

Case Western Reserve University
Department of Chemistry

INFORMATION FOR GRADUATE STUDENTS IN CHEMISTRY
2026-2027

Preface

This booklet presents information needed by the graduate students in the Department of Chemistry. It is written by the Graduate Affairs Committee and revised annually.

Questions not answered in this booklet should be directed to Angela Molina-Danforth, Graduate Affairs, Clapp Hall 212, (216) 368-5030, e-mail: amm496@case.edu.

The rules and regulations presented here are not meant to be inflexibly administered. Students may petition for waiver. Petitions must be in writing and should be submitted to the Graduate Affairs Committee via the Graduate Affairs Office, Clapp Hall 212.

In addition to the material in this booklet, graduate students should become thoroughly familiar with the rules of the School of Graduate Studies in the General Bulletin of the University.

The Department of Chemistry, Graduate Affairs Committee for 2026-2027 consists of:

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INFORMATION FOR GRADUATE STUDENTS IN CHEMISTRY

A. GENERAL INFORMATION

The Chemistry Department offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy. Only full-time graduate students are admitted to the doctoral program. Graduate work may be carried out on a part-time basis for the Master's degree without thesis (course-work Master's). A course-work Master's degree program may be converted to a program for the doctorate with the approval of the Chemistry Graduate Admissions Committee. Thesis research may be undertaken only by full-time graduate students.

For online application forms for graduate study in the Department of Chemistry, call or write:

Graduate Admissions Committee
Department of Chemistry
Case Western Reserve University
Cleveland, OH 44106-7078
Telephone: (216) 368-5030
FAX: (216) 368-3006
e-mail: chemistry@case.edu

1. Admission. Graduates with strong records (usually as chemistry majors) from universities and colleges of recognized standing are admitted selectively to graduate study in the Department of Chemistry.

The Department of Chemistry primarily offers Fall admissions. The priority deadline for first consideration of Ph.D. applications is December 1. See Section A-4 for information concerning graduate teaching and research assistantships.

2. Placement Examinations. Upon matriculation, each entering graduate student takes three placement examinations covering undergraduate level subject matter in: 1) Inorganic Chemistry, 2) Organic Chemistry, and 3) Physical Chemistry.

The placement examinations, which are standardized American Chemical Society (ACS) examinations, are given during the week preceding the beginning of the academic semester in the fall. The Department will issue an announcement concerning the date, time, and place of these examinations to all new graduate students before the start of the fall semester.

3. Tuition and Fees. See Student Financial Services of Case Western Reserve University for information on tuition and fees: <https://case.edu/studentaccounts/tuition-fees/graduateprofessional-tuition-fees/school-graduate-studies>.

4. Appointments. First-year chemistry Ph.D. students receive a monthly stipend plus full tuition and health insurance via a teaching assistantship. Assistants are required to participate in

the undergraduate instructional program or in the grading pool to the extent of 20 hours per week. This assignment fulfills the departmental teaching requirement. Students are required to perform to the satisfaction of the course instructors in order to maintain good standing in receiving teaching assistantships.

Continuing Ph.D. students with no mandatory teaching duties (i.e., those supported by grants or contracts) receive a monthly stipend plus full tuition and health insurance via a research assistantship.

Those continuing Ph.D. students (i.e. not first-years) who are supported by the Department have teaching assignments of twenty (20) hours per week. They receive a regular monthly stipend plus full tuition and health insurance.

On occasion, the Department will have teaching assistantship opportunities for M.S. students. These opportunities are not guaranteed and are based on the availability of teaching assistant spots. Final approval for M.S. teaching assistantship positions comes from the Department Chair. M.S. students granted a teaching assistantship will receive a monthly stipend but no tuition or health insurance assistance from the assistantship.

For the summer months, June 1 through August 31, most Ph.D. students will hold research appointments. A few teaching appointments will also be available.

Stipends for graduate students will have federal, state, and local taxes withheld. FICA taxes are also withheld for those not enrolled in a class.

Graduate students holding appointments in the Department shall not hold any other type of appointment or employment simultaneously on or off campus or take courses at another college or university without the written permission of the Department. Requests for such permission should be directed to the Chair of the Graduate Affairs Committee.

Ordinarily, the appointment for a graduate student that is administered by the Department may be renewed provided the student's progress is satisfactory as judged on the basis of course grades, research, oral qualifying examination, and how satisfactorily the student fulfills the teaching and/or research responsibilities of the appointment. Graduate students will usually be notified concerning the renewal of their appointments before the beginning of each semester.

Graduate students are encouraged to apply for all fellowships for which they are eligible (e.g., NSF Graduate Research Fellowship, NIH F31). Please see the links on the Department of Chemistry website:

<http://chemistry.case.edu/info/faculty-and-graduate-students/fellowships/>

5. Participation in Undergraduate Instruction. Teaching is an important part of graduate education. Therefore, all Ph.D. students are required to assist in undergraduate instruction for a cumulative total of 20 hours weekly as part of the requirement for the Ph.D. This Ph.D. requirement will usually be fulfilled by full-time graduate students during the first academic year of graduate study.

Graduate students with teaching assistant responsibilities are required by the Office of the Provost to complete training in the form of UNIV 400: Professional Development for Graduate Teaching Assistants. UNIV 400 is the only course that satisfies the Provost Office's required training for graduate teaching assistants. This training requirement applies to graduate teaching assistants who work with undergraduate or graduate students. UNIV 400 includes an online, asynchronous webinar designed to provide graduate teaching assistants with skills and knowledge of university policies, campus resources, and best practices in teaching and learning. International TAs are also expected to complete a Spoken English Test. The webinar must be completed before the term in which students begin their teaching assistant responsibilities. Students who do not complete UNIV 400 will receive a No Passing grade (NP) and will be ineligible to work as a TA. The department may withhold stipend and/or tuition support in this instance.

Graduate teaching assistants will be informed by email of their assignments in undergraduate instruction or related work. Graduate teaching assistants are encouraged to indicate their preference of assignment on the Teaching Preference Form which will be sent out before the assignments are made. Ultimately, it is the responsibility of each student to find out their teaching assignment before classes start, especially if the student does not receive a teaching assignment two days before classes begin.

Graduate teaching assistants who do not complete their assigned work may have their stipend revoked. Examples include, but are not limited to, failing to appear for assigned laboratory sections; failing to complete graded work; failing to wear appropriate PPE; and failing to maintain professional conduct.

Furthermore, the graduate teaching assistant's performance in undergraduate instruction will be evaluated at the midterm and at the end of each semester by the faculty member responsible for the undergraduate activity. The evaluation is shared with the student. A poor teaching performance may place the student in poor standing within the graduate program and will be noted by the Graduate Affairs Committee. A student who receives two failed evaluations in a row may be subject to having their teaching assistantship forfeited for the remainder of the semester and the semester following.

Teaching assistants must review Case Western Reserve University's Consensual Relationship Policy (<https://case.edu/equity/university-policies/consensual-relationship-policy>) before beginning their teaching assignments. No graduate students may supervise students with whom they have personal relationships.

