal must be in writing and must specify the nature of the procedural error. The provost's decision on appeal shall be final.

7.4 Confidentiality

All persons involved in administering these procedures will make diligent efforts to protect the reputations, privacy, and positions of all involved persons. These persons include those who file grievances, persons who are alleged in a grievance to have taken inappropriate actions or activities, and department administrators. All of the procedures and the identity of those involved should be kept confidential to the extent permitted by law. However, confidentiality regarding information other than the identity of the grievant need not be maintained if the grievance is found to be false and in particular if dissemination is necessary to protect the reputation of individuals or units falsely accused. Making public the fact that a grievance has been deemed false or unproved is not considered retaliation against the grievant. Protection of confidentiality does not preclude disclosures necessary to redress actions that led to a grievance.

8. Services for Graduate Students

8.1 Department of Chemistry Graduate Student Advisory Committee (DCGSAC)

The DCGSAC is an organization through which graduate students address academic and social issues as they pertain to the graduate student population. The DCGSAC is composed of two representatives from each area in chemistry, plus an additional member from the largest area. These graduate students are nominated and elected by the graduate students in each area. They address issues that affect graduate students, represent the graduate students of the department in a unified manner, improve communication between graduate students and the department administration, and strengthen interactions within the graduate student body as a whole. The DCGSAC also sponsors professional events, such as symposia that provide information about careers in the chemical profession, and social events, such as the Fall Picnic and the Winter Holiday Party. See chemistry.illinois.edu/dcgsac for more information.

8.2 Career Counseling and Placement Services

The School of Chemical Sciences Career Counseling and Placement Services Office provides guidance, resources, and opportunities to job-seekers to help them achieve their career aspirations relevant to their academic interests and to facilitate and support connections between employers and those job-seekers. The office assists students from all degree levels, postdocs, and alumni in the Department of Chemistry who are interested in industrial, government, academic, and alternative careers. Visit the office in 105 Noyes Lab for handouts and reference guides on the job search and interview process as well as for help with resume and CV preparation, mock interviews, career advising, job search coaching, and negotiation and networking support.

For full-time industrial recruiting, Ph.D. students and postdocs are recommended to participate actively in the full fall recruiting season prior to completion of time in the department, because the majority of companies visit campus at that time. Registration may be done at any time in the Career Services Office (105 Noyes Lab). Registration is necessary only once. Students in their first year are encouraged to register, because many exploration opportunities and events for first through third year students are available. Student resumes/CVs can be uploaded via our online recruiting system to be shared with employers, and all on-campus interviews are scheduled through the system as well.

For more information, visit the SCS Career Services website at careers.scs.illinois.edu, in 105 Noyes Lab, or by contacting Patricia Simpson, Director, at 217-333-1050 or plblum@illinois.edu.

9. What to Do When in an Accident

Safety is a priority in the Department of Chemistry. Take extra time to think of safety and possible consequences of unsafe conditions before performing any activity. Consult your advisor or a suitable reference if you are unsure about the hazards of a particular procedure.

Contact Chad Stevens, who is the Director of Facilities and Safety in the School of Chemical Sciences, for assistance in safety training, evaluations, and inspections, as well as advice regarding safe procedures, proper equipment, or safety concerns. All accidents should be reported within at most 24 hours to the Director of Facilities and Safety, who will ensure that the proper forms are completed.

Additional safety information can be found on the School of Chemical Sciences webpage at safety.scs.illinois.edu.

The campus Division of Research Safety has valuable information at drs.illinois.edu.

Important telephone numbers to know are listed below:

For an emergency, including from campus phones	911 (not 9-911)
Director of Facilities and Safety, School of Chemical Sciences	217-333-6365
Division of Research Safety	217-333-2755
Environmental Health & Safety	217-333-2755
Campus Police	217-333-1216

10. General Information

10.1 Mailboxes

Graduate students are not assigned mailboxes or box numbers, unless they are receiving samples and need a box number for that purpose. Incoming mail for a student without a box number is automatically placed in their advisor's mailbox.

10.2 Room and Desk Assignments

When a student finds an advisor and becomes part of a research group, workspace will be assigned within the research lab.

10.3 Conference Rooms

Individual graduate students or groups of graduate students may reserve any of the departmental conference rooms for purposes related to the business of the department, including scholarly activities, social gatherings, and meetings.

10.4 Keys

To obtain building and laboratory keys, students must have an authorization form signed by a senior staff or faculty member. Keys are distributed via the receiving room, 29A RAL.

