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1. 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 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 post graduate degree.

The primary reference for rules and regulations regarding graduate students is the Mississippi State University Graduate School Policies. The Graduate School’s current policies can be found at:

http://www.grad.msstate.edu/

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 the Department of Chemistry Graduate Program staff.

**Graduate Coordinator**
Stephen Foster, Ph.D.
Rm 2235 Hand Lab Bldg
Mail Stop 9573
Department of Chemistry
Mississippi State University
Mississippi State, MS 39762
Voice: (662) 325-8854
sfoster@chemistry.msstate.edu

**Graduate Recruiting Coordinator**
T. Keith Hollis, Ph.D.
Rm 3337 Hand Lab Bldg
Mail Stop 9573
Department of Chemistry
Mississippi State University
Mississippi State, MS 39762
Voice: (662) 325-7616
khollis@chemistry.msstate.edu
## 2. DEPARTMENT OF CHEMISTRY GRADUATE FACULTY AND RESEARCH AREAS

### Analytical

<table>
<thead>
<tr>
<th>Professor</th>
<th>Research Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. David Wipf</td>
<td>Scanning probe microscopy, investigation of the initiation and propagation of localized corrosion, characterization of modified electrodes, and ultra-microelectrode construction and characterization</td>
</tr>
<tr>
<td>Dr. Todd Mlsna</td>
<td>Chemical sensors, biomass conversion</td>
</tr>
<tr>
<td>Dr. Dongmao Zhang</td>
<td>Raman and Surface enhanced Raman spectroscopy of biomolecules; Nanoparticle-ligand interaction; Protein post-translational modification</td>
</tr>
</tbody>
</table>

### BIOCHEMISTRY/BIOPHYSICS/CHEMICAL BIOLOGY

<table>
<thead>
<tr>
<th>Professor</th>
<th>Research Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Joseph Emerson</td>
<td>Bioinorganic Chemistry – Transition metal catalysis in biological systems</td>
</tr>
<tr>
<td>Dr. Nicholas Fitzkee</td>
<td>Protein solution structure, flexibility and dynamics</td>
</tr>
<tr>
<td>Dr. Keith Mead</td>
<td>Organic Synthesis – Synthetic methods development, stereo-controlled synthesis of anti-cancer natural products</td>
</tr>
<tr>
<td>Dr. Edwin Lewis</td>
<td>Drug interactions with newly discover cancer specific targets: G-quadruplex and i-motif</td>
</tr>
<tr>
<td>Dr. Dongmao Zhang</td>
<td>Raman and Surface enhanced Raman spectroscopy of biomolecules; Nanoparticle-ligand interaction; Protein post-translational modification</td>
</tr>
</tbody>
</table>
### Environmental

| Dr. Todd Mlsna | Chemical sensors. biomass conversion |

### Educational

| Dr. Deb Mlsna | Development and introduction of laboratory instruction that will allow students access to a relevant laboratory learning experience |

### Inorganic

<table>
<thead>
<tr>
<th>Dr. Joseph Emerson</th>
<th>Bioinorganic Chemistry- transition metal catalysis in biological systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Keith Hollis</td>
<td>Designs and develops next-generation organometallic ligands and complexes for OLEDs, O-PVs, and strong bond activation</td>
</tr>
<tr>
<td>Dr. Todd Mlsna</td>
<td>Chemical sensors. biomass conversion</td>
</tr>
<tr>
<td>Dr. Edwin Webster</td>
<td>Computational Inorganic, Organometallic, and Bioinorganic</td>
</tr>
</tbody>
</table>

### Materials and Polymers

| Dr. Andrzej Sygula | Organic Synthesis – Buckybowls – curved surface polynuclear aromatics |
### Organic

<table>
<thead>
<tr>
<th>Dr. Dongmao Zhang</th>
<th>Nanomaterials, nanoparticles, nanoparticle-ligand interactions and surface chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Keith Mead</td>
<td>Organic synthesis – Synthetic methods development, stereo-controlled synthesis of anti-cancer natural products</td>
</tr>
<tr>
<td>Dr. Keith Hollis</td>
<td>Organic Synthesis – Designs and develops next-generation organometallic ligands and complexes for synthetic methodology and materials applications, which often requires the development of new synthetic methodologies</td>
</tr>
<tr>
<td>Dr. Andrzej Sygula</td>
<td>Organic synthesis – Buckybowls – curved surface polynuclear aromatics</td>
</tr>
</tbody>
</table>

### Physical

<table>
<thead>
<tr>
<th>Dr. Stephen Foster</th>
<th>Upconversion of low-power visible and near-infrared light. High-resolution spectroscopy of reactive molecules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Steven Gwaltney</td>
<td>Theoretical Chemistry - Quantum chemical methods, Molecular dynamics of proteins and polymers</td>
</tr>
<tr>
<td>Dr. Svein Saebo</td>
<td>Quantum Chemistry - Electronic structure of molecules, Theory of electron correlation</td>
</tr>
<tr>
<td>Dr. Edwin Lewis</td>
<td>Thermodynamics - energetics of drug/DNA binding</td>
</tr>
<tr>
<td>Dr. Nicholas Fitzkee</td>
<td>NMR spectroscopy, NMR methods development, protein solution structure and dynamics</td>
</tr>
<tr>
<td>Dr. Edwin Webster</td>
<td>Computational Inorganic, Organometallic, and Bioinorganic</td>
</tr>
</tbody>
</table>
3. ADMISSION REQUIREMENTS FOR GRADUATE DEGREES

3.1 Basic Admission Requirements:

For consideration for admission, a student must have:

- A Bachelor’s or Master’s degree in chemistry (or a related area with additional course work equivalent to the requirements for a traditional chemistry major).
- A minimum undergraduate GPA of 2.75 (on a 4.0 scale) over the last two years.
- A Bachelor's degree from an English-speaking country or score a minimum of 477 on the paper-based “test of English as a foreign language” (TOEFL) exam (153 on the computer-based test; or 53 on the internet based test) or score 4.5 on the “International English Language Testing Service” (IELTS) exam.

A student who has not met one or more of these requirements may be admitted as an unclassified or provisional student. Check the Bulletin of the Graduate School for further details.

Financial support is available for entering students, but foreign students with low language scores (< 550 TOEFL paper; 213 TOEFL computer; 79 TOEFL iBT; or 6.0 IELTS) are unlikely to be awarded a TA during their first year of study.

3.2 Application to the Doctoral or Master’s Program

To apply to the M.S. or Ph.D. program in Chemistry you must complete the University's official application process. You do NOT need to fill out a separate application for financial aid. We consider all applicants for aid as we consider them for admission.

1. Follow the link: http://www.grad.msstate.edu/prospective/admissions/domestic/. You will see five cases - US student, International Student, Unclassified, Distance Learning, and Readmissions. Select the appropriate classification for your application.
2. Read the information on the page and then select Apply Online. You will be asked to set up a MyBanner account with Mississippi State University.
3. Open the online application and fill out Section I according to the instructions.
4. In Section II of the application, enter "Chemistry" as the "Major Field you wish to study".
5. If you know the faculty member(s) with whom you wish to work, list them in your statement of purpose.
6. Online applications are submitted electronically. Any documents not submitted electronically should be sent to:

   Office of Admissions
   P.O. Box G
   Mississippi State University
   Mississippi State, MS 39762
International Students must submit a TOEFL or IELTS score and the submission of a GRE score is recommended. The GRE and TOEFL code for Mississippi State University is 1480. If you can support your own studies, you should submit a "Declaration of financial support" form. All applicants are considered for financial aid, and completion of this form will NOT reduce your chance of receiving aid. U.S. Students do not need to supply any test scores or the support form.

A complete application includes: 3 letters of reference, official university transcript(s), a statement of purpose (brief discussion of why you want to study for a graduate degree in chemistry), and an application fee.

International students who wish to be considered for financial aid should complete their application (and ensure ALL documents are received) before

- February 28 (for Fall admission)
- September 30 (for spring admission).

US students and international students not seeking aid should complete their application as early as possible but prior to April 1 (Fall) or June 1 (Spring).

3.3 Academic and Social Support Services

MSU provides considerable support services to enrolled students. The Graduate School Web page has many support services (http://www.grad.msstate.edu/). Information and links for the Barnes and Noble Book store, campus maps, dining services, health care, health insurance, counseling, housing, the Mitchell Memorial Library, and much more (http://www.grad.msstate.edu/points/). The Graduate School’s Bulletin provides additional information: http://www.grad.msstate.edu/pdf/bulletin.pdf.

4. REQUIREMENTS FOR DOCTORAL DEGREE – The successful completion of the Ph.D. in chemistry requires the public presentation and defense of a dissertation documenting original research of sufficient quality to be published in peer-reviewed journals abstracted by the Chemical Abstracts Service. The department has established milestone activities to aid the student’s progress toward this goal as documented in the remainder of this section. While completion of these activities is necessary, they are not separately sufficient for the award of the degree.

4.1 Academic Standards and Probationary Policy

An overall GPA of 3.0 in all graduate courses is required by the university to remain in good-standing. 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 after the probationary semester, a 3.0
cumulative GPA is still not achieved, a recommendation by the student’s committee to the Graduate Affairs Committee is necessary for program continuation. The Graduate Affairs Committee decides what action should be taken. Possible actions include extension of probation or dismissal from the Graduate Chemistry Program.

In summary:
- The University requires a "B" average on all graduate course work.
- A "B" average is required for all chemistry courses above the 6000 level.
- No grade under "C" can be accepted for graduate credit.
- More than 6 credit hours of C or lower grades will result in dismissal from the program.

### 4.2 Milestones and Time Line Table for a Doctoral Degree in Chemistry

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Year 1</th>
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<th>Year 2</th>
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<th>Year 3</th>
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<th>Year 4</th>
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<td>Fall</td>
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<tr>
<td>Professional Chemistry Course(^1)</td>
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<tr>
<td>Other Chemistry Coursework(^2)</td>
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<td>Research Advisor Selection(^3)</td>
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<td>Advisory Committee Selection(^4)</td>
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<td>Program of Study Completed</td>
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<td>First Year Conference</td>
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<td>Conduct Research(^5)</td>
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<td>Take Cumulative Exams(^6)</td>
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<td>Literature Seminars(^7)</td>
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<td>Research Seminar(^8)</td>
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<td>Oral Proposal(^9)</td>
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<td>Admission to Candidacy(^10)</td>
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<td>Application to Graduate(^11)</td>
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<td>Defense of Dissertation Research(^12)</td>
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<td>Ph.D. Awarded(^12)</td>
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</tbody>
</table>

\(^1\)An overall GPA of 3.0 in all graduate coursework is required.
\(^2\)A minimum of six 3-hour chemistry courses are required (18 semester hours)
\(^3\)Your research advisor must be chosen before the end of your first semester in residence
\(^4\)You and your research advisor will select four faculty members who will be members of your Research Advisory Committee.
\(^5\)Dissertation research starts day one and continues until submission and acceptance of the corrected dissertation.
\(^6\)You must pass 6 of 12 cumulative exams. They begin at the start of your 2nd year in residence; the end date will vary.
\(^7\)Two literature seminars are required. They may be given at any time, but you should plan to accomplish this early in your timeline for the degree.
\(^8\)Research presentation at a regional or national scientific meeting; it may be given at any time.
\(^9\)A research proposal must be prepared and defended before your Advisory Committee within 1 calendar year of the end of the semester in which you complete your cumulative exams.
\(^10\)Admission to candidacy occurs after you have completed all requirements (other than the dissertation defense) and are a principal (or lead) author on at least one peer-reviewed publication.
\(^11\)You must apply to graduate during the semester in which you plan to defend your dissertation.
\(^12\)The graduation semester is fixed by the date of submission of an approved dissertation to the library.

