Department of Chemistry

Graduate Student Handbook

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College of Arts and Sciences

University of Tennessee, Knoxville

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Departmental Welcome

Welcome to the Graduate Handbook, developed by the Department of Chemistry as a resource for prospective and current graduate students. This Handbook provides information related to requirements for admission and degrees, expectations for graduate students, and major milestones along the path toward an advanced degree in chemistry.

The Department has a rich history of graduate education – it is the oldest PhD granting department at the University of Tennessee, Knoxville, which is the flagship educational institution of the State of Tennessee. The department has a highly active graduate education program that is growing toward 200 graduate students. With our faculty, these students are engaged in scholarly, ground-breaking research in the traditional areas of chemistry – analytical, inorganic, organic, and physical – as well as in polymer chemistry and a variety of interdisciplinary research areas. Beyond the research laboratory, aspiring scholars have opportunities for professional development through involvement in teaching, outreach through the department's Association of Chemistry Graduate Students, and more.

Our hope is this Handbook is a useful resource that, along with your faculty advisor, our support staff, and department leadership team, will help you achieve your professional goal of earning an advanced degree in chemistry, thereby joining the ranks of Vols who proudly call the University of Tennessee their alma mater.

1. Introduction

1.1 Graduate School Introduction

To serve the mission and vision of the Graduate School and preserve the integrity of Graduate Programs at the University of Tennessee, Knoxville, information related to the process of graduate education in each department is to be provided for all graduate students.

Based on Best Practices offered by the Council of Graduate Schools, it is important that detailed articulation of the information specific to the graduate degrees offered in each department/program be disseminated.

The Department of Chemistry's Graduate Handbook does not deviate from established Graduate School Policies noted in the Graduate Catalog (https://catalog.utk.edu/index.php?catoid=55), but rather provides the specific ways in which those policies are carried out. If any policy(ies) described herein becomes out-of-date with those published by the Graduate School, the policy of the Graduate School shall take precedence, with all others remaining in effect.

1.2 Purpose of this Handbook

The information in this Handbook is intended to assist Chemistry graduate students pursuing advanced degrees in Chemistry at the University of Tennessee, Knoxville by presenting basic information concerning the graduate program, including admissions and financial information, requirements of assistantships, and degree requirements. Students are advised to consult this handbook routinely but also recognize that it does not cover all aspects of graduate study. Therefore, students are urged to also consult more complete sources of information such as the Graduate Catalog, resources and publications available from the Graduate School, and other UTK websites.

Graduate students are expected to be aware of and satisfy all regulations governing their work and study at the university. This includes policies and regulations stated in the Graduate Catalog, as well as program-specific policies, regulations, and processes described herein. In addition, graduate students must abide by the Student Code of Conduct outlined in the *Hilltopics* student handbook (https://hilltopics.utk.edu/), which is available through the Division of Student Life. A graduate student's rights and obligations include the right to appeal academic decisions to the Graduate Council through the Graduate Council Appeals Committee. The processes for doing so are available on the Graduate School website (https://gradschool.utk.edu/graduate-student-life/understanding-your-rights-and-obligations/).

The first part of this handbook attempts to present topics in the order in which a student aspiring to an advanced degree typically needs the information. Thus, a basic overview of admission policies and application processes, as well as financial support and basic expectations for graduate assistantships precedes information related to registration, advising, and degree requirements. Some of the pertinent material from the Graduate Catalog is included for easy reference, but it is always relevant to consult the Graduate Catalog for full and updated information. Several appendices include more detailed information on topics important to earning a degree and examples of some Graduate School forms.

Additional information for prospective and current graduate students is available on the Department of Chemistry website (https://chem.utk.edu/), which includes information about departmental personnel, facilities, and infrastructure.

1.3 Chemistry Department Administration

Department Office:
552 Buehler Hall
Phone: (865)973-3141

Department Head: Kevin Shaughnessy
Associate Head for Graduate Programs: Brian K. Long
Associate Head for Undergraduate Programs: Michael D. Best

Department Head Assistant: Rhonda Wallace
Administrative Associate for Graduate Programs: Kendra Bilbo

Inquiries related to the Graduate Program: chemgradprog@utk.edu

Listing of Chemistry faculty: https://chem.utk.edu/faculty/

2. Admission Requirements and Application Procedures

Enrollment in the graduate program in Chemistry at the University of Tennessee, Knoxville requires admission to both the Graduate School and the Department of Chemistry. Up-to-date information regarding Application Procedures and Admission Policies can be found in the Graduate Catalog. These are summarized below, followed by admission requirements. It should be noted that admission requirements differ for domestic and international students, and the Graduate Catalog should be consulted for these details.

2.1 Applying for Graduate Study

For consideration for graduate study at the University of Tennessee, Knoxville, a student must submit a formal, online application through the Office of Graduate Admissions (https://gradschool.utk.edu/admissions/). Once the application is complete, decisions related to admission follow a multi-step process:

1. The Graduate School screens the application to ensure the applicant meets minimal standards set by the university.
2. Application materials are reviewed by the Department of Chemistry's Admissions Committee. Acceptance will depend on a number of factors including the applicant's credentials and the needs of the program.
3. The Department of Chemistry notifies the Graduate School of the admission decision.
4. The Graduate School notifies the applicant of the admission decision.

Applications may be based on unofficial transcripts; however, official transcripts are required before a student may enroll for their second term. (Details may be obtained from the Office of Graduate Admissions – see After Admission.) Applicants have the ability to check their application status online.

2.2 Admission Requirements

The general admission requirements set by the Graduate School for domestic and international students are summarized here: Admission to graduate study requires a bachelor's degree from a college or university accredited by the appropriate regional accrediting agency, recognized by the Council on Higher Education Accreditation (CHEEA). A non-U.S. degree must be equivalent to a bachelor's degree from the United States and must be granted by a recognized or accredited foreign institution. Admission for students with a degree from the United States requires a minimum grade point average of 2.7 out of a possible 4.0, or a minimum of 3.0 during the senior year of undergraduate study. Applicants with previous graduate work must have a grade point average of 3.0 on a 4.0 scale. Applicants with non-U.S. degrees must have a minimum GPA of 3.0 on a 4.0 scale or other equivalent to a 'B' average. If applicants with non-U.S. degrees have completed graduate level coursework, a minimum GPA of 3.3 out of 4.0 or other equivalent to a 'B+' average is required. An international student graduating from a United States institution must meet the same requirements as those for domestic students.

According to the Graduate School, applicants with U.S. degrees whose undergraduate GPA falls below 2.7 may be admitted by exception. Similarly, applicants with non-U.S. degrees whose undergraduate GPA falls below 3.0 or whose graduate GPA falls below 3.3 also may be admitted

by exception. Given the number of applications the Department receives each year, such exceptions are rarely granted.

Enrollment in graduate programs is a privilege which may be withdrawn by the University, or any area of graduate study, if it is deemed necessary by the Dean of the Graduate School to safeguard the University's standards.

2.3 Admission to the Department of Chemistry

Admission to the Department as a graduate student is decided on a case-by-case basis, taking into consideration an applicant's undergraduate record (traditionally including courses in general, analytical, inorganic, organic, and physical chemistry), motivation for graduate study, and potential for superior academic achievement and performance in research. These are typically evaluated through supporting information, such as letters of reference from faculty and research mentors familiar with the student, experience in research, scholarly contributions in the form of research-based presentations or papers, and awards.

It should be noted that meeting the minimum standards set by the Graduate School and Department of Chemistry program requirements does not guarantee admission. For example, although Graduate School policy allows exceptions to GPA standards, admission to Chemistry is sufficiently competitive that the Department of Chemistry does not pursue such exceptions with the Graduate School. With that in mind, applicants are strongly advised to have an undergraduate GPA of 3.0 or better (on a 4.0 scale) or a GPA of 3.3 or better (on a 4.0 scale) in an MS program.

Students interested in applying as a non-degree graduate student should apply to the Graduate School only, as admission to non-degree status does not constitute admission to a degree program. Policies regarding non-degree admission as well as other admission classifications can be obtained from the Office of Graduate Admissions (https://gradschool.utk.edu/admissions/).

2.4 Applications Procedures and Requirements

As noted above, anyone with a bachelor's degree from a regionally accredited institution, an institution accredited by another organization recognized by the Council on Higher Education Accreditation (CHEA), or an equivalent degree from a similarly recognized or accredited foreign institution who wishes to take courses for graduate credit, whether or not the person desires to become a candidate for a degree, must submit a formal online application for admission to graduate study or apply for transient status. No action is taken until a file is complete. An applicant will be notified by the Office of Graduate Admissions of the Graduate School once an admission decision is reached. Applicants may check their status online through the Application Status Portal.

To apply for admission to the UTK Graduate School, the following materials must be submitted to Graduate Admissions through the online portal. All documents submitted become the property of the university and will not be returned.

- The completed online Graduate Application for Admission, which can be found here: https://gradschool.utk.edu/admissions/applying-to-graduate-school/
- A non-refundable application fee paid by credit card or electronic check. (This fee may be waived in certain cases at the discretion of the Graduate Admissions Committee.)

- One *unofficial* transcript from all colleges and universities attended. Applicants should note, however, that if admission is offered and accepted, *official* transcripts and degree certificates (if separate from transcripts) are required. Furthermore, the Graduate School reserves the right to revoke admission to a student if any official or unofficial documents are found to be fraudulent following review. In addition, registration is prohibited after the first semester of enrollment until students have submitted the official copy of transcripts where a bachelor's degree was earned and official transcripts from all institutions where graduate coursework was completed.
- Scores from Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) are required *unless*
    - English is the official language of applicant's country of citizenship, or
    - English is the primary language of instruction at the institution from which the applicant received an undergraduate, graduate, or professional degree. Evidence that the language of instruction is English must appear on the transcript or the applicant will be asked to provide additional documentation.

  The University of Tennessee Graduate School maintains a list of countries with English as the official language: (https://gradschool.utk.edu/admissions/applying-to-graduate-school/admission-requirements/official-english-countries/).

