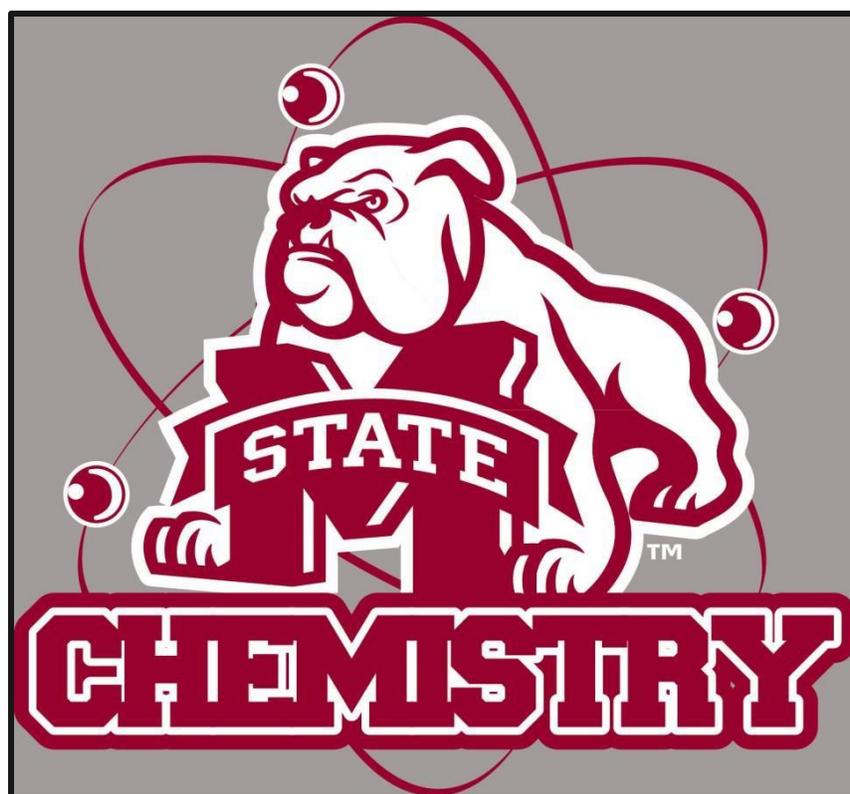


# 2021-2022 Chemistry Graduate Student Handbook



Faculty Adoption: July 14, 2021

Previous Version: 8/17/2020

## *Table of Contents*

### Table of Contents

#### CHEMISTRY

CHEMISTRY GRADUATE STUDENT HANDBOOK OVERVIEW .....	3
DEPARTMENT OF CHEMISTRY GRADUATE FACULTY AND RESEARCH AREAS.....	4
1. ADMISSION REQUIREMENTS FOR GRADUATE DEGREES .....	6
1.1. General Admission Qualifications:.....	6
1.2. Application to the Graduate Program .....	6
2. REQUIREMENTS FOR Ph.D. DEGREE .....	7
2.1. Academic Standards and Probationary Policy .....	7
2.2. Milestones and Submission Timeline for a Ph.D. Degree in Chemistry.....	8
2.3. Ph.D. Program Forms .....	9
2.4. Ph.D. Academic Curriculum .....	10
2.5. Ph.D. Research Advisor Selection .....	11
2.6. Ph.D. Graduate Committee Selection .....	11
2.7. Ph.D. Annual Review .....	11
2.8. Specific instructions for each document: .....	12
2.9. Seminar Requirements .....	13
2.10. Teaching Requirements .....	13
2.11. Cumulative Exams (cumes) .....	13
2.12. Admission to Candidacy: Original Research Proposal Defense .....	14
2.13. Ph.D. Research .....	16
2.14. Journal Publication Requirement .....	16
2.15. Admission to Candidacy.....	16
2.16. Application for Degree .....	16
2.17. Time Limits to Complete Ph.D. Degree .....	17
2.18. Ph.D. Dissertation Preparation .....	17
2.19. Presentation and Dissertation Defense .....	17
2.20. Conferring of the Ph.D. Degree in Chemistry .....	18
2.21. Dissertation/Thesis Charges .....	18
3. REQUIREMENTS FOR THE MASTER'S DEGREE .....	19
3.1. Academic Standards and Probationary Policy .....	19
3.2. Milestones and Submission Timeline for Master's Degrees in Chemistry .....	19

---

## Department of Chemistry Graduate Student Handbook

---

3.3.	Master's Degree Programs Forms .....	21
3.4.	Graduate Academic Curriculum.....	22
3.5.	Graduate Research Advisor Selection.....	23
3.6.	Graduate Research Advisory Committee Selection.....	23
3.7.	Annual Review .....	23
3.8.	Seminar Requirements .....	24
3.9.	Teaching Requirements .....	24
3.10.	Comprehensive Area Exams (non-thesis degree).....	24
3.11.	Time Limits to Complete the Master's Degree .....	25
3.12.	Master's Degree Thesis Preparation.....	25
3.13.	Thesis Defense or Oral Examination .....	25
3.14.	Conferring of the Master's Degree in Chemistry .....	26
3.15.	Dissertation/Thesis Charges .....	26
4.	GRADUATE ASSISTANTSHIPS .....	27
4.1.	Eligibility for Assistantship .....	27
4.2.	Types of Assistantships .....	28
4.3.	Examination and Certification Requirements.....	29
4.4.	Leave and Holidays .....	29
4.5.	Major medical, maternity, and long-term leave policies.....	30
5.	SAFETY .....	30
6.	ADDITIONAL POLICIES.....	31
6.1.	Employment outside of the Department of Chemistry .....	31
6.2.	Travel .....	31
6.3.	Building Security and Keys .....	31
6.4.	Professionalism.....	31
6.5.	Disciplinary Actions and Individual Corrective Action Plans (ICAPs) .....	32
7.	REVIEW .....	32

### CHEMISTRY GRADUATE STUDENT HANDBOOK OVERVIEW

This handbook summarizes the policies and procedures that are in effect as of the date posted on the front cover. Students will be notified of changes as they occur, but this handbook is not a contract, and if policies change in minor ways during a student's course of study, then the student will be asked to work toward a degree under the new policies in place of policies that were in effect when the student was admitted.

This document summarizes the requirements for the (thesis-based and non-thesis-based) M.S. and Ph.D. degrees in Chemistry at Mississippi State University located in Starkville, Mississippi. The purpose of this handbook is to inform graduate students of the rules, regulations, and timeline for completion of a graduate degree within our program.

The primary reference for rules and regulations regarding graduate students is the Mississippi State University Graduate Catalog (<http://catalog.msstate.edu/graduate>) and associated Academic Policies (<http://www.catalog.msstate.edu/undergraduate/academicpolicies>). The Graduate Assistant Handbook is the primary source for policies concerning student assistantships and this, along with answers to many other questions, is found in the FAQ section of the graduate school (<https://www.grad.msstate.edu/faq-policies>).

Specific course requirements, suggested course curricula, deadlines, and other departmental guidelines, rules, and regulations are presented here. Questions regarding these requirements may be referred to the Graduate Coordinator or Academic Coordinator.

#### **Graduate Coordinator**

David O. Wipf, Ph.D.

2220 Hand Lab

Phone: (662) 325-7608

[dwipf@chemistry.msstate.edu](mailto:dwipf@chemistry.msstate.edu)

#### **Academic Coordinator**

Taylor Fultz, B.S.