*Note: The student is responsible for fulfilling all of the degree requirements on schedule.*
4.3 Office of Graduate School – Reference Sheet

**Submission Timeline for Graduate Student Forms**

<table>
<thead>
<tr>
<th>Doctoral Forms</th>
<th>Due in the Department</th>
<th>Due in the Office of Graduate School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory Committee Request</td>
<td>By end of 2nd semester of Enrollment</td>
<td>When preliminary/comprehensive examination is scheduled</td>
</tr>
<tr>
<td>Program of Study</td>
<td>Two days prior to Graduate School Deadline</td>
<td>Two weeks prior to the end of the semester</td>
</tr>
<tr>
<td>First Year Conference</td>
<td>One week prior to start of 2nd Fall semester</td>
<td>n/a</td>
</tr>
<tr>
<td>Transfer Approval Sheet</td>
<td>Upon committee approval</td>
<td>Two weeks prior to the Preliminary exam</td>
</tr>
<tr>
<td>Change in Graduate Program</td>
<td>Upon committee approval</td>
<td>As appropriate</td>
</tr>
<tr>
<td>Report of Exam Results</td>
<td>Date of examination</td>
<td>As students are notified</td>
</tr>
<tr>
<td>Report of Written Exam</td>
<td>Date of examination</td>
<td>As students are notified</td>
</tr>
<tr>
<td>Report of Oral Exam</td>
<td>Date of examination</td>
<td>As students are notified</td>
</tr>
<tr>
<td>Advisory Committee Request Change</td>
<td>Upon departmental approval</td>
<td>Upon departmental approval</td>
</tr>
<tr>
<td>Admission to Candidacy</td>
<td>See the current Graduate Bulletin – after publication requirement met</td>
<td>Results of preliminary exam and approved dissertation topic</td>
</tr>
<tr>
<td>Announcement of defense of doctoral dissertation</td>
<td>Announced in College only</td>
<td>n/a</td>
</tr>
</tbody>
</table>

4.4 Doctoral Degree Program Forms

**Advisory Committee Request** (Appendix A)
Should be completed first semester of enrollment and kept in department; due to OGS when preliminary examinations are scheduled. All committee members must have a graduate faculty appointment.

**Request for Change of Advisory Committee Members** (Appendix B)
Should be attached to Committee Request form and kept in department until paperwork is sent to OGS when preliminary examinations are scheduled.

**Graduate Program of Study** (Appendix C)
Should be completed first semester of enrollment and kept in department; due to OGS when preliminary examinations are scheduled.

**Graduate Program of Study - Continuation** (Appendix D)
Must be attached to Graduate Program of Study form if needed to list courses in excess of 10 that are on the original Graduate Program of Study form.
Graduate Program of Study - Attachment Sheet (Appendix E)
Should be attached to Program of Study form. This form details courses that will count toward the total number of credit hours required for the degree but do not appear on the Program of Study. Due to OGS when preliminary examinations are scheduled.

Change to Graduate Program of Study (Appendix F)
Should be attached to Program of Study form and kept in department until paperwork is sent to OGS when preliminary examinations are scheduled.

Transfer Approval Form (Appendix G)
Should be submitted to OGS as soon as transcript is available so that courses can be reviewed and transferred.

Admission to Candidacy Form (Appendix H)
Due to OGS along with examination result for preliminary/comprehensive examination.

Declaration Announcement of Comprehensive Examination/Defense Form (Appendix I)
This completed form must be sent electronically to Ms. Pam Sullivan, (Manager, Graduate Programs) at least two weeks prior to the scheduled date.

4.5 Graduate Course Advising During First Semester

Entering graduate students are advised by the Graduate Coordinator. When a student chooses a permanent graduate research advisor (See Step 4.7 below), the graduate research advisor (in collaboration with the student’s graduate Research Advisory Committee) provides the academic advisement.

4.6 Graduate Academic Curriculum

Full-time students are required to register for a minimum of 9 semester hours of graduate coursework. No student should register for more than 13 semester hours. These limits include regular graduate courses approved by the student’s graduate research advisor and the graduate coordinator, seminar (CH 8711, CH 8721, and CH 8731), and thesis research (CH 8000) or dissertation research (CH 9000).

All doctoral students are required to take a minimum of 24 hours of GPA graded coursework. All doctoral students must pass CH 8111 Professional Chemistry, CH 8711 Seminar I, CH 8721 Seminar II, CH 8731 Seminar III, and six 3-hour courses (CH 7xxx, CH 8xxx or out of department XX 6xxx (≤ 50% of the total)). The remaining two hours could be directed individual study, CH 7000, or another course. These courses are selected by the student in consultation with his/her graduate Advisory committee.
4.7 Graduate Research Advisor Selection

New students must interview with at least three potential research advisors during the 1st semester, and an advisor must be selected before the first of November (before the 1st of April for students entering in January). The number of departmentally-supported students (TAs) who may work with a given faculty member is limited; a student should select an advisor as soon as possible. An Advisor Selection Form (Appendix J) must be filled out and returned to the Graduate Coordinator for approval by the Graduate Affairs Committee.

4.8 Graduate Research Advisory Committee Selection

Selection of the Graduate Research Advisory Committee to guide the student’s studies is the responsibility of both the student and his/her graduate research advisor. This permanent committee must be selected no later than two weeks before the end of the 2nd semester in residence. The committee will have at least five members of the graduate faculty. Each student will be evaluated on a regular basis (See Appendix R). It is expected that the student will meet with the advisory committee (in some capacity) at least once per year, including annual reviews, the research proposal, and any other meeting called during progression towards the degree.

All advisory committee members must have Graduate Faculty standing. Three of the committee members must have appointments in the Department of Chemistry. The remaining committee members may be chemistry faculty or faculty from other departments. The Advisory Committee Request Form (Appendix K) should be completed and forwarded to the Graduate Program Coordinator.

Faculty may be added or removed from the graduate research advisory committee with the approval of the student’s advisor, and the Department of Chemistry Graduate Coordinator must be informed.

4.9 Annual Review

Students will convene their Graduate Research Advisory Committee and report on their progress (including research, coursework, and teaching) after the first full year of study in the graduate program. See Appendix R for further information.

4.10 Communication Skills Requirements

All graduate students are required to demonstrate written and oral communication skill competencies. Adequate performance is required on the literature seminars, written exams, research proposal, dissertation defense, teaching, publications, and presentations at professional meetings. An international student holding one or more degrees (baccalaureate or higher) from a college or university in the U.S. is not required to submit English language test
scores for admission. Similarly, an international student from a country where English is the first language, as documented by a statement on the high school graduating certificate that English is the official (first) language of the country, and who holds one or more degrees (baccalaureate or higher) from a college or university where English is the first language, is not required to submit English language test scores. However, such student, after admission and registration at MSU and upon the recommendation of the department, may be required to schedule one or more ESL (English as a Second Language) courses. An international student, except as noted above, must have either a TOEFL (Test of English as a Foreign Language) score or an IELTS (International English Language Testing Systems) (per Graduate Council, January 2008) score. A total of two TOEFL or IELTS scores will be accepted per student admission application, and both must be submitted prior to enrollment in a graduate program. Only one type of test score (TOEFL or IELTS) may be submitted per applicant; therefore, a student cannot submit one TOEFL score and one IELTS score. If two test scores are submitted, the higher score will be the valid score in determining whether a student is granted regular admission or must successfully complete ESL courses as a contingency for full admission (per Graduate Council, August 2010). An international applicant to unclassified graduate status (non-degree-seeking) who is not from a country where English is the first language or who does not hold a baccalaureate or higher degree from a college or university where English is the first language must submit an appropriate TOEFL or IELTS score.}

More information concerning English requirements can be found in the International Student Section of the Graduate School’s website.

4.11 Teaching Requirement

The normal laboratory instruction assignment load for a first-year graduate teaching assistant equals approximately 12-15 contact hours per week, plus grading and proctoring. 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.

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). While the student has a departmental teaching assignment, it is supervised by one of the Laboratory Coordinators (Introductory Chemistry, General Chemistry, or Organic Chemistry). The Laboratory Coordinators will complete and submit annual reviews to the Graduate Program Coordinator. Excellence in teaching is expected, and inadequate efforts may jeopardize continued teaching assignments and, therefore, financial support.

4.12 Written Qualifying Exams (Cumulative Exams)

Ph.D. students must begin taking cumulative exams ("cumes") at the beginning of their second year in residence.
• Cumes are given once a month during the regular academic year (8 per year) on the second Thursday of each month in chemical biology, analytical, inorganic, organic or physical chemistry
• Exam topics are posted at least 1 week before the exam, on the first Thursday of the month. In consultation with their advisors, students are required to select and sign-up for one of the posted exams in the main Chemistry office by 5:00 p.m. on the Monday before the exam.
• Exam periods are 90-minutes long, and all students take the exams at the same time.
• Only one exam can be attempted in any exam period.
• Cumes are graded as a pass or a fail; any missed exam is a fail. Pass/fail grades will be made available to each student before the next scheduled exam date. If a student is not notified before that deadline, he/she will be given a passing grade.
• Each student takes a maximum of 12 "regular" cumes (over 3 semesters).
• Each student must pass six (6) exams from the 12 attempts.
• Three passes must come from the student's research area; the other three are unrestricted.

Students may take one practice cume at the end of their first year in residence. If passed, this optional cume counts as one of the six required passes; if failed, it is discarded.

Graded exams are not returned but can be reviewed by the student. The graded exams are available for review in the Chemistry Department office.

If the student fails to meet these requirements, he/she will be placed in the M.S. program and must complete the M.S. degree before applying for readmission to the Ph.D. program. If readmitted to the Ph.D. program, the student does not retain any passes or fails and must immediately restart the cume process.

4.13 Preliminary Examination (Research Proposal Defense)

Doctoral students are required to complete a preliminary/comprehensive exam. To satisfy this requirement, the Chemistry department requires all doctoral students to develop and defend a research proposal (RP) before their graduate advisory committees. This combined written and oral examination must be scheduled within one calendar year of the end of the semester in which the student passes his or her 6th cumulative exam. **Note:** If an oral examination is not scheduled before the calendar year deadline, the department will schedule it within 6 weeks of the end of the third semester. If the student is unprepared at that time, he or she will fail the examination and have only 1 further attempt to pass the exam and remain in the program.

The topic of the RP will be selected by the student in consultation with his or her graduate committee. The student will complete a written proposal following the format required by the American Chemical Society for an ACS-PRF DNI grant application:
• 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, figs and refs). Describe the proposed research, its significance, and give a general plan of procedure.
• 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 include the names of all authors, complete article title, complete journal title, year of publication, volume number (if any), and pages of cited article. Do not use et al. (e.g. Dunn, D.A., Lee, B.I., and Fahr, A., Characterization and Analysis of Oil-Shale. Journal of Petroleum Chemistry, 2015, 16, 200-215.).
• A budget is not required.

The full proposal must be submitted by the student to each member of his or her graduate research advisory committee in electronic form one week prior to the proposed date for the oral defense. The student must make an oral presentation and defend his RP to his graduate research advisory committee.

The Graduate School must be notified of the examination (Declaration of Examination/Defense form) (Appendix I) at least two weeks prior to the scheduled date of examination. The graduate school maintains deadlines, but these rarely impact chemistry students because they must complete the examination within one year of completing their cumes. The graduate school deadlines are:

• June 1 for December graduation
• November 1 for May graduation
• February 1 for August graduation

The student’s graduate advisory 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/ preliminary examination. Any member of the graduate faculty may attend any graduate examination. One negative vote will not constitute failure for a student on a preliminary/comprehensive examination. Two negative votes will constitute failure for a student on a preliminary/comprehensive examination (per Graduate Council, October 2005). A student who fails this examination can apply to schedule a date for another examination after a period of four months has elapsed from the date of the original examination. Two failures on this examination will result in the student being dropped from further consideration as a doctoral candidate.
4.14 Research

The graduate student will carry out original research under the direction of the student’s graduate research advisor and the advice of the student’s graduate research advisory committee. This research serves as the basis of the student’s Ph.D. 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 Chemistry Dept.), 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.

Dissertation research hours (CH 9000) 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.

4.15 Journal Publication Requirement

All doctoral students are required to be a principal (or lead) author of at least one peer-reviewed publication before admission to candidacy. This article must be published, or accepted for publication, in a peer-reviewed publication abstracted by the Chemical Abstracts Service. While having one peer-reviewed publication is a necessary degree requirement, achieving one publication is not necessarily sufficient for the award of a Ph.D. The Department’s expectation of one required publication is only the minimum, and the student’s research advisor may require a larger number. Some faculty require 2, 3, or more publications to earn a Ph.D. in their groups.

4.16 Admission to Candidacy

A doctoral student must be admitted to candidacy for the Ph.D. before holding his or her dissertation defense. To be eligible for candidacy, a student must complete all coursework on his or her program of study, complete the cumulative exams, successfully defend his or her oral proposal, and meet the Department’s Journal Publication Expectation (4.15).