  The Graduate School sets minimum TOEFL and IELTS score requirements for admission, and scores are considered valid if submitted with the application within two (2) years of the test date. Additional information regarding English Language Requirements, registering for the TOEFL or IELTS, and sending scores is available from the Graduate School at https://gradschool.utk.edu/admissions/applying-to-graduate-school/admission-requirements/.

  The Department of Chemistry recommends that students take and submit their TOEFL score. The Chemistry Department strongly prefers students to have a minimum total TOEFL iBT score of 98 with a speak section score of 22.

In addition, the Department of Chemistry requires that applicants submit the documents listed below through the online portal. The documents are to be uploaded *after* the application has been submitted.

- 3 Letters of Recommendation
- The applicant's résumé or curriculum vita
- Personal Statement or Statement of Purpose

The Department of Chemistry does not require that applicants take the Graduate Record Examination (GRE). Students are encouraged to submit their GRE scores if they believe doing so will strengthen their application. The scores must be less than three (3) years from the date of admission to be considered. The chemistry subject test is similarly optional. The University Code for the University of Tennessee, Knoxville is 1843.

Questions from applicants related to admission policies established by the Graduate School should be addressed to the Office of Graduate Admission through their online portal (Contact-graduate-admissions).

Questions related to application and admission policies of the Department of Chemistry should be addressed to chemgradprog@utk.edu, and additional information for Prospective Graduate students is available through the Department's website, https://chem.utk.edu/graduate-students/.

2.5 Application Review, Deadlines and Initial Enrollment

The Department of Chemistry reviews and makes decisions on applications typically beginning in December. Thus, applicants are strongly encouraged to complete and submit their applications early. *Students may apply for admission in any semester, but the Department of Chemistry's current practice is for all graduate students to enter the program beginning in the Fall semester ONLY*. In exceptional situations, the Department will consider and review, on a case-by-case basis, requests for entry in Spring or Summer terms.

Deadlines for graduate applications will be posted on the Department of Chemistry's website (https://chem.utk.edu/graduate-students/prospective-students/#apply)

The Office of Graduate Admissions must be notified of any change in entering date after admission has been granted. If a student does not enroll within one year after the requested admission, the application process must be repeated.

In addition, because any offer of a graduate assistantship issued by the Department of Chemistry is a contract with a specific start date, ***students admitted to the Chemistry graduate program are required to request and obtain approval from the Chemistry Department if they wish to change the date of initial appointment after admission has been granted***. International students are especially advised to begin their visa application process in a timely manner so that they can arrive in the department on the date of initial appointment. International students who are unable to attain a visa in time to arrive on campus by the date specified in the contract for graduate study furnished by the Department of Chemistry may request that their admission be deferred for one year.

2.6 Transfer Credit

Policies related to credits earned through transfer are detailed in the Graduate Catalog. At the doctoral level, courses are not officially transferred, but they may be used to meet course requirements for a PhD in Chemistry. In cases where a student believes a requirement has been met through coursework in another program, the student may petition for a waiver of the requirement. (See Section 7.8 for information on petitions.) Because this results in a modification of a student's degree program, the petition should outline how degree requirements will be fulfilled. The process should begin with the involvement of the student's advisor and dissertation committee, as the dissertation committee approves all coursework. In addition to approval(s) at the department level, a waiver ultimately requires approval of the Dean of the Graduate School. Coursework taken outside of the US is typically not accepted due to the difficulty in establishing equivalence to courses at UT.

According to Graduate School policy, graduate course credit hours that **may not be applied** towards meeting degree requirements include:

- Graduate credits transferred from universities outside the University of Tennessee system cannot be used to meet the thesis or dissertation requirements or 600-level coursework requirements.
- Graduate credit for extension courses taken from other institutions is not transferable, nor is credit for any course taken at an unaccredited institution.
- Graduate credit previously earned as audits or by correspondence study at any university.

Students should also be aware that courses transferred to any graduate program will not affect the minimum residence requirements for the program, nor will they be included in calculating the student's UT grade point average.

The Graduate School places additional restrictions on the application of course credit hours for MS and PhD programs. Particularly relevant for students seeking a PhD in Chemistry is the following restriction: "A candidate for a doctoral degree who earned a graduate (typically a master's) degree prior to beginning the doctoral degree must complete a minimum of 24 credit hours of graduate courses at UT (exclusive of course 600 Dissertation)." Thus, even if a waiver of a requirement is approved, students still must meet that minimum threshold of 24 credit hours of graduate courses at UT.

In terms of departmental policy, the Department of Chemistry will not consider a waiver of more than two graduate courses.

2.7 Change of Program

Although we encourage prepared students to work toward the PhD degree, if you chose to enter the MS program when you completed your application for graduate admission, this choice can be changed. This choice also affects what research classes you are allowed to register for, specifically CHEM 500 and CHEM 600. CHEM 500 is strictly speaking, thesis (MS) research and CHEM 600 is dissertation (PhD) research.

If you were admitted into the Master of Science degree program in Chemistry, you will be permitted to register for CHEM 500 after you begin your research activities in a particular research group. However, if your ultimate intention is to earn the PhD degree, you will have to file a "Change of Program" form prior to entering candidacy for the PhD and register for CHEM 600. Thus, proper planning between a student and their advisor is essential, as enrollment in CHEM 600 begins in the semester following completion of the candidacy exam (successfully completing the CRP, described in Section 6.3 below). (As also noted in Section 4.2, there is a requirement of continuous enrollment in CHEM 600.)

In cases where a student is making a change from the PhD program to the MS program, or is a non-degree seeking student wishing to change to a degree program, a "Change of Program" form is also required. Prior to completing and submitting this form to the Graduate School, the student should seek additional instructions from the Associate Head for Graduate Programs.

3. Financial Support

3.1 Graduate Education and Graduate Assistantships

Graduate study in the Department of Chemistry involves education and training through graduate level courses, innovative research, mentoring by a faculty member, and engagement with colleagues and external visitors. Graduate students in the Department of Chemistry's PhD Program receive a package of financial support in the form of a graduate assistantship. The university defines a graduate assistant as both student and employee. As a student, a graduate assistant is expected to fulfill the responsibilities required by their courses and perform well academically. As an employee, graduate assistants are expected to fulfill their assigned obligations in teaching and/or research. All departments are required to follow university guidelines for graduate assistants, and within the various types of assistantships defined by the Graduate School, the Department of Chemistry appoints students as a Graduate Teaching Assistant (GTA) or as a Graduate Research Assistantship (GRA).

The Graduate School defines an assistantship as a financial award to a graduate student for work in teaching or research while they simultaneously pursue an advanced degree. It can be thought of, in essence, as financial support for the student as an employee, whether those responsibilities be in research or in teaching, or in combination thereof. In the Department of Chemistry, a typical graduate assistantship is a 50% appointment (one-half time basis), and the remaining time is for fulfilling responsibilities as a student.

At the University of Tennessee, Knoxville, appointments as a PhD Program graduate assistant at a level of 25% or greater include not only a stipend, but student health insurance and a waiver of maintenance fees, mandatory fees, and differential tuition for the period of appointment, in accordance with university policy. Cost of tuition is also covered for Chemistry graduate students on half-time (50%) assistantships.

Failure to complete one or more of the progress milestones outlined in Section 6 below, or transition into the MS Program may result in loss of any guaranteed financial support from the Department of Chemistry in the form of an assistantship.

3.2 Graduate School Fellowships

The Graduate School offers a limited number of fellowships to graduate students, and these are awarded on a competitive basis. Information regarding these fellowships, including application requirements and procedures and deadlines can be found here: https://gradschool.utk.edu/costs-and-funding/graduate-fellowships/.

3.3 Work Assignments and Related Factors

As noted above, Chemistry graduate students are both students and employees, typically employed at 50% time as either Graduate Teaching Assistants (GTAs), Graduate Research Assistants (GRAs), or in a "split" GRA/GTA appointment that carries 25% time responsibility as at GTA and 25% time responsibility as a GRA (for a total half-time, or 50% appointment). Students in GTA roles invest approximately 20 hours per week during the semester assisting in the teaching mission of the Department while students in GRA/GTA split appointments invest approximately 10 hours per week during the semester in those activities. Students in GRA roles are supported by grants and contracts from their major advisor. For the remainder of their time, graduate

students are expected to fulfill the responsibilities of their coursework, whether that be in traditional lecture-style courses, seminar courses, or research hours, making continuous progress toward their degree.

The Graduate School establishes time limits for completion of all requirements for graduate programs – six years for a master's program and eight years for a doctoral program. In addition, the Graduate School specifies that the maximum number of years that a graduate student can be appointed to a graduate assistantship is three years as a master's student, five years as a doctoral student, or eight years in doctoral programs in which students enter with a baccalaureate degree only. Requests for an extension beyond these time periods must be made in writing by the academic unit to the Dean of the Graduate School.

The Department of Chemistry also establishes limits on the duration of departmental financial support: these limits are expressly stated within every offer letter. All students are encouraged to review that information routinely.

3.4 Outside Employment

Graduate students in Chemistry typically hold 50% time appointments as teaching or research assistants and they are expected to pursue coursework or research activity the remainder of their time. Outside employment, except for a few hours of tutoring, or other professional activity is prohibited. International Students are especially warned to discuss any opportunity to tutor elsewhere on campus with International Student and Scholar Services, which is part of the Center for Global Engagement; these are UT appointments that would increase their total employment to more than 50% and put students "out-of-status" with their F-1 visa. Any student involved in tutoring is required to report that activity to the department.

3.5 Financial Implications to Withdrawing, Termination of Employment

Graduate student appointments are semester-long appointments. While students may drop any or all classes prior to the start of the semester, once the semester officially begins, students are required to officially withdraw from the university in order to drop all classes. Withdrawing from the university has academic and financial implications.