1115 Hand Lab

Phone: (662) 325-3584

[tfultz@chemistry.msstate.edu](mailto:tfultz@chemistry.msstate.edu)

*And so the root  
Becomes a trunk  
And then a tree  
And seeds of trees  
And springtime sap  
And summer shade  
And autumn leaves  
And shape of poems  
And dreams—  
More than tree.*

From "For Russell and Rowen Jelliffe" by Langston Hughes

**DEPARTMENT OF CHEMISTRY GRADUATE FACULTY AND RESEARCH AREAS**

Below is the list of tenure/tenure-track and non-tenure/tenure track Chemistry graduate faculty recognized by the Graduate School at Mississippi State University for the 2021-2022 academic year. The Department of Chemistry requires all graduate students to be mentored by a major professor/advisor that is a tenure/tenure-track faculty member. Non-tenure/tenure track faculty members can co-mentor students and serve on graduate committees within the Department of Chemistry.\* This list shows the exact spelling of their names. This spelling is required to be used on all graduate forms. A more detailed description of the faculty and their interests can be found on the Departmental webpage at the following address: <https://www.chemistry.msstate.edu/people/faculty/>

**Tenure/tenure-track faculty**

<b>Name</b>	<b>Rank</b>	<b>Department</b>	<b>Area</b>
Dr. Ashli Brown-Johnson	Associate Professor	BMBEPP	Biological Chemistry
Dr. Sidney Creutz	Assistant Professor	Chemistry	Inorganic Chemistry
Dr. Xin Cui	Assistant Professor	Chemistry	Organic Chemistry
Dr. Joseph P. Emerson	Associate Professor	Chemistry	Biological and Inorganic Chemistry
Dr. Nicholas C. Fitzkee	Professor	Chemistry	Biological and Physical Chemistry
Dr. Steven R. Gwaltney	Professor	Chemistry	Physical Chemistry
Dr. T. Keith Hollis	Professor	Chemistry	Inorganic and Organic Chemistry
Dr. Christopher N. Johnson	Assistant Professor	Chemistry	Biological Chemistry
Dr. Mahesh K. Gangishetty	Assistant Professor	Chemistry	Physical Chemistry/Materials
Dr. Debra Ann Mlsna	Associate Professor	Chemistry	Chemical Education
Dr. Todd E. Mlsna	Professor	Chemistry	Analytical Chemistry
Dr. Virginia Montiel	Assistant Professor	Chemistry	Inorganic Chemistry
Dr. Miguel Munoz	Associate Professor	Chemistry	Inorganic Chemistry
Dr. Amanda Patrick	Assistant Professor	Chemistry	Analytical Chemistry
Dr. Colleen N. Scott	Associate Professor	Chemistry	Organic Chemistry/Polymers
Dr. Dennis W. Smith, Jr.	Dept. Head/Professor	Chemistry	Organic Chemistry/Polymers
Dr. Kun Wang	Assistant Professor	Chemistry/Physics	Physical Chemistry
Dr. Charles Edwin Webster	Professor	Chemistry	Inorganic Chemistry
Dr. David O. Wipf	Professor	Chemistry	Analytical Chemistry
Dr. Dongmao Zhang	Professor	Chemistry	Analytical Chemistry

---

---

## Department of Chemistry Graduate Student Handbook

---

---

### Non-tenure/tenure-track faculty

Name	Rank	Department	Area
Dr. Eric Van Dornshuld	Assistant Clinical Professor	Chemistry	Physical Chemistry
Dr. Whitnee L. Nettles	Assistant Clinical Professor	Chemistry	Chemical Education
Dr. Sean L. Stokes	Assistant Clinical Professor	Chemistry	Organic Chemistry
Dr. Xue Xu	Assistant Clinical Professor	Chemistry	Organic Chemistry

\*Clinical professors can be members of graduate committees with the recognition that PhD graduate committees must have at least four tenure/tenure-track faculty members and master's degree graduate committees must have three tenure/tenure-track faculty members.

### 1. ADMISSION REQUIREMENTS FOR GRADUATE DEGREES

#### 1.1. General Admission Qualifications:

The minimum requirements for admission are given in the Graduate Catalog.

<http://catalog.msstate.edu/graduate/admissions-information/>

**To be considered a competitive admissions candidate, a student must have:**

- a. A bachelor's or master's degree in chemistry (or a related area).
- b. A minimum undergraduate GPA of 3.0 (on a 4.0 scale) over the last two years.
- c. International applicants must submit scores from the Test of English as a foreign language (TOEFL) or the International English language testing systems (IELTS). A minimum TOEFL score of 53 iBT (Internet-Based Test) or IELTS score of 4.5 is required for admission to Mississippi State University. However, a student will be much more likely to be admitted with scores higher than 68 on the iBT and 6.0 on the IELTS.
- d. Some international applicants with a bachelor's or master's degree from a traditionally English-speaking program or country may be exempt from required TOEFL/IELTS exam scores. A list of these exempt countries is found at this link: <http://catalog.msstate.edu/graduate/admissions-information/application-process/#applicationtext>

A student who does not meet one or more of these requirements may still be admitted as an *unclassified*, *contingent*, or *provisional* student. Check the Graduate Catalog for further details. <http://catalog.msstate.edu/graduate/admissions-information/admissionstatus/#overviewtext>

**Fall semester admission** is recommended for all new graduate students, Spring, or Summer admission will only be considered in special circumstances.

Well-qualified entering students are eligible for financial support. See Section 4 for details. Students admitted with provisional status cannot be awarded an assistantship, until they have completed nine credit hours of graded coursework (with a GPA of 3.00 or greater and no grade of C or lower). Contingent admission typically requires additional remedial course work that must be completed within the first year of study at MSU. Students who wish to be admitted without financial support should indicate this on their application.

#### 1.2. Application to the Graduate Program

To apply to the graduate program in Chemistry you must complete the University's official application process. *Do not fill out a separate application for financial support.* We consider all applicants for financial support as we consider them for admission.

- a. Follow the link: <https://www.grad.msstate.edu/students/admissions>, which contains application instructions.
- b. When you have read the material on this page, click the "Apply Now" link in the top right corner, or go to <https://www.apply.grad.msstate.edu/>.

---

## Department of Chemistry Graduate Student Handbook

---

- c. bachelor's or master's Click "Apply Online" for the semester in which you wish to be admitted and follow the instructions on the following page.
- d. If you know the faculty member(s) with whom you wish to work, list them in your statement of purpose.
- e. Online applications are submitted electronically.
- f. Any documents not submitted electronically should be sent to the following address.  
Office of Admissions  
P.O. Box G  
Mississippi State University  
Mississippi State, MS 39762

**International Students** must submit either a TOEFL or IELTS score. Submission of a GRE score is helpful but not required. The **GRE** and **TOEFL code** for Mississippi State University is **1480**.

A complete application includes: three letters of reference, official university transcript(s), a statement of purpose (a brief discussion of why and what you would like to study for a graduate degree in chemistry), and payment of the application fee.

To receive financial support, students must complete their application (and ensure ALL documents are received) before:

### A. Fall Admission

October 15<sup>th</sup> of the prior Fall semester for an **Early Decision**

January 25<sup>th</sup> for the year of admission for Regular Consideration

Note: **Early Decision** offers applicants an admission decision by the Department before October 31<sup>st</sup>, this option is recommended for highly qualified candidates.

The first review of applicants for Regular Consideration begins in early January and continues until all available admissions are filled.

### B. Spring Admission

September 30<sup>th</sup> of each year for Regular Consideration

## 2. REQUIREMENTS FOR Ph.D. DEGREE

### 2.1. Academic Standards and Probationary Policy

An overall GPA of 3.0 in all graduate courses is required by the University to remain in a good-standing status. The chemistry department additionally requires that the student must maintain a 3.0 average in all chemistry courses at or above the 7000 level. If the cumulative GPA drops below 3.0 at any time, the student will be placed on academic probation and be required to correct the deficiency by the end of the following semester. If a 3.0 cumulative GPA is not achieved after the probationary semester, the Graduate Affairs Committee will recommend to the Chemistry Faculty that the student

## Department of Chemistry Graduate Student Handbook

remain on probation or dismissed from the Chemistry Graduate Program. Decisions can be appealed by petition to the Department Head of the Department of Chemistry.

### Chemistry department academic standards policies:

- A 3.0 average or greater on all graduate course work.
- A 3.0 average or greater is required for all chemistry courses above the 7000 level.
- No grade of "C" can be used to fulfill requirements of the master's or Ph.D degree.
- Six or more credit hours of "C" or lower may result in dismissal from the program.

### 2.2. Milestones and Submission Timeline for a Ph.D. Degree in Chemistry

The chart below shows the expected milestones for a graduate student entering in the Fall (F) or Summer (Su) semester. For those entering in the Spring (Sp), the timeline is shifted one semester to the right.

Years	1			2			3			4+		
	F	Sp	Su	F	Sp	Su	F	Sp	S	F	Sp	Su
(a) Professional Chemistry Course	●											
(b) Other Chemistry Coursework	●	●	●	●	●	●						
(c) Select Research Advisor	●											
(d) Select Graduate Committee		●										
Conduct Annual reviews			■		■	■		■	■		■	■
Conduct Research	●	●	●	●	●	●	●	●	●	●	●	●
(e) Take Cumulative Exams	●	●		●	●							
(f) Give Seminars	■	■	■	■	■	■	■	■	■	■	■	■
(g) Oral Proposal and Candidacy				■	■	■	■	■				
(h) Apply for Graduation												+
(i) Defend Dissertation												+
Ph.D. Awarded												+

#### Key

●	<b>Required Time</b>
■	<b>Suggested Time</b>
+	<b>Usual Time</b>

#### Comments:

- (a) All students are required to take CH8111 – Professional Chemistry.
- (b) A minimum of six 3-hour courses are required (18 semester hours of graded course content). This must include at minimum of four, 3 hour 8000-level courses from CH or other approved courses from CHE, BCH, or related Departments.
- (c) You will be matched with your research advisor(s) before the end of your first semester in residence.
- (d) You and your research advisor will select four additional qualified faculty members who will compose your Graduate Committee.