When qualified, the student should download the “Admission to Candidacy” (Appendix H) form posted on the graduate school website and submit that form, with a copy of the first page of the required publication (or proof of acceptance), to the department’s graduate coordinator to obtain his signature.
4.17 Application for Degree

During the semester of the desired graduation date, the student must apply to graduate (application for graduation is found through the Banner system). The graduate student is responsible for completing the form. The deadline dates are posted on the Graduate School website each semester.

4.18 Ph.D. Dissertation

The research carried out by the student serves as the basis for the written Ph.D. dissertation. The dissertation should be completed while the student is in residence (enrolled). The writing, typing, copying, and printing are the responsibility of the student. (See sections 7.2 and 7.3 for additional information.)

- Prior to writing the dissertation, students must review the document “Standards for Preparing Theses & Dissertations” posted on the MSU library website. It details the formatting and style requirements, outlines the approval process, and provides a checklist for the dissertation.
- Students must also review the department’s Guidelines for Dissertation/Thesis Preparation appendix (Appendix T).

4.19 Presentation and Defense of Dissertation

a. General Information

Students must defend their dissertation research during a formal seminar to the public coordinated by the graduate research advisor and in the presence of the graduate research advisory 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 Graduate School through the on-line “Declaration of Examination/Defense” (Appendix I) form. This completed form must be sent electronically to Ms. Pam Sullivan, Manager, Graduate Programs, at least two weeks prior to the scheduled date.

Students must be in good academic standing and registered for a minimum of 1 semester hour of graduate research during the semester when the defense takes place.

All faculty and graduate students will be invited to attend this seminar. A closed meeting of the candidate with the graduate research advisory committee will follow the seminar (any graduate faculty member may attend in this meeting). The graduate research advisory committee will examine the student’s understanding of the dissertation research and evaluate the content and style of the completed dissertation. One negative vote will not constitute failure for a student on a dissertation defense. Two negative votes will
constitute failure for a student on a dissertation defense (per Graduate Council, October 2005). A student who fails to defend his or her dissertation successfully can apply to schedule another date after a period of four months has elapsed from the date of the original defense. Two failures to defend the dissertation will result in the student’s removal from candidacy.

The examining committee will complete the Report of Examination Results form to report the results to the Graduate School. Please note that the student should request the secretary provide this form to the graduate committee chair. It must be brought to the defense so that it may be completed by the entire committee.

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.

Prior to awarding the degree, the graduate student is responsible for completing the Final Laboratory Inspection Form (Appendix M), which includes packaging and labeling of all chemicals used or produced in the student’s research. In consultation with the graduate research advisor, the materials should be either saved or disposed of according to the MSU hazardous waste disposal guidelines. All instrumentation, glassware, and supplies are to be left in a clean condition, returned to the assigned cabinets, and/or returned to the stockroom. A final check by the graduate research advisor and stockroom manager will be made prior to the final approval being given by the Graduate Program Coordinator for the awarding of the degree.

b. College of Arts and Sciences Requirements

The Associate Dean of the College of Arts & Sciences reviews all dissertations before they are signed by the Dean. The Associate Dean prefers at least 2-3-days turn-around for review. Occasionally, the student must make corrections and changes before the Associate Dean gives his approval; only then the Dean will sign. Therefore, the earlier it is submitted, the greater the opportunity to meet required deadlines. Please keep in mind the following:

i. There is a log in/log out system within the Dean’s office for theses/dissertations and signature pages. The graduate student must complete these tasks. DO NOT SEND THESE THROUGH INTERDEPARTMENTAL MAIL OR BY A STUDENT WORKER. If the graduate student is unavailable to log in/out, it is his/her responsibility to call or e-mail the Associate Dean, giving the name of the person who will complete these tasks. The same person who logs in MUST log out.

ii. Electronic versions of the theses/dissertations are accepted. However, the student must bring in a hardcopy of his/her signature page. If sending electronically, he/she must e-mail a pdf or word document to the Associate Dean
for Research, and it must be carbon copied (CC’d) to the ADR’s administrative assistant. See the CAS website (http://www.cas.msstate.edu/office/) or contact the Dean’s office (662-325-2646) for email addresses. If the assistant is not copied, the dissertation will not be logged in nor brought to Associate Dean's attention. If the dissertation is sent electronically, the student should use his/her name in the transmittal of the dissertation file (e.g. J Doe-dissertation.pdf).

iii. If a dissertation file is sent on a jump drive or disk, the jump drive or disk must be placed in a Ziploc bag or disk case with the student’s name clearly written on the outside.

c. Department of Chemistry Requirements

i. Graduate Student Exit Checkout List
Your research lab bench/hood/space must be cleaned and inspected prior to your last day in the department. All samples/experiments must be properly labeled (list of all compounds and their storage locations), all glassware must be cleaned and stored, cleaning baths must be emptied, and unused chemicals must be returned to stock or disposed of properly. Lab notebooks and paperwork (e.g., progress reports/research updates/spectra/file backups) should be submitted to your research advisor, and all personal items must be removed. Research groups may have additional checkout procedures; be sure to check with your advisor.

ii. Dissertation Copy for Department (and Research Advisor)
As a part of the requirements for completion of your degree, the Department requires a printed, hard bound copy from the publisher through the MSU Library with your name and title printed on the face and spine of the book. Select Research Advisors will also require a printed copy of the dissertation. See Office Staff for viewing samples.

iii. Return of Keys
All Department of Chemistry keys must returned the last day of work in the building. Failure to turn in keys will result is a charge to your student account for $150.00 per research lab key and $600.00 per teaching lab key.

4.20 Conferring of the Ph.D. Degree in Chemistry

The attendance of both the student and the graduate research advisor is expected at the special doctoral hooding convocation ceremony. The student, graduate research advisor, mentors, family, and friends are invited to attend the ceremony.
4.21 Time Limits to Complete Ph.D. Degree

The Chemistry Department will normally fund the studies of Ph.D. students for a maximum of 5 years from their date of entry into the program. Under unusual circumstances where mitigating circumstances preclude completion of degree requirements within 5 years, one extension of this time limit can be requested. Such a request should originate from the student and graduate 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 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 (Appendix L), available on the Graduate School website, may be used to request a one-time, one-year extension. The request must be signed by the major professor and the dean of the college and submitted to the Office of the Graduate School (per Graduate Council, May 2005).

5. REQUIREMENTS FOR MASTER'S DEGREE

5.1 Academic Standards and Probationary Policy

An overall GPA of 3.0/4.0 on all graduate courses is required by the university to remain in good-standing. 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 either cumulative GPA drops below 3.0 at any time, the student will be placed on probation and be required to correct the deficiency by the end of the next semester. If after a probationary semester, a 3.0 cumulative GPA is still not achieved, a recommendation by the student's advisory committee to the Graduate Affairs Committee is necessary for program continuation. The Graduate Affairs Committee decides what action should be taken. Possible actions include extension of probation or dismissal from the Graduate Chemistry Program.

- The University requires a "B" average on all graduate course work.
- A "B" average is required for all chemistry courses above the 6000 level.
- No grade under "C" can be accepted for graduate credit.
- More than 6 credit hours of C or lower grades will result in dismissal from the program.
### 5.2 Milestones and Time Line Table for an M.S. Degree

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Spr</td>
</tr>
<tr>
<td>Professional Chemistry Course(^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Chemistry Coursework(^2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directed Individual Study(^3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Advisor Selection(^4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advisory Committee Selection(^5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program of Study Completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year Conference</td>
<td></td>
<td></td>
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<tr>
<td>Conduct Research(^6)</td>
<td></td>
<td></td>
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<tr>
<td>Literature Seminar(^7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application to Graduate(^11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defense of Thesis Research(^12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S. Awarded(^12)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)An overall GPA of 3.0 in all graduate coursework is required.

\(^2\)A minimum of 30 semester hours are required to complete an MS degree. Students typically take 6 three-hour courses and a four-hour Directed Individual Study project in addition to the required seminar, professional chemistry course, and six hours of thesis research.

\(^3\)Suggested semester to complete the DIS project.

\(^4\)You and your research advisor will select two other faculty members (three members, if co-advised) who will act as your research advisory committee.

\(^5\)Thesis research starts in year one and continues until completion.

\(^7\)One literature seminar is required. It can be given at any time, but you should plan to accomplish this early in your timeline for the degree.

\(^8\)You must apply to graduate during the semester in which you plan to defend your Thesis.

\(^9\)The graduation semester is fixed by the date of submission of an approved dissertation to the library.

*Note: The student is responsible for fulfilling all of the degree requirements on schedule.*
5.3 Office of Graduate School - Ready Reference Sheet

Submission Timeline for Graduate Student Forms

<table>
<thead>
<tr>
<th>Master’s Forms</th>
<th>Due in the Department</th>
<th>Due in the Office of Graduate School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory Committee Request</td>
<td>By end of 1st semester of enrollment</td>
<td>Semester in which student applies</td>
</tr>
<tr>
<td>Program of Study</td>
<td>By end of 2nd semester of Enrollment</td>
<td>Semester in which the student applies for graduation</td>
</tr>
<tr>
<td>Transfer Approval Sheet</td>
<td>Upon committee approval</td>
<td>As soon as official transcript is available</td>
</tr>
<tr>
<td>Change in Graduate Program</td>
<td>Effective date of change</td>
<td>Semester in which the student applies for graduation</td>
</tr>
<tr>
<td>Report of Examination Results</td>
<td>Date of examination</td>
<td>By the date published in the Academic Calendar section of the current Graduate Bulletin</td>
</tr>
<tr>
<td>Advisory Committee Request</td>
<td>Upon departmental approval</td>
<td>Upon departmental approval</td>
</tr>
<tr>
<td>Announcement of Thesis Defense</td>
<td>Announced in College only</td>
<td>n/a</td>
</tr>
</tbody>
</table>

5.4 Master’s Degree Program Forms

Advisory Committee Request (Appendix A)
Should be created first semester of enrollment and kept in department; due to OGS with Graduation Checksheet. All committee members must have a graduate faculty appointment.

Request for Change of Advisory Committee Members (Appendix B)
Should be attached to Advisory Committee Request form and kept in department until paperwork is sent to OGS with Graduation Checksheet

Graduate Program of Study (Appendix C)
Should be created first semester of enrollment and kept in department; due to OGS with Graduation Checksheet.

Graduate Program of Study - Continuation (Appendix D)
Must be attached to Graduate Program of Study form if needed to list courses in excess of 10 that are on the original Graduate Program of Study form.

Change to Graduate Program of Study (Appendix F)
Should be attached to Program of Study form and kept in department until paperwork is sent to OGS with Graduation Checksheet.
Transfer Approval Form (Appendix G)
Should be submitted to OGS as soon as transcript is available so courses can be reviewed and transferred.

Declaration Announcement of Comprehensive Examination/Defense Form (Appendix I)
This completed form must be sent electronically to Ms. Pam Sullivan, (Manager, Graduate Programs) at least two weeks prior to the scheduled date.

5.5 Graduate Research Advisor Selection

New students must interview with at least three potential research advisors during the 1st semester. An advisor must be selected before the first of November (before the 1st of April for students entering in January). The number of departmentally-supported students (TAs) who may work with a given faculty member is limited; a student should select an advisor as soon as possible. An Advisor Selection Form (Appendix J) must be filled out and returned to the Graduate Coordinator for approval by the Graduate Affairs Committee.

5.6 Graduate Research Advisory Committee Selection

Selection of the Graduate Research Advisory Committee to guide the student's studies is the responsibility of both the student and his/her graduate research advisor. This permanent committee must be selected no later than two weeks before the end of the 2nd semester in residence. The committee will have at least three members of the graduate faculty. If the student is co-directed by two committee members, a fourth committee member is required. The Advisory Committee Request Form (Appendix K) must be completed.

Faculty may be added or removed from the graduate research advisory committee with the approval of the student’s advisor, and the Department of Chemistry Graduate Coordinator must be informed.

5.7 Annual Review

Students will convene their Graduate Research Advisory Committee and report on their progress (including research, coursework, and teaching) after the first full year of study in the graduate program. See Appendix R for further information.
5.8 Master’s Program of Studies

The Program of Studies (Appendix N) form should be completed and approved by the student's advisory committee by the end of the 2nd semester in residence. Program requirements are

- At least 6 hours of thesis research (CH 8000)
- Professional Chemistry (CH 8111)
- At least 23 hours of additional coursework:
  - Up to 6 semester hours may be out-of-department graduate courses.
  - All chemistry courses must be at the 7000 level or higher, with at least 12 hours at the 8000 level or above.
  - Up to 6 hours may be earned by directed individual study.
  - One literature seminar credit is required as part of the 24 hours.
  - Up to 9 hours of transfer credit can be accepted but must be approved through the Office of the Graduate Studies.