Whether by withdrawing or by termination, any student who leaves before the end of the term is likely to incur financial burdens that become their responsibility. This includes students who plan on defending and leaving (terminating) prior to the end of semester. The amount of financial liability to the student is determined by the date when the student drops their courses or withdraws from the University. Students who are considering this are advised to review policies of One Stop Student Services related to Withdrawing from the University (https://onestop.utk.edu/withdraw/) and consult with a One Stop Student Services advisor to understand their liability. In addition, they should consult with their advisor and, as needed, the Associate Head for Graduate Programs.

3.6 Exit Process and Checkout Procedure

The University requires all regular employees and graduate students who are leaving the University to complete a checkout process before their last physical day of work. This process, (described at https://hr.utk.edu/exiting-process-and-terminations/) begins with the Department of

Chemistry entering online the student's ID number and their last day physically on campus, as well as completing paperwork for termination. The student will receive an email notifying them of the need to resolve outstanding debts or issues (building keys, library books, etc.). Failure to complete the entire checkout procedure has ramifications: leaving the University without completing the checkout process will result in the final paycheck being withheld.

4. Registration and Advising

4.1 First-Year Students

Once a student has been admitted to the Chemistry graduate program, they can register for classes; however, as detailed in the contract for graduate study offered by the Department, all first-year students are *required* to participate in an orientation program that takes place prior to the start of the Fall semester (nominally beginning August 1). This program is developed specifically to meet the needs of incoming graduate students. As part of this onboarding program, students will receive information related to degree requirements and course requirements of the various concentrations (such as Analytical Chemistry, Inorganic Chemistry, Organic Chemistry, Physical Chemistry, and Polymer Chemistry). Incoming graduate students will also meet with a faculty member who will advise on course registration and course loads prior to registering.

During their first year, graduate students seeking a PhD degree are advised to fulfill the residence requirement that is set by the Graduate School by enrolling in 9 credits in the fall semester and 9 credits in the immediately following spring semester. In the fall semester of the first year, 9 credit hours can be met through enrollment in two (2) "track" courses (refer to Section 5 – Degree Requirements), as well as Chemistry Seminar (CHEM 501), Use of Facilities (CHEM 502), and Chemical Research Skills and Ethical Conduct (CHEM 503), each of which is a 1 credit course. (Note: two *consecutive* semesters of enrollment at 9 (or more) credit hours (strongly recommended by the Department of Chemistry) or three *consecutive* semesters of 6 (or more) credit hours is needed to satisfy the Graduate School's residence requirement, which is detailed on the Graduate School's Admission to Candidacy – Doctoral Degree form.)

Beyond the first semester, course selection must be done in consultation with the student's major advisor, and, if necessary, their committee, to select courses that advance their program of study and provide a suitable foundation for their research. In addition to registering for CHEM 501, it is likely that students will need to register for CHEM 500 Thesis to meet the recommendation of 9 credit hours in the Spring semester, which will allow the student to fulfill the residence requirement in their first year. In all matters of course registration, students need to remain consistent with policies set by the Graduate School, which are described in Section 4.3 of this Handbook.

International students may have additional enrollment requirements related to maintaining their visa status and are therefore encouraged to consult their advisor in the Center for Global Engagement.

4.2 All Chemistry Graduate Students

As noted above, all graduate students are advised to consult with their advisor on course selection, as they may give advice on courses from other departments that might bear heavily on a particular research area, as well as being aware of the following:

- If you register late, you will be responsible for paying Late Registration Fees.
- All degree-seeking students are required to continuously enroll in both Fall and Spring semesters from the time of their first enrollment until graduation.
- The Student Health Insurance Plan carries eligibility requirements in terms of credit hours each semester, including during the summer. Students are urged to review those requirements before registering for classes. Presently, all degree-seeking graduate students enrolled in 3 or more graduate hours in Fall and Spring semesters are considered eligible for the Student Health Insurance Plan.
- For students pursuing an MS degree, registration in CHEM 500 Thesis while conducting research and preparing the final thesis is required. In addition, students must register for a minimum of 3 credit hours in the semester in which the thesis is accepted by the Graduate School. If a student obtains an MS degree and continues to the PhD program, registration in CHEM 500 is no longer permitted.
- Chemistry graduate students may begin enrolling in CHEM 600 in the semester following successful completion of CHEM 603 – Candidacy Proposal.
- Whenever a student is registered for CHEM 500 or CHEM 600, there are expectations of progress toward the degree through research activities, as conveyed by the requirement that a grade be assigned.

Special Note for International Students. The minimum enrollment for international students may differ from those of domestic students, and international students should always check with the Center for Global Engagement (CGE) to determine the minimum enrollment needed to satisfy all enrollment requirements attached to their specific visa.

4.3 Course Loads and Full Time Status – Graduate School Policies

For graduate students without an assistantship, the maximum load for a graduate student is 15 credit hours during fall and spring semesters. Furthermore, 9 credit hours is considered full time, though the typical full academic load may vary by discipline. For the summer semester, graduate students may register for a maximum of 12 credit hours in an entire summer semester or for a maximum of 6 credit hours in a five-week summer session. Students may enroll in only one course during a mini-term session. Registration for more than 15 credit hours during any semester, or for more than 12 credit hours in the summer semester, is not permissible without prior approval, and information related to Graduate Course Overload can be found in the Graduate Handbook.

Students holding a one-half (50 percent FTE) time assistantship normally should enroll in at least 6 credit hours during the Fall and Spring semesters of the assistantship. A one-fourth (25 percent FTE) time graduate assistant normally should take at least 9 credit hours during the semesters of the assistantship. Departments may make exceptions to the credit-hour enrollment requirements; however, graduate assistants must be enrolled to be eligible to receive the assistantship. A student must be enrolled in at least 9 credit hours to be considered full-time for federal financial aid purposes, even if the student has an assistantship.

4.4 Advisor Selection Process

In the Department of Chemistry, the process of advisor selection is multi-faceted and built around lab rotations that take place under the auspices of CHEM 502 (Use of Facilities). The overall process of advisor selection provides ample opportunity for students to learn about current research activities and new projects, and to interact with faculty and their groups prior to making a selection.

This process begins during the orientation period prior to the start of the fall semester, when faculty present research projects to new graduate students and then are given time to meet with faculty to discuss projects that seem particularly interesting and are aligned with their desired area(s) of study. Following this, students select a set of faculty (typically 3-4) with whom they desire to complete a short laboratory rotation, which gives them first-hand insights and experiences. After rotations are completed, all students have time to consider their experience and interests. Many choose to meet again with potential faculty mentors and their groups prior to making a rank-ordered choice of research groups. After that input is received from all new graduate students, the department begins the process of matching students with faculty.

While it cannot be guaranteed, in almost all cases, students receive their first choice of advisor. With each step in the process, there are deadlines for submitting required forms (that are made available to students at various stages of the process), which ensure equity for all students. As long as forms are turned in by stated deadlines, there is no advantage to being first, early, or last.

No appointment is official until formal notice from the Department is given to the graduate student and the faculty advisor.

4.5 Initiating Research and Establishing a Dissertation Committee

Once advisor selection is finalized by the Department, graduate students should meet with their advisor to create a plan for initiating research activities and determine a suitable location (desk assignment) in the group.

After being assigned a research advisor and *before the end of the Spring semester of their first year*, all graduate students in the Department of Chemistry are required to establish their dissertation committee by completing the PhD Committee form. This selection of members for the committee should be done in close consultation with their advisor.

Officially, every PhD committee is a nomination from the Department, and it must be approved by the Dean of the Graduate School. The Graduate School requires that PhD committees be comprised of at least four members, with one being an external member, defined as being outside of the Department of Chemistry. In addition to the student's advisor (and, if relevant, co-advisors), the Department of Chemistry further specifies that a doctoral committee must include one tenured or tenure track chemistry faculty member who is "in division" and one who is "out of division".

Once a student obtains signatures from committee members on the Doctoral Committee form, it should be submitted to the Administrative Associate for Graduate Programs in the Main Office for signature of the Associate Department Head for Graduate Programs. The Department will submit the form to the Graduate School on behalf of the student.

5. Degree Requirements

This section of the Chemistry Handbook discusses some aspects of these requirements in more detail. Students are encouraged to first consult with their advisor when questions arise regarding these requirements. If the matter is not clarified or resolved, they should consult with the Associate Head for Graduate Programs.

5.1 Requirements for Degrees

The requirements for the PhD and MS degrees in Chemistry are contained within the Graduate Catalog and they are summarized below with text adapted from the Graduate Catalog. Within both the MS and PhD programs of study, there are "concentrations", which are areas of focused coursework tailored to a particular sub-discipline of chemistry. Each concentration contains a sequence of either three or four courses that must be completed – these are sometimes referred to as a "track" or track requirement. The courses associated with each concentration are detailed following the general outline of the PhD and MS degree requirements:

Chemistry Major, PhD

Credit Hour Requirement

- 52 graduate credit hours beyond the bachelor's degree
- 31 graduate credit hours beyond the master's degree

Required Courses

- Research and a dissertation to give at least 24 credit hours of graduate credit in CHEM 600.
- Required participation in seminar (CHEM 501) at the beginning of the period of graduate study until 6 credit hours of satisfactory credit has been obtained
- Preparation of a written candidacy proposal (CP) based on current and proposed research and oral defense of the CP to give 2 credit hours in CHEM 603
- Preparation and defense of an original research proposal (ORP) to give 1 credit hour in CHEM 604
- 18 additional credit hours in courses at the 500-level or above including
  - at least one course above 604
  - the sequence of courses designated by the concentration
- CHEM 503 (1 credit hour)

Non-Course Requirements

- A final oral examination is conducted in which the dissertation is defended.
- Graduation with a PhD in Chemistry requires the publication of a minimum of two articles in peer-reviewed journals describing research performed during graduate studies. One of the articles must list the graduating student as the first author (or an equally contributing first author).
- Each student must present their research at one regional, national, or international conference.

In addition, and as described in Section 6.4, the Department of Chemistry requires doctoral students to present their research progress in a Third Year Seminar.