Chemistry graduate students may participate as tutors in the University tutorial program for up to a maximum of six (6) hours a week provided they have the approval of their research advisor, the instructor of the tutee's course, and the Department Chair. *Teaching assistants may not accept pay for tutoring students to whom they have teaching or grading responsibilities. Doing so is a conflict of interest and may result in forfeiture of the TA position.*

6. Graduate Teaching Assignments & Duties. Chemistry graduate teaching assistants may be assigned to one of three types of teaching assistant – (1) laboratory course assistant; (2) grading pool assistant; or (3) lab prep assistant.

A **laboratory course assistant** is defined as a teaching assistant who is assigned to a lab course (e.g., CHEM 113: Principles of Chemistry Laboratory) taught by a Chemistry faculty member and which will involve direct supervision over undergraduate students in one of the teaching lab spaces. A laboratory course assistant's duties may include, *but are not limited to*, readying equipment necessary for the completion of the lab session; delivering pre-lab lectures; grading Digital Lab Reports (DLRs) and other assignments; supervising the lab space; and attending weekly meetings.

A **grading pool assistant** is defined as a teaching assistant who is assigned to the grading pool, managed by Drs. Drew Meyer and Rekha Srinivasan, and provides proctoring and grading support for Chemistry lecture courses. A grading pool assistant's duties may include, *but are not limited to*, proctoring exams for large lecture courses; grading exams for large lecture courses; grading homework assignments for lecture courses; ensuring academic integrity during the exam period; and entering grades in Canvas.

A **lab prep assistant** is defined as a teaching assistant who is assigned to the prep lab pool, managed by Dr. Brian Fitch and/or Grace Shang, and supports the laboratory staff by preparing for the undergraduate lab courses. A lab prep assistant's duties may include, *but are not limited to*, cleaning glassware; preparing chemical solutions for laboratory sessions; cleaning lab spaces; assisting with course materials, such as video tutorials or captioning for accessibility purposes; and aiding the laboratory staff in post-lab breakdown.

It is the teaching assistant's responsibility, no matter their assignment, to meet with their teaching assistant supervisor and understand the supervisor's expectations for the assignment. Likewise, the teaching assistant supervisor is expected to inform the teaching assistant of their standards and notify the teaching assistant of their scheduled lab session; any scheduled grading or proctoring sessions; or their prep work schedule.

Should a teaching assistant have concerns regarding their assignment, the TA should notify Department Manager James Sill and Drs. Thomas Gray, Shane Parker, and Drew Meyer (if a grading TA).

7. Graduate Teaching Assistant Policy. The purpose of this policy is to provide guidance for legal compliance and equity for students with appointments as Graduate Teaching Assistants (GTAs). This policy comes from the School of Graduate Studies.

- a. Background. Graduate students at Case Western Reserve University may receive financial support in a variety of ways: tuition credit, tuition remission, teaching assistantships, research assistantships, administrative assistantships, and part-time student employment. This policy provides guidance regarding graduate teaching assistantships. An appointment as a Graduate Teaching Assistant (GTA) contributes to a student's primary objective of earning a graduate degree by

providing training experiences coupled with financial support. This training complements other learning objectives with hands-on instructional activities that build communication skills, content knowledge, and time management skills. The general policy is to assign GTAs teaching and instructive tasks that will provide a useful and meaningful experience in their major field or related field, and/or areas that may serve their future career goals.

- b. Eligibility for Appointment. To hold a GTA appointment, graduate students are expected to be maintaining progress toward their degree, and meeting the instructional, teaching, and/or training obligations of their appointment. As of Summer Semester 2025, GTAs may not serve as the Instructor of Record for courses they assist with, but instead must perform their responsibilities under the oversight of a designated Instructor of Record. This policy applies to GTAs only and does not preclude departments from hiring students to teach as an Instructor of Record through employment procedures that are independent of GTA appointments (e.g., student employment positions, internships, fellowships, adjunct instructor appointments) when the student possesses the requisite knowledge and qualifications.
- c. Period of Appointment. A typical GTA appointment spans a semester or summer session. Duties as a GTA typically begin one week before the first day of classes and end when final grades are due, as determined by the academic calendar. GTAs should be appointed for no less than a full semester, unless prior written approval has been granted by the dean of the academic unit making the appointment.
- d. GTA Time Commitment. A ‘full-time’ GTA is considered a 50% appointment, translating to an average of 20 hours of GTA activities per week or less. A GTA’s workload may vary weekly, depending on the specific tasks and responsibilities that are required, recognizing that there are inherent peaks and valleys in serving in a teaching role (e.g., periods such as examinations and finals may vary from the regular semester). If a GTA believes their assistantship responsibilities routinely require more than an average of 20 hours per week, they should share such concerns with the Instructor of Record to discuss solutions. If a solution cannot be reached, the co-chairs of the Graduate Affairs Committee or Department Chair should be consulted as an additional resource. If a resolution is not reached at the department level, the student may elevate their concern to the Dean of the School/College and Dean of Graduate Studies.
- e. Additional GTA Guidance. Some degree programs may require specific periods of GTA experience to meet degree requirements due to critical skills that can be gained through teaching. These may be in the form of paid or unpaid GTA appointments and are considered as progress towards the degree in these cases. Satisfaction of such degree requirements are considered academic requirements and the expectations for such academic requirements are determined by the academic leadership for that graduate degree program.

GTAs should consult the School of Graduate Studies Policies and Procedures as well as their program guidelines regarding policies and practices addressing student holidays, breaks, vacations, and parental and sick leave, as they are expected to follow such policies.

The Office of the Provost requires all GTAs to complete training for their GTA responsibilities. If it has been three (3) academic years since your initial training, you must complete the online webinar again to remain current with university policies and procedures. More information regarding this requirement can be found on the UCITE website.

The individual course assignments and specific GTA responsibilities are at the discretion of the School/College, Department, and the faculty member who is designated as the Instructor of Record. The duties typically expected of a GTA are described in the Graduate Teaching Assistant Policy Appendix.

8. Schedule. Chemistry graduate students are limited to registration for nine (9) semester hours during the Fall and Spring semesters (one semester hour during the Summer Session, if graduating in the Summer). To be classified as a full-time student by the School of Graduate Studies, a student usually must be registered for nine (9) semester hours or one (1) semester hour of CHEM 701 during each semester of the academic year. All students are financially responsible for any extra credit hours that are taken beyond the limit set by the department (for teaching assistants) or research advisors (for research assistants).

9. Orientation Program for New Graduate Students. All full-time first-year graduate students are required to attend an orientation program which begins approximately one week before the start of fall-semester classes and includes the placement examinations (see Section A-2). Incoming students are notified of the orientation schedule by email in advance. The orientation program will also include mandatory lab safety training and course registration for the Fall semester.