10.5 Student Identification Cards (i-cards)

Student identification cards (i-cards) are obtained at the ID Center in the Illini Union Bookstore (809 S. Wright Street). A letter of admission is required for new students to obtain an i-card. The i-cards are used to ride the Champaign-Urbana buses for free. They are also used for entrance to the fitness centers and libraries.

10.6 Computer and Graphics Facilities

All students have free accounts on the university system. For information about university computing resources, see techservices.illinois.edu. For information about SCS computer services, see computing.scs.illinois.edu, and for assistance, contact scs-help@illinois.edu.

The School of Chemical Sciences maintains a Graphic Services office. The professional staff provide a range of conventional photographic, digital imaging, technical drawing and graphic design services to all graduate students, faculty and staff. The office is located in 71 Noyes Lab, 217-244-1784 (graphics@scs.illinois.edu).

10.7 GradLinks

Please read the announcements distributed through the Graduate College's GradLINKS weekly e-bulletin. These messages contain notices of important events and deadlines.

10.8 Photocopying

Photocopying facilities are available for official use. Each job must be charged to a specific account number, which can be obtained from faculty or area offices as appropriate. Copy service request forms may be submitted to the mailroom for large amounts of copying. Such requests must be submitted in advance of when a large volume of copies are needed. Requests should be placed with the Receiving staff in 29A RAL.

10.9 Office Supplies and Services

Some office supplies are available to teaching assistants. Students should check with the area office of the course to determine what supplies are available and where they are located.

10.10 Telephones

The University of Illinois currently uses Microsoft Teams for telephone use. Teams is a VoIP (Voice over Internet Protocol) system and can be utilized with a variety of specialized telephony devices or simply with a computer and internet connection. Dial 911 for emergencies. If you have issues with your Teams account or need other assistance, then contact SCS Computing at scs-help@illinois.edu.

10.11 Chemistry Library

The Chemistry Library is located in Room 170 Noyes Lab (217-333-3737). Library hours are available on the library's website, library.illinois.edu/chx.

10.12 Personal Counseling

Students sometimes experience personal challenges that complicate and undermine success in their academic and personal lives. These problems might include academic difficulties, career indecision, problems with family or friends, depression, problems resulting from an abusive childhood or sexual assault, anxiety, procrastination, eating disturbances or disorders, low self-esteem, alcohol or substance abuse, or anxiety about dating or sexuality. The University Counseling Center staff provides a variety of services to help students understand their problems and themselves, improve their academic performance, achieve satisfying relationships, and make effective and satisfying career and life choices.

The Counseling Center staff is aware of the special concerns of women, men, lesbian, gay and bisexual students, international students, students with disabilities, and students of color and other ethnic minority groups, and they are committed to being sensitive to these issues. The Counseling Center is supported by the Health Service fee, and most services are available at no additional cost. For more information about any Counseling Center service or program, or to schedule a first-time appointment, please call 217-333-3704. The Counseling Center is located in the Fred H. Turner Student Services Building, 610 E. John Street, Champaign, IL 61820. Their website is counselingcenter.illinois.edu.

Sources of Information

The information in this document is based in part on the following University of Illinois publications:

Graduate College Website

grad.illinois.edu

Graduate College Handbook

grad.illinois.edu/handbooks-policies

Graduate College Calendar

calendars.illinois.edu/list/524

Graduate Programs

catalog.illinois.edu/graduate

University of Illinois Student Code

studentcode.illinois.edu

Graduate Employees' Organization (GEO) at UIUC

uiucgeo.org

The *Graduate College Handbook* explains your privileges and responsibilities as a graduate student, describes many of the services provided to you by the university, and summarizes the Graduate College regulations that apply to all graduate students. There are additional departmental requirements, which in some instances are more stringent than those of the Graduate College. Much of the *Handbook* deals with rules and regulations, but it also suggests ways in which exceptions can be requested for good reasons. All graduate students should carefully examine the *Handbook*.

The *University of Illinois Student Code* applies to all undergraduate, graduate, and professional students. It provides information about regulations such as individual rights, affirmative action, registration, student conduct, etc.

The *Graduate Programs* webpage provides information about degree programs and courses offered.

The *Graduate College website* provides a wealth of information for all policies and procedures pertaining specifically to graduate students; including but not limited to thesis and dissertation requirements, petition policies, registration policies, and assistantship policies.

If conflicts exist between this *Graduate Manual* and any document listed above, then the applicable Graduate College or university policy takes precedence.