The Office of Graduate Studies enforces an eight year limit on all course work listed in an M.S. program. An extension of time form (Appendix L) can be used to request a one-time, one-year extension. A typical program of studies would include

- CH 8000 Thesis Research (6 hours; required).
- CH 8111 Professional Chemistry (1 hour; required).
- CH 8711 Seminar (1 hour; required).
- Six 3-hour courses: any approved combination of CH8000-level and 6000-level out-of-department courses chosen in consultation with the research advisor/committee (18 hours).
- CH 7000 Directed Individual Study (4 hours).

5.9 Research

Original research is required of all graduate students, and the results must be documented in an M.S. thesis. Since the completion of a research project involves the investment of a great deal of time and effort, research should begin as early as possible. This research requires direction from a faculty advisor and possible collaboration with other faculty but must be based in substantial part upon the work for which the student is solely responsible.

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 Chemistry Dept.), 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.

5.10 Thesis and Final Exam

a. General Information

Students must defend their thesis research during a formal seminar to the public coordinated by the graduate research advisor and in the presence of the graduate research advisory 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 Graduate School through the on-line “Declaration of Examination/Defense” (Appendix I) form. This completed form must be sent electronically to Ms. Pam Sullivan, Manager, Graduate Programs, at least two weeks prior to the scheduled date.

Students must be in good academic standing and registered for a minimum of 1 semester hour of graduate research during the semester when the defense takes place.

All faculty and graduate students will be invited to attend this seminar. A closed meeting of the candidate with the graduate research advisory committee will follow the seminar. The graduate research committee will examine the student on the thesis research. Any member of the graduate faculty may attend any graduate examination.

The student’s graduate advisory committee will evaluate content and style of the completed thesis. One negative vote will not constitute failure for a student on a thesis defense. A student who fails to defend his/her thesis successfully can apply to schedule another date after a period of four months has elapsed from the date of the original defense. Two failures to defend the thesis will result in the student’s dismissal from the program without a degree.

The results of the "masters final" must be reported to the Graduate School using the Report of Examination Results form. Please note that the student should request that the graduate secretary supply this form to the committee chair, and it must be brought to the defense so that it may be completed by the entire committee.

Deadlines and general guidelines for submission of thesis are published by the Office of Graduate Studies.

b. Department of Chemistry Requirements
   i. Graduate Student Exit Checkout List

Your research lab bench/hood/space must be cleaned and inspected prior to your last day in the department. All samples/experiments must be properly labeled (list of all compounds and their storage locations), all glassware must be cleaned
and stored, cleaning baths must be emptied, and unused chemicals must be returned to stock or disposed of properly. Lab notebooks and paperwork (e.g., progress reports/research updates/spectra/file backups) should be submitted to your research advisor and all personal items must be removed. Research groups may have additional checkout procedures; be sure to check with your advisor.

ii. **Thesis Copy for Department**

As a part of the requirements for completion of your degree, the Department requires a printed, hard bond copy from the publisher through the MSU Library with your name and title printed on the face and spine of the book. See Office Staff for viewing samples.

iii. **Return of Keys**

All Department of Chemistry keys must returned the last day of work in the building. Failure to turn in keys will result is a charge to your student account for $150.00 per research lab key and $600.00 per teaching lab key.

6. **GRADUATE ASSISTANTSHIPS**

Graduate assistantships are provided as financial support for graduate students. They are intended to facilitate progress toward the earning of a graduate degree. Graduate research, teaching, and service assistantships are available annually. A graduate assistant’s work schedule must not exceed 20 hours per week.

Graduate Students are encouraged to read the [University Policies and Procedures Governing Graduate Assistantships](#) handbook, which can be found on the graduate school’s website, as the material contained herein is specific to the Chemistry Department and does not include all of the University policies.

6.1 **Eligibility for Assistantship - Minimum Eligibility Requirements**

To be eligible for a Chemistry 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.
6.2 Types of Assistantships

a. Graduate Teaching Assistant (GTA)

Within the Department of Chemistry, Graduate Teaching Assistants are assigned to teach laboratories, and this work is supervised by the designated laboratory coordinator. Each GTA typically is assigned two lab sections and will be required to make presentations, prepare the laboratory, prepare solutions, and complete any other (minor) duties assigned by the laboratory coordinator. These tasks involve direct contact with students, but the graduate teaching assistant is not an instructor of record. A GTA is only granted to those enrolled and actively pursuing research and the completion of their degrees.

b. Graduate Research Assistantships (GRA)

Graduate Research Assistants perform duties in support of University 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 assigned duties.

c. Graduate Service Assistant (GSA)

Graduate Service Assistants aid faculty and staff members with administrative functions. GSA appointments are available in many academic and non-academic units. Duties vary, depending on administrative needs of the unit making the award, and stipends vary according to the nature of assigned duties.

6.3 Examination and Certification Requirements

a. Certification Requirement

All graduate students planning to serve as Graduate Teaching Assistants must participate in the Graduate Teaching Assistant Orientation and Classroom Certification Program prior to beginning the first teaching assignment at MSU and must satisfy all program/evaluation requirements necessary to obtain the level of certification (GTA1, GTA2, GTA3) corresponding to the duties/responsibilities of the teaching assistantship appointment. Please refer to Graduate Teaching Assistantship Certification found in the Graduate School publication for detailed certification requirements. To hold an assistantship in the Department of Chemistry, a GTA is required to have a GTA2 or GTA3 certification.

b. Language Requirement

If English is not the native language of an international graduate student, the English Language Requirements for International Students apply and must be satisfied to be eligible for an
Assistantship. These requirements are found in the International Students Admission section of this publication.

c. Chemistry Examination Requirement

All new graduate students receiving assistantships are required to take the ACS General Chemistry full-year exam during a scheduled time period 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 his or her 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.

6.4 Graduate Assistantship Award, Benefits, and Termination

All Graduate Assistants receive a tuition award (exemption) of approximately 71% of the assessed in-state tuition and required fees. Graduate Assistants who are not Mississippi residents also receive 100% exemption of non-resident tuition.

*IRS Code states that the tuition remission of those Graduate Service Assistants whose course of study is specifically related to assistantship duties is not taxable. For a Graduate Service Assistant whose course of study is not specifically related to assistantship duties, tuition remission up to $5,250.00 per calendar year is not subject to tax; however, tuition remission in excess of $5,250.00 per calendar year is taxable.*

a. Stipends

Stipends are paid on the fifteenth and the last working day of each month. When employment begins during a pay period, stipends for the first pay period are calculated on a prorated basis.

b. Health Insurance Supplement

The University provides a health insurance subsidy for Graduate Assistants who purchase the University-sponsored health insurance plan through the MSU Longest Student Health Center. The subsidy will be deposited into each Graduate Assistant’s account in early **October** and early **February**. To access information about the University-sponsored health insurance plan, visit [http://www.health.msstate.edu/healthcenter/insurance_student.php](http://www.health.msstate.edu/healthcenter/insurance_student.php)
c. Termination of Assistantship

If the assistantship is terminated prior to the specified ending date, the assistant’s duties, stipend, and tuition award will cease. The student will also be required to pay back a prorated portion of the previously applied tuition award.

6.5 Responsibilities for Maintaining a Graduate Assistantship

a. Required Course Load

**Fall and Spring Semesters**—Graduate assistants must be full-time students (registered in at least 9 graduate credit hours) and are prohibited from enrolling in more than 13 graduate credit hours.

**Full- and Half-Summer Awards**—Full-summer awards require an enrollment in at least 6 graduate credit hours; a maximum of 9 credit hours is permitted. Any combination of Maymester, 1st 5-week, 2nd 5-week, or 10-week terms may be used for the 9-credit hour maximum; however, half-summer awards in either 5-week term may require an enrollment in at least 3 graduate credit hours with a maximum of 7 credit hours allowed. *Additionally, a student holding a half-summer graduate assistantship must be enrolled in courses during the term when the assistantship is awarded.*

b. Academic Achievement

To retain an assistantship, a student must demonstrate satisfactory progress in graduate study. Failure to do so may result in termination of the assistantship. Unsatisfactory progress may be defined as the failure to maintain a B average in graduate courses attempted after being admitted to a specific program; a grade of U, D, or F in any course; any grade more than two levels below a B; failure of the preliminary/comprehensive examination; an unsatisfactory evaluation of a thesis or dissertation; failure of a research defense; or any other failure of a required component of one’s program of study. Any, or a combination of these, may constitute the basis for termination from a degree program. Individual programs have the right to establish their own criteria; however, the preceding definition must be the minimum standard for continuing in graduate programs and holding graduate assistantships. In the case of dismissal, a student’s assistantship is terminated.
6.6 University Policies Relating to Students

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

http://www.msstate.edu/web/security/student_policies.html

Faculty Handbook - http://www.msstate.edu/web/faculty_handbook/

GTAs could be the subject of a grievance filed by a student. If you are aware of a student grievance, contact your immediate supervisor immediately. A grievance must be handled officially and result in final resolution.

7. THESIS/DISSERTATION REQUIREMENTS

7.1 Dissertation Charges

All doctoral students submitting a dissertation to the MSU Graduate School, must sign an agreement with ProQuest/MSU Dissertation Publishing, the firm that has acted as the repository and distributor for the majority of dissertations written in the United States for more than sixty years. For more than a decade, ProQuest/MSU has also provided online 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. See Prior Publication Issues and links to journal policies at

http://www.grad.msstate.edu/current/publications/

7.2 Thesis/Dissertation Book Binding Requirements

Upon acceptance by the MSU Library for publication, hard-cover bound copies (as specified in section 7.3) of the Thesis/Dissertation with the Title, Author, and Year imprinted on the cover and spine of the book must be provided.

7.3 Thesis/Dissertation Copies

It is required that students provide two (2) hard-cover bound printed copies of the Thesis/Dissertation, one to the research advisor and one to the Department of Chemistry.
8. SAFETY

The Department of Chemistry strives to provide a safe work environment for our students, faculty, and staff.

8.1 Safety Contracts

Anyone working in a teaching and/or research laboratory is required to attend training sessions/workshops as specified in Section 8.2 and is required to follow the rules and guidelines of the University and the Department of Chemistry. All Graduate Assistants are required to read, complete, and abide by the departments Safety Contract (copy attached is Appendix P).