- (e) You must pass 6 of 16 cumulative exams (cumes) for the PhD program. These exams are offered four times a semester, once a month during the Fall and Spring semesters. Students should start taking them upon arrival in residence.
- (f) Three seminars are required to be given for the Ph.D. program. Research presentations at a regional or national scientific meeting can be used to substitute for in-house seminars.
- (g) Ph.D. students must generate an original research proposal (Written Exam) and defend this work (Oral Exam) to your Graduate Committee within 12 months from the end of the semester in which you complete your cumulative exams. Upon completion of this requirement students become a PhD candidate. See "Admission to Candidacy" section below.
- (h) You normally will apply to graduate during the semester in which you plan to defend your dissertation.
- (i) The graduation semester is the semester in which the student completes the Application for Graduation and meets all other degree requirements.

### 2.3. Ph.D. Program Forms

#### Doctoral Degree Program Forms

All forms should be completed and sent to [grad@chemistry.msstate.edu](mailto:grad@chemistry.msstate.edu) as a means of submitting to the Department of Chemistry. Please include your name, netID, and a short summary of what is on the form and use the term "Forms" in the subject line of the email message. Completed forms will be forwarded to the Graduate School as needed. Be sure to include an advisor's signature or initials when possible.

All forms, apart from the Advisor Preference form, can be found on the Graduate School website: <https://www.grad.msstate.edu/students/forms>

#### Research Advisor(s) Preference Survey

A survey will be sent to you during your first semester in residence and must be completed by the mid-point of that semester. Students will be asked to list their research preferences, list which Research Advisors they prefer to work with, and if they wish to be co-advised. The results of this survey will be sent to the faculty, who will in turn provide a list of students they wish to advise. The Chemistry Department and the graduate coordinator will use the student and faculty survey along with departmental requirements and faculty needs to assign students to a research advisor.

#### Committee Request form

The Committee Request form is to be completed by the end of your first Spring semester of residence for Fall and Summer admission or by the end of the first Fall semester for Spring admission.

#### Request for Change of Committee Member(s) form

Should be completed as needed. Research Advisor or Graduate Coordinator approval is required before submission.

### **Program of Study**

Students will consult with their Research Advisor and their graduate committee to develop an approved *program of study*.

### **Transfer Approval form**

Students transferring course work into our program, should complete this form within the first year of study at MSU. Up to two chemistry-related courses can be considered as transfer coursework. A detailed syllabus is needed for each course under consideration and these courses need to be approved by the student's Research Advisor and the Graduate Coordinator.

### **Change in Graduate Program**

Students can change programs within the first year of study at MSU. After the first year, Ph.D. students can change their program to the master's degree program with approval of their Research Advisor and the Graduate Coordinator.

### **Announcement of PhD Defense**

All Ph.D. dissertation defenses must be publicly advertised at least one week prior to the defense. Students will put together the announcement and submit it to the Academic Coordinator at least one week prior to the defense. The announcement must include the approved dissertation title and abstract, student's name, time and date, and location.

### **Report of Exam Results**

Upon completion of the Written/Oral Exam or the dissertation defense of the Ph.D. the student's Research Advisor will complete the Report of Exam Results form. This form is only available to graduate faculty and is not shown to students.

### **Checkout and Exit Survey Forms**

All research active students will complete this form upon completing their appointment at MSU. Students will clean their laboratory and office spaces, organize their research products (data, notebooks, chemicals, etc.), and return Departmental property. Failure to turn in keys will result in a charge to your student account for \$150.00 per research lab key and \$600.00 per teaching lab key.

Students should check with their Research Advisor for any additional requirements. Checkout forms must be signed/initialed by the student's Research Advisor, their TA/RA supervisor, the Departmental Business Manager, and Graduate Coordinator. The Checkout Form and Exit Survey must be completed and turned in to the Department within your last semester in residence, or a hold will be placed on your account restricting your access to your official transcripts.

## **2.4. Ph.D. Academic Curriculum**

Students are required to register for a minimum of 9 semester hours of graduate course work during the Fall and Spring semesters to be considered a full-time student. No full-time student should register for more than 13 semester hours during the Fall and Spring

semesters. All graduate students are required to take a minimum of 24 hours of GPA graded coursework. All Ph.D. students must pass:

- CH 8111 Professional Chemistry
- CH 8711 Seminar I, CH 8721 Seminar II, and CH 8731 Seminar III
- Six additional 3-hour courses selected by the student in consultation with their Research Advisor and approved by the student's Graduate Committee
  - Four courses must be 8000-level CH, CHE, or BCH courses,
  - Two can be CH or other related disciplines.

### 2.5. Ph.D. Research Advisor Selection

Entering graduate students are advised by the Graduate Coordinator. When a student chooses a permanent graduate research advisor or Major Professor/Advisor, the Major Professor or Advisor (in collaboration with the student's Graduate Committee) provides the academic advisement.

New students will interview potential research advisors during their 1<sup>st</sup> semester. A survey will be sent to the students during their first semester in residence and must be completed by the mid-point of that semester. Students will be asked to list their research preferences, list which research advisors they prefer to work with, and if they wish to be co-advised. A similar survey will be sent to the faculty, who will in turn provide a list of students they wish to advise. The Chemistry Department and the graduate coordinator will use the student and faculty survey along with departmental requirements and faculty needs to assign students to a research advisor.

Students who do not submit a Research Advisor Preference form will have a hold placed on their account due to lack of progress, which prevents the student from registering for courses.

### 2.6. Ph.D. Graduate Committee Selection

Selection of a graduate committee to guide the student's studies is the responsibility of both the student and their Research Advisor. This committee must be selected no later than the 2<sup>nd</sup> semester in residence at MSU. The committee will have *at least* five members of the graduate faculty at Mississippi State University or similar standing. All committee members must have a Ph.D. Four or more these faculty members must be tenure/tenure-track faculty with an appointment in the Department of Chemistry. Changes in membership of the graduate committee are made with the approval of the student's Research Advisor or the Graduate Coordinator using the Change of Committee Member(s) form from the Graduate School.

### 2.7. Ph.D. Annual Review

Annual reviews should be completed and submitted to the Departmental Main Office by August 1<sup>st</sup> of each year. Failure to submit an annual report by the deadline will result in a hold being placed on your Banner account due to lack of progress, which can impact the student's ability to register.

---

## Department of Chemistry Graduate Student Handbook

---

The following items should be included in the Annual Review packet supplied by the student.

- a. A curriculum vitae (CV)
- b. A research/academic report including course and cumulative examination progress.
- c. An individual development plan (IDP)
- d. An advisor-generated research evaluation form
- e. A graduate committee research evaluation form (in the second and following years)
- f. Any teaching evaluations

The student will provide these items to their research advisor two weeks prior to the departmental deadline listed above. The advisor completes the research evaluation form, which is signed by the student and advisor to acknowledge receipt and review of the evaluation.

In the 2<sup>nd</sup> and following year. The graduate committee chair (i.e., the student's research advisor) will deliver a summary statement of the committee review to the graduate coordinator. If any part of the Ph.D. student's review is not considered "acceptable" or better, the Graduate Affairs committee may recommend dismissal or a change to the master's degree program.

### 2.8. Specific instructions for each document:

**Curriculum vitae (CV):** The CV should be written in a style consistent with the type of position that students plan to seek following completion of the degree.

**Research and Academic Report:** All research reports should summarize research accomplishments and should set goals for research in the following year. A one-page addendum must be added to the research report summarizing academic progress and incomplete requirements. Year-specific requirements include:

- First year: two pages maximum (not including the academic summary)
- Second year: The second-year report should be modeled on the format of a three-page JACS Communication with appropriate listing of citations using ACS style. The report should conclude with a brief section on future research plans. (not including the academic summary)
- Third year: five pages maximum (not including the academic summary)
- Fourth year and beyond: five pages maximum. The report should include a timeline for completion of the degree, and an outline of the planned dissertation. (Not including the academic summary)

**Individual Development Plans (IDP):** IDPs are written plans that give students ownership and structure to assess their skills, interests, and values, define clear and actionable goals, explore career options, and facilitate conversations with their research advisor(s). The form of IDP is flexible; however, most are structured around core competencies or learning outcomes. The following categories must be included: training (academics/coursework), scholarship (research), and career development.

