

Graduate Handbook
Department of Chemistry and
Biochemistry
2013-2014



WELCOME TO FLORIDA STATE UNIVERSITY CHEMISTRY AND BIOCHEMISTRY DEPARTMENT

INTRODUCTION TO GRADUATE STUDIES IN CHEMISTRY

This booklet contains information necessary for successful completion of your graduate degree program. Familiarity with the contents is conducive to a smooth transition into our department and will help to minimize complications in your program. Additional information is available in the FSU Graduate Bulletin published by the Office of the Registrar, as well as the Graduate Student Handbook published by the Office of the Graduate School.

Providing assistance to graduate students is a primary function of the Chemistry Student Affairs Office. The office is located in 310 DLC, and the telephone number is (850) 644-6004. Students are welcome to call or come by anytime between 8:00 a.m. – 5:00 p.m., Monday – Friday.

We look forward to working with you!

Elizabeth Kistner

Graduate Coordinator

Cierra Smith

Undergraduate Program Assistant

I. General Information and Requirements

Assistantships

Teaching Assistantships

As a rule, an incoming graduate student is offered a teaching assistantship (TA) and is usually assigned to teach General Chemistry Laboratory. TA positions for students past their first (1st) year whom are not supported by a Research Assistantship (RA) are made available based upon the Departmental needs, the prior student performance in a TA position, and are prioritized for students who have been in the program for less than five (5) years.

TAs for upper level courses are selected on the basis of qualifications and interests, as well as Departmental teaching needs. Every effort is made to match teaching assistants with laboratory and grading assignments for which they are best qualified.

TA Evaluation of Performance.

Student TAs will be evaluated at the end of each semester by their faculty supervisor. At the end of the semester written evaluations from students and supervisory faculty are submitted to the Associate Chair. The evaluation will be:

- 1) **Satisfactory:** *The student has performed as a professional and received strong marks from student evaluations*
- 2) **Reason for Concern:** *The student has either demonstrated unprofessional behavior or received low marks from the student evaluations.*
- 3) **Unsatisfactory:** *The student will receive an Unsatisfactory rating for unprofessional behavior and poor student evaluations.*

Unsatisfactory performance typically involves absence from assigned work periods, late performance of duties, **missed office hours**, or unsatisfactory interactions with undergraduate students.

If TA performance is unsatisfactory **during the semester**, faculty supervisors in conjunction with a departmental representative will proceed through the following steps:

1. Verbally inform the TA of the nature of the dissatisfaction and of a reasonable manner in which they may resolve the problem;
2. Repeat the complaint to the TA in writing with copies to the Major Professor and appropriate departmental personnel;
3. If performance is particularly and chronically unsatisfactory in the opinion of the faculty supervisor, a meeting between the TA, Major Professor, and department representative will be arranged.

Result of Unsatisfactory Performance:

Teaching assistants with unsatisfactory evaluations will be subject to the following administrative actions:

1. After the first such unsatisfactory evaluation, a meeting is held with the TA, Coordinator of General or Organic Laboratories (as appropriate), and Associate Chair. In that meeting a plan to improve TA performance will be determined. The Graduate Supervisor of the student will be notified of the performance evaluation prior to the meeting and will receive the plan within 48h of the meeting.
2. After a second unsatisfactory term, another meeting will be held that will include the Major Professor to develop a second improvement plan.

No graduate student who has received three (3) unsatisfactory evaluations will be eligible for a TA position in the Department. **Continuation in the graduate program will then only be supported by a research assistantship or personal financing.** *The decision on TA can be petitioned to the Executive Committee for review.*

Research Assistantships

After the first academic year, the student's Major Professor may support the student as a Research Assistant (RA) or through a Teaching Assistantship (TA). The expectations and assessment of performance as a Research Assistant (RA) will be provided by the Major Professor.