8.2 Personal Protective Equipment (PPE)

To ensure the safety of our students, the department requires the use of Personal Protective Equipment (PPE) when working in the teaching labs and in the research labs. The appropriate PPE requirement for each teaching and research lab is defined for all labs as outlined below in section 8.2.b – Hazard Assessment Certification.

a. Types of PPE

There are many items that can be considered PPE; a definition of each of these items is listed below.

i. **Eye Protection**

Goggles or safety glasses are required when working in the laboratory. Specific requirements can be found in the safety documentation of each laboratory. Goggles, which give complete protection, are best and should be worn in all situations known to be hazardous. Ordinary safety glasses with side shields should be worn at all other times in the laboratory. In experiments involving any suspected risk of explosion, a safety shield should be used in addition to goggles.

ii. **Lab Coats**

Lab coats are required to be worn at all times when working in the teaching laboratories and should be worn in the research laboratories according to the requirements posted in the Hazard Assessment Certification for that lab. The Department of Chemistry provides each student with a NOMEX lab coat; no other coat is acceptable. When you leave the lab, hang your lab coats in their proper place when not in use; do not drape over equipment and workbenches or place in drawers. DO NOT wear your lab coat outside of the lab (i.e. hallways, bathroom, offices, etc.).


iii.    **Gloves**

Proper gloves are required when working in the laboratory. Check the compatibility of the gloves with the chemicals to be used. Before stepping out of the lab, TAKE YOUR GLOVES OFF, as gloves may not be worn when outside of the lab. Do NOT use a cell phone while wearing gloves!

iv.    **Shoes**

You must wear CLOSED-TOE, SOLID shoes. This is interpreted to mean solid “tennis-shoe” type sneakers or leather shoes that cover the entire foot. Anything that falls into the category of a “sandal” is not allowed. Clogs, athletic footwear that have lots of holes in the sides, and other open-toed or open-heeled shoes do not cover enough foot and are not allowed.

v.    **Hair Restraints**

Long hair must be placed in a hair tie or some other approved method of securing it. It may not be tucked into your lab coat without being secured.

b.    **Hazard Assessment Certification**

Every research supervisor has a prominently posted Hazard Assessment Certification, which provides the rules for wearing of personal protective equipment (PPE) in that work area. That document provides the rules for PPE usage. Compliance with its terms is mandatory, and noncompliance will result in disciplinary action. Disciplinary actions are as follows:

- 1st incident---a written warning to student and research advisor
- 2nd incident---suspension from research for 1 week
- 3rd incident---suspension from research for 1 month
- 4th incident---dismissal from MSU Chemistry program

8.3    **Laboratory Housekeeping**

Good housekeeping in the laboratories is an essential part of any safety program. Therefore, labs are regularly inspected for cleanliness and for safety practices. Research and instructional laboratories should be maintained in a clean condition at all times (no trash on the floor, no food in research work areas, no open chemical containers, etc.). Keep refrigerators and freezers clean, inventoried, and defrosted. Do not store anything in the walking and working parts of the floor or aisles. Please note that all laboratory doors must be closed at all times to ensure the proper operation of the fume hoods. Additionally, keep approaches to all doors and electrical panels absolutely unobstructed.
8.4 Chemical and Safety Training

The Department of Chemistry strives to provide a safe work environment. To help ensure the safety of our students, faculty, and staff, all personnel are required to wear the proper Personal Protective Equipment (PPE) at all times in the research labs and in the teaching labs. Additionally, the department requires completion of the following training sessions/workshops:

Hazardous Waste Training (Required Annual Certification)

This one-hour course covers disposal requirements for generators of "hazardous" waste materials regulated under the US EPA Resource Conservation and Recovery Act and provides information on the packaging and disposal of medical/infectious waste materials as well as sharps such as needles and broken glass.

This class is offered live or online (MyCourses). To enroll in an online session, please email Ben Sharpe at bsharpe@research.msstate.edu with your name and NetID.

To enroll in the classroom (face to face) session, go to http://orc.msstate.edu/safety/chemical/training/ and click on “Enroll Now” under Hazardous Waste Training.

Introduction to Laboratory Safety (Required)

The goal of the training is to provide a basic introduction to laboratory safety topics so that laboratory users understand how to reduce exposures to chemicals and other hazards and to work safely in a laboratory environment. Topics covered will include proper laboratory attire, PPE, work practice controls, chemical classifications and segregation, MSDS, labeling, and hazard communication.

To Enroll, go to https://ssl2.msstate.edu/orc/workshops/login.php and click on Enroll Now under the Introduction to Laboratory Safety.

Laboratory Risk Assessment Workshop (Required)

An important aspect of managing a safe laboratory is effective risk management. This interactive class for PI's, Lab Managers/Research Associates, and graduate students is designed to provide information on how to conduct a risk assessment and to effectively manage risk in the lab. Breakout sessions with ORC&S personnel will allow participants to conduct risk assessments specific to their research with their peers.

To Enroll, go to https://ssl2.msstate.edu/orc/workshops/login.php and click on Enroll Now under the Laboratory Risk Assessment Workshop.
**Fire Extinguisher** *(Required – Recertification every three years)*

This hands-on course will demonstrate the proper techniques for using a fire extinguisher and will discuss the different types of fire extinguishers used for different types of fires.

To Enroll, go to [https://ssl2.msstate.edu/orc/workshops/login.php](https://ssl2.msstate.edu/orc/workshops/login.php) and click on Enroll Now under the Fire Extinguisher.

### 8.5 Chemical Storage

The storage in the laboratory of chemicals such as metallic hydrides, active metals, peroxides, and explosives must be kept to a minimum quantity required to conduct the research. Never leave glass containers of solvents on the floor where they can be kicked accidentally. Use common sense on chemical storage.

### 8.6 Transportation of Chemicals and Gases

When transporting chemicals outside the laboratory, always place the chemicals in a secondary container and on a cart. For transporting chemicals within the laboratory, always wear personal protective equipment, including gloves, goggles, and lab coat, and carry the chemicals with caution. *Never grab the container by the cap.* Return the chemical to its designated storage site after use.

### 8.7 Gas Cylinders

Treat every gas cylinder as a potential bomb! When not in use, keep the caps on. Cylinders must be well secured to a firm support at all times, whether full or empty. Use only the cylinder carts for transporting compressed gases. When not in use, return to the central cylinder storage area outside.

### 8.8 Working with Chemicals and Gases in the Research Lab

It is required when working in a research lab that each person wear the PPE required for that lab as posted in the Hazard Assessment Certification. Failure to comply with this may result in dismissal from the program. See section 9.7 for complete guidelines.

It is forbidden by University policy to work alone with hazardous materials. Those who work after normal working hours must make sure that there is someone nearby who will become aware of any need for assistance that may arise.

Chemical reactions should not be left unattended if there exists the slightest possibility of their getting out of control. Reactions which involve continuous introduction of a gas should not be
left without supervision. The reaction vessel must be separated from the gas source by an empty trap, and a flash arrestor must be incorporated in reactions using flammable gas. Toxic and corrosive compounds such as HCN, HF, HCl, H₂S, phosgene, NH₃, mercaptans, etc., which might form in a reaction, must be trapped rather than allowed to escape into a room or into the outside environment via the hood. Careful consideration must be given to the location of a reaction. Reactions which require large amounts of flammable solvents, active metals, or metal hydrides should be carried out in the hood behind a safety shield. The heating of such reactions should be done electrically or by a steam bath; open flames must be avoided.

8.9 Disposal of Chemicals, Glassware, and Sharps

a. Chemicals:

Chemicals of any type must not be placed in waste baskets. Instead, they should be placed in suitable and properly labeled containers. Hazardous Waste containers must be stored in a secondary containment tray at all times to prevent accidental release or spills from occurring. Containers must be closed at all times unless ACTIVELY adding to the container. Once a container is full, you should date it and put it back in the secondary containment tray to await pick-up. Please handle all chemical waste responsibly. Glass containers, after being thoroughly rinsed with water and labels removed or defaced, may be placed in waste baskets. All students and faculty are required to take the Hazardous Waste Class every year.

b. Glassware:

All laboratory glassware must be disposed of in a broken glass box. Empty bottles should be clean and the label defaced prior to being placed in the broken glass box. When glass boxes are full, the plastic liner should be closed and the lid taped to the box. The box should be taken to an MSU dumpster (non-recycling only) by laboratory personnel.

c. Sharps:

All sharps (needles, scalpels, razor blades, and contaminated glassware) must be disposed of in the labeled sharps container. If chemical residues are present, they must be disposed of as solid waste. Under no circumstances can they ever be disposed of in the wastebaskets!

8.10 Incident Reporting Procedures

Familiarize yourself with the location of safety showers, fire extinguishers, eye washes, and first aid kits. Students are expected to immediately notify their research adviser, the Safety Officer (Laura Lewis), and the Department Office of all laboratory and workplace accidents, including those involving any of the following circumstances:
8.11 Use of Fire Extinguishers

Learn the location of the nearest fire extinguisher and how to use it. These devices are typically located at the exit of the laboratory. If you have never used a fire extinguisher, demonstrations of fire extinguishers are held in the fall in connection with teaching assistant orientations.

a. Metal Fires:

Treated sand for smothering metal or metal hydride fires is available. Obtain some before using metal compounds such as lithium aluminum hydride, sodium or potassium borohydride, sodium, potassium, lithium, etc. Never use water on solvent or metal fires. Distillations using reducing metals must be carried out only in those hoods located near a 50 lb. Class D fire extinguisher. The hoods must be cleared of other flammables before beginning the distillation.

b. Small Fires:

If the fire is confined to a wastebasket or sink, put it out with the appropriate fire extinguisher.

c. Large Fires:

If the fire looks at all unconquerable with the use of only one fire extinguisher, shout a warning and pull the nearest fire alarm. Send someone to meet the firefighters to show them where the fire is, and alert everyone in the immediate area. Confine the fire by closing doors then GET OUT OF THE BUILDING and meet on the Drill Field in front of the Library.

9. ADDITIONAL POLICIES

9.1 Employment outside of the Department of Chemistry

Ph.D. students are expected to spend full-time on their program of study and research. Students that hold departmental fellowships and/or assistantships are not permitted to hold jobs outside
the department. Violations of this policy will result in the loss of the departmental assistantship and/or fellowship.

9.2 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 has the responsibility to 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 (Appendix O). The other sources that the student must pursue for the remainder of the travel funds are the Graduate School, Graduate Student Association travel fund program, extramural funds that support the Ph.D. student’s research, etc.

9.3 Vacation, Sick Leave, and Holidays

Graduate assistants are not eligible for vacation, sick leave, or unemployment compensation. Graduate Assistants are entitled to the same holidays as faculty unless other arrangements are agreed upon in the department.

The Department of Chemistry allows Graduate Assistants up to 10 days of paid leave for medical or personal reasons PER academic year, which is August 16th through August 15th. Any time taken in excess of the 10 days will be WITHOUT pay. You must complete the Student leave form, have it signed by your Research professor and your Lab Coordinator, and then turn it in to the office. See Appendix Q.
Holidays

Graduate students are entitled to take as holidays the days on which the University is officially closed. In addition, graduate students are allowed 10 sick/vacation days during the year. Any leave beyond the allotment requires approval of the research advisor and notification of the Graduate Coordinator. Students will not receive a departmental stipend for extended leave beyond that indicated above.

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<th>University Holidays</th>
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<tr>
<td>Independence Day</td>
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<td>Labor Day</td>
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<tr>
<td>Thanksgiving</td>
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<tr>
<td>Christmas-New Year/Winter Holiday</td>
<td>9 days</td>
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<td>M.L. King, Jr. Day</td>
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<td>Good Friday/Spring Holiday</td>
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<td>Memorial Day</td>
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Note that “Fall Break” and “Spring Break” are not University Holidays.

OF CRITICAL IMPORTANCE:

The Chemistry Department does understand that it is sometimes necessary for students to be away from campus. It is important that these be scheduled appropriately so as not to impose upon your teaching or research obligations. Students holding a research assistantship should discuss any extra leave in advance with their advisors. Students holding teaching assistantships must adhere to the departmental policies regarding absences. You are expected to be on campus for the entire semester in which you teach. You must be present on the day before classes begin and be present for any training sessions and TA meetings held by your teaching supervisor. You must also be present for all grading activities at the conclusion of the semester. If you cannot be here any time during a semester, there is a strict protocol to follow. You must complete the student Leave Form in advance, which summarizes your travel and who will be covering your teaching duties while you are absent. The form must be signed in advance by your teaching supervisor, your research advisor, and the graduate coordinator. Teaching assistants who neglect this procedure will automatically receive a letter of reprimand.

9.4 Maternity Policy

As soon as possible after becoming aware of a pregnancy, the student should visit the graduate coordinator to discuss an accommodation plan. If a graduate student becomes pregnant during a term, she will finish that term normally if possible. If she is a TA in a laboratory, arrangements
can be made to provide a substitute for laboratory teaching duties. If she is an RA, it will normally be expected that she and her research advisor will reach agreement as to the conditions under which she will finish the current term.

A graduate student who is expecting may request a TA appointment from the Department that is consistent with her condition of pregnancy. That is, she will be assigned non-laboratory-related responsibilities, either handling discussion/quiz sections or administrative duties, according to departmental needs.

A student who has been granted such a maternity-related TA will also be entitled to a total of four weeks of paid maternity leave, which may commence at the student’s discretion any time after the beginning of the eighth month of pregnancy.

Pregnant students may also choose to take an unpaid leave-of-absence from the chemistry graduate program, without prejudice, for a period of up to four semesters.

9.5 Building Security and Keys

An administrator in the business office will distribute you keys to the areas in which you will be working. It shall be clearly understood by all those receiving keys that he/she will

- Exercise great care to prevent loss. Report any losses of keys immediately to the Chemistry main office.
- NOT loan your key[s] 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 key card swipe access. If their key access does not work, do not let them in.
- Do not prop open any doors in the building that have card access.
- 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.