10. Course Program. The graduate course program of the Chemistry Department follows the semester system in which the fall and spring semesters are each of 14 weeks in length (excluding recesses) followed by a final examination period of one week. The university requires that Ph.D. graduate students register for 400- or 500-level courses; Master's students may register for up to six credits at the 300-level only if there is no 400-level option and advisor approval is given. During the Fall and Spring semesters of the first year, full-time chemistry graduate students will take nine semester hours of course work per semester selected from the following group:

Fall Semester

CHEM 406 Chemical Kinetics and Dynamics (3 credit hours)

CHEM 412 Advanced Inorganic Chemistry (3 credit hours)

CHEM 421 Advanced Organic Chemistry I (3 credit hours)

CHEM 428 Introductory Biochemistry (3 credit hours)

CHEM 431 Laboratory Methods in Inorganic Chemistry (3 credit hours)

CHEM 435 Synthetic Methods in Organic Chemistry (3 credit hours)

CHEM 442 Computational Chemistry (3 credit hours)
CHEM 443 Structure, Properties, and Applications of Polymeric Materials (3 credit hours)
CHEM 446 Quantum Mechanics (3 credit hours)
CHEM 506 Special Topics in Physical Chemistry (3 credit hours)
CHEM 605 Chemistry Colloquium (no credit) (see Section A-11)

Spring Semester

CHEM 414 Organometallic Chemistry (3 credit hours)
CHEM 415 Industrial Catalysis (3 credit hours)
CHEM 422 Advanced Organic Chemistry II (3 credit hours)
CHEM 425 Physical Methods for Determining Organic Structure (3 credit hours)
CHEM 428 Introductory Biochemistry I (3 credit hours)
CHEM 429 Biochemistry II: Living Systems (3 credit hours)
CHEM 430 Bioconjugate Chemistry (3 credit hours)
CHEM 440 Solar Energy Conversion (3 credit hours)
CHEM 441 Functional Nanomaterials (3 credit hours)
CHEM 447 Photochemistry (3 credit hours)
CHEM 450 Molecular Spectroscopy (3 credit hours)
CHEM 452 AI in Chemistry (3 credit hours)
CHEM 502 Special Topics in Inorganic Chemistry (3 credit hours)
CHEM 504 Special Topics in Organic Chemistry (3 credit hours)
CHEM 506 Special Topics in Physical Chemistry (3 credit hours)
CHEM 605 Chemistry Colloquium (no credit) (see Section A-11)

After the first academic year, primary emphasis in graduate work for the Ph.D. is on research. Graduate students will take two additional advanced graduate courses during each semester of the second year if they entered the program with a bachelor's degree. Graduate students working for either the Ph.D. or Master's degree in the Chemistry Department usually do not take a minor outside the Department. They are encouraged to take courses in other departments when these courses are relevant to the students' professional interests and particularly their thesis research. However, for the Ph.D. degree, four of their courses must be in the Chemistry Department. For the M.S., six of their courses must be in the Chemistry Department.

Course semester-hour requirements for the Master's degree are designated under Master's Degree Requirements.

For the Ph.D. degree, students entering with a Master's degree need 23 coursework hours of which 18 must be letter graded. Students entering with a Bachelor's degree need 36 coursework hours of which 24 must be letter graded. CHEM 601 (Graduate Research) is a pass/fail course and can be counted toward the total requirement of 23 or 36 coursework hours. Students then need 18 hours of CHEM 701 (Graduate Research). Once CHEM 701 has begun, the student must enroll for 701 until graduation.

11. Readiness and Writing Colloquia. All Ph.D. students must complete the Readiness and Writing seminars, which include CHEM 605, CHEM 606, and CHEM 607. All three seminars are zero-credit courses that are required for graduation.

- a. CHEM 605 – Ph.D. Readiness Colloquium (Year 1, Fall & Spring Semesters). The goal of CHEM 605 is to establish the core professional skills needed for Ph.D. research and readiness, covering topics such as reading and evaluating scientific literature; laboratory notebook practice; professional networking; scientific presentation; effective mentor-mentee relationships; and research ethics.
 - b. CHEM 606 – Professional Writing (Year 3, Fall Semester). The goal of CHEM 606 is to prepare students to write for peer review, with students producing a full manuscript draft based on their own research by the end of the semester. A student who does not satisfactorily complete the course will be required to take remedial actions under supervision of the Department Chair to demonstrate that adequate progress toward the degree is being made.
 - c. CHEM 607 – Defense Readiness (Year 4, Fall Semester). The goal of CHEM 607 is to determine whether a student is on track for a successful Ph.D. defense in Year 5, via a departmental research presentation, an updated thesis outline, a draft introductory chapter, and a formal committee meeting. A student judged not to have made satisfactory progress receives an ‘NP’ grade in CHEM 607 and a ‘U’ grade in CHEM 701, with the option to terminate the program with a master’s degree. A student may appeal by completing a remediation plan approved by the thesis committee in the following semester.
12. Registration for Research Work. Research may be undertaken with the approval of the graduate student's advisor (see Section A-14) under the listing CHEM 601, Graduate Research, or CHEM 701, Ph.D. Dissertation Research.
13. Lab Rotations. First-year graduate students will be required to complete three laboratory rotations during the first semester. Rotations will begin during the second week of classes. Contact Dr. Divita Mathur if you have any questions. Students are expected to meet with the faculty, attend group meetings, learn about the group's research, and submit a 250-word report of each rotation. Due date for the reports will be announced later. Failure to complete three rotations will affect the student’s CHEM 605 grade.
14. Advisors. The Chair of the Graduate Affairs Committee serves as advisor for new full-time Ph.D. students until the selection of a faculty member as a research advisor has been approved by the Chemistry Graduate Affairs Committee and Department Chair. The choice of a research advisor is extremely important and should be made only when a student has become well acquainted with the faculty and research work in progress in the Department. Refer to the Department of Chemistry’s departmental website for descriptions of faculty research interests: <http://www.case.edu/artsci/chem/faculty/>. Full-time first-year graduate students will complete a Research Advisor Selection Form indicating their preferences of thesis advisor during the first semester, following their third lab rotation.

The Research Advisor Selection Form is obtained from the Chemistry Office of Graduate Affairs (Clapp 212) and should be returned to that office. The Chemistry Department Chair, considering the recommendations of the Chemistry Graduate Affairs Committee and Faculty at

large, will give final approval to the selection of research advisors and notify the student, subject to approval by the faculty member selected as thesis advisor. The research advisor, once selected, is responsible for guidance in the student's selection of courses, in research, and in meeting degree requirements.

In situations where a chemistry graduate student selects a research advisor outside the Department of Chemistry (or if the advisor leaves the Department), the Chair of the Graduate Affairs Committee will play a more active role in guiding the student by means most appropriate to the particular situation. Several faculty members also serve as advisors to all part-time graduate students in matters of course selection and schedules.

An advanced graduate student who wishes to change research advisors should first meet with the Chair of the Graduate Affairs Committee to explain the reason for requesting such change.

15. Research Notes and Data. All research notebooks and various forms of recorded data obtained as part of the thesis research are to be left with the thesis advisor upon termination of the research. These are the property of Case Western Reserve University. Students are urged to make carbon copies of all notes and data which they may want to retain.

Authorship in publications is subject to the university's guidelines, which may be viewed here: <https://physiology.case.edu/research/authorship-guidelines/>

16. Grades and Quality Point Average. The following grades are used for courses for graduate credit:

A - Excellent	(4 quality points)
B - Good	(3 quality points)
C - Passing	(2 quality points)
D - Poor	(1 quality point)
F - Failure	(no credit toward degree)
P/NP (for 601)	(not counted in quality point average)
S - Satisfactory (for 701)	(not counted in quality point average)
U - Unsatisfactory (for 701)	(no credit toward degree)
IN - Incomplete	(no credit toward degree)
AD - Audit	(no credit toward degree)
W - Withdraw without grade	(no credit toward degree)
Z - Instructor did not turn in a grade	

CHEM 601 (Graduate Research) is assigned the grades of P (Pass) or NP (No Pass). CHEM 701 (Dissertation Research) is assigned the grades of S (Satisfactory) or U (Unsatisfactory). (A letter grade is never given for CHEM 601 or 701.) A grade of NP or U will result in a review of the student's work and the factors impeding their progress in thesis research in order to establish whether the prospects for completion of degree requirements justify continuation of a graduate appointment in the Department. This review will be conducted by the Graduate Affairs Committee with the help of the Ph.D. Oral Qualifying Committee and the thesis advisor and will be carried

out as soon as possible after the award of the unsatisfactory grade (usually one month). Credits that receive a grade of NP or U must be retaken and do not count towards degree requirements.