The evaluation will be:

- 1) **Satisfactory:** *The student has performed as a professional progressed in Research, and is on the normative timeline for degree.*
- 2) **Reason for Concern:** *The student has either demonstrated unprofessional behavior or is failing to progress*
- 3) **Unsatisfactory:** *The student will receive an unsatisfactory rating for unprofessional behavior and poor progress.*

Questions concerning tax status should be directed to the Human Resources Office. (Note: The Department's graduate assistants are classified using the guidelines established in the FSU Human Resources Policies and Procedures found online at <http://policies.vpfa.fsu.edu/personnel/3h.html#2>).

Teaching

Every student is required to participate in teaching during his/her graduate career because teaching experience is an integral part of graduate education. To instruct the student in carrying out teaching duties in a competent and professional manner, the Department conducts CHM 5945, "Seminar on Chemical Education", prior to the fall semester. All students are expected to

register for and fully participate in this course as part of fulfilling the teaching requirement (see page 5).

Evaluations of teaching will be provided by both students being taught *and* the supervising faculty each semester.

Specific teaching requirements for the graduate degree program of the Department follow:

A student working toward the Ph.D. degree is required to teach a normal half-time (0.5 Full Time Equivalents – FTE) teaching assignment, or equivalent, for at least two (2) semesters.

An M.S. candidate is required to teach a normal half-time (0.5 FTE) teaching assignment, or equivalent, for at least one (1) semester.

Full Time Enrollment

The Department considers all graduate students to be full-time students and requires each in state student to register for 12 hours per semester, unless otherwise directed by the College of Arts and Sciences. Each international or out of state student is required to register for nine (9) hours per semester in courses unless directed differently by the Dean of Arts and Sciences Office and approved by his/her Major Professor or assigned advisor (see page 7), except those students in the coursework M.S. program may be considered part-time. However, all students supported as TAs or RAs are required to be full-time students by University regulation and liability clauses which require such enrollment practices.

An unsupported student in his/her last term, whose only task is the writing of his/her dissertation or thesis, may petition the Graduate Advising and Awards Committee to register for a reduced load. This action should be taken before the semester begins. A six (6) hour load generally applies to students who are still on campus and are utilizing Departmental facilities. In no case should a student registered for fewer than six (6) hours continue to perform research.

Only one (1) term of a reduced load is permitted. Therefore, students who have not completed the defense of their dissertation or thesis during this term in which they are registered for a reduced load must adhere to the 9-12 hour per semester minimum in all subsequent terms.

An unsupported student, who is off campus and not utilizing any University or Departmental facilities and who has satisfactorily completed all University and Departmental requirements, **except** for the defense of Thesis/Dissertation, is permitted to register for two (2) credit hours in the final term of enrollment.

An unsupported student, who is off campus and not utilizing any University or Departmental facilities, and who has satisfactorily completed all University and Departmental requirements after the final clearance deadline for one (1) semester but prior to the first day of classes of the

next semester, is required by the Graduate School to register for two (2) credit hours during the term of graduation.

Required Seminars

FSU has implemented a new RCR training policy for all post-doctoral, graduate, and undergraduate students supported by National Science Foundation funding.

CITI RCR COURSE: The course can be found online at <http://gradschool.fsu.edu/Academics-Research/Research-and-Scholarly-Integrity/FSU-s-CITI-Courses>. *All new students, regardless of assignment, are **required** to complete this course prior to the last day of classes during the first term of enrollment.*

Students are required to enroll and participate in the NSF Ethics Online Course Departmental Seminar Program.

CHM 5945: Seminar on Chemical Education – Taught prior to each fall semester in preparation for Supervised Teaching. Topics include safety, how to conduct classes and laboratories, exam construction, ethics of teaching, legal implications, and written and oral communication of scientific material. *All new students, regardless of assignment, are **required** to enroll and attend.*

CHM 5823: Introduction to Research – In the first term of the graduate program, students are **required** to enroll into an “Introduction to Research” course.

CHM 5935: Departmental Seminar – Normally held on Friday afternoon at 3:30 p.m. during the Fall and Spring semesters. The Department hosts a variety of academic and industrial speakers, covering contemporary topics. First year students are required to enroll in the Department Seminar. All Graduate Students are **required** to attend and are *encouraged to ask questions* of the speakers. A student can have no more than two (2) consecutive unsatisfactory (U) grades in CHM5935.