It should also be noted that the Department of Chemistry does not accept "journal club" courses as contributing to the 18 credit hour requirement.

Chemistry Major, MS

Credit Hour Requirement

- Minimum of 30 graduate credit hours

Required Courses

- Research and a thesis to give 6 to 12 credit hours of graduate credit in CHEM 500
- Required participation in seminar (CHEM 501) at the beginning of the period of graduate study until 3 credit hours of satisfactory credit has been obtained
- Sufficient graduate coursework in chemistry (at the 400-level or above) and/or a related field to make an overall total of 30 credit hours, including
  - the sequence of courses designated by the concentration
  - At least 14 credit hours of this graduate coursework must be at the 500-level or above
- CHEM 503 (1 credit hour)

Non-Course Requirements

- A final oral examination is conducted in which the thesis is defended.

5.2 Concentrations (Tracks) and Courses

Each Chemistry sub-discipline offers three or four courses that explore the fundamental concepts of the field. All PhD students must complete one of these sequences, and the courses associated with the various concentration areas are listed immediately below.

Concentration ("Track")	Course Sequence Required for PhD Degree
Analytical Chemistry	CHEM 510, CHEM 511, CHEM 512, CHEM 513
Inorganic Chemistry	CHEM 530, CHEM 531, CHEM 532, CHEM 533
Organic Chemistry	CHEM 550, CHEM 551, CHEM 552
Physical Chemistry	CHEM 570, CHEM 571, CHEM 572, CHEM 573
Polymer Chemistry	CHEM 590, CHEM 594, CHEM 595, CHEM 596

Although there is no formal breadth requirement, in addition to completing a sequence, all PhD students are encouraged to complete coursework in three different divisions (track areas) of chemistry to broaden their knowledge of chemistry.

For students pursuing an MS degree in Chemistry with a concentration in Inorganic Chemistry or Physical Chemistry, only three of the four track courses are required. For students pursuing an MS degree in Chemistry with a concentration of Polymer Chemistry, only the first three courses of the track are required.

In addition, the Department of Chemistry offers a PhD in concentration areas of Chemical Physics, Environmental Chemistry and Theoretical Chemistry. Each of those tracks require students to select and complete one of the above-listed course sequences. The Environmental Chemistry concentration is also offered at the MS level, and in a manner consistent with concentrations for the MS degree, a sequence of three courses from any concentration is required. The requirements for each of these are published in the Graduate Handbook.

5.3 Rules for Graduate Coursework

The required 18 hours of graduate course work must be completed with a GPA of 3.0 or greater for the PhD degree. As noted in Section 5.1, the Department of Chemistry does not accept "journal club" courses in fulfillment of these coursework requirements.

In addition, the Graduate School has a variety of important policies related to coursework. Here are a few important points:

- A graduate student must maintain at least a 3.0 GPA on all graduate coursework taken at UT to be in good academic standing with the Graduate School
- A student cannot receive a graduate degree (MS or PhD) if their GPA is less than 3.0
- No graduate course with less than a "C" grade (a "D" or "F") can be used to satisfy a degree requirement as is mandated by the UTK Graduate School
- A graduate student may repeat up to two courses in which they earned a grade of D or F, subject to the following conditions:
    - The decision to repeat a course is made between the student and their advisor.
    - Each course may only be repeated once.
    - The original and repeat grades will be included in the calculation of the cumulative grade point average.
    - Credit hours will only be counted once toward meeting degree requirements.
    - To re-enroll in a class the graduate student must complete a petition for consideration by the Dean of the Graduate School. This is accomplished using the "Permission to Repeat a Graduate Course" form, which is available from Forms Central at the Graduate School.

In addition to these policies related to grades set by the Graduate School, there are several other policies of the Graduate School and the Department of Chemistry that relate to Academic Standing. These matters are covered in Section 7 of this Handbook.

5.4 Publication Requirement

The publication of research results is an important milestone for developing scientists and a critical component for the success of graduate students in finding employment as well as in their future careers. For this reason, students are encouraged to maximize the publication of high-quality research during their graduate careers. To emphasize the importance of these efforts, the department requires the publication of a minimum of two original research articles in peer-reviewed journals describing research performed during graduate studies. One of the articles must list the graduating student as the first author (or an equally contributing first author). Accepted articles will be counted toward this requirement.

A copy of the qualifying publications must be presented to the student's doctoral committee along with the final dissertation at least two weeks prior to the oral defense. Failure to meet this requirement will result in the postponement of the oral defense until the requirement is met. If an accepted publication is not yet in print, a copy of the submitted manuscript along with proof of acceptance from journal editorial staff will fulfill this requirement.

6. Milestones and Examinations in the Chemistry PhD Program

6.1 Typical Progress and Examinations

Students on a half-time assistantship enrolled in 6 or more hours per semester (fall and spring) are considered full time. If students complete two 3-credit courses each semester during their first year, giving particular emphasis to courses in their chosen track, coursework requirements for the PhD can normally be completed within 3 or 4 semesters. Some students who are especially well prepared may choose to take 3 courses per semester, thereby completing coursework requirements more rapidly. This would allow them to become completely dedicated to research earlier in their graduate career. Ultimately, fulfilling coursework requirements and meeting the residency requirement of the Graduate School is the responsibility of the student.

In addition to coursework, there are five significant milestones that PhD students must complete on their way to earning their PhD in chemistry:

- Divisional Foundation Exam (DFE): All first-year graduate students are expected to pass the DFE associated with their chosen track, as described in Section 6.2.
- Candidacy Exam: In the Department of Chemistry, a student completes the candidacy exam by successfully writing and defending their candidacy research proposal (CRP). This occurs in the second year, and details and deadlines are provided in Section 6.3.
- Third Year Seminar: All PhD students prepare and present an open seminar based on their research in the summer of their third year. Details on this are covered in Section 6.4
- Original Research Proposal (ORP): Graduate students pursuing a PhD degree are required to prepare, present, and defend a proposal based on original research, and this must be completed by the end of their seventh (7^{th}) semester. Additional details and deadlines are described in Section 6.5.
- Defense of PhD Dissertation: A final examination based on a public presentation and a defense of the dissertation is required. The defense includes both an open portion and a closed session with the dissertation committee. Additional details are presented in Section 6.7.

These are not the only requirements for earning a PhD degree, which were outlined in Section 5.2, but they are significant events. In particular, the CRP, ORP, and dissertation defense are key evaluative examinations that assess the preparation and progress of students. For students pursuing an MS degree, the only major examination is the public presentation and defense of the thesis.

Beyond the Third Year Seminar and the three exams, student progress and success in meeting academic standards are evaluated through First-Year Evaluations, which are completed by the Department, and annual evaluations made by advisors and dissertation committees. These are described in Section 7 of this Handbook.

The Department of Chemistry analyzes documents generated by students in fulfillment of degree requirements – CRP, ORP, and thesis or dissertation – through a plagiarism-checking software. Thus, whenever a student submits one of these documents to their thesis or dissertation

committee, they are required to also submit it to the Administrative Associate for Graduate Programs (currently Kendra Bilbo).

6.2 Divisional Foundation Exam (DFE, First Year)

The Divisional Foundation Exams (hereafter referred to as 'DFEs') are mandatory assessments for all first-year graduate students. DFEs are designed to i) provide our graduate students with structured feedback about gaps in their fundamental knowledge (which will enable them to pursue advanced research more efficiently); and ii) increase the likelihood that students will successfully defend their CRPs without the need for extensive remediation. DFEs will be constructed by faculty in the associated division, and these assessments will focus on division-specific concepts that should have been mastered during undergraduate chemistry courses. *Graduate students will be required to pass the DFE associated with their chosen track before they will be allowed to register for their CRP*.

DFEs will be administered three times during the first year: once near the beginning of the Fall semester, once at the end of the Fall term, and once in the Spring, semester. Students will have a maximum of three (3) attempts to pass the DFE associated with their chosen track. Students will be informed of their assessment outcome after each attempt, and they will work with a divisional representative to construct a plan for addressing any deficiencies. If a student has not achieved a passing score on the DFE for their track within three (3) attempts, then the student will be directed to the MS program.

6.3 Candidacy Research Proposal and Exam (CHEM 603, November–April of Second Year)

Deadlines and Registration Requirement:

- Written proposal must be submitted by the last Friday of December before the official holiday break established by the University.
- The defense of the written proposal must occur in the following semester before April 1.
- Any activity assigned as part of a decision of "Needs Further Development" must be completed by July 1 of that year.
- Enroll in CHEM 603 in the semester in which the written candidacy proposal will be defended. (If assistance with registration restrictions is required, see Linda Sherman.)

The non-coursework related portion of the candidacy requirement will be met by writing and orally defending a proposal based on the research that the student is performing. The proposal and examination should also cover general knowledge, i.e., this exercise will have both a focused research and a breadth aspect. This exam will be conducted in the student's second year of study. The candidacy research proposal (CRP) will be reviewed and evaluated by the student's dissertation committee, who administers the candidacy exam.

A. Format of the Candidacy Research Proposal (CRP)

A student's candidacy research proposal (CRP) is a written proposal based on the student's current and proposed Ph.D. research. The CRP should be 10 to 15 pages long (including figures, schemes, and tables; but excluding references) and follow the format

of a major funding agency in the discipline of study chosen by the student. The CRP should include background information that situates the student's research program in a broader context, a summary of work accomplished to-date, and describe in appropriate detail the proposed body of research work to be completed for the Ph.D. degree. Students are strongly encouraged to develop a CRP that clearly articulates the motivation for the proposed research, offers hypothesis-driven investigations, and plainly states key objectives.

This written document must be submitted to their dissertation committee by the last Friday of December before the holiday break established by the University.

Also, as noted in Section 6.1, when a student submits their CRP to their committee, they are required to send the document to the Administrative Associate for Graduate Programs.