The grade of I (Incomplete) may be given for a course when, in the opinion of the course instructor, there are valid reasons for the failure of a student to complete the work of a course before the end of the grading period. In order to receive credit for a course marked I, the student must complete the work by the date specified by the instructor but not later than the end of the next regular semester (Fall or Spring) in which the student is enrolled. If the student fails to remove the Incomplete within the specified time, he or she forfeits the privilege of completing the course for credit and the grade becomes a permanent I unless the instructor elects to give the grade of U.

The grade of W will be given if a student officially withdraws from a course two calendar weeks after the start of a semester. A student after consultation with the appropriate dean may withdraw from a course not later than the end of the 11th week of the semester and receive a grade of W. After this date, a student who withdraws from a course normally will receive a grade of F unless, in the judgment of the Dean of Graduate Studies, there are valid reasons for recording the grade of W. Students will be permitted to change their registration in a course from credit to audit (AD) only during the first two calendar weeks of the semester (the drop/add period). According to Graduate School rules, a student who receives a grade of U in 701 will be placed on probation and must remove himself/herself from probation within one year to continue graduate study. Removal from probation will require repetition of the number of hours that received the U until the acceptable grade of S is attained.

The School of Graduate Studies and the Department of Chemistry set additional standards for the maintenance of good standing. Specifically, a student shall be separated from the University if he or she fails to achieve a grade-point average of at least 2.50 after two semesters or 2.75 after four semesters of full-time graduate study (excluding summers).

The School of Graduate Studies and the Department of Chemistry require a minimum cumulative grade point average of 3.0 for the awarding of graduate degrees.

17. Review of Student's Progress. The progress of Ph.D. students will be reviewed by the thesis advisor (for Masters students, this will be the program advisor). Ph.D. students who do not make satisfactory progress towards their research will be given an 'Unsatisfactory' grade in CHEM 701. Students who receive the 'Unsatisfactory' grade are automatically placed on academic probation and must earn a 'Satisfactory' grade in the following semester to remain in the program.

18. Part-time Graduate Study in Chemistry. The following features of the graduate program in chemistry should be noted by part-time students:

- a. The Department accepts part-time students working for the Master's degree (Plan B, see Section C) but not for the doctorate. The first year of course work for the Master's and doctorate are essentially the same. Consequently, a graduate may start work on a part-time basis and then transfer to work for the Ph.D. upon approval by the Department.

- b. Research under CHEM 601 (Graduate Research) and CHEM 701 (Dissertation, Ph.D.) may be initiated only by full-time graduate students. Only the Master's degree under Plan B (course work only, see Section C) can be obtained entirely on a part-time basis.

B. REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is awarded to those students who demonstrate a mastery of subject matter at an advanced level and the ability to carry out original and fundamental research. The Master's degree is not a prerequisite, although some students choose to obtain this degree in the course of their doctorate work, particularly if their graduate study is likely to be interrupted. (See Section C, requirements for the Master of Science Degree.) Graduate students may start graduate course work in the Department as Masters students and subsequently transfer to doctoral status to work for the Ph.D. upon approval by the Graduate Affairs Committee.

1. Time Requirements and Limitations on the Program of Study for the Ph.D. The graduate school specifies that ordinarily a minimum of three full academic years or the equivalent past the bachelor's degree are required for the Ph.D. The time normally needed to complete the Ph.D. requirements in chemistry is normally five full years (including summers) starting from the commencement of credit in CHEM 701. The Graduate School ordinarily expects graduate students to take a minimum of 36 coursework credit hours. See Section B-4 regarding transfer of graduate course credit. Students entering the Ph.D. program with a Master's degree may petition to reduce the minimum number of coursework credit hours to 23.

According to Graduate School rules, all requirements for the Ph.D. must be completed within a total period of five consecutive calendar years after a student first registers for CHEM 701, including periods of leaves of absence. Students whose leaves of absence are for duty in the Armed Services, however, will have the time limitation extended by their period of service. A student who fails to complete the requirements within five years must petition for an extension with the recommendation of the program. An extension may be granted if the student and advisor work out a plan to complete degree requirements within a specified timeframe and must be endorsed by the Department Chair and Graduate Affairs Chair. Students who do not file an extension or fail to meet the requirements of their extension are subject to separation from the university.

2. Competency Requirements. The competency requirement may be satisfied with a score at the 70th percentile in the ACS standardized examinations in organic, inorganic, and physical chemistry, respectively. These exams are given during the orientation week in August. A different set of standardized exams will be given following the end of finals in the fall and in the spring for students who have not yet passed their competency requirements. Alternatively, students may satisfy the competency requirement by scoring a B or better in a graduate level course in that area of chemistry. Students are expected to have demonstrated competency in all three areas of chemistry by the end of the first year and cannot be considered for advancement to Ph.D. candidacy until they do so.

3. Course Distribution Requirement for the Ph.D. A minimum of 18 semester-hours of graded graduate course credit is a requirement for admission to Ph.D. Candidacy, as specified in Section B-5. Within or beyond this course work, each doctoral student is required to pass with a grade of A or B at least one approved graduate-level course each from three of the five chemistry areas listed below. Grades of A or B in courses taken to fulfill the competency requirement can simultaneously satisfy the distribution requirement. Of the graduate level lecture courses (a minimum of six) which must be taken for a grade, **four** of your overall courses must be in the Chemistry Department.

ORGANIC CHEMISTRY

CHEM 425 (Physical Methods for Determining Organic Structure)
Chemistry)\CHEM 428 (Introductory Biochemistry)
Catalysis)
CHEM 429 (Chemical Aspects of Living Systems)
CHEM 435 (Synthetic Methods)
CHEM 443 (Structure, Properties, and Applications of Polymeric Materials)
CHEM 436 (Complex Molecular Synthesis)

PHYSICAL CHEMISTRY

CHEM 406 (Kinetics and Dynamics)
CHEM 442 (Computational Chemistry)
CHEM 446 (Quantum Mechanics)
CHEM 450 (Molecular Spectroscopy)
CHEM 447 (Photochemistry)
CHEM 452 (AI in Chemistry)
CHEM 506 (Special Topics)

BIOLOGICAL CHEMISTRY

CHEM 428 (Introductory Biochemistry)
CHEM 429 (Chem. Aspects of Living Systems)
BIOC 412 (Phys. Properties Biomacromol.)