9.6 Professionalism

It is expected that Graduate Students will at all times 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.
9.7 Disciplinary Action

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), or other authorized personnel, both in the Teaching Labs and in the Research Labs may result in Disciplinary Action.

Disciplinary action will be as follows:

1\(^{st}\) incident---a written warning to student and research advisor
2\(^{nd}\) incident---suspension from research for 1 week
3\(^{rd}\) incident---suspension from research for 1 month
4\(^{th}\) incident---dismissal from MSU Chemistry program
Nature uses enzymes containing transition elements to carry out a wide variety of hydrolytic and reduction-oxidation reactions with amazing selectivity. The Emerson laboratory is focused on uncovering the chemistry that is and can be catalyzed by transition metal centers in biology. To do this, we employ a combination of techniques from biochemistry, synthetic chemistry, and spectroscopy.

Nearly all of life's essential chemistry is catalyzed by proteins. Each protein is exquisitely tuned for a specific function, from DNA replication to metabolism. Over the past 20 years, scientists have grown to appreciate the importance of dynamics and flexibility in enzyme catalysis. We are interested in understanding the relationship between a protein's flexibility and its function, and in particular how proteins can use structural disorder to their advantage during catalysis.

Ru-based sensitizers and substituted anthracene compounds are used to upconvert low-power red and near-infrared photons into green and blue wavelengths. We have demonstrated the upconversion of a low-power 633 nm (red) light to blue light near 400 nm. Work continues to develop new systems that will move the long-wavelength input limit into the near infrared.

The Gwaltney group uses computational chemistry to study molecular interactions on time and length scales not amenable to experimental techniques. We use molecular dynamics to probe the structure and function of proteins and to study protein-small molecule interactions, with our primary interest being to develop better treatments against exposure to chemical weapons. We also study the properties of polymers and polymer composites.
The Hollis Group designs and develops next-generation organometallic ligands and complexes for many applications, which often requires the development of new synthetic methodologies. Access to new molecules and materials is required to solve many of the technological challenges facing society, such as improving energy-efficiency, direct conversion of solar energy to useful forms, and more cost-effective access to medicines. These goals are reached by developing efficient, scalable syntheses of molecules with interesting properties.

Edwin Lewis

Professor and Head - Physical and Biophysical

Our lab is generally interested in the characterization of specific high affinity interactions that take place between small molecules and biopolymers, e.g. drug binding to nucleic acids and/or proteins. In these studies we use a variety of microcalorimetry (ITC and DSC), light scattering (static and dynamic) and spectroscopic techniques (CD, Fluorescence, UV-vis, and NMR). We also use computational methods and molecular dynamics to model these interactions. The defining focus of our lab is the use of energetic or thermodynamic data in rational drug design.

Keith T. Mead

Professor - Organic

Over the years, my group has broadly been interested in the synthesis of oxygen heterocycles, and we have developed novel routes to tetrahydrofurans, tetrahydropyrans, and spiroketals which have been documented in the chemical literature. Most recently, we have turned our attention to the synthesis of biologically-active flavonoids and related substances.

Deb Mlsna

Assistant Professor – Chemical Education

My interests include the development and introduction of laboratory instruction that will allow students access to a relevant laboratory learning experience. Cooperative learning laboratories that allow students to design their own experimental approach and work together as a team to solve a problem were used to expand the student's understanding and identify how concepts they learned in lecture are applied in the real world.

Todd Mlsna

Associate Professor – Analytical

My current research interests focus on the development of chemical sensors. The research and development of miniature chemical sensors is a rich field of study encompassing both basic and applied research with a broad range of applications. From environmental monitoring, to health diagnostics, to protecting soldiers on the battlefield, chemical sensor development has been an intense interest of many disparate government agencies and national labs.
Svein Saebo  
(662)325-7813  
ssaeb@chemistry.msstate.edu

Professor – Physical

Our research involves several areas of theoretical and computational chemistry. Our main interest is the development of accurate and efficient methods for electron correlation. In addition, we are interested in intermolecular interactions in particular dispersion type interactions. Among the systems we are studying are dimers of relatively large polyaromatic systems or π stacked systems.

Andrzej Sygula  
(662)325-7612  
asygula@chemistry.msstate.edu

Professor – Organic

The Sygula Group has been involved in synthesis and characterization of the novel bowl-shaped polycyclic aromatic hydrocarbons known as buckybowls or fullerene fragments. Using the synthetic procedures developed in our laboratory we prepare large molecular architectures (molecular clips and tweezers) capable of making strong inclusion complexes with selected guest molecules, including fullerenes.

Charles Edwin Webster  
(662)325-7224  
ewebster@chemistry.msstate.edu

Associate Professor – Inorganic

Our research involves several areas of theoretical and computational chemistry, including areas of biological catalysis, bond activation, and structure and bonding. Model analogues (as well as complete "smaller" systems) may be studied with either density functional or ab initio methods with a high degree of success.

David Wipf  
(662)325-7608  
wipf@ra.msstate.edu

Professor – Analytical

Our research is based on analytical and physical electrochemical methods. A primary interest is developing a type of scanning probe microscopy called scanning electrochemical microscopy (SECM). SECM uses a microscopic electrode to scan surfaces and provides information about surface reactivity on the nano- to micro-scale. We are interested in applying SECM to problems in corrosion and catalysis (biological and inorganic). In addition, we are developing new types of energy storage materials, such as new types of lithium-based batteries and supercapacitors.
### MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL

#### COMMITTEE REQUEST

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#### COMMITTEE MEMBERS:

- **Typed/Printed Name:**
  - Major Professor
  - Co-Major Professor (if applicable)
  - Minor Professor (if applicable)
  - Committee Member
  - Committee Member
  - Committee Member
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#### APPROVAL:

- **Typed/Printed Name:**
  - Graduate Coordinator
  - Minor Graduate Coordinator (if applicable)
  - Dean (if applicable)
  - Student

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### MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL

**REQUEST FOR CHANGE OF COMMITTEE MEMBER(S)**

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**Degree:**

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**COMMITTEE MEMBER(S) TO ADD:**

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**COMMITTEE MEMBER(S) TO DELETE:**

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**APPROVAL:**

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### MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL
**GRADUATE PROGRAM OF STUDY**

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**Please use the GRADUATE PROGRAM OF STUDY - CONTINUATION to list additional coursework if applicable**

**Typed/Printed Name:**
- Major Professor: [Signature] Date: [Date]
- Committee Member: [Signature] Date: [Date]
- Committee Member: [Signature] Date: [Date]
- Committee Member: [Signature] Date: [Date]
- Co-Major Professor or Committee Member: [Signature] Date: [Date]
- Minor Professor (If applicable): [Signature] Date: [Date]
- Graduate Coordinator: [Signature] Date: [Date]
- Minor Graduate Coordinator (If applicable): [Signature] Date: [Date]
- Dean (If applicable): [Signature] Date: [Date]
- Student: [Signature] Date: [Date]

Context on this form does not supersede degree requirements as specified by the Bulletin of the Graduate School under which the student entered the degree program.

*Office of the Graduate School - Mallison 9703*
## MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL

**GRADUATE PROGRAM OF STUDY - CONTINUATION**

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* Please denote MINOR courses with asterisk

Office of the Graduate School - Mailstop 5783
MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL
GRADUATE PROGRAM OF STUDY - ATTACHMENT SHEET

Name: ___________________________ MSU ID: ___________ Net ID: ___________

List below courses accepted as part of the requirements for the doctoral degree but not appearing on the Graduate Program of Study.

AREA OF PROGRAM EMphasis:

CORE REQUIREMENTS:

SPECIALIZATION:

ELECTIVES:

Office of the Graduate School - Mailstop 9703
**Appendix F**

**MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL**

**CHANGE TO GRADUATE PROGRAM OF STUDY**

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<th>Name:</th>
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* Please denote MINOR courses with asterisk

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Office of the Graduate School - Mailstop 9703

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MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL
TRANSFER APPROVAL FORM

Name: ____________________________  Graduate Transfer Credit Accepted From: ____________________________
Last   First   Middle   Home of Original Institution - use per form
MSU ID: ____________________________
Degree: ____________________________
Major: ____________________________
Minor: ____________________________

Type of Transfer (accept criteria)*:
__________________________ Domestic (if Transfer Grade on Transcript calculated with final GPA)
__________________________ International (Transfer Grade of 5)
__________________________ Military Transfer Grade of 5

* PLEASE NOTE: Official Transcript must be on file in the Office of the Graduate School

Instructons: For each course transferred, supply the course information as listed on the original transcript in line 1, then decide how the course should be designated on the MSU transcript on line 2. You may choose from 2 options: a) re-label the course using the symbol, number and title of an equivalent MSU course (e.g., IE 6579 Process Improvement Engineering) or b) retain the actual course title from the original institution, but label it with a special topics designation (e.g., IE 657910 Quality Mat). Please note that the Semester Taken must rnsist the original date as indicated on the transcript.

<table>
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<tr>
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NOTE: Course credit transferred must not exceed the 8-year time limit for masters and educational specialists at the time of degree completion. Doctoral students may not transfer any course credit after successful completion of the preliminary/comprehensive examination. Any exception to current transfer credit policy outlined in the Graduate Bulletin requires approval by the respective Academic Dean, and from the Dean of the Graduate School via Memorandum.

Justification for Exception: __________________________________________________________

Signatures:

Major Professor ____________________________ Date __________
Committee Member ____________________________ Date __________
Committee Member (Minor; if applicable) ____________________________ Date __________
Graduate Coordinator ____________________________ Date __________
Minor Graduate Coordinator (if applicable) ____________________________ Date __________
Committee Member ____________________________ Date __________
Academic Dean ____________________________ Date __________

Office of the Graduate School - Mailstop 9703
<table>
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Check One:

- [ ] Doctor of Philosophy Degree (Ph.D.)
- [ ] Doctor of Education Degree (Ed.D.)

Major: ______________________________________________________________________

Concentration (if applicable): ______________________________________________________________________

Minor (if applicable): ______________________________________________________________________

Semester and year of admission to doctoral degree program: ____________________________

Semester and year of earliest course that appears on the Graduate Program of Study (POS)

Please note: The time limit to complete all requirements to earn a doctoral degree is 8 years after enrollment into the first course, including transfer credit:

Number of course hours completed to date: ____________________________

Number of dissertation hours completed to date (20 hours required): ____________________________

Date written preliminary exam passed: ____________________________

Date oral comprehensive/preliminary exam passed:

Please note: Students must meet continuous enrollment requirement after passing preliminary examination:

Date of approval of proposed dissertation topic/idea: ____________________________

Proposed Title of Dissertation:

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Submit this form to the Office of the Graduate School with the Report of Examination Results for the preliminary examination.
DECLARATION OF EXAMINATION/DEFENSE

NAME: ___________________________ MSU ID: ___________________________
(First)  (Middle)  (Last)

DEGREE (SELECT ONE): PhD □  MS □  MA □  EdS □

Major/Concentration: ______________________________________________________

Minor: ___________________________________________________________________

EXAMINATION: ___________________________ DATE ___________________________

COMPREHENSIVE □

PRELIMINARY □

DEFENSE: ___________________________ DATE ___________________________

THESIS DEFENSE □

DISSERTATION DEFENSE □

DISSERTATION/THESIS TITLE: __________________________________________________

EXAMINATION INFORMATION:

Location: ___________________________

Major Professor: ___________________________

Minor Professor: ___________________________
(if applicable)

Graduate Coordinator: ___________________________

This completed form must be sent electronically to Ms. Pam Sullivan, Manager, Graduate Programs
(pps9@grad.msstate.edu), at least two weeks prior to the scheduled date.

The Office of the Graduate School 6/28/13
GRADUATE RESEARCH ADVISOR
SELECTION FORM

Student Section:

I have interviewed the following three faculty members and have decided to work with

and major in

1. ____________________________ Student (type name)

2. ____________________________ Student (signature)

3. ____________________________

Advisor Section

I agree to serve as Research Advisor to the student named above and in so doing certify that I
have adequate time, space, and facilities available for the student to successfully complete
their degree project.

__________________________  ______________________
Advisor                        Date

It is expected that no faculty will have more than two students supported on departmental TA
funds unless an equal number of students are supported through external funds. Please
indicate how this student will be supported and explain any special circumstances.