B. Format of Oral Examination

A student will make an oral presentation and defend their CRP to their dissertation committee in the spring semester of their second year of graduate study. The examining committee will ask questions about the proposed research and the CRP document, as well as any additional reading material that is assigned to the student by the committee in advance of the defense. The CRP defense is intended to evaluate the student's abilities to (1) understand relevant literature and foundational chemistry concepts, (2) describe the impact of the work in a broader context, and (3) demonstrate a suitable base of general knowledge in appropriate fields.

The CRP defense will typically last approximately 2 hours, comprising ~30 minutes devoted to presentation of the CRP and 1.0-1.5 hours for questions and discussion. In the semester that the CRP oral exam is given, students will need to register for CHEM 603 to receive credit, which can be done by contacting the main office.

The oral portion of the candidacy examination, defense of the CRP, must be administered no later than April 1st.

In cases where the research has evolved significantly since the CRP document was submitted, students may choose to supplement their proposal with a 1-2 page addendum (not a proposal revision) outlining research progress since submission of the CRP. This must be delivered to the committee at least two weeks before the scheduled oral examination.

C. Possible Outcomes

There is one outcome only for the activity embodied in writing and defending the CRP: Students either “Pass” or “Fail” this multi-part candidacy exam.

If a student submits their CRP document by the deadline described above, the committee makes its evaluation after the student defends their candidacy research proposal with one of these choices:

(a) Pass: The examination committee unanimously agrees that the student’s CRP document, presentation, and defense reflects an appropriate and thorough knowledge of their research, the research field, and the underlying fundamental chemistry, therefore meriting a decision of “Pass.”

(b) Fail: The examination committee unanimously agrees that there are serious deficiencies in a student's preparation, knowledge, and comprehension of core concepts that are intrinsic to chemistry and to their research, imperiling success as a doctoral candidate in chemistry. In such cases, a student will be directed to the M.S. program.

(c) Requires Further Development: In this case, the examining committee agrees to defer their Pass/Fail decision until additional evaluation takes place. That evaluation is based upon assigned remediation activities established by the committee. The purpose of deferring the decision pending further development is to allow the student to address deficiencies revealed through the evaluation of the CRP document or/and the presentation and oral defense. Remediation may include additional written content or/and an additional presentation with a question-and-answer session to follow.

In cases where the examining committee decides that further development is required, the examination committee will develop and describe to the student an activity (or set of activities) designed to help the student achieve mastery by addressing the weakness(es). The particular activity is at the discretion of the examining committee, and it may include revision of the CRP written document, the development of a short addendum aimed at clarifying aspects of their proposed research or shoring up key weaknesses, a re-defense, which may include additional content, or a combination of such activities.

Under this scenario, the chair of the examining committee is charged with delivering to the student a concise written description of the required activity, including deadlines. Ultimately, and as stated above, all of these activities must be completed and a Pass/Fail decision is rendered by the examining committee by July 1 to determine if the student will gain entrance to the Ph.D. program.

When Further Development is required, a minimum of 3 votes of "pass" from the examining committee, as well as concurrence from the committee chair, is needed for a decision of "Pass". In a case where the minimum of 3 "pass" votes from the examining committee with concurrence from the chair is not established, the student will be directed to the M.S. program.

D. Alternate Timelines for Examination

There are two situations in which the timeline of the CRP-based candidacy examination will be adjusted:

- Students who enter the Ph.D. program in the Spring semester, and are off sequence, will be grouped with the class entering in the upcoming Fall semester. In other words, these students will submit the proposal in their fourth semester in residence.
- Students who change research groups in their first year of study will be given a three-month extension on all CRP deadlines.

Students who change groups at a later date are required to petition the Graduate Student Advisory Committee for reconsideration of the timeline for candidacy. Students who face extenuating circumstances also may petition the Graduate Student Advisor Committee.

Except in the most unusual circumstance, these petitions must be submitted in advance of the stated deadlines. These petitions will be decided on a case-by-case basis. Timelines for students who are granted Leave of Absence (see Section 7.9) will be adjusted accordingly on a case-by-case basis.

E. Receiving Credit for the Candidacy Examination - Chemistry 603 (Candidacy Proposal, 2 hours)
To receive credit for the candidacy examination, students enroll in the two credit hour course CHEM 603 Candidacy Proposal, normally during the Spring semester in which they will have the oral defense of their CRP. Students who successfully complete CHEM 603 fulfill the requirements for Ph.D. candidacy. Thereafter, they may begin enrolling in CHEM 600.

6.4 Third-Year Seminar

During their third year in the PhD program, PhD students will present an open seminar describing their research project and progress to-date. These seminars will be organized by the head of each division (Analytical, Inorganic, Organic, Physical, and Polymer) and 3rd year students will present within the division that they have selected for their "track" (concentration area). Each member of the student's dissertation committee must attend their 3rd Year Seminar. If a member(s) must miss the seminar, the student will set up an independent meeting to make the presentation to those who cannot attend.

Division heads should consult with research advisors whose students will be giving their 3rd Year Seminar and assign each 3rd year student presenting in the division a date and time for their presentation. Although these series are organized by the divisions, they are open to all students and faculty and to the public.

6.5 Original Research Proposal Exam (CHEM 604, 4th year, by the end of the 7th semester)

Deadlines and Registration Requirement:

- Written proposal must be submitted to the committee by November 1.
- The defense *and* any activity assigned as part of "Requires Further Development" must be completed by the last day of final exam week.
- The ORP document must be submitted to the committee two weeks prior to the scheduled defense.
- Enroll in CHEM 604 in the semester in which the original research proposal is written and defended. (If assistance with registration restrictions is required, see Linda Sherman.)

PhD candidates must generate and successfully defend an Original Research Proposal (ORP). Passing the ORP is a graduation requirement that must be completed by the end of the student's seventh semester in the program (typically the Fall of the 4th year). As noted above, during the semester in which the student generates and defends their ORP, they are required to register for CHEM 604 Original Research Proposal, which is a 1 credit hour course.

A. Format of the Original Research Proposal (ORP)
Like the CRP, the ORP has a written component and an oral defense. For the written portion, a student will work *independently* to author a proposal not more than 15 pages in length on a topic that is sufficiently different from the student's dissertation research. In addition, the topic must be clearly differentiated from ongoing or prior research in the group. The ORP document should clearly express motivation(s), overarching goal(s), and key research objectives. Sufficient background information that situates the proposed activity and justifies themes of research should be included in order to establish the need and significance of the proposed, original research. As with the CRP, students are strongly encouraged to offer hypothesis-driven investigations that connect to key objectives and goals.

Each student is required to append their current CV to their ORP so that it is distributed to the examining committee, which is the student's dissertation committee. The CV is not counted in the 15 page limit of the ORP.

Also, and as noted in Section 6.1, when a student submits their ORP to their committee, they are also required to send the document to the Administrative Associate for Graduate Programs.

B. Format of Oral Examination
A student will make an oral presentation and defend their ORP to their dissertation committee. The exact timing of this defense is up to the student; however, the following points must be considered and are re-emphasized:

- The ORP document must be submitted to the examining committee two weeks prior to the scheduled defense, and
- The entire process, *including* any activity(ies) assigned as "further development", *must be concluded by the last day of final exam week*.

The ORP defense will typically last approximately 2 hours, comprising ~30 minutes devoted to presentation of the ORP and 1.0-1.5 hours for questions and discussion. Students will be evaluated based on their ability to (1) confront a new area of chemistry and understand foundational concepts within that area; (2) identify an original research problem and formulate a plan of research that addresses that problem; and (3) justify the appropriateness of the research plan and articulate expected outcomes.

C. Possible Outcomes
There is one outcome only for the activity embodied in the writing and defense of the ORP: Students either "Pass" or "Fail" this requirement.

If a student submits their ORP document by the stated deadline, the committee makes its evaluation after the student defends their original research proposal with one of these choices:

(a) Pass: The examination committee unanimously agrees that the student has successfully and independently developed, presented, and defended an original research idea. In so doing, they have demonstrated appropriate mastery of a new subject area and thoughtfully proposed a suitable set of research activities designed to address key objectives and address the research goal(s). In addition,

the student must meet the requirement of having given a public presentation of their dissertation research. As a result, the student earns a decision of "Pass."

(b) Fail: The examination committee unanimously agrees that there are serious deficiencies in, for example, a student's preparation, knowledge, and comprehension of core concepts intrinsic to the proposed original research, or in formulating hypothesis-driven research designed to address key objectives and goals. In such cases, a student will be directed to the M.S. program.

(c) Requires Further Development: In this case, the examining committee agrees to defer their Pass/Fail decision until additional evaluation takes place. That evaluation is based upon assigned remediation activities established by the committee. The purpose of deferring the decision pending further development is to allow the student to address deficiencies revealed through the evaluation of the ORP document or/and the presentation and oral defense. Remediation may include additional written content or/and an additional presentation and re-defense.

Under this scenario, the chair of the examining committee is charged with delivering to the student a concise written description of the required activity. Ultimately, *all activities must be completed and a decision rendered by the examining committee no later than the last day of final exam week*. To "Pass," the committee must be unanimous in their decision and the student's CV must document a public presentation of their dissertation research.

D. Alternate Timelines for Examination
The one situation in which the timeline of the ORP will be automatically adjusted:

- Students who enter the Ph.D. program in the Spring semester will be grouped with the class entering in the upcoming Fall semester. In other words, these students will submit and defend their ORP in their 8th semester in residence.

Students who face extenuating circumstances may also petition the Graduate Student Advisory Committee for a revision of the ORP timeline. Except in the most unusual circumstances, these petitions must be submitted in advance of the stated deadlines. These petitions will be decided on a case-by-case basis. Timelines for students who are granted Leave of Absence (see Section 7.9) will be adjusted accordingly on a case-by-case basis

E. Receiving Credit for the ORP - Chemistry 604 (Candidacy Proposal, 1 hour)
To receive credit for the ORP, students enroll in the one credit hour course CHEM 604 Original Research Proposal during the semester in which they write and defend the ORP.