### 2.9. Seminar Requirements

Three seminar presentations are required during the Ph.D. program corresponding to the CH8711, CH8721, and CH8731 Seminar courses. One of the seminars is presented to the department. This literature-based seminar has a topic not directly related to the student's or advisor's research program. Another of the three is a research-based presentation at a regional or scientific meeting (regional or national ACS meetings, for instance). The Lester Andrews Graduate Research Symposium (LAGRS) may not count toward the outside-of-the-department requirement. The third seminar may be either a research-based or literature-based seminar with requirement as described above.

### 2.10. Teaching Requirements

A minimum of two semesters of satisfactory teaching accomplishments are required of Ph.D. students. This requirement is independent of a student's financial support. For example, a student on a research fellowship must still satisfy the teaching requirement. The requirement may be satisfied in any number of ways, including but not limited to a Graduate Teaching Assistantship. See Section 4. Graduate Assistantships for details.

### 2.11. Cumulative Exams (cumes)

Ph.D. students begin taking cumulative exams ("cumes") in their first year of residence in the program. For students beginning in the Fall semester this means starting cumes in September. Students starting in the Spring will start in January. Cumes are given once a month during the Fall and Spring semesters. Cume titles are announced on the first Thursday of each month for each of the main chemistry areas: biological, analytical, inorganic, organic, and physical. Titles can include pertinent literature or reference materials. Cume titles can also be very general. Best practices suggest that graduate students should continually read the journal articles published within their chosen areas, and a good starting point for any cume would be to read current issues of ACS journals.

Students must consult their Research Advisor before signing up to take a cume in an area outside their research interest. Interdisciplinary students may choose from cumes relevant to their research areas. For example, a student studying in a bioorganic group, could take cumes in both biological and organic chemistry.

Exam periods are 120-minutes long, and all students take the exams simultaneously.

- Only one exam can be attempted in any exam period.
- Cumes are evaluated on a pass/fail grade. The grade will be made available to each student within three weeks after the exam date.
- Students must take a cume at every examination opportunity. Students failing to take a cume while in residence is considered to have failed that cume. When an absence at the cume is unavoidable, such as a medical emergency, the student may petition the graduate affairs committee for a replacement cume opportunity.

---

## Department of Chemistry Graduate Student Handbook

---

- Graded exams are not returned but can be reviewed by the student. The graded exams are available for review in the Department of Chemistry office.
- Cumes are provided to the student and graded by the faculty in a "double-blind" procedure. The student is not provided the identity of the cume author and the students are only identified by code to the faculty grading the exam.
- Students must pass two of their first eight cumes opportunities and six cumes out of the 16 cume opportunities.

If a student fails to pass the required number of cumes (i.e., two of the first eight or six of the first sixteen), they will be dismissed from the Ph.D. program. If desired, a student can change to the master's degree program at this point. The paperwork for this change must be completed no later than one month after the student fails their final cume attempt to prevent a hold from being placed on the student's account. Upon passing their sixth cume, they will receive an official memo from the Graduate Coordinator and are finished taking cumes.

### 2.12. Admission to Candidacy: Original Research Proposal Defense

Ph.D. students are required to complete a written and oral comprehensive exam before advancing to candidacy. To satisfy this requirement, the Chemistry department requires all doctoral students to develop and write an independent, original research proposal (written exam) and defend this proposal to their Graduate Committee (oral exam). The written portion of this exam must be scheduled before the end of the third semester after passing all cumes. Students must be enrolled in a minimum of one credit hour at MSU during the semester the exam is administered. A student enrolled during the summer semester can be enrolled in any summer term.

The topic of the research proposal will be selected by the student in consultation with their Research Advisor. The research topic should be also generally approved by the student's Graduate Committee. It is recommended that the topic has some degree of divergence from the research advisor's current research interests.

#### *Written Proposal Examination:*

The written proposal must follow the format required by the American Chemical Society for an ACS-PRF DNI grant application:

<https://www.acs.org/content/acs/en/funding-and-awards/grants/prf/programs/dni.html>

An abstract (**≤ 250 words**). Explain the rationale for the research, its objective, and the significance to the field if the objective is achieved.

- The body (**≤ 4000 words**, 12-point double-spaced, excluding the abstract, figures, and references). Describe the proposed research, its significance, and give a general plan of procedure.

---

## Department of Chemistry Graduate Student Handbook

---

- Number the pages (abstract as Page 1). Print the word count of the narrative (Proposal Narrative = *nnn* words) before the reference citations. Proposals exceeding 4000 words will be returned without review.
- References *must* be formatted appropriately such as they would be in a peer reviewed publication.

The full proposal (written) must be submitted by the student in electronic form to their Research Advisor who will submit it to each member of the graduate committee. The student's research advisor will run a plagiarism check and submit the report electronically alongside the document to the committee for examination. Evidence of plagiarism will be treated as an honor-code violation. The committee members will independently evaluate the written component and submit their vote to the Research Advisor and GPC within seven days by email. The members evaluate the proposal as (1) a failure, (2) requiring a revision, or (3) a pass. The decision of the majority will be communicated to the student by the next day. If a revision is required, the student has one week to submit it or the result is counted as a failure. A failure in the written portion of this exam can be addressed by re-submitting a proposal within three months from their original submission date. Students that do not address the written proposal failure will be dismissed from the PhD program.

### *Oral Proposal Examination:*

The oral defense must be scheduled within seven days of the committee's passing the written exam. The student then must make an oral presentation and defense of their research proposal (Oral Exam) to their Graduate Committee.

The Department must be notified of the examination at least one week prior to the scheduled date of examination. The Graduate School Catalog at Mississippi State lists additional deadlines for the Comprehensive (Written and Oral) Examinations that are required for graduation.

The student's graduate committee serves as the examining committee. The student or a committee member may request that the Graduate School appoint an outside observer to attend the comprehensive examination. Additionally, any member of the graduate faculty may attend and observe any graduate examination, however only committee members will cast votes assessing the student's performance. One negative vote **will not** constitute failure for a student on a comprehensive examination. However, two negative votes **will** constitute failure for a student on a comprehensive examination (<http://catalog.msstate.edu/graduate/academic-policies/phd-requirements/#examinationstext>). The student's committee must complete and submit the examination results report form no later than one week from the date of the pass/fail decision. The form must be submitted by a faculty or staff member of the department.

Students must pass both the Written and Oral Exam to be admitted to Candidacy. The Graduate Committee, by majority vote, may permit a student who fails the Written/Oral Exam a single examination retry. If granted, the retry must occur in a three-month period starting three months after the date of the original examination. If the student has not scheduled their retry after six months from the date of the original examination, their exam will be scheduled for them. Two failures on this examination **will** result in the student

being dismissed from the Ph.D. program. A student may be allowed to change to the master's degree program in this event.

### 2.13. Ph.D. Research

The graduate student will carry out original research under the direction of their Research Advisor and the advice of their Graduate Committee. This research serves as the basis of the student's dissertation.

Research assistantships (RAs) may be available, and students who accept an RA to work on specific projects, which are supported by extramural funds (not from the Department of Chemistry), will receive research direction from the faculty member that manages the project. In most cases, this research may be included in the student's thesis or dissertation. In the cases where inclusion is prohibited for proprietary or intellectual property reasons, the faculty advisor will clearly delineate what may be included in the thesis/dissertation. Students should understand that extramural research funds are often renewed annually and that if the funding is discontinued, the RA may be terminated as well.

Ph.D. students should register for research/dissertation hours (CH 9000). They are graded each semester and the student will be awarded an S (for satisfactory) or U (for unsatisfactory) for dissertation credit. A student cannot graduate with a U grade in the final semester.

### 2.14. Journal Publication Requirement

The policy of the department is that a student is not eligible to receive a Ph.D. degree before becoming an author on a peer-reviewed publication. Article(s) should be published or accepted for publication in a peer-reviewed publication before scheduling a final defense. It is important for students to discuss publication requirements with prospective advisor, since specific research groups may have additional expectations for presentations and publications.

### 2.15. Admission to Candidacy

A doctoral student must be admitted to candidacy for the Ph.D. before holding their dissertation defense. A doctoral student is admitted to candidacy when he/she successfully passes the comprehensive exam. A student's time frame for completing the degree will begin in the semester following Admission to Candidacy.