Support (TA, RA, etc.)  Source of Funds

Additional Comments:

Committee Approval:

__________________________  ______________________
Graduate Coordinator        Date
MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL
REQUEST FOR EXTENSION OF TIME

Name: _______________ Last: _______________ First: _______________ Middle: _______________
MSU ID: _______________ Net ID: _______________

Degree: _______________ Major: _______________
Semester/Year of Admission to Program: __________________________

REQUEST FOR EXTENSION OF TIME is CONSIDERED FOR ONE ACADEMIC YEAR. Each student is allowed one extension of time. Request for an additional extension requires the approval of the Provost.

TO BE COMPLETED BY THE STUDENT:
Justification for request for extension of time and plan for completion of degree (attach additional page(s) if needed)


TO BE COMPLETED BY THE MAJOR PROFESSOR:
MASTER'S OR SPECIALIST PROGRAM: Explain how out-of-date course work will be certified to assure that the student's knowledge of subject matter is current (attach additional page(s) if needed)
DOCTORAL PROGRAM: Explain how the advisory committee will certify that the student's knowledge of the appropriate content will be current at the time the degree is granted (attach additional page(s) if needed)

Typed/Printed Name: __________________________ Approval Signatures: __________________________
Student: __________________________ Date: _______________
Major Professor: __________________________ Date: _______________
Graduate Coordinator: __________________________ Date: _______________
Dean: __________________________ Date: _______________
Provost (required only if student has been previously granted an extension): __________________________ Date: _______________

Office of the Graduate School - Mailstop 9703

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Appendix M – page 1 of 2

Final Laboratory Inspection Form and Graduate Student Exit Checklist

The following checklist must be completed when a graduate student (by resignation, involuntary termination, or graduation) exits his/her MSU employment.

Personal

1. Remove personal items from work areas.
2. Provide forwarding address and new email address to the department.
3. Completed Exit interview with the Graduate Coordinator.

Return all University property, including:

1. Keys (building, office, desk, files, etc.)
2. ID card
3. Parking decal/gate card
4. Research/data notebooks (you may retain a copy)
5. Library books, CD texts, periodicals
6. Lab coats/tools/instruments

Financial

Settle outstanding accounts, including:

1. Charges owed to the department
2. Charges owed to other departments (e.g., Library, Parking, Student Accounts)
3. Reimbursements owed to you (e.g. travel expenses)

Electronic Records

1. Retrieve or delete any personal files/information on your office PC, office/department server, lab server, etc.
2. Retrieve any University email files, or files on other University email servers and systems, that you wish to retain. If you have any questions regarding your email, contact ITS at 325-0631.
3. If you possess sole access rights to an administrative database, software application, information system, office PC, etc., transfer the passwords to your advisor.

Laboratory

1. Work areas cleaned completely:
   Desk
   Hood
   Sink
   Floor
   Shelves

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Appendix M continued – page 2 of 2

2. All chemical "samples" you made or put into a container and disposed. Including sample vials and specimens properly labeled. (Disposal of samples can be arranged with Ben Sharpe at 325-2787 or on the Office of Environmental Health and Safety website [ehs.msstate.edu] under the "waste pickup" tab.)

3. Safety Officer (Laura Lewis) contacted and review/inspection of chemicals or samples that you are being left behind in addition to an inspection of your work area.

Printed Name ____________________________________________

Student Signature ____________________________________________ Date ________

Advisor Signature ____________________________________________ Date ________

Safety Officer Signature ____________________________________________ Date ________

Business Office Signature ____________________________________________ Date ________

Department Head Signature ____________________________________________ Date ________
## Appendix N - Graduate Program of Study

**MISSISSIPPI STATE UNIVERSITY - OFFICE OF THE GRADUATE SCHOOL**

**GRADUATE PROGRAM OF STUDY**

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Please use the GRADUATE PROGRAM OF STUDY - CONTINUATION to list additional coursework if applicable.

**Typed/Printed Name:**

Major Professor

Committee Member

Approval Signatures:

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Appendix O – page 1 of 4

Department of Chemistry Graduate Student Handbook

Department Travel Checklist-STUDENT

Revised 09.14.14

EMPLOYEE INFORMATION: YOU MUST HAVE RESEARCH PROFESSOR SIGNATURE TO BE TURCH IN TO TRAVEL COORDINATOR

Name: ___________________________ Date of Travel: ___________________________

If attending a Conference: Conference Title ______________________________

FIRST Submission of this form does not Guarantee Departmental Support

To receive any University funding, you must first receive Research Professor approval.

Collect Information on your travel arrangements:

- Where, when, why, who, how? (Must include destination, such as Univ. of Alabama; purpose; type of event)
- Website with conference information, if applicable, or flier/instructions for event.
- Apply for funding. Example: http://research.mstate.edu/travel

Forward information to your travel coordinator, who will begin paperwork process.

- If a quote from Travel Leaders is necessary, for flights, etc., your travel coordinator will need to get the quote.
- Your travel coordinator will notify you when the Travel Form is ready for your signature.
- If you need an EBITA (Employee Business Travel Account) it comes out of MSU account, travel coordinator will initiate.

ADDITIONAL INFORMATION: ABSOLUTELY NO ALCOHOL ON REMBURSABLE RECEIPTS

- When attending workshops, seminars, conferences, etc., please include a copy of the flier/program for the event.
- If pre-registration is required, you may pay with your own credit card, or the departmental credit card, or by University check.
- If you are traveling outside the US, confidentiality limits (this includes Hawaii, Puerto Rico, & Canada), complete International Travel Request form, estimate your travel expenses and send this to your advisor for process International travel request.
- For international travel include your statement of specific reasons the travel is absolutely essential and the institution along with your estimate of travel expenses.
- The foreign travel request must arrive in the office of the Provost 10 days prior to the travel date.
- If you do not stay at a conference hotel, you must have a license. 2. You are staying with friends/family, 3. You found a cheaper hotel (must be at least $25 cheaper).

NON-ALLOWED EXPENSES

- Alcohol/beverages
- Personal phone calls
- Personal services, such as laundry

UPON RETURN FROM TRAVEL

- Submit all receipts (originals) to Travel Coordinator. Travel will not accept a facsimile copy with your expenses.
- An EBITA is considered an advance payment. Expenses and travel form must be processed within 10 business days of the month following the trip, or Payroll will deduct from your salary.
- Your airfare reservation is made through Travel Leaders, your hotel and rental car reservations must be made with Travel Leaders.
- You may use your own hotel reservations, if staying at the conference hotel.
- Business meals require an itemized receipt and MSU Form C-4 (Entertainment Form). No Alcohol allowed on receipts.
- All meals receipts must have an itemized receipt along with the credit card receipt. If restaurant does not have itemized receipt, you must obtain an itemized cash receipt before leaving. Your travel coordinator will not contact the restaurant for you, after returning from your trip.
- If you need to travel by automobile tell travel coordinator to check with MSU Department of Transportation for available vehicles. This use of your personal vehicle for travel should result in receipts and will be reimbursed at the lower mileage rate.
- If driving out of state, instead of feeling, you need to get an airplane quote from Travel Leaders to show cost comparison and complete the Form A-34 when using personal vehicle.
- Travel coordinator will complete travel reimbursement forms showing your expenses and certify you when it is ready for your signature.
- No Travel Leader charges for quotes, but if the reservation is made, or for each subsequent charge, $27.50.
- If traveling with another MSU student, list their student's name below.
- Lodging: If sharing a room with another MSU student, you must get two separate receipts, or one person pay and notify reimbursement goes on that person's travel form.
- All original itemized receipts must be submitted for any tax related expenses.
- If presenting a paper includes copy of flier/program of the event.
- If travel policies are not followed and your travel coordinator has to complete a waiver (only ONE allowed for life at MSU) for your travel reimbursement, this is going on record and repeat offenders will be reimbursed the charges.
Department Travel Checklist - STUDENT

**Personal Information:**

<table>
<thead>
<tr>
<th>Name:</th>
<th>MSU or DigId:</th>
<th>Ret ID:</th>
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<tr>
<th>Dates of Travel:</th>
<th>Destination:</th>
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<tr>
<th>Purpose of Travel:</th>
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<table>
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<tr>
<th>Person(s) traveling with you:</th>
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<table>
<thead>
<tr>
<th>Account(s) to be Charged:</th>
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**Vehicle Request:**

<table>
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<th>Do you need a University Vehicle?</th>
<th>YES</th>
<th>NO</th>
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<th>What type of vehicle do you need to reserve?</th>
<th>CHOICE ONE:</th>
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<td>VAN</td>
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<th>Driver Cell Phone Number (if requesting a vehicle):</th>
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<tr>
<th>What time and date you will pick up keys for vehicle requested:</th>
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<table>
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<tr>
<th>What time and date will you return the keys for vehicle requested:</th>
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**Air Travel Request:**

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<th>A copy of drivers license if you have not previously been one to your travel destination</th>
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<tr>
<th>Do you need air travel?</th>
<th>YES</th>
<th>NO</th>
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If yes: Preferred departure date and time of day:

<table>
<thead>
<tr>
<th>Preferred return date and time of day:</th>
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<table>
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<tr>
<th>Destination of travel:</th>
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### Department Travel Checklist: Student

**Conference Registration**

<table>
<thead>
<tr>
<th>CHOOSE</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>Are you attending a conference?</td>
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<tr>
<td>Hotel: Name of Conference:</td>
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<tr>
<td>Are you staying at a conference hotel?</td>
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<tr>
<td>Do you need to book hotel? (You will need to provide a personal credit card)</td>
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<tr>
<td>Name of Hotel and contact info:</td>
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<tr>
<td>Do you need the department to complete/limit registration? (Submit Limit or Provide coordinator with information to complete)</td>
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#### Travel Awards

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<tr>
<th>CHOOSE</th>
<th>YES</th>
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<tr>
<td>Have you applied for Travel awards?</td>
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<tr>
<td>Have you applied for CGSA travel award?</td>
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<td>Have you applied for CGSA award?</td>
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<tr>
<td>Have you applied for TAGGS travel award?</td>
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**ATTACH ANY ADDITIONAL INFORMATION CONCERNING YOUR TRAVEL**
Appendix O continued – page 4 of 4

Department Travel Checklist-STUDENT

Type any additional information below. The text will wrap automatically for you.
Department of Chemistry

General Safety Guidelines Agreement

As a student in the Department of Chemistry, I, ____________________________ (Print Name)
agree to abide by the following General Safety Guidelines. I understand that I must be aware of the hazards
pose by the materials I use, as well as the hazards of the by-product materials that could be generated. (Please
initial by each item to indicate your compliance.)

____ 1. As a chemical user, I will make myself aware of the use and location of emergency equipment such
    as safety showers, fire pull stations, container grounding equipment, etc. before beginning work
    or study. I will educate myself on the emergency procedures for fire, spills, and injuries. If I am
    unclear about the safety consequences of a particular action, I will ask my PI or safety officer.

____ 2. Before beginning work or study, I will learn the location of all relevant Material Safety Data Sheets
    (MSDS). If MSDS are not physically stored in my lab, I will familiarize myself with the digital system
    for accessing them.

____ 3. I will always wear appropriate eye protection when working in the lab or place of study. I
    understand that eye protection (safety glasses, splash goggles, or a face shield) needs may change
    depending on the particular task. I will only wear ANSI-approved eye protection during my work.

____ 4. I will always wear appropriate laboratory clothing when using chemicals. Specifically,

a. I will not wear open-toed shoes, sandals, or shoes which will readily absorb or pass chemicals.
b. I will tie back or restrain long hair.
c. I will not wear jewelry in the lab.
d. I will wear long loose fitting pants in the teaching labs.
e. I will wear an appropriate lab coat when handling flammable, toxic, or hazardous chemicals.

____ 5. As appropriate, I will wear gloves when working with chemicals. I understand the differences
    between different protective materials, including latex, nitrile, and neoprene. I will select the
    material that best suits the work I am doing, and if that material isn’t available, I will ask my PI to
    supply the appropriate gloves. Conversely, I will not wear gloves outside of chemical work areas,
    and I will not contaminate public doors and elevators with gloved hands.
6. I will not prepare or consume foods in workplaces where chemicals are used. I will only consume food, beverages, or chewing gum in designated areas.

7. I will not use or store tobacco products in workplaces.

8. I will not apply cosmetics in workplaces where chemicals are used.

9. I will wash my hands when leaving the workplace, even if gloves were worn.

10. I will not wash lab coats with my personal clothes. I will keep my lab coat in the workplace, and I will not wear my lab coat in “clean” areas, such as designated eating areas.