6.6 Scoring of CRP and ORP Oral Presentations and Defenses

Examining committees are required to score the CRP and ORP oral defense for each student. The categories of the evaluation are listed on the scoring sheets appended to the CRP and ORP Outcome forms (available on the Department website). These categories include understanding and application of fundamental chemical principles, the quality of the written document and oral presentation, extent of progress in research, and the originality or intellectual contribution to the

research project. This scoring process is used to evaluate strengths and weaknesses of each student and assess the graduate program as a whole. A student's scores may be taken into consideration as part of a student's annual evaluation or in selecting students for departmental awards.

6.7 Final Oral Examination and Defense – PhD and MS degrees

The steps to graduation, which includes instructions and links to forms and deadlines, are outlined and described at this Graduate School website: http://gradschool.utk.edu/graduation/steps-to-graduation/. *Students are strongly urged to familiarize themselves with these processes and requirements of the Graduate School, as advanced planning and lead-time are required* for many of these final steps, such as applying for graduation, scheduling the defense, submitting a draft of the dissertation (or thesis) for review by the Graduate School, delivering the full dissertation to the committee, and submitting the final dissertation.

Although the following policies and protocols are mostly described in terms of student's defending their dissertation to earn their PhD in Chemistry, the same provisions, including timing and deadlines, apply to students defending their thesis and earning their MS in Chemistry. In addition, because the University has a formal check-out process (see Section 3.6), *all graduate students are required to inform the Administrative Associate for Graduate Programs as soon as they have an intended graduation semester*.

A PhD candidate must pass an oral examination (defense) focused on the research described in the dissertation. The dissertation, in the form approved by the major professor (advisor), must be distributed to the committee at least two weeks before the examination, as well as the Administrative Associate for Graduate Programs for plagiarism checking as is noted in Section 6.1. The PhD candidate must also provide a copy of all qualifying publications to the doctoral committee at the time the student's dissertation is submitted (at least two weeks prior to the oral defense). Failure to meet this requirement will result in the postponement of the oral defense until the requirement is met.

Students are advised to begin the process of scheduling their final examination (dissertation defense) well in advance: the Graduate School sets deadlines for defending and coordinating the schedules of all committee members is typically challenging. In addition, the dissertation defense must be announced publicly and in advance. The defense of dissertation will be administered by *all* members of the doctoral committee after completion of the dissertation and all course requirements. This examination must be held at least two weeks before the final date for acceptance and approval of dissertation, as listed on the webpage detailing Graduation Deadlines (https://gradschool.utk.edu/academics/graduation/graduation-deadlines/). The major professor or the department must submit the results of the defense Pass/Fail form (Graduate School form) with the committee signatures by the deadline date. As described below, it is preferable that all forms related to the final dissertation defense and dissertation acceptance be submitted by the Administrative Associate for Graduate Programs so that the Department can retain records in the student's file.

The oral examination is conducted by the student's full dissertation committee. Generally, it involves a public presentation based on the dissertation (or thesis) research, and this is followed by an open period for questions from the audience. Following the public presentation and questions from the audience, the audience is dismissed and the examination closed for discussion with the committee and questions. When the committee feels they are suitably informed, they

confer privately to reach a decision regarding the defense examination, and following that, communicate their decision to the degree candidate. The committee also completes and signs the “Report of Final Examination/Defense of Thesis or Dissertation” form, which is used to communicate the results of the final examination to the Graduate School.

In addition, the committee confers to reach a decision on the acceptability of the dissertation. The committee may decide to accept the dissertation in current form, or they may recommend or require revisions. In those cases, the committee has discretion over when they convey acceptance of the dissertation by affixing their signatures to the “Thesis/Dissertation Approval” form: They may choose to withhold their signatures until they have the opportunity to review the revised dissertation, or they may assign to the major advisor the responsibility of verifying minor changes were implemented. Ultimately, it is the student’s responsibility to revise their dissertation such that it meets the approval of their committee, to ensure their dissertation (thesis) adheres to formatting requirements set by the Graduate School, and to submit the final, approved version. Transmission of the finalized dissertation to the Graduate School constitutes the last milestone prior to official conferral of the degree.

The Graduate School will not accept the Pass/Fail form if it comes from the student; thus, it is recommended that the advisor submit the signed form(s) to the Administrative Associate for Graduate Programs in Main Office, who will submit the form to the Graduate School. The Thesis/Dissertation Approval form must either be delivered in-person to the Graduate School or by email. If sent by email, this form must be sent from the advisor or from the department, not the student. The Department of Chemistry *requires* copies of the Thesis/Dissertation Approval” form and the “Report of Final Examination/Defense of Thesis or Dissertation” form after they are signed. For all of these reasons, students and advisors are most strongly advised to place the responsibility for submitting completed forms with the Department.

7. Academic Standing, Petitions and Appeals, and Leave of Absence

7.1 Graduate School GPA Standards

As noted earlier and as detailed in the Graduate Catalog, graduate students must maintain an overall grade point average (GPA) of at least 3.0 in all graduate coursework to be in good academic standing with the Graduate School. If a student’s cumulative GPA falls below 3.0, they will be placed on academic probation or, in cases of exceptionally poor performance, notified of their dismissal by the Graduate School. If a student is placed on probation, they will be notified by the Graduate School. Students on academic probation may continue graduate studies in subsequent semester so long as they earn a GPA of 3.00 or greater in each semester. Upon achieving a cumulative GPA of 3.00, the student will be removed from probationary status and returned to good standing.

If a student is placed on academic probation by the Graduate School and their subsequent semester graduate GPA falls below 3.00, the degree (or non-degree) status will be terminated by the Dean of the Graduate School. When the circumstances are deemed to justify continuation, with the recommendation of the student’s advisor and the concurrence of the Department of Chemistry, the Dean of the Graduate School may allow a student on probation whose semester graduate GPA is below 3.00 to continue on a semester-by-semester basis.

7.2 First-Year Evaluation

Each year, following the end of Spring semester, the Chemistry faculty meet to evaluate the performance of first-year graduate students. Students who enter the department in January are evaluated after three semesters in the program.

In the first-year evaluation, students are reviewed based on academic performance and efforts made to initiate and progress in their research. The expectation of our graduate students is that they will have:

- maintained a grade point average of at least 3.0
- made significant progress toward their graduate chemistry degree by completing 12 credit hours of 500-level coursework beyond the 1-credit courses required in the first semester (CHEM 501, 502, 503)
- achieved a passing score on their Divisional Foundation Exam
- joined a research group and made initial progress on their research project

After evaluating each student based on these criteria, students are assigned into one of 4 categories with the following definitions.

> Category 1: Your performance to date has been satisfactory; you have maintained good academic standing, selected a research advisor, passed the DFE, and made progress in research. Therefore, you are on track at this point for continuation in the PhD program.
>
> Category 2: Your performance to date is satisfactory with some exceptions and you have passed the DFE. Such exceptions may take the form of falling slightly below the 3.0 overall GPA threshold for good standing, not completing 12 credit hours, or not progressing in research.
>
> Students who are in Category 2 may move to Category 1 by rectifying the noted exception within a designated timeframe. Students in category 2 will normally be reevaluated at the end of their second year.
>
> Category 3: Your performance to date falls below the expectations outlined above, necessitating a change to the MS program or, at your option, withdrawal from the program.
>
> Category 4: Your performance to date has been unsatisfactory in a way that justifies dismissal from the program. It should be noted that dismissal may occur regardless of a student's status with the Graduate School.

A formal letter describing the results of the First-Year review will be sent to each student (as well as to their advisor), and they are encouraged to discuss the results with their advisor or/and with the Associate Head for Graduate Programs should they have questions. The results of first-year evaluation may be appealed through the appeal process outlined in Section 7.8 of this Handbook.

7.3 Progress and Evaluations in Years 2-4

As described in Section 6.1, graduate students are expected to progress through the milestones of the program in a timely fashion. Along that path, the student will encounter objective evaluations, such as those based on grade point or written exams, but also judgements by the faculty of the student's progress and potential – examples include decisions related to CRP and ORP activities. As part of this process, it is expected that each student will meet with their advisor to review progress and engage in academic planning. Through these face-to-face meetings, students will receive feedback related to their academic performance and guidance for fulfilling requirements and adhering to policies for their degree.

Consistent with these expectations and policies of the College and the Graduate School, students should receive written feedback annually from their advisor(s). Each letter should discuss the results from degree requirements from that year (Year 2: CRP exam, Year 3: Third-Year Seminar, Year 4: ORP exam). In addition, students will be evaluated by criteria that include, but are not limited to, their academic status, productivity and progress in research, and overall progress toward their degree. The evaluation will ultimately indicate whether the student is or is not meeting expectations. Advisors may, as needed, include input from members of the student's dissertation/thesis committee.

Written evaluation should be discussed in a face-to-face meeting between graduate student and their advisor. The document should be dated and signed by the student and the advisor. Importantly, a student's signature indicates only that the contents have been discussed between the student and advisor. A copy of the signed letter is to be given to the Administrative Associate for Graduate Programs (currently, Kendra Bilbo) for the student's file by July 31st of each year. Cases in which progress is deemed to be unsatisfactory will be reviewed by the Associate Head for Graduate Programs and the Graduate Student Advisory Committee.

7.4 Annual Committee Meetings Beginning in Year 5

Graduate students are required to have annual meetings with their dissertation committees beginning in their fifth year in the program. In this meeting, the graduate student will present research progress and describe their path to completing dissertation research and any other degree requirements. Although this meeting is not required if the student will defend their dissertation before the end of the 5th year, it is recommended to help the student prepare for their defense.

7.5 Dismissal from a Research Group Due to Performance Below Expectations

If a graduate student is evaluated and deemed to not meet expectations, the major professor may choose to dismiss that student from their research group. This may be triggered because of the annual evaluation or based on a problem that comes to the attention of the major professor. Students may fail to meet expectations for a variety of reasons including, but not limited to, failure to make sufficient progress in their research, unsafe conduct in the laboratory, or a violation of discipline-specific codes of conduct that apply to research. In all such instances, the advisor is required to provide written notice to the student that outlines the reasoning for the decision and a copy to the Associate Head for Graduate Programs. Provided there are no extenuating circumstances, on the first such case, the student will be given an opportunity to find a new advisor, with a timeline communicated from the Associate Head for Graduate Programs.