### 2.16. Application for Degree

During the semester of the desired graduation date, the student must apply for graduation (application for graduation is found on the student's myState Banner page). The student is responsible for completing this process. The deadline dates and fees are posted in the Academic Calendar each semester. Failure to meet the deadlines will require the filing of a new "Application for Graduate Degree" form and registration in subsequent term.

### 2.17. Time Limits to Complete Ph.D. Degree

Per Graduate Council, March 2010, a Ph.D. student must complete the degree program within five years after passing the preliminary/comprehensive examination. An extension-of-time form is available on the Graduate School website, may be used to request a one-time, one-year extension. The request must be signed by the Research Advisor and the dean of the college and submitted to the Office of the Graduate School (per Graduate Council, May 2005). There are additional enrollment requirements detailed in the graduate catalog, under the "*Enrollment and Registration*"

<http://catalog.msstate.edu/graduate/academic-policies/enrollment-requirements/#text>)

section including a continuous enrollment requirement. Students must be in good academic standing and registered for a minimum of 1 credit hour during the semester when the defense takes place.

### 2.18. Ph.D. Dissertation Preparation

The research carried out by the student serves as the basis for the written dissertation. The writing, typing, copying, and printing are the responsibility of the student. The Office of Thesis and Dissertation Format Review in the Mitchell Memorial Library sets the standards for formatting this document. Their website (<https://www.library.msstate.edu/thesis>) posts the document *Standards for Preparing Theses & Dissertations*, detailing the formatting and style requirements, outlines the approval process, and provides a checklist for the dissertation. Students should also attend the library workshop on thesis and dissertation preparation and use the templates provided. All dissertations will be assessed for plagiarism and other honor code violations by the research advisor.

### 2.19. Presentation and Dissertation Defense

#### General Information

Students defend their dissertation research in a formal seminar to the public and their Graduate Committee. This defense must occur before the published deadline in the official University academic calendar (<https://www.registrar.msstate.edu/calendars/academic-calendar>), which is typically six or more weeks prior to the graduation date. The date, time, and location of the seminar must be reported to the Department through the Announcement of PhD/MS Exam form.

Signature pages need to be reviewed by the Office of Thesis and Dissertation Format Review (see above) before you defend.

All faculty and graduate students will be invited to attend the defense seminar. Immediately following the seminar, a closed meeting of the candidate and the Graduate Committee is held. The student's Graduate Committee examines the student's understanding of the dissertation research and evaluate the content and style of the completed dissertation. After the examination, the committee will vote to accept the defense. A single negative vote by a committee member is allowed in accepting the defense. Two or more negative votes will constitute failure for a student on a dissertation defense. By a majority vote of the student's Graduate Committee, a student who fails the

dissertation defense can be granted a single examination retry 4 to 6 months after their original attempt. A second failure will result in the student being dismissed from the Ph.D. program. Students may be given an opportunity to apply to the master's degree program in this event.

After the exam, the Graduate Committee completes a Report of Examination Results. The Research Advisor is responsible for this form. Note that this form may not be shown to the student at any time.

### **Post Defense Requirements**

The Associate Dean of the College of Arts & Sciences reviews all dissertations before they are signed by the Dean. The Associate Dean requires two to three days for review. Occasionally, the student must make corrections and changes before the Associate Dean gives their approval; only then the Dean will sign. Therefore, the earlier it is submitted, the greater the opportunity to meet required deadlines.

Dissertations must be approved by the Office of Thesis and Dissertation Format Review (<https://www.library.msstate.edu/thesis>) to ensure compliance to the format required by Mississippi State University. This review occurs after the Graduate Committee and the Dean approves your dissertation.

### **Department of Chemistry Requirements**

The Department requires a final, library-approved **digital** copy of your thesis or dissertation. This can be submitted to the Graduate Coordinator. This file will not be publicly available so there should be no concern over intellectual property or embargos. Consult your research advisor(s) about their specific requirements for providing a printed copy of the dissertation.

### **2.20. Conferring of the Ph.D. Degree in Chemistry**

The attendance of both the student and the Research Advisor is expected at the Ph.D. graduation ceremony. The student, graduate research advisor, mentors, family, and friends are invited to attend the ceremony.

### **2.21. Dissertation/Thesis Charges**

Students submitting a dissertation or thesis to the MSU Graduate School are required to sign an agreement with ProQuest/MSU Dissertation Publishing, the firm that has acted as the repository and distributor for most dissertations written in the United States for more than sixty years. For more than a decade, ProQuest/MSU has also provided on-line access to this database. It is important that you read and understand the ramifications of the ProQuest/MSU agreement, the MSU Publication Agreement, and any other publishing agreement that you may be asked to sign. To make informed decisions, you, your graduate research advisor, and your graduate research advisory committee should be aware of the publication practices in your field of study, particularly if you have previously published or plan to publish any part of your research in a journal or book.

### 3. REQUIREMENTS FOR THE MASTER'S DEGREE

#### 3.1. Academic Standards and Probationary Policy

An overall GPA of 3.0 in all graduate courses is required by the University to remain in a good-standing status. The chemistry department additionally requires that the student must maintain a 3.0 average in all chemistry courses at or above the 7000 level. If the cumulative GPA drops below 3.0 at any time, the student will be placed on academic probation and be required to correct the deficiency by the end of the following semester. If a 3.0 cumulative GPA is not achieved after the probationary semester, the Graduate Affairs Committee will recommend to the Chemistry Faculty that the student remain on probation or dismissed from the Chemistry Graduate Program. Decisions can be appealed by petition to the Department Head of the Department of Chemistry.

#### Chemistry department academic standards policies:

- A 3.0 average or greater on all graduate course work.
- A 3.0 average or greater is required for all chemistry courses above the 7000 level.
- No grade of "C" can be used to fulfill requirements of the master's or Ph.D degree.
- Six or more credit hours of "C" or lower may result in dismissal from the program.

#### 3.2. Milestones and Submission Timeline for Master's Degrees in Chemistry

##### Thesis-based Master's degree Timeline

The chart below shows the expected milestones for a graduate student entering in the Fall (F) or Summer (Su) semesters. The chart shifts a semester right for a student entering in the Spring (Sp).

Years	1			2		
	F	Sp	Su	F	Sp	Su
(a) Professional Chemistry Course	●					
(b) Other Chemistry Coursework	●	●	●	●	●	●
(c) Select Research Advisor	●					
(d) Select Graduate Committee		●				
Conduct annual reviews			●		■	■
Conduct Research	●	●	●	●	●	●
(e) Give Seminar				■	■	
(f) Apply for Graduation					■	■
(g) Thesis Defense					■	■
Master's Degree Awarded						■

#### Key

●	<b>Required Time</b>
■	<b>Suggested Time</b>

#### Comments:

- (a) All students are required to take CH8111 – Professional Chemistry.

## Department of Chemistry Graduate Student Handbook

- (b) A minimum of six 3-hour, 8000-level CH (or related) courses are required for the master's degree (24 hours of graded course content). All non-CH courses must be approved by the graduate committee.
- (c) Your research advisor will be assigned before the end of your first semester in residence.
- (d) You and your research advisor select 2 to 3 additional qualified faculty members who will compose your Graduate Committee.
- (e) One seminar is required to be given for the master's degree program. They may be given at any time, but students should plan to accomplish these early in their timeline for the degree.
- (f) You should apply to graduate during the semester in which you plan to defend your thesis.
- (g) The graduation semester is set by the semester in which the student completes the Application for Graduation and meets all other degree requirements.

### Non-thesis-based Master's degree Timeline

Years	1			2		
	F	Sp	Su	F	Sp	Su
(a) Professional Chemistry Course	●					
(b) Other Chemistry Coursework	●	●	●	●	●	●
(c) Select Advisor	●					
(d) Select Graduate Committee	●					
Conduct Annual review			■			■
(e) Take Comp exams		■	■	■	■	■
(f) Give Seminar				■	■	
(g) Apply for Graduation					■	■
(h) Take Oral Exam					■	■
Master's Degree Awarded					■	■

#### Key

●	<b>Required Time</b>
■	<b>Suggested Time</b>

#### Comments:

- (h) All students are required to take CH8111 – Professional Chemistry.
- (i) A minimum of six 3-hour CH (or related) courses are required (30 hours of graded course content). All non-CH courses must be approved by the graduate committee.
- (j) The Graduate Coordinator acts as the advisor to all non-thesis MS students.
- (k) You and your research advisor select 2-3 individuals who will be members of your Graduate Committee in the first semester of this program.
- (l) Comprehensive exams must be passed in 3 of the 5 traditional areas of chemistry. These exams are offered once a month during the Fall and Spring semesters.
- (m) One seminar is required to be given for the master's degree program. They may be given at any time, but students should plan to accomplish these early in their timeline for the degree.