INORGANIC CHEMISTRY

CHEM 412 (Advanced Inorganic)
CHEM 414 (Organometallic)
CHEM 415 (Industrial)

CHEM 502 (Special Topics)

ENGINEERING CHEMISTRY

ECHE 462 (Chemical Reaction Engineering)
ECHE 465 (Catalysis)
EMAC 470 (Polymer Synthesis)
EMAC 472 (Physical Chemistry of Polymers)
EMSE 401 (Transformation of Metals and Alloys)
EMSE 402 (Glassy State)

4. Transfer of Credit. Transfer of credit toward the doctorate is limited to graduate-level courses taken in excess of degree requirements at the other university and must be approved by the student's advisor, the Graduate Affairs Committee, and the Dean of Graduate Studies. Such courses must have been taken within five years of matriculation at Case Western Reserve University and passed with grades of B or better. No credit for the doctoral dissertation may be transferred from another university. Students who transfer credit from a previous Ph.D. program must also retake the oral qualifying examination. All requests for transfer of credit should be made in writing to the Chair of the Graduate Affairs Committee. Transfer of credit forms can be obtained online or see Angela Molina-Danforth, Clapp Hall 212.

5. Admission to Candidacy for the Ph.D. Admission to Candidacy signifies that the student has been judged intellectually qualified and basically prepared to earn the Ph.D. degree by completing a suitable research problem and writing a dissertation. In accordance with the regulations of the School of Graduate Studies, the decision of the Department to admit a student to Ph.D. candidacy is ordinarily made no later than one month after the completion of 36 semester-

hours of graduate study, interpreted as 4 semesters (excluding summers) for full-time graduate students entering the Department with B.A. or B.S. degrees. The 36 semester hours must include at least 18 hours of formal course work (i.e., six 3-credit hour courses) and two semesters of Colloquium. A student denied admission to Candidacy may not undertake further study for the doctoral degree in the Department of Chemistry. Such a student may continue studies toward the M.S. degree with the recommendation of the Ph.D. Oral Qualifying Committee and the Dean of Graduate Studies.

Ph.D. students are advised to schedule their oral qualifying examination in the Fall semester of their second year.

The following requirements must be satisfied for a student to be admitted to Ph.D. Candidacy in Chemistry: (1) a grade of Pass on the Ph.D. Oral Qualifying Examination, ordinarily taken during the fall semester of the second year, (2) a cumulative grade-point average for at least 18 semester-hours of graduate-level formal classroom courses of 2.75 or above, and (3) satisfaction of competency and course distribution requirements. Students may be enrolled in CHEM 701 (dissertation, Ph.D.) before being advanced to candidacy.

For students entering the Department with an M.S. degree, or equivalent, approved by the Graduate Affairs Committee, advancement to Ph.D. candidacy can come as early as the third semester in the department. At least 23 credit hours of course work must be taken, of which no more than five can be CHEM 601.

(After completion of 36 hours for those entering with a B.S./B.A. degree and 23 hours for those entering with a Master's degree, the student is required to complete 18 hours of CHEM 701 (research). Please Note: Candidates for the Ph.D. degree **must be enrolled** in the semester in which they are to receive the degree—this includes summer.)

When a student has passed the Ph.D. Oral Qualifying Examination, the Ph.D. Oral Qualifying Committee makes a prompt recommendation concerning Candidacy to the Graduate School. This recommendation is based on the student's satisfaction of requirements (2) and (3) above, the student's performance to date in research, and an overall evaluation of the student's potential to complete a doctoral research program and the other requirements for the Ph.D. The decision on admission to Candidacy is made by the Ph.D. Oral Qualifying Examination Committee. Written notice of admission to Candidacy is sent promptly to the Dean of Graduate Studies and to the student by the Graduate Affairs Committee.

6. Ph.D. Oral Qualifying Examination. The Ph.D. oral qualifying examination shall determine if the student has achieved real understanding of the research problem and the strategy to be used in attacking it. In examining these qualities, the Ph.D. Oral Qualifying Committee should also be sensitive to any general strengths and weaknesses in chemistry. It is desirable for the student's thesis advisor to be present at this examination, but the advisor does not participate in it. **Students must contact thesis committee members by email (cc: thesis advisor) not later than October 15, to begin the process of arranging a date for the oral examination.**

- a. Content of Examination. The examination is based on a presentation of the student's planned thesis project, **including research results** to date. Questioning by the Committee will focus on this project and the chemistry related to it. However, the student is expected to have breadth and depth of preparation in the chemical sciences in general, and questions related to all areas of chemistry will be possible.

The student is first given approximately 20 minutes to present the purpose and strategy of their research. In this presentation, details of methods used and research already completed should be described. The Committee will then question the student concerning the thesis problem.

A written summary of the student's thesis proposal, not more than about 2,000 words in length (excluding literature citations) and including key literature references, should generally be organized along the lines of the following four components: Specific Aims; Background and Significance; Research Design and Methods; and Preliminary Results. The required format parallels that described in Chapters 7 to 10 (pp. 27 to 50) of Otto O. Yang, *Guide to Effective Grant Writing*, first edition, Springer, 2005. There is a second edition of this book, but it is less relevant to the proposal format required for the written summary. Both editions are available electronically on the Department of Chemistry website, under "Chemistry Links" (<https://chemistry.case.edu/info/faculty-and-graduate-students/links/>). The written summary is due to thesis committee members **two weeks** (14 calendar days) before the scheduled exam date.

Specific Aims: Briefly describe what the proposed research is intended to accomplish and any hypotheses to be tested.

Background and Significance: Briefly sketch the background to the proposal, critically evaluating the limitations of existing knowledge that justify conduct of the proposed research.

Research Design and Methods: Describe the research design and the procedures to be used to accomplish the specific aims of the project. Potential pitfalls and safety concerns are issues which may be important to note.

Preliminary Results: Briefly describe and present preliminary results demonstrating that you are capable of undertaking the proposed research.

This written summary is to be distributed to each of the committee members at least two weeks before the scheduled examination. Within the first week, faculty committee members have the opportunity to provide written notification to the student (within reason) of some particular component of the proposal, not mentioned in the written summary, that they would like to see the student discuss at the oral exam.

- b. Criteria for Evaluation of the Oral Examination. The Ph.D. Oral Qualifying Committee is responsible for deciding by majority vote whether the student has passed or failed the oral examination. The criteria for this decision are the soundness of the student's written and spoken presentation of the thesis research problem and the strength of their response to questions asked in this area or on other subjects in chemistry, if the discussion should reveal these to be important. The focus in all cases is on the level of the student's actual understanding. The Committee's decision on the oral examination performance will be made independently of the student's record otherwise as a graduate student. Course grades and research achievements not related to thesis research are considered separately in the Ph.D. candidacy decision which follows if the student is judged as having passed the oral examination. If the passing grade is given for the oral examination, the Committee proceeds to consider admission of the student to candidacy for the Ph.D. degree, as described above. If the failing grade is given, the student is ineligible for candidacy. The student is entitled to repeat the oral examination a second time, generally 2-4 months later, but not later than compatible with the time limits set by the Graduate School for the decision as to admission to Candidacy (end of the second academic year; see Section B.-5 Admission to Candidacy for the Ph.D.).
- c. Report of Ph.D. Oral Qualifying Examinations: The thesis committee chair will ordinarily inform the student immediately and informally of the committee's decision regarding the oral examination. If the judgment is adverse, the chair will briefly explain why. The chair then will submit a formal written report to the Chemistry Main Office on the results of the oral examination with copies to the student and the research advisor. If the failing grade is given on the first attempt, the formal report on the oral examination will provide a detailed assessment of the student's perceived strengths and weaknesses and suggestions for remedial work.
- d. Appointment of Ph.D. Oral Qualifying Committees: Three faculty members are appointed by the Department Graduate Affairs Committee for each graduate student following the second semester after their admission to full-time graduate work in the Department. One of the three will be designated as chair. The thesis advisor is not a member of the Ph.D. Oral Qualifying Committee. In appointing this committee, the Graduate Affairs Committee will ordinarily attempt to select members with competence in an area reasonably close to the thesis problem of the student and the third usually in a less closely related area. These will normally be Chemistry faculty members, but the Graduate Affairs Committee may approve at most one CWRU faculty member outside the Chemistry Department as a member of the committee (not the chair). In the event of a repeat of the Ph.D. Oral Qualifying Examination following failure of the first attempt, the Department Graduate Affairs Committee may consider restructuring the Ph.D. Oral Qualifying Committee upon petition by the student.
- e. Scheduling of the Ph.D. Oral Qualifying Examination: The examination must be taken during the first semester of the second year of graduate study in the