In extenuating circumstances or in cases where a student is dismissed from a second research group due to not meeting expectations, the matter will be referred to and reviewed by the Graduate Student Advisory Committee to determine if the student will be dismissed from the Chemistry Graduate Program and recommended for dismissal from the Graduate School. In such cases, the Graduate Student Advisory Committee will gather and consider inputs that include, but are not limited to the evaluation letter that triggered this process and a written response from the student. Based on their review, the Graduate Student Advisory Committee will send a formal recommendation to the Associate Head for Graduate Programs.

In cases where the recommendation is for dismissal, the Department of Chemistry will provide a written notice outlining the reasons for the dismissal to the student and to the Graduate School. As described in the Graduate Handbook, the Dean of the Graduate School will evaluate the student's record to determine whether the student is eligible to apply for a change of status and register in another area of study, as registration for courses the Department of Chemistry would not be permitted (without written authorization).

7.6 Dismissal Due to Performance Below Expectations as a Teaching Assistant

A graduate student assigned as a teaching assistant is expected to meet their responsibilities in a professional and conscientious manner and adhere to course and campus policies. Each TA is expected to be, at the very least, on-time for classes and appointments, provide quality instruction, evaluate student work in a fair and consistent manner, welcome questions, and work pleasantly with all students, staff, course instructors, and other TAs. As part of their weekly duties, TAs should plan an appropriate amount of time to prepare and familiarize themselves with, for example, laboratory experiments and needs, lecture content and assignments in order to help their students. TAs who are unprepared will face challenges from their students and be subject to their criticisms. In addition, it is expected that students assigned as a TA, including Head TA, will be available prior to the start of the semester to meet with the course instructor(s) for training and discussing expectations, and available through the end of the grading period for the semester. Timely communication with students and the course instructor is expected and considered an essential requirement for all TAs.

In cases where deficiencies in TA performance arise, course instructors will typically discuss their concern(s) with the TA and provide guidance for improvement and clarify expectations. In cases that are deemed more serious in nature or when desired corrective action has not been taken, a graduate student will be notified in writing of the issue(s) and the expected corrective action(s). If these situations escalate or poor teaching continues, the matter will be referred to the Graduate Student Advisory Committee through the Associate Head for Graduate Programs. The Graduate Student Advisory Committee will review the matter, including gathering relevant input, and make recommendations to the Department. Recommendations may include discontinuing support as GTA or/and dismissal from the program.

In cases where the recommendation is for dismissal, the Department of Chemistry will provide a written notice outlining the reasons for the dismissal to the student and to the Graduate School. As described in the Graduate Handbook, the Dean of the Graduate School will evaluate the student's record to determine whether the student is eligible to apply for a change of status and register in another area of study, as registration for courses the Department of Chemistry would not be permitted (without written authorization).

7.7 Standards of Profession and Conduct

A graduate student is a person officially admitted to and enrolled in the Graduate School at the University of Tennessee. Programs, polices, and procedures, as well as minimum requirements, are outlined in the Graduate Catalog. Each student has a responsibility to be familiar with the policies and regulations of the Graduate School and the Department. The Graduate School and the Department are responsible for maintaining current policies. The rights and responsibilities of all students, including policies governing student conduct and academic integrity, are discussed in *Hilltopics* (https://hilltopics.utk.edu/). It is the responsibility of the student to meet retention standards set forth by the Graduate School and by the Department of Chemistry.

In addition to not making progress toward the degree or not meeting expectations in their GTA or GRA duties, failure to maintain acceptable academic standards or standards of conduct may result in termination from the Chemistry graduate program and/or from the Graduate School. In addition, a student who fails their candidacy (CRP) or ORP exams, or who perpetrates academic dishonesty or other actions deemed detrimental to the University, including, but not limited to racial, religious, or sexual harassment, theft, or workplace use of alcohol or illegal drugs may be terminated and dismissed. All students should be aware that there are financial consequences to being dismissed, as described in Section 3.5.

Consistent with policies described in Section 7.5 and Section 7.6, in cases where the recommendation is for dismissal, the Department of Chemistry will provide a written notice outlining the reasons for the action to the student and to the Graduate School. The Dean of the Graduate School will evaluate the student's record, the Department's expectations, the documented violations and, based on those, determine whether the student is eligible to apply for a change of status and register in another area of study.

A. Academic Honesty

Academic integrity is a responsibility of all members of the academic community. An honor statement is included on the application for admission, where the applicant's signature acknowledges that adherence is confirmed. The honor statement presented in *Hilltopics* declares:

> *"An essential feature of the University of Tennessee, Knoxville, is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."*

All graduate students are expected to adhere to the highest standards in all of their work and interactions, and can expect the same in return from their major advisor, mentors, and teachers. Alleged instances of academic dishonesty, including but not limited to research misconduct (such as falsification, misrepresentation or modification of research results), non-compliance with academic or research policies, and plagiarism (see below) will be investigated following University protocols.

B. Plagiarism

Plagiarism is using the intellectual property or product of someone else without giving proper credit (unless such knowledge is widely recognized as common knowledge). The

undocumented use of someone else's words or ideas in any medium of communication is a serious offense subject to disciplinary action that may include failure in a course and/or dismissal from the University. This includes replicating others' work with minor or cosmetic changes. Some examples of plagiarism are

- Using written or spoken words, phrases, or sentences from any source without proper attribution (quotation marks and a citation).
- Summarizing, without proper attribution (usually a citation), ideas from another source (unless such information is recognized as common knowledge).
- Borrowing facts, statistics, graphs, figures, or phrases without acknowledging the source (unless such information is recognized as common knowledge).
- Submitting work, either in whole or in part, created by a professional service and used without attribution (e.g., paper, speech, bibliography, or photograph).
- Using a figure or table that has been published elsewhere without obtaining permission from the copyright owner.

Students should be mindful of these expectations and exercise caution when generating proposals, preparing slides, drafting manuscripts, or writing their thesis or dissertation. This caution also applies when students are involved in collaborative research. When in doubt, students should discuss the matter with their major professor or seek additional counsel from mentors. Alternatively, students with questions or concerns related to research integrity may find the many resources offered by the Division of Research Integrity & Assurance (within the Office of Research, Innovation & Economic Development) to be helpful, particularly resources related to Responsible Conduct of Research, including the online course. Because plagiarism is a form of academic (dis)honesty and may result in disciplinary action, allegations will be similarly investigated following University protocols.

C. Violations Related to Conduct & Community Standards

In addition to matters of academic honesty, there are several forms of misconduct related to student behavior that may lead to sanctions of different type, including dismissal. These are described in the *Student Code of Conduct* contained within *Hilltopics*. Violations of the *Student Code of Conduct* include, but are not limited to misuse of resources, flagrantly discordant behavior, harassment or sexual harassment in all forms, theft and other lawless actions, violations related to privacy records or identification, and more. Allegations of misconduct that violates the *Student Code of Conduct* will be referred to the Office of Student Conduct and Community Standards for their review and investigation, which may proceed independent of any civil or criminal litigation. Details of their processes, including student rights, resolutions, hearings and appeals, and sanctions appear in the *Student Code of Conduct*.

7.8 Petitions and Appeals

Students have the right to appeal decisions related to 1) interpretation of and adherence to departmental, college, or university policies or procedures as they apply to graduate education; 2) academic penalties imposed for academic and/or research misconduct; and 3) grades. University policy and procedure is set by the Graduate Council, as described here: https://gradschool.utk.edu/graduate-council/appeals-committee/the-university-of-tennessee-

graduate-council-appeal-procedure/. Importantly, these procedures mandate that resolution of matters related to departmental policy, procedures, or/and grades begin first at the departmental level. For appeals related to grades, students must first confer with the instructor of record.

In addition, graduate students in the Department of Chemistry have the right to petition for variances to policies. The distinction between an appeal and a petition is that an appeal is made once a decision has been rendered, but a petition is a request made in advance.

A. Petitions

Exceptions or substitutional modifications to degree requirements, which take the form of a petition to the Graduate School, normally require prior approval by vote of the faculty. Thus, a petition must be submitted in writing to the Associate Head for Graduate Programs, who will route the petition for consideration and action based on the subject. Petitions must contain the following:

- Name, student ID#, and contact information
- Current degree program and name of advisor
- Brief statement of the request and the basis for the request, and the desired remedy being requested.
- Any appropriate discussion and supporting documentation

Matters that are sometimes considered are: substitution of an appropriate course for a required course for the degree, extension of departmental support beyond the designated maximum, and extensions of stated limits/deadlines for completing a degree program requirement. Petitions for substitutions must be based on a demonstrated equivalence or/and appropriateness relative to research objectives.

Petitions for variances to any deadline set by the department for a requirement must demonstrate extraordinary circumstances beyond the control of the student (e.g., a medical or family matter). Students should consult with their major professor regarding preparation of their petition.

The responsibility for submitting petitions in a timely manner to provide for considered review and decision by relevant departmental subgroups (divisions, committees) and the faculty rests with the student. Students are advised that the faculty typically meets once per month only during the academic year.

B. Appeals

It is recognized that there may be instances in which a graduate student disagrees with an academic decision delivered by their advisor, committee, or the Department related to interpretation of and adherence to Department, College, or University policies or procedures, or grade decisions. As stated by the Graduate School, the student has the right to appeal those decisions. In such instances, the Department follows procedures and policies on appeals and grievances provided by the Graduate Council (link given above). Also, and as noted within those policies, students with grievances related to race, sex, color, religion, national origin, age, disability or veteran status have the right to file a formal complaint with the Office of Investigation and Resolution.