- (n) You normally apply to graduate during the semester in which you take the oral examination.
- (o) The graduation semester is set by the semester in which the student completes the Application for Graduation and meets all other degree requirements.

### 3.3. Master's Degree Programs Forms

All forms should be completed and sent to [grad@chemistry.msstate.edu](mailto:grad@chemistry.msstate.edu) as a means of submitting to the Department of Chemistry. Please include your name, netID, and a short summary of what is on the form and use the term "Forms" in the subject line of the email message. Completed forms will be forwarded to the Graduate School as needed. Be sure to include an advisor's signature or initials when possible.

All forms, apart from the Advisor Preference form, can be found on the Graduate School website:

<https://www.grad.msstate.edu/students/forms>

#### **Advisor Selection form**

This form should be completed by the mid-point of the first semester of enrollment. Students in the thesis-based master's degree program should rank their interests in research groups from 1 to 3, where 1 is their top preference and 3 would be their 3<sup>rd</sup> preference. Students in the non-thesis program will be advised by the Graduate Coordinator. Faculty need to assign students to a research group.

This form will be sent to you during your first semester in residence and must be completed by the mid-point of that semester. Students will be asked to rank their top three Research Advisor preferences. The Department and the graduate coordinator will use these preferences along with Faculty need to assign students to a research advisor.

#### **Committee Request form**

The Committee Request form is to be completed by the end of your first Spring semester of residence for Fall and Summer admission or by the end of the first Fall semester for Spring admission.

#### **Request for Change of Committee Member(s) form**

Should be completed as needed. Research Advisor or Graduate Coordinator approval is required before submission.

**Program of Study** Students should consult their major professor and their graduate committee to develop an approved *program of study*.

#### **Transfer Approval form**

Students transferring course work into our program, should complete this form within the first year of study at MSU. Up to 2 courses can be considered as transfer coursework. A detailed syllabus is needed for each course under consideration and these courses need to be approved by the student's Research Advisor

### Change in Graduate Program

Students can change programs within the first year of study at MSU with approval of their Research Advisor and the Graduate Coordinator. Master's degree students in their second year or beyond, must complete their master's degree program and re-apply to the Ph.D. program to continue at MSU.

### Announcement of the Master's Degree Exam

This form must be completed and submitted at least two weeks prior to the scheduled date, where the Examination must be publicly advertised with the Department at least one week prior. A title, abstract, time, and location must be included with this form.

### Report of Exam Results

Upon completion of the Master's degree exam, the graduate committee chair/major professor/advisor will complete the *Report of Exam* results form. This form is only available to graduate faculty and is not shown to students.

### Checkout and Exit Survey Forms

All research active students will complete this form upon completing their appointment at MSU. Students will clean their laboratory and office spaces, organize their research products (data, notebooks, chemicals, etc.), and return Departmental property. Failure to turn in keys will result in a charge to your student account for \$150.00 per research lab key and \$600.00 per teaching lab key.

Students should check with their Research Advisor for any additional requirements. Checkout forms must be signed/initialed by the student's Research Advisor, their TA/RA supervisor, the Departmental Business Manager, and Graduate Coordinator. The Checkout Form and Exit Survey must be completed and turned in to the Department within your last semester in residence, or a hold will be placed on your account restricting your access to your official transcripts.

### 3.4. Graduate Academic Curriculum

Students are required to register for a minimum of 9 semester hours of graduate course work during the Fall and Spring semesters to be considered a full-time student. No full-time student should register for more than 13 semester hours during the Fall and Spring semesters.

Non-thesis master's degree students are required to take an additional 10 hours of graded graduate course content. All courses are selected by the student in consultation with their Advisor and will be approved by the student's Graduate Committee.

All master's students are required to take a minimum of 24 hours of GPA graded coursework. All master's students must pass:

- CH 8111 Professional Chemistry
- CH 8711 Seminar I
- Six additional 3-hour courses selected by the student in consultation with their Research Advisor and approved by the student's Graduate Committee

Thesis-based master's students are additionally required to take:

- four additional course-work hours
- a minimum of 6 hours of Thesis Research (CH 8000.)

Non-thesis-based master's students are required to take an additional ten hours of graded graduate course content.

### 3.5. Graduate Research Advisor Selection

Entering graduate students are advised by the Graduate Coordinator. When a student chooses a permanent graduate research advisor or Major Professor/Advisor, the Major Professor or Advisor (in collaboration with the student's Graduate Committee) provides the academic advisement. All non-thesis master's degree students will be advised by the Graduate Coordinator.

New thesis-based master's degree students will interview potential research advisors during their 1<sup>st</sup> semester. A survey will be sent to the students during their first semester in residence and must be completed by the mid-point of that semester. Students will be asked to list their research preferences, list which research advisors they prefer to work with, and if they wish to be co-advised. The results of this survey will be sent to the faculty, who will in turn provide a list of students they wish to advise. The Chemistry Department and the graduate coordinator will use the student and faculty survey along with departmental requirements and faculty needs to assign students to a research advisor.

Students who do not submit a Research Advisor Preference form will have a hold placed on their account due to lack of progress, which prevents the student from registering for courses.

### 3.6. Graduate Research Advisory Committee Selection

Selection of the Graduate Committee to guide the student's studies is the responsibility of both the student and their graduate Advisor. This committee must be selected no later than the end of the 2<sup>nd</sup> semester in residence at MSU for thesis-based master's degree students. Non-thesis-based master's degree students must generate their Graduate committee immediately upon starting the program. The committee will have *at least* 3 members of the graduate faculty at Mississippi State University or similar standing. Additionally, at least 2 of these faculty members should be tenure/tenure-track faculty with an appointment in the Department of Chemistry. Changes in membership of the graduate committee are made with the approval of the student's Research Advisor or the Graduate Coordinator using the Change of Committee Member(s) form from the Graduate School.

### 3.7. Annual Review

#### Thesis-based and non-thesis master's degree program

Annual reviews should be completed and submitted to the Departmental Main Office by August 1<sup>st</sup> of each year. Failure to submit an annual report by the deadline will result in a

hold being placed on your Banner account due to lack of progress, which can impact the student's ability to register.

The following items should be included in the Annual Review packet supplied by the student.

- a. A curriculum vitae (CV)
- b. A research/academic report including coursework and research progress (thesis-based only).
- c. An individual development plan (IDP)
- d. An advisor-generated research evaluation form (thesis-based only)
- e. A graduate committee research evaluation form (thesis-based only, in the second and following years)
- f. Any teaching evaluations

The student will provide these items to their research advisor two weeks prior to the departmental deadline listed above. The advisor completes the research evaluation form, which is signed by the student and advisor to acknowledge receipt and review of the evaluation.

In the 2<sup>nd</sup> and following year. The graduate committee chair (i.e. the student's research advisor) will deliver a summary statement of the committee review to the graduate coordinator. If any part of the student's review is not considered "acceptable" or better, the Graduate Affairs committee may recommend dismissal or a change to the non-thesis master's degree program.

**Specific instructions for file formats and for each year:** See Section 2.8 above.

### 3.8. Seminar Requirements

One seminar presentation is required for the master's degree program. This literature-based seminar has a topic not directly related to the student's or advisor's research program.

### 3.9. Teaching Requirements

Satisfactory teaching accomplishments are required of master's students holding a Graduate Teaching Assistantship position. See Section 4. Graduate Assistantships for details on teaching assistantships and teaching requirements.

### 3.10. Comprehensive Area Exams (non-thesis degree)

Non-thesis master's degree students must pass three comprehensive area exams before scheduling their final oral examination. The comprehensive exams (comps) are upper-level undergraduate/lower-level graduate exams from the five areas of chemistry (Analytical, Biological, Inorganic, Organic, and Physical). A passing score is 70% percent or higher on an individual exam. Students must pass the comprehensive exam in three of the five areas of chemistry to move forward in the program. Comps are given four times a semester during

the Fall and Spring academic terms. Students can sit for up to three comp exams per area. Please see the Graduate Coordinator to sign up for these exams.

### 3.11. Time Limits to Complete the Master's Degree

Eight years is the maximum time to complete a master's degree. There are additional enrollment requirements detailed in the graduate catalog, under the "[Enrollment and Registration](#)" section including a continuous enrollment requirement. Students must be in good academic standing and registered for a minimum of 1 credit hour during the semester when the defense takes place.