11. I will never pipette by mouth or place my mouth on any laboratory surface. I will not use my teeth to pry open containers in the lab.

12. I will not participate in horseplay or distracting behavior when in workplaces where chemicals are used.

13. I will keep aisles and walkways clear of obstructions. I will not store flammable or reactive chemicals near exits. I will never store chemicals on the floor.

14. I will pack chemicals in appropriate leak-proof containers for transport through the building. When materials are hazardous, I will use at least one layer of overpack during transport.

15. When dispensing chemicals or conducting procedures in which flammable, toxic, noxious, or corrosive fumes or vapors will be generated, I will perform the work in a well-ventilated location, such as a fume hood.

16. Whenever possible, I will avoid leaving equipment operating unattended.

17. I will not leave faucets on with running water unattended other than hood faucets being used for an active experiment.

18. I will ensure all water hoses are firmly wired or clamped to the faucet and drain.

19. I will not store products for human consumption in refrigerators or storage units used to store chemicals.
Appendix P continued – page 3 of 3

20. I understand that working with hazardous chemicals in the laboratory alone is not allowed. When I am working with flammable, toxic, noxious, or corrosive chemicals, I will ensure that someone else is within visual or hearing range.

21. As a member of the chemistry community, I recognize my responsibility to ensure a safe workplace. If I see a colleague or coworker participating in risky behavior, I will remind them about this document. If they continue, I will speak with my PI or safety officer to resolve the situation. If I fail to do this, I recognize that I am in part responsible for accidents that may occur.

22. I understand that failure to comply with these guidelines may result in any of the following consequences. I recognize that these are not necessarily in order, and depending on the severity of the infraction, any or all of these consequences may be applied.

   a. A verbal reprimand.
   b. A written reprimand to the offender, research professor, and Department Head.
   c. A meeting with the Department Head or Safety Committee and suspension of stipend and research activity for one week.
   d. Dismissal from the Department of Chemistry.

I have read and understand the General Safety Guidelines. I do not hold Mississippi State University or its employees liable for any harm that may come to me or to my property while attending Mississippi State University. If I do not abide by these guidelines, I understand that I could lose my stipend support and/or be removed from the program of study.

(Signature)  (Date)

(Print Name)  (MSU NetID)

Last Revised 9/2014
Appendix Q –

Department of Chemistry Graduate Student Application for Leave

Name: ____________________________  MSU ID No: __________________

Purpose of Leave: Vacation/Personal  Medical

Beginning Date: ____________________

Ending Date: _____________________

Signature of Student: ___________________________  Date: _________

Approved: (Must be signed by Research Professor and Lab Coordinator, if a Teaching Assistant)

Name and Title (Please print): ____________________________

Signature: ___________________________  Date: _________

Name and Title (Please print): ____________________________

Signature: ___________________________  Date: _________

The Department of Chemistry allows Graduate Assistants up to 10 days of paid leave for medical or personal reasons PER academic year, which is August 16th through August 15th. Any time taken in excess of the 10 days will be WITHOUT pay. You must complete the Student leave form and have it signed by your Research professor and your Lab Coordinator and then turn it in to the office.

Form must be completed, signed, approved, and given to the Business Manager BEFORE leave is taken.
Appendix R – Annual Review

I. Timing of the Annual Review

A student’s first Annual Review will occur no later than the start of the Spring semester following his/her first summer of residence in the graduate program. This deadline applies to all students, including those who begin their studies in January.

II. Purpose of the Annual Review

The annual reviews are required to help ensure each student is making good progress toward his or her degree. The first annual review will focus upon his/her initial progress in fulfilling the plan of study, area requirements, teaching, and research. Subsequent reviews allow the committee to monitor the student’s continuing progress toward graduation and in some cases may provide valuable advice about the conduct of their research.

In preparation for an annual review, the student:

1. Must email the required documents (see section IV) to his/her advisory committee members at least one week before the date of the Review. In preparing for the Review, the student should be aware that:

   a. The documents must be approved by your advisor *before* they are sent.

   b. The presentation must be prepared in consultation with his/her advisor. The presentation should be of sufficient detail to take at least 30 to 40 minutes to present (without interruption).

2. Must have an approved research advisory committee in place before the end of his/her 2nd semester in residence. Students will consult with his/her advisor to pick his/her advisory committee members.

3. Must accommodate the committee member’s schedules. The students must ask his/her advisor first, then suggest several times, not just one, to the other committee members. Students will find that the faculty are very busy, and scheduling meetings can be extremely difficult.

III. Who may attend a Review?

Any member of the departmental graduate faculty may attend any review. Annual reviews must be announced one week prior to the review.
IV. Conduct of the Review

1. The student should write a document outlining his/her conducted and proposed research. The document and presentation should also include a complete list of graduate coursework (with grades), future courses to be completed, and the student's teaching experience. A student's first review should also include the results of his/her general chemistry ACS diagnostic exam(s). A copy of this document should be given to each faculty member of the evaluation committee one week prior to the Annual Review. The research portion of the document should not exceed three pages in length (excluding figures and references). This portion of the document should include a concise statement of the proposed research problem, its significance, a proposed solution, and references.

2. The student's research advisory committee will meet immediately before the start of the Annual Review to discuss among themselves the ground rules for the questions, number of questions, and areas to be covered.

3. The student will begin the Review with an oral description of the research problem. During the presentation, the student will be asked questions pertaining to the research problem and closely associated areas.

4. The First Year Conference is limited to 90 minutes. At the end of the first hour, the research advisor will ask if there are any additional questions; if not, the student will be asked to step outside while the student's performance is discussed.

VI. How are the student, graduate coordinator, and department chair informed of the results?

1. The research advisor will orally inform the student of the committee's recommendation following the Review.

2. The research advisor will prepare a letter summarizing any recommendations and will then send copies of the letter to the Graduate Affairs Committee and the Department Chair.
Appendix S – Guidelines for Research Proposal Preparation

1. The majority of graduate school is research. Research is not formulaic.

2. The proposal is not formulaic, and the advisor should be consulted to determine what items and details are appropriate.

3. The meeting shall convene and reconvene for as long the committee deems it necessary to adequately interview the candidate.

4. The advisory committee's job is to test the competency of the candidate, the candidate's current knowledge, and his/her potential to develop independent research ideas.

5. While the advisory committee does not choose the topic and direction of the proposed research, the advisory committee does review and judge the worthiness of the presentation and defense by the student. The proposal must follow the ACS-PRF DNI guidelines and be of sufficient detail to convey the material to the advisory committee:

   - An abstract (≤ 250 words).
   - The body (≤ 4000 words, 12-point double-spaced, excluding the abstract, figs and refs).
   - 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 include the names of all authors, complete article title, complete journal title, year of publication, volume number (if any), and pages of cited article. Do not use et al.
   - A budget is not required.

6. The entire proposal package (both written and presentation documents) must be reviewed and approved by the candidate's advisor prior to the document being sent out to the advisory committee (one week in advance of the meeting).
Appendix T – Guidelines for Dissertation/Thesis Preparation

These guidelines are not comprehensive but are a minimum of what is required for an acceptable thesis or dissertation.

1. When is it "time" to defend your thesis or dissertation and submit it to your committee? Only when it is publication ready - not because you are nearing the deadline imposed by the graduate school in the semester during which you would like to graduate.

2. A defense should be scheduled no later than one month before the dissertation is due in the Dean of Arts & Sciences’ office (unless you plan on submitting your dissertation late and graduate in a subsequent semester). Your dissertation should be well-edited, first by you (which will require several rounds of editing and rewriting) and then by your advisor. Substantial errors will delay the review and acceptance by your committee. If your defense is late or your dissertation is poorly written, do not expect your committee to review your corrections after the defense in time to submit your dissertation in that same semester.

3. Good writing, like good science, requires discipline. Your writing should be designed so that it is logical and easy to understand. Good writing requires using consistent language and graphic presentation, as well as the correct terminology. The dissertation is often the point at which the student fully analyzes the results and considers the scientific implications of his or her work. One of the main objectives of preparing the dissertation is the lessons learned from the process of analyzing relevant data and organizing and presenting results in way that the reader readily arrives at the same conclusion as the student. A major part of graduate school is the preparation of the student for future professional activities with proper mentoring and training. Organization and good written and oral communication skills are essential for successful skilled scientists.

4. Your advisor and, especially, your committee members are not your editors! Learn to correct your own writing. Do not simply make the corrections your advisor provides and return the dissertation to him/her. Analyze the corrections and look for additional error/improvements in presentation that your advisor might have missed or not suggested. Revision of the complete dissertation document should occur a minimum of three times; six or more times is not unusual for a quality document. Ask yourself, "is this sentence wordy, or is the statement ambiguous?" "Are there unsupported conclusions or statements?" Deadlines are not an excuse for a poorly written dissertation. Do not leave out topics, discussions, etc., because they are difficult to express or explain. If they are critical to your dissertation, then the committee will end up asking you to include the material, and this extended process will only delay the completion of the dissertation and your potential graduation.

5. Write your dissertation for someone who is not necessarily a specialist in your field, but who is a competent scientist with a general chemistry background. Your most important audience, after your advisor, is your committee. The faculty on your committee, while scientifically educated, are not likely experts in your field. You need to include background, theory, figures, etc. that will allow them to understand your data and what you have written about your data with minimal consultation of external references. The more background reading they have to do, the longer the review process will become
(and the more likely they will find inconsistencies or errors in your writing). It may lead to requests for rewriting or additions to your dissertation. If your committee members do not understand something, they will not (and should not) sign your dissertation. There are any number of reasons they may not understand what you have written, but it is ultimately your responsibility to make it clear to them.

6. Some faculty will not accept a dissertation with published articles unless you discuss it with them first. You should discuss your dissertation outline with your advisor and your committee well before you start to write it. For some faculty to be willing to serve on your committee, inclusion of results or data from a published manuscript means that you must clearly distinguish your work from that of co-workers. You should place only your results in the Results section of the dissertation. Results by coworkers can be included in the Discussion with appropriate citation and be discussed with your results. Review and revise published articles. You almost always will find errors, and you may discover new insights. If your committee finds errors in fact or logic, changes will be required.

7. Dissertations that use published articles will have to have the introductions of articles modified to avoid repetition. In the dissertation introduction (normally the first chapter), all chapters will be thoroughly introduced, and the relationship between the chapters identified. Introductions to individual chapters should be short and very specific without rehashing the dissertation introduction. You are publishing a book: an authoritative document on your area of research. The Introduction should be a comprehensive, scholarly review and discussion of previous work. It should include past results, implications, and unresolved issues. The Introduction should review all planned/attempted projects included in the dissertation whether they succeed or not. The dissertation should describe the progress of unsuccessful projects. Errors in a published article must be corrected or noted in the dissertation, and, if appropriate, the journal should be notified.

8. The whole thesis must be based on a single publication standard or style. Usage and style must be consistent. Use only a single name for a compound, method, etc. For example, do not use bromopentane in one instance and pentylbromide in another. Decide on your preferred terminology and stick with it throughout the dissertation, even if it means editing published articles. References must include titles (This inclusion is very useful for reviewers and is standard practice on grant proposals). Do not repeat references. Instead repeat the reference number or name in the text as needed.

9. Depending on your advisor’s judgment, the dissertation or thesis might need to include a summary of all work, not just experiments that “worked” or were published. You probably learned more from those experiments that did not work. The committee cannot necessarily fully understand your accomplishments and results by only seeing the successful results. The lines of investigation that lead to a dead end are often introduced in the Introduction and discussed in the Discussion. The extent to which the experiments are described in the Experimental Section or Results depends to what extent they are required to understand the results.

10. Spectra – Although shifts, areas, spin-spin coupling constants, etc. are reported in experimental sections, the committee needs to confirm the analysis is consistent with the spectrum. In particular, compile NMR spectra (preferably in an appendix) that are used to confirm chemical structures. Structures must be
included in the spectra with atoms labeled with corresponding shifts. Any multiplets whose multiplicity cannot be readily determined from the full spectra must be expanded, as an inset if convenient. All fonts, color schemes, line widths, etc. should be consistent throughout the document. For example, do not use different programs to create spectra if they produce different formatting in the figures.

A word to the wise: the easier your dissertation is to read, the faster the committee reads it, the less time they think about it, the fewer question they will ask, and the fewer problems they will find!