A significant element of the Graduate Council's policy on appeals of academic matters is the reliance on proper procedure, which is summarized here:

- Appeals related to course grades should begin with the instructor and, if no resolution is achieved, the appeal should be filed with the Department Head.
- Appeals related to academic decisions rendered by or within the Department should be filed with the Associate Head for Graduate Programs, and if no resolution is reached, appealed to the Department Head.
- If the issue remains unresolved after decision by the Department Head, the student may, within 10 business days, appeal to the Dean of the college. If the matter remains unresolved after decision by the Dean, the student may, within 10 business days of that decision, appeal to the Graduate Council Appeals Committee.

The initial appeal must be filed no later than 10 business days after the decision that triggers the appeal. If, after filing the appeal, the student does not receive a response within 10 business days, the student has the right to take the appeal to the next level. Here it is expressly noted that "response" does not mean "resolution": Matters that require consideration by the full Faculty will be handled at the next regularly scheduled Faculty meeting, which occur monthly during the academic year. Matters that require consideration by committees or divisions (or both) will be handled in an expeditious manner by those groups. Matters that involve both will be handled in sequence. In all of these situations, the response will indicate both the need for the involvement of these bodies and the expected timeline for decision and resolution.

In a manner consistent with policy of the Graduate Council, an appeal at the department level should contain the following elements:

- Name, student ID#, and contact information
- Current degree program and name of advisor
- Brief statement of the decision being appealed and the grounds for the appeal
- Any appropriate discussion and supporting documentation

As described by the Graduate Council, it is the student's responsibility to make the case for the appeal. As examples, in the case of an appeal of policies and procedures, the student should provide one or more indications of how proper policy or procedure was not followed; when a grade is appealed, the student should clearly indicate one or more of the allowable reasons for appeal (which are articulated by the Graduate Council); and in the case of an academic penalty, the student must provide a rationale for the inappropriateness of the academic penalty.

7.9 Leave of Absence

The Graduate School has established policies covering Leave of Absence and Reinstatement that apply, generally, to situations in which it is necessary for students to temporarily interrupt their studies for at least a semester, up to a maximum period of two years. In those cases, the Department of Chemistry will defer to these policies, which are articulated in the Graduate

Handbook. Graduate students pursuing a Leave of Absence are strongly encouraged to consult with their major advisor and Associate Head for Graduate Program in order to determine whether a Leave of Absence is the most appropriate course of action. In addition, international students must also consult with the Center for Global Engagement (CGE) in order to ensure compliance with Federal immigration policy.

Graduate students who are on a Graduate School-approved Leave of Absence are not able to make any formal progress toward their degree and may not use faculty services and/or university facilities during that period of time. They also may not receive an assistantship, fellowship, or financial aid in any form, or take UT courses. The time approved for leave of absence will not be counted toward time to degree and program milestones (such as CRP, ORP, etc.) will be adjusted accordingly. However, and as noted by the Graduate School, a leave of absence does not imply a guaranteed continuation of funding upon return.

The Department of Chemistry will work with graduate students who require leave of absence of less than a full semester. In such cases, the student must make a formal request to the Department (through the Associate Head for Graduate Programs or Department Head) for leave. Notwithstanding emergency situations, the request should be made at least 2 weeks in advance, describing, in general, the need for the leave, current responsibilities that must be covered during the absence, and the expected timeline, including the start of and return from leave. In addition, and as appropriate, the request should include a proposal for adjustment of any program milestones (e.g., CRP, ORP, etc.), especially if they are imminent. The following general categories are provided.

- *Short-term Medical or Family-related Leave:* In this context, short-term is considered to be less than 4 weeks. The Department can work with a student to ensure teaching responsibilities are covered. Students should consult with their advisor to ensure research commitments are similarly covered.
- *Long-term Medical or Family-related Leave:* In cases of a serious health condition, pregnancy/childbearing/child-bonding, or the need for caregiving for an immediate family member with a serious health condition, the student should consult with their advisor and the Associate Head for Graduate Programs to consider whether a one-semester leave of absence from the program is in their best interest. If the student determines a one-semester leave of absence is not in their best interests, the student will work with their advisor and the Associate Head for Graduate Programs to determine the optimal path forward.
- *Bereavement Leave:* State employees are entitled to 3 days of paid bereavement leave following the death of a child, parent, sibling, grandchild, grandparent, stepchild, stepparent, foster parent, or parent-in-law. Situations extending beyond that period are to be considered within Short-term Family-related Leave.
- *Jury Duty Leave:* Employees summoned to Jury Duty are entitled to leave. Any graduate student summoned to service in this capacity must immediately contact and inform their advisor. In addition, if they have TA responsibilities, they must immediately contact and inform their instructor of record for the course and the Associate Head for Undergraduate Programs so their teaching responsibilities can be covered.
- *Other types of Personal Leave:* In cases of other unavoidable circumstances or hardships, a student should confer with their advisor and the Associate Head for Graduate Programs to determine the appropriate path forward and type of request to be made.

All requests for leave of these types will be evaluated on an independent basis. In cases where adjustments to deadlines for program milestones are approved, it becomes the student's responsibility to inform their dissertation (or thesis) committee and to meet those deadlines moving forward. In situations where coursework is interrupted, it will be the student's responsibility to work with the course instructors to ensure course requirements are met.

Appendix 1: Resources and Links Pertinent to Graduate Study at UTK

Department, College, and University

Department of Chemistry https://chem.utk.edu
College of Arts and Sciences https://artsci.utk.edu
Graduate School https://gradschool.utk.edu
- Office of Graduate Admissions https://gradschool.utk.edu/admissions
- 2025-2026 Graduate Catalog https://catalog.utk.edu/index.php?catoid=55
- Graduation Deadlines https://gradschool.utk.edu/graduation/graduation-deadlines
- Graduate School Forms https://gradschool.utk.edu/forms-central
- Thesis/Dissertation Consultant https://gradschool.utk.edu/thesesdissertations
- Graduate Student Life https://gradschool.utk.edu/graduate-student-life

Office of Equal Opportunity & Accessibility https://dae.utk.edu/eoa/
Office of Innovative Technology https://oit.utk.edu
Office of Title IX https://titleix.utk.edu

Professional Development & Training

Center for Career Development & Academic Exploration https://studentsuccess.utk.edu/career/
Developing Future Faculty Initiative https://teaching.utk.edu/futurefaculty
Graduate and Professional Student Professional Development https://gradschool.utk.edu/about-graduate-school/training/gpspd/

Graduate Student Senate https://gss.utk.edu
Office of for Campus Culture & Community https://studentlife.utk.edu/campus-culture/
Teaching and Learning Innovation https://teaching.utk.edu/
UT Libraries Information & Resources for Graduate Students https://libguides.utk.edu/graduate

International Scholar Services

International House https://ihouse.utk.edu
International Student and Scholar Services – Center for Global Engagement https://international.utk.edu
OPIc Testing Program https://gradschool.utk.edu/graduate-student-life/ita-testing-program

Funding

Graduate School Costs and Funding Opportunities http://gradschool.utk.edu/graduate-student-life/costs-funding/graduate-fellowships/
Financial Aid and Scholarships https://onestop.utk.edu/financial-aid
Graduate Student Senate Travel Awards https://gss.utk.edu/gss-travel-awards/
One Stop Student Services https://onestop.utk.edu

Other Student Resources

Student Counseling Center https://studentlife.utk.edu/counselingcenter/
Student Conduct and Community Standards https://studentlife.utk.edu/studentconduct/standards-of-conduct-overview/

Appendix 2 – List of Department of Chemistry Faculty *(as of the posting this handbook)*

DEPARTMENT OF CHEMISTRY
Kevin Shaugnessy, Department Head
Brian K. Long, Associate Head for Graduate Programs
Michael D. Best, Associate Head for Undergraduate Programs

Professors

Best, M.D. (Paul and Wilma Ziegler Professor), PhD – University of Texas, Austin
Campagna, S.R. (Director of Scientific Programs, UT-ORII) PhD – Princeton University
Dadmun, M.D. (Paul and Wilma Ziegler Professor), PhD – University of Massachusetts, Amherst
Dai, S. (UT-ORNL Joint Faculty), PhD – University of Tennessee, Knoxville
Hinde, R.J. (Executive Dean, College of Arts & Sciences), PhD – University of Chicago
Jenkins, D.M. (Paul and Wilma Ziegler Professor) PhD – California Institute of Technology
Kilbey II, S.M. (Paul and Wilma Ziegler Professor), PhD – University of Minnesota
Long, B.K. (Gleb Mamantov Professor), PhD – University of Texas, Austin
Musfeldt, J.L. (Paul and Wilma Ziegler Professor), PhD – University of Florida, Gainesville
Nemykin, V.N. PhD – National Academy of Sciences of Ukraine
Shaughnessy, K. PhD – Stanford University
Sokolov, A.P. (Governor's Chair), PhD – Academy of Sciences of Russia
Xue, Z. (Paul and Wilma Ziegler Professor), PhD – University of California, Los Angeles
Zhao, B. (Paul and Wilma Ziegler Professor), PhD – University of Akron

Associate Professors

Brantley, J.N., PhD – University of Texas, Austin
Calhoun, T.R., PhD – University of California, Berkeley
Chen, Y., PhD – Duke University
Clark, J., PhD – University at Buffalo SUNY
Darko, A.K., PhD – University of Florida, Gainesville
Do, T., PhD – UC Santa Barbara
Roy, S., PhD – Yale University
Sharma, B., PhD – University of Pittsburgh
Vogiatzis, K. (T. Ffrancon Williams Professor), PhD – Karlsruhe Institute of Technology (Germany)

Assistant Professors

Banerjee, S., PhD – University of Pennsylvania
Baccile, J.A., PhD – Cornell University
Cheng,Y., PhD – Duke University
Clark, J., PhD – University of Buffalo SUNY
Do, T.D., PhD – University of California, Santa Barbara

Heberle, F.A., PhD – Cornell University
Lei, Z., PhD - University of Michigan-Ann Arbor
McNicholas, B., PhD – California Institute of Technology