### 3.12. Master's Degree Thesis Preparation

The research carried out by the student serves as the basis for the written thesis. The writing, typing, copying, and printing are the responsibility of the student. The Office of Thesis and Dissertation Format Review in the Mitchell Memorial Library sets the standards for formatting this document. Their website (<https://www.library.msstate.edu/thesis>) posts the document *Standards for Preparing Theses & Dissertations*, detailing the formatting and style requirements, outlines the approval process, and provides a checklist for the dissertation. Students should also attend the library workshop on thesis and dissertation preparation and use the templates provided. All theses will be assessed for plagiarism and other honor code violations by the research advisor.

### 3.13. Thesis Defense or Oral Examination

#### General Information

Thesis-based master's degree Students must defend their thesis research during a formal seminar to the public, which also is attended by their Graduate Advisor and their Graduate Committee. This defense must occur before the published deadline in the official University academic calendar. This is typically six or more weeks prior to the graduation date. The date, time, and location of the seminar must be reported to the Department through the Announcement of PhD/MS Exam form. This completed form must be submitted at least *two weeks prior* to the scheduled date.

All faculty and graduate students will be invited to attend the defense seminar. Immediately following the seminar, a closed meeting of the candidate and the Graduate Committee is held. The student's Graduate Committee examines the student's understanding of the thesis research and evaluate the content and style of the completed thesis. After the examination, the committee will vote to accept the defense. A single negative vote by a committee member is allowed in accepting the defense. Two or more negative votes will constitute failure for a student on a thesis defense. By a majority vote of the student's Graduate Committee, a student who fails the thesis defense can be granted a single examination retry 4 to 6 months after their original attempt. A second failure will result in the student being dismissed from the master's degree program.

Non-thesis master's degree students will hold an oral comprehensive exam. This oral examination requires all Graduate Committee members ask a series of chemistry question, where the master's degree candidate is to answer these fully illustrating their mastery of

the concepts of Chemistry. The nature and format of the oral examination is determined by the Committee Chair and Advisor. Typically, the examination will test concepts at the upper-level undergraduate and lower-level graduate course curriculum.

After the examination, the Graduate Committee completes a Report of Examination Results. The Research Advisor is responsible for this form. Note that this form may not be shown to the student at any time.

The student should consult the Graduate School office for specific deadlines and the fees. Failure to meet the deadlines will require the filing of a new "Application for Graduate Degree" form and registration in subsequent term.

### **Post Defense Requirements**

The Associate Dean of the College of Arts & Sciences reviews all theses before they are signed by the Dean. The Associate Dean requires two to three days for review. Occasionally, the student must make corrections and changes before the Associate Dean gives their approval; only then the Dean will sign. Therefore, the earlier it is submitted, the greater the opportunity to meet required deadlines.

Theses must be approved by the Office of Thesis and Dissertation Format Review (<https://www.library.msstate.edu/thesis>) to ensure compliance to the format required by Mississippi State University. This review occurs after the Graduate Committee and the Dean approves your dissertation.

### **Department of Chemistry Requirements**

The Department requires a final, library-approved **digital** copy of your thesis or dissertation. This can be submitted to the Graduate Coordinator. This file will not be publicly available so there should be no concern over intellectual property or embargos. Consult your research advisor(s) about their specific requirements for providing printed copy of the thesis.

### **3.14. Conferring of the Master's Degree in Chemistry**

The attendance of both the student and the graduate research advisor is expected at the graduation ceremony. The student, graduate research advisor, mentors, family, and friends are invited to attend the ceremony.

### **3.15. Dissertation/Thesis Charges**

Students submitting a dissertation or thesis to the MSU Graduate School are required to sign an agreement with ProQuest/MSU Dissertation Publishing, the firm that has acted as the repository and distributor for most dissertations written in the United States for more than sixty years. For more than a decade, ProQuest/MSU has also provided on-line access to this database. It is important that you read and understand the ramifications of the ProQuest/MSU agreement, the MSU Publication Agreement, and any other publishing agreement that you may be asked to sign. To make informed decisions, you, your graduate research advisor, and your graduate research advisory committee should be aware of the

publication practices in your field of study, particularly if you have previously published or plan to publish any part of your research in a journal or book.

### 4. GRADUATE ASSISTANTSHIPS

Graduate assistantships financially support students who are expected to devote 100% of their time and effort to pursuing their degree. They are intended to facilitate progress toward the earning of a graduate degree.

The laws for visa status may place limits on employment eligibility of an international student. If an international student is uncertain about whether visa status allows acceptance of an assistantship or additional work hours, he/she should contact the International Student Office for clarification.

Your dual role as student and graduate assistant necessitates your review and understanding of University Policy and Regulations that provide guidance and direction for handling complaints, academic misconduct, student grievances, attendance reporting, etc. Applicable documents can be found at:

- MSU Student Policies:  
[http://www.msstate.edu/web/security/student\\_policies.html](http://www.msstate.edu/web/security/student_policies.html)
- MSU Faculty Handbook: [http://www.msstate.edu/web/faculty\\_handbook/](http://www.msstate.edu/web/faculty_handbook/)
- Mississippi State University Graduate Catalog:  
<http://catalog.msstate.edu/graduate/>

Graduate Students should review the [Graduate Assistantship Handbook](#), which can be found in the FAQ (<https://www.grad.msstate.edu/faq-policies>) section on the graduate school's website for policies related to:

- Assistantship Eligibility
- Types of Assistantships
- Teaching Certification Requirements
- Language Requirements
- Graduate Assistantship Award, Benefits, and Termination
- Responsibilities for Maintaining a Graduate Assistantship
- University Policies Relating to Graduate Teaching Assistants

#### 4.1. Eligibility for Assistantship

The current departmental policy guarantees Ph.D. graduate students up to five years and master's degree graduate students up to years of financial support as a teaching assistantship if they are making satisfactory progress toward their degree. This guarantee of funding is valid while the student is good standing in the Ph.D. or thesis-based master's degree program in chemistry and that the student performs their teaching and other assigned duties well. Generally, students in the non-thesis master's degree program will not be supported by Departmental assistantships.

Under unusual circumstances where mitigating circumstances preclude completion of degree requirements within 5 years, one semester extensions of this time limit can be requested of the Graduate Coordinator. Such a request should originate from the student and Research Advisor in the form of a written memorandum of request to the Graduate Coordinator that includes a plan and timeline for completion of the degree.

Graduate research, teaching, and service assistantships are assigned annually.

To be eligible for a Chemistry Graduate Assistantship, a student must be admitted to the Chemistry degree program with “regular” or “contingent” status. A student with “contingent” status must, within the first award enrollment period, satisfy all “regular” admission requirements. An assistantship award will be terminated if these requirements are not met. “Unclassified” graduate students or graduate students with “provisional” admission status to a degree program are ineligible to hold an assistantship.

### 4.2. Types of Assistantships

#### Graduate Teaching Assistant (GTA)

Teaching assignments are made to meet Departmental needs. Effort is made to make the assignment relevant to the student’s research interests (e.g., a student whose research is related to organic synthesis is assigned to teach organic laboratory). Teaching assignments will be supervised by one of the Department’s Laboratory Coordinators. Each teaching assistant will be assessed by their immediate supervising Laboratory Coordinator each semester except during the summer semester. These reviews must be submitted as part of the annual review. Excellence in teaching is expected, and inadequate effort in teaching responsibilities may jeopardize continued teaching assignments and related financial support.

Within the Department of Chemistry, Graduate Teaching Assistants are assigned to teach laboratories, proctor and grade exams, hold office hours, and administer various functions of the delivery of the department’s teaching functions (laboratory and lecture) as part of their on-the-job-training. Other duties may be assigned as the need arises. Each GTA is typically assigned two lab sections and will be required to make presentations, prepare the laboratory, prepare solutions, and complete any other duties assigned by their supervisor. While many of these tasks involve direct contact with students, a graduate teaching assistant is not an instructor of record.

A graduate assistant’s work schedule does not exceed 20 hours per week. The minimum stipend rate is \$600.00 per month. Students are expected to develop proficiency and improve in performance as they move through the program. This time is independent from the time they should be engaged in study, research, and other related activities that are consistent with making progress toward their degree.

The normal laboratory instruction assignment load for a first-year graduate teaching assistant (TA) cannot exceed 20 hours per week. In subsequent years, students may be supported on research grants and may have reduced or zero teaching duties. Additional responsibilities associated with the teaching assignment include staff meetings, grading, interacting with students, and record-keeping. These hours relate to the teaching

assignment only and are outside of time requirements for study, research and other activities related to making progress toward the degree.