Department for full-time students who entered without prior graduate work in chemistry. It is recommended that the Oral Qualifying Examination be taken during the month of October, with the latest possible date being the day prior to the start of final exams. For graduate students who entered with prior graduate work, who started their graduate work on a part-time basis, or who entered the graduate program at a non-standard time of the year, the Graduate Affairs Committee will fix a date after consultation with the thesis advisor, Ph.D. Oral Qualifying Committee chair, and the student. **Exams must be scheduled not later than October 15 for Fall-term admits.** If a student fails to schedule an examination to be held during the prescribed period, the examination will be scheduled by the Graduate Affairs Committee.

- f. Disputes regarding any of the above will be heard by the Graduate Affairs Committee Co-Chairs.

7. Ph.D. Research and Dissertation. Each candidate for the doctorate must submit a dissertation as evidence of ability to conduct research at an advanced level. The dissertation must present contribution to knowledge in chemistry and at least part should be suitable for publication as a full-length article in a recognized journal. The dissertation is based on original laboratory and/or theoretical research carried out by the student. Each student must prepare their own dissertation; joint dissertations are not permitted.

Instructions for the form of the dissertation must be requested from the Graduate Affairs Coordinator, Clapp Hall 212. This will be sent via email. An abstract is to be included with the doctoral dissertation.

The dissertation is submitted electronically. If the student's research is supported by a grant or fellowship from a non-University source, this must be explicitly cited, including grant or contract number, for all grants. The final typed dissertation must be approved and accepted by the Office of the Dean of Graduate Studies not later than one month before the Commencement at which the degree will be granted. The cost of typing, preparing and reproducing all copies (including bindery charge) is the responsibility of the graduate student.

All dissertations are considered public documents upon acceptance by the Graduate School.

8. Final Oral Examination. This examination is a public defense of the Ph.D. dissertation. The Final Ph.D. Oral Examination Committee consists of at least five CWRU faculty members, including at least three with primary Chemistry appointments, at least four with appointments (primary or secondary) in Chemistry, and at least one with a primary appointment in another department. It includes the three members of the Ph.D. Oral Qualifying Committee and the graduate student's thesis advisor. The chair of the Ph.D. Oral Qualifying Committee will become the chair of the Final Ph.D. Oral Committee. Persons who are not members of the University faculty may serve as additional non-voting members of the committee. The selection of the required faculty member from another department is to be made by the student's research advisor and/or the Ph.D. Oral Qualifying Committee chair, after consultation with the student. Selection

of the out-of-department member should be done three (3) to six (6) months in advance of the Final Oral Examination.

The student must file with the School of Graduate Studies a copy of notification for scheduling the Final Oral Examination at least three (3) weeks in advance of the examination. The front office will then post an announcement of the exam.

Ten days prior to the scheduled defense, the student must give a finished copy of their thesis to each committee member.

The objective of the thesis defense is to determine if (i) the conclusions drawn are consistent with the research results, (ii) the thesis work constitutes a significant contribution to science that merits the award of the Ph.D. degree, and (iii) the thesis meets the structural requirements of the School of Graduate Studies.

The actual defense will consist of both an open and a closed session. The open session will begin with an approximately 45-minute seminar-style presentation by the candidate. Following a question-answer period dealing with scientific issues of general interest, the committee members will question the candidate on other matters which the members believe would benefit from public airing.

At the completion of the open examination period, the committee chair will ask remaining members of the audience to excuse themselves. The closed session will consist of further scientific questions for the candidate, a discussion of any major organizational concerns about the thesis, as well as a private discussion of the candidate's performance (in the candidate's absence). The student will be certified as passing the Final Oral Examination if not more than one member of the committee dissents. The student may need to meet individually with one or more committee members after the thesis defense to obtain clarification of stylistic or minor organizational concerns.

Required thesis corrections should be indicated in the committee member's copy and provided to the student at the final defense. Any additional required alterations must be provided to the student in writing within 48 hours of the defense. Supervision of the thesis corrections will in general be the responsibility of the thesis advisor, who will notify the committee members in writing that the thesis has been properly corrected by the date set by the committee, normally within one month from the date of the final defense. At the completion of the exam, if the student is judged to have passed the final defense, each consenting committee member will sign the Final Certification of the Ph.D. Degree form, unless there are substantive scientific concerns. In the latter event, faculty may withhold their signature to indicate their requirement to review the revised thesis. In this case, faculty should notify the student in writing of their approval of the thesis corrections as soon as possible, and in any case within 10 days of receipt of the corrected thesis.

9. Application and Fees for Graduation. Use the Graduation Application process to apply for graduation through the Student Information System by the appropriate semester deadline. The student should consult the School of Graduate Studies for information concerning graduation fees

and registration in the semester in which the Final Oral Examination occurs at <https://case.edu/gradstudies/current-students/graduation>.

C. REQUIREMENTS FOR THE MASTER OF SCIENCE (See University General Bulletin)

The Master of Science may be obtained through course-work only and may be obtained on a part-time basis.

1. Time Limitation and Continuity of Registration Requirement. A student who interrupts their work for the Master's degree (i.e., does not register) for one or more semesters during the academic year should obtain a leave of absence from the Dean of Graduate Studies. Graduate School rules specify that except for work interrupted by military service, all requirements for the Master's degree must be completed within a total period of five consecutive calendar years including periods of leave of absence. A student who fails to complete the requirements within five years must be formally readmitted as a full-standing student in order to continue their studies for the degree. Courses taken more than five years prior to matriculation cannot normally be counted towards this degree.

2. Transfer of Credit. Transfer of credit from another university for the Master's degree is limited to six (6) semester-hours of graduate-level courses taken in excess of degree requirements at the other university and must be approved by the student's advisor, the Graduate Affairs Committee, and the Dean of Graduate Studies. Such courses must have been taken within five years of matriculation at Case Western Reserve University and passed with grades of B or better. Credits for research at another university cannot be transferred.

3. Program Requirements.

- a. Program of Study: The minimum requirement of credits earned for the Master's degree is a total of 30 semester-hours, of which at least 24 must be earned at Case Western Reserve University. Of the 30 semester-hours, at least 18 must correspond to formal graduate courses in the Department of Chemistry. Six of the 18 semester-hours earned with Chemistry coursework may be undergraduate-level courses if a corresponding graduate-level course is not available and the Master's advisor (Dr. Clemens Burda) has approved the course.