### **Graduate Research Assistantships (GRA)**

Graduate Research Assistants perform duties in support of research, which may or may not relate to a student's thesis/dissertation. This opportunity provides an excellent means for students to learn new techniques and methods, as well as expand their knowledge by association with research-oriented responsibilities. Duties and stipends vary and are dependent on the nature of the assistantship.

### **4.3. Examination and Certification Requirements**

#### **Chemistry Examination Requirement**

All new graduate students receiving assistantships are required to take the ACS General Chemistry full-year exam during a scheduled time prior to the start of their first semester in residence. All doctoral and master's graduates of the Mississippi State University Department of Chemistry must be competent general-chemistry teachers. It is especially important that all teaching assistants have good general chemistry knowledge, and this exam is used to prove sufficiency prior to teaching undergraduate students. Successful completion of this exam is a requirement for holding a teaching assistantship. If a student fails to pass this exam, he/she will be given a second chance to pass a similar test later that same semester. A second failure may result in a loss of their assistantship, and the student will be required to attend a freshman lecture course. Regardless of score, first year graduate students are encouraged to attend a lecture section for the laboratory they supervise to be better prepared for student questions.

### **4.4. Leave and Holidays**

Per the Graduate School, Graduate Assistants are **not** eligible for vacation, sick leave, or unemployment compensation.

The Department of Chemistry allows Graduate Assistants a maximum of 15 days of paid leave for medical or personal reasons. Students earn 10 days of leave PER academic year, which runs from August 16<sup>th</sup> through August 15<sup>th</sup>. If a student has any remaining days of leave at the end of an academic year, a maximum of 5 of those days will be rolled over to the next Academic Year. Any days taken more than the student's given leave days will be WITHOUT pay.

Graduate Assistants are entitled to the same holidays as faculty in addition to their leave days granted by the department. Any leave beyond the allotment requires approval as below. Students will not receive a departmental stipend for extended leave beyond that indicated above. University holidays are listed on the MSU Human Resources website: <https://www.hrm.msstate.edu/benefits/holidays/>

*Note that "Fall Break" and "Spring Break" are not University Holidays.*

### Leave request procedure:

- A. Obtain and complete the [Graduate Student Application for Leave form](#) from the Department webpage **prior** to requested leave days.
- B. The student's Research Advisor and their Assistantship Supervisor (i.e., the TA supervisor) approve and sign the form.
- C. Submit the form to the Chemistry Main office for approval by the Business Manager.

### **OF CRITICAL IMPORTANCE:**

The Department of Chemistry understands that it is sometimes necessary for students to be away from campus. It is important that planned absences be scheduled to not impose on teaching, service, or research obligations. Students holding a research assistantship should discuss any extra leave in advance with their Research Advisor(s). Students holding teaching assistantships must adhere to the departmental policies regarding absences. Graduate Assistants are expected to be on campus for the entirety of their assistantship. Graduate Teaching Assistants must be present on the day before classes begin and be present for any training sessions and TA meetings held by your teaching supervisor. Teaching Assistants must also be present for all grading activities at the conclusion of the semester. If you cannot be here any time during a semester you must complete the leave request procedure (see above) in advance and indicate who will be covering your teaching duties while you are absent. Teaching assistants who fail to follow this procedure will receive a letter of reprimand for their first offense and have their assistantship terminated on their second offense.

### **4.5. Major medical, maternity, and long-term leave policies**

Major medical leave policies are based on state law and the Institute for Higher Learning polities. As soon as possible, the student impacted by a major medical condition or change is encouraged to discuss this confidentially with their research advisor and the graduate coordinator to discuss an accommodation plan. Students are strongly advised to consult with Human Resources Management prior to or during pregnancy (<https://www.hrm.msstate.edu>)

Similarly, students requiring long-term leave should contact their research advisor and the graduate coordinator as soon as possible. Interested parties should refresh themselves with Departmental and Graduate School degree policies and timelines before generating a long-term plan.

## **5. SAFETY**

The Department of Chemistry's overriding goal is to provide a safe work environment for our students, faculty, and staff.

Anyone working in a teaching and/or research laboratory is required to follow the rules and guidelines of the University and the Department of Chemistry. The Safety Handbook for the department of Chemistry provides details of safety procedures and policies. All Graduate Assistants are required to read, complete, and abide by the department's Safety Contract and Handbook.

### 6. ADDITIONAL POLICIES

#### 6.1. Employment outside of the Department of Chemistry

Graduate students are expected to devote full effort to their program of study and research. Students that hold assistantships are not permitted to hold jobs outside the Department. Violations of this policy will result in the loss of assistantship. This prohibition assumes that a full-time student with this level of work commitment (obligations) would not be able to meet successfully all academic requirements.

#### 6.2. Travel

The department will provide matching funds (up to \$500.00) for the travel to one regional or national professional meeting at which a Ph.D. student will be presenting a paper on his/her Ph.D. dissertation research. The student must request and receive approval for these funds **prior** to commencing travel. No retroactive approvals will be given. To request matching supplemental funds, the Ph.D. student is to complete and process the Department of Chemistry Travel Authorization Form. Other sources of travel funds available to the student are the Graduate School, Graduate Student Association travel fund program, extramural funds that support the Ph.D. student's research, the Chemistry Graduate Student Association, etc.

#### 6.3. Building Security and Keys

An administrator in the business office will distribute keys or authorize keycard (ID) access to the areas in which you will be working.

It shall be clearly understood by all those receiving keys that they will:

- Exercise great care to prevent loss. Report any loss of keys or ID immediately to the Chemistry main office.
- NOT loan your key[s] or keycard to anyone.
- See that the outside door is closed when entering or leaving the building after regular hours. DO NOT PROP DOORS OPEN!
- Under NO circumstances let anyone in the building after hours that does not have keycard swipe access. If their keycard access does not work, do not let them in.
- Lock all work areas when leaving (labs, offices, etc.). Do not leave an unattended area unlocked, even for a short period of time (e.g., restroom visit).
- Report to the University Police and the Department Head any unusual or suspicious occurrence or persons found in the Chemistry building complex after the building is closed.

#### 6.4. Professionalism

It is expected that Graduate Students will always conduct themselves in a professional manner in their interactions with students, the faculty, and the staff. These standards

should be upheld in their speech, dress, demeanor, and interactions with others from both inside and outside of the department.

### 6.5. Disciplinary Actions and Individual Corrective Action Plans (ICAPs)

Failure to follow University and Department Policies and Procedures, including guidelines as found in this Handbook, or direct instruction from the Safety/Chemical Manager, Lab Coordinator(s), graduate faculty, or other authorized personnel, both in the teaching and research Labs may result in Disciplinary Action.

Each graduate assistant (GTA, GRA, GSA) will be given guidelines, at the start of the semester, on the Departmental requirements and expectations of their position. Failure to maintain Departmental standards and expectations will result in an individual corrective action plan (ICAP). The objective of an ICAP is to correct and resolve performance problems with a graduate teaching assistantship, graduate service assistantship, or graduate research assistantship. The ICAP offers a probationary period where specific standards, goals, and/or expectations are explicitly defined to the graduate assistant and consistently monitored by the graduate assistant's direct supervisor(s) and, if applicable, the TA Coordinator. The student should expect that any first ICAP can include a reduction of stipend; any subsequent ICAPs will include an increased reduction of stipend and may include a termination of their assistantship. Egregious or overt actions may result in immediate termination of assistantship, as deemed appropriate by the Department Head. Retrained students that maintain Departmental standards and expectations over a prolonged period may be returned to regular stipend the following semester by petition to the Department Head/Associate Head.

An ICAP will specifically address issues that are not meeting or exceeding expectations and will include:

- a detailed list of deficiencies.
- a list of specific expectations to address the itemized deficiencies.
- a retraining/probationary period plan (In general this should be no less than one month and no more than three months).

A brief ICAP meeting with the student will be held within five business days of the report of the noted deficiency. The student may offer a written response to the noted deficiency within two business days after the ICAP meeting; this response will be noted in the student's file. The Department Head is the final arbitrator for the consequences, terms, and conditions of the ICAP.

## 7. REVIEW

This Handbook will be reviewed no later than three years from the previous adoption by the Chemistry department faculty. Minor changes, updating web links and calendar dates will be made as necessary by the Graduate Coordinator in consultation with graduate affairs committee.