Nine semester-hours of graduate electives must be taken. Electives may be taken in the Chemistry Department or in pre-approved departments, including BIOC, EMAC, and ECHE.

The remaining three semester-hours may consist of CHEM 601 (Graduate Research) or CHEM 507, 508 (Special Readings).

The Master's program requires two semesters of CHEM 605: Colloquium seminar attendance.

In the final semester, Master's students have the option to register for 1 credit of EXAM 600 to maintain full-time status. This is only necessary for students who must maintain full-time status, such as international students who must meet specific visa requirements. A minimum GPA of 3.0 is required for graduation.

b. Special Readings and Research: The Department requires for the Master's Degree either of the following:

1. Three semester-hours of CHEM 507, 508 (Special Readings) with a report to be submitted to the advisor.
2. Three semester-hours of CHEM 601 (Graduate Research). Note that CHEM 701 does not count toward the M.S. degree.

In either case the report or the resume will be evaluated by the faculty member supervising the special readings or graduate research and designated as acceptable or unacceptable.

c. Part-time graduate study. Part-time graduate students working for a degree under Plan B are urged but not required to study full-time for at least one semester.

Part-time graduate students who are unable to obtain a leave of absence from their regular employment for one semester can complete all requirements for the Master's degree on a part-time basis. A reasonable schedule would consist of three semester-hours for the first fall and spring semesters plus at least three semester-hours of CHEM 507 or 508 (Special Readings) and additional courses in later semesters and summer sessions, yielding a total of 30 semester-hours.

D. SUMMARY OF CRITICAL DATES FOR 2026–2031

<https://case.edu/registrar/dates-deadlines/academic-calendar>

E. GRADUATE STUDENT ASSOCIATION

The Graduate Student Association of the Department of Chemistry is devoted to the development and maintenance of effective communication between the faculty and the graduate student body. The Association strives for the continued enhancement of contact at all levels, social as well as professional between faculty members and graduate students. It is the purpose of the association to promote such a relationship between the faculty and graduate student body as will be most conducive to the greatest educational and scientific benefit of all. Membership in the Association is open to all Chemistry graduate students.

Activities of the Association include the following:

1. Nomination of graduate students to be members of the Department Graduate Affairs Committee, Undergraduate Affairs Committee, Graduate Admissions Committee, and various *ad hoc* department committees, and to represent the graduate students at faculty meetings.
2. Arrangement of social events.
3. Professional development.

Students requiring information regarding housing, departmental procedures, etc., may obtain advice by contacting a member of the Graduate Student Association (G.S.A.) by phone or by mail, in care of the Department of Chemistry, Case Western Reserve University. Alcohol may not be served at university events without a liquor permit.

F. PROCEDURAL AND OTHER MATTERS

1. Keys. You will be issued a key to your PI's lab after you have been assigned an advisor. Department Manager James Sill will coordinate this with your PI; no action is necessary on your part. All keys must be picked up by the individual requestor at Access Services (Crawford Hall (lower level)). At the termination of appointment, these keys must be returned to the same office. If a key is lost, please report it immediately to the Security Office (216-368-3333). A \$50 fee will be charged to replace a lost key. If a student fails to turn in any key, a hold will be placed on that student's transcript until the key is returned or a lost key charge is paid.
2. Ordering Equipment and Supplies. Orders are placed through SmartCart or by email with an order form. You will be informed of the on-line training and procedures by the Department Finance Office (Clapp Hall 212). All purchasing related questions and order forms should be directed to Kirsten Nolfi (kxn262@case.edu).
3. Obtaining Supplies from the Fisher Stockroom. Orders are placed through SmartCart. You will be informed of the on-line training and procedures by the Department Finance Office (Clapp Hall 212).
4. Engineering Services Fabrication Center. The services of machinists are available for the construction and repair of certain equipment. The Engineering Services Fabrication Center is located in Room 207, Olin Building. Graduate students seeking the use of these shops must see the Department Manager. Jobs requiring more than 30 minutes must be authorized in advance by the faculty member. For any machine shop work requiring new construction, relatively complete advance drawings are required. Students and faculty who are undertaking the design of relatively complex equipment requiring much shop time are urged to check with the head of the ESFC while the equipment is still in the design stage. The shop personnel will assist in the ordering of any materials and construction or components which they do not stock.

5. Copy Room. Copying and reproducing services are available within the Department in Clapp Hall 213. These facilities are available only for official department or school-related business. Students are not permitted to directly connect their personal computers to any printer in the department. Flash drives are permitted.

6. Library Facilities. Kelvin Smith Library (<https://case.edu/library/>) and Health Center Library (Medical School) have extensive chemistry collections and are available for use by graduate students. Hours and phone numbers for all University Libraries are listed on the CWRU Website.

7. Telephones. The telephones are on the Centrex system and give direct access to outside lines. The last four numbers correspond to the University extension. To obtain inside phones, you must dial 368-XXXX. To dial outside numbers, dial first 9, then the outside number. International phone calls cannot be placed on office phones.

8. Emergencies. The following numbers can be contacted in the event of an emergency.

Fire/Police/Lockdowns	(216) 368-3333
Mental Health Emergency	(216) 368-2450
Environmental Safety	(216) 368-2906
Chemical Spills	(216) 368-2907
County Emergency System	9-911 (inside campus phone only)

In the case of any imminent danger, **(216) 368-3333** must be contacted immediately. Dispatch will inform Environmental Health and Safety of the incident as well. (216) 368-3333 will direct to CWRU's Public Safety Office and will be able to find you faster than 911.

In the case of a mental health emergency, dispatch will contact University Health and Counseling Services' 24 hour support.

Report all emergencies as soon as possible to your faculty advisor. Dr. Brian Fitch must also be notified after you have notified emergency services and your advisor.

9. Building Maintenance. Building Maintenance can be contacted at (216) 368-2580. Water leaks or drips should be reported to Building Maintenance as soon as possible. Dr. Brian Fitch must also be notified.

10. Lock Outs. If you are locked out during normal working hours, you may ask a staff member in the Chemistry Main Office to be let back in. This is only applicable to your student office and your PI's lab space; students will not be let into room they do not have clearance to. For lock outs after hours, please contact CWRU's non-emergency number at **(216) 368-3300**. Do not call the emergency line for a lock out.

11. Stipend Checks. These are issued electronically on the last working day of the month. You may view your check deposit at HCM.

12. Mail. Mailboxes are provided for graduate students in the hallway outside of the Chemistry Department Administrative Office in Clapp Hall.

13. Graduate Student Holiday, Vacation, Parental Leave and Sick Leave Policies: These policies apply to graduate students in the School of Graduate Studies who receive stipends that support their effort toward earning a degree during the period when they receive support. They represent the minimum to which graduate students who earn a stipend over a 12-month period are entitled.

If a graduate student receives a stipend over a 12-month period, they will receive support for holidays, vacations, sick leave and parental leave as set forth below. The stipend support for those days will be at the same rate as for normal work days. For all anticipated leaves longer than two weeks, appropriate departmental approvals must be obtained and paperwork submitted to the School of Graduate Studies prior to the start of the leave.

These policies do not supersede other University policies concerning attendance or residence at the University, e.g. participating in classroom activities as a student or teaching assistant. These policies only apply to student effort toward earning a degree.

Holidays. Graduate students are entitled to observe University closings for Holidays and other recognized events. The University currently recognizes 10 named holidays, 1 university designated holiday and 1 personal floating holiday. (<https://case.edu/hr/worklife/university-closings-holidays>)

Vacations. Graduate students are allowed two weeks of vacation per calendar year (10 traditional work days) if they receive full support during a 12-month period. Students who receive less than 12 months of support are not entitled to vacation during the period of support. Vacation is not provided during the supported period when students receive support for part of the year. The dates of vacations must be approved in advance by the student's research mentor to ensure that time-sensitive work is not disrupted.

All vacation requests must be submitted to the Chemistry Main Office via the Request for Vacation Form (<https://chemistry.case.edu/info/faculty-and-graduate-students/forms/>). Graduate students must obtain their PI and the Department Chair's signature; teaching assistants must also obtain the signature of their TA supervisor. Request for Vacation Forms must be submitted **2 weeks in advance** of your intended vacation for international travel; for domestic travel, please submit your form **2 business days** in advance. The department has final approval on all vacation requests. Unauthorized vacation is not permitted and will not be paid.

Vacation days can be accrued from one year to the next year only with the prior written approval of the Program and only up to a maximum of 20 traditional work days, to allow for international travel, for example. There is no terminal leave.

The times between academic terms and the summer are considered part of the active training period and are not to be regarded as vacation time.

Sick Leave. Graduate students are entitled to two weeks (10 traditional work days) of sick leave per year, with no year-to-year accrual. Sick leave may be used for medical conditions related to pregnancy and childbirth. Under exceptional circumstances, additional sick leave days may be

granted following receipt of a written request from a physician and prior written approval by the Program.

Parental Leave. Graduate students are entitled to paid parental leave for the adoption or birth of a child for up to 8 weeks. When both parents are supported graduate students, the leave may be used consecutively or together. The leave must be used within 12 months of birth or adoption. Parental leave must be approved in advance in writing by the Program. It is permissible to add parental leave and sick leave together for the adoption or birth of a child.

Unpaid Leave. Students, who require additional leave beyond what is stipulated above, must seek prior written approval from the School of Graduate Studies for an unpaid leave of absence. Approval for a leave of absence must be requested in advance by the student and the student should provide documentation for the leave request and obtain approval from the Program. Conditions for the leave and Program approval must then be submitted to the School of Graduate Studies. Continued coverage of health insurance is allowable for one semester under a medical leave of absence as permitted within the guidelines of University Health Services and with written approval by the Program and Dean of School of Graduate Studies.

Unused Leave. A student is not entitled to receive any form of compensation for any unused holidays, vacation days, sick leave, parental leave, and/or other accrued time off.

Disclaimers. These policies do not supersede any HR policy. In addition, these policies do not create a contractual relationship with any student and the policies may be amended at any time by the Faculty and the School of Graduate Studies.

14. Parking Lots. Case is a member of the Central Parking Operation (CPO) which is managed by Standard Parking. All parking facilities in University Circle are under their control. To obtain a parking permit, graduate students should visit Access Services, Crawford Hall, but first must have a valid Graduate Student Identification. <https://case.edu/parking/about>.

15. Personal Protective Equipment. Lab coats and safety glasses are provided by the department during Orientation Week.

16. The VISA Office. This office is located in Crawford Hall (visa@case.edu) and offers assistance to international students. International students are encouraged to consult the VISA Office for any visa related issues and before embarking on any international travel.

17. Health Care Programs. The University offers a comprehensive health care program which includes clinical services as well as insurance for a fee. The student is billed individually for this charge which is currently \$2,110 per semester. (This is covered by the graduate assistantship.) Students must use the university-provided health insurance unless they can prove that they are covered by another plan. If a student has a comparable health insurance plan, it can be waived on the Student Information System (SIS) after you complete your registration. Students with dependents may elect additional coverage for a spouse or for spouse and children.

18. Employment Service. Case Western Reserve University maintains a Career Center (<https://case.edu/studentlife/careercenter/>) to assist students in finding positions. Throughout the

year, but particularly in the fall, many companies visit the campus to interview graduate students for research positions. Graduate students who will be seeking industrial positions are urged to contact the Career Center *at least one year before the anticipated graduation date*. Academic positions and postdoctoral appointments are usually arranged with the help of faculty members, particularly the thesis research advisor.

Students seeking postdoctoral positions are encouraged to contact potential postdoctoral advisors at least one year in advance of the proposed date of their graduation from CWRU.

G. TITLE IX NOTICE OF NONDISCRIMINATION

Case Western Reserve University prohibits sex- and gender-based discrimination in its education programs and activities, as well as retaliation for asserting the right to be free from such discrimination, in accordance with federal law, including Title IX of the Education Amendments of 1972 (20 U.S.C. § 1681). Sex- and gender-based discrimination includes discrimination based on sex, pregnancy, parental status, gender identity or expression, transgender identity, and sexual orientation. Sex- or gender-based discrimination also includes sexual harassment, sexual assault, sex-based stalking, sexual exploitation, and dating violence or domestic violence.

The Title IX Coordinator in the Office of Equity is responsible for implementing the policy prohibiting sex- and gender-based discrimination.

Anyone impacted by sex- or gender-based discrimination, or who knows of others impacted by sex- or gender-based discrimination, and who would like to report discrimination or seek support for themselves or others, may contact the Title IX Coordinator by telephone, email, text message, or in person during regular business hours, or through the online Office of Equity forms below.

Title IX Coordinator: Rachel E. Lutner
Main Office Phone: 216-368-3066
Text or Call Title IX Coordinator: 216.327.4160
Email: titleix@case.edu

Online forms to report sex- or gender-based discrimination:
[Online form for CWRU community members to report and request support](#)
[Online form for CWRU community members to report anonymously](#)
[Online form for non-CWRU community members to report](#)
[Webpages for more information](#)

Campus Location: Dental Research Building, Suite 0G60 2124 Cornell Road, Cleveland, OH 44106

Mailing Address: 10900 Euclid Ave., Cleveland, OH 44106-7108

H. LIST OF OFFICE AND SERVICE LOCATIONS.

	<u>Room</u>	<u>Building</u>	<u>Telephone</u>
Chair, Department of Chemistry	208	Clapp	216-368-3852
Associate Chair, Chemistry Department	411	Millis	216-368-0991
Co-Chair, Graduate Affairs Committee	411	Millis	216-368-0991
Co-Chair, Graduate Affairs Committee	228	Millis	216-368-3697
Department Main Number	212	Clapp	216-368-3622
Graduate Affairs Coordinator	212	Clapp	216-368-5030
Graduate School & Dean of Graduate Studies	203	Tomlinson	216-368-4390
University Career Center	229	Sears	216-368-4446
University Health Service (24 hour Emergency)	2124	Cornell Rd.	216-368-2450
VISA Office	215	Crawford	216-368-6964
Standard Parking		.	216-368-2273
Parking Assignments	Access Services-Crawford Hall – Lower Level		

EMERGENCIES, SECURITY, + LOCKDOWNS
216-368-3333