THEMATIC SEMINARS – All Graduate Students are **required** to enroll and participate in thematic seminars each Fall and Spring term, except for the very first term in the program when they register for the Department Seminar only. In addition, each student should present two (2) seminars as part of his/her degree program; according to the Doctoral Program requirements (see Section IV).

Transfer Credit

Courses taken at another institution that apply to the overall program of a student may be listed on the Departmental Program of Study form whether they are transferred as credit or not.

The student may petition for the acceptance of graduate level coursework from another institution to count towards their PhD requirements. The petition should be made in the first semester.

For official transfer of course credit from another recognized graduate school, to be listed on a student's FSU permanent record, see the regulations given in the current General Bulletin.

Grades earned at another institution cannot be used to improve a grade point average or eliminate a quality point deficiency at Florida State University.

Foreign Languages

There are no Departmental foreign language requirements for graduate degrees in Chemistry and Biochemistry. However, a student's Supervisory Committee may require that a foreign language be included as a part of the student's Program of Study.

Policy on Spoken English

The ability to communicate in spoken English is a necessary component of the graduate training in the Department. Student for whom English is not the native language and who are not fluent in English must demonstrate this competence by passing a test of spoken English (SPEAK) administered by the University through the Center for Intensive English Studies (CIES) prior to the first week of classes of the first term of enrollment. A score of 50 or higher is required for a Ph.D. degree. Alternatively, a student can achieve a grade of 90% or higher in his/her remedial work in English. The graduate student cannot advance to candidate status until they attain a score of 50 or above on the SPEAK exam or a 90% or higher in the course.

Students unable to pass the SPEAK examination with a score of 50 at the first opportunity after enrolling at the University will be considered deficient in their background and will be required to take remedial work in English each semester until a passing score is earned or the student withdraws from the program. A student not passing the SPEAK examination by the BEGINNING of the third term of enrollment will be ineligible for the normal assistantship of 05. FTE and will be given an assignment with a reduced stipend or salary. A student not passing the examination by the END of the third term of enrollment (including summer terms) will be notified of their pending dismissal from the program. Dismissal will become effective at the END of their fifth term of enrollment (including summer terms) unless a passing score is earned in the interim. Students who have not fully passed the SPEAK examination are expected to take the exam (at their own expense) each time it is offered (April, July, and December).

Graduate students must receive a score of 50 or higher on the English competency exam to be considered for a Teaching Assistantship. A student who scores a 45 on the SPEAK exam can be permitted to be a grader, proctor, lab section instructor, or recitation section instructor as long as he/she also enrolls in the University's English improvement course. In addition to the SPEAK exam, prior to the first week of classes, incoming graduate students meet with the Department's teaching interview committee (Associate Chair, General Chemistry Lab Coordinator, Organic Chemistry Lab Coordinator) to assess their potential as teaching assistants.

Tuition Waivers

Normally, all first year students who are not Florida residents are awarded out-of-state tuition waivers. International students will continue to receive waivers for out-of-state tuition after the first year, provided funds are available. Domestic students, however, are expected to claim Florida residency as soon as they are eligible. It is the responsibility of each student to pay a

portion of his/her fees. Check “MY ACCOUNT STATEMENT” through Secure Apps under Blackboard or the Student Affairs Office after the fourth day of classes for current charges. Waivers are issued by the Student Affairs Coordinator in 310 DLC just prior to the beginning of each semester.

Students must notify the Student Affairs Coordinator of any change in schedule. Tuition waivers will not be issued for any courses not applicable toward the M.S. or Ph.D. degree or for any courses dropped or added after the fourth day of class without the approval of the Student Affairs Office.

Student Employment Outside the Department

Students who hold fellowships or assistantships **should not** hold employment outside the Department. The Department holds that students who are allowed to accept outside employment do so at the expense of time that should be devoted to research. This is not intended to prevent students from performing small, non-recurrent tasks, such as occasional tutoring. The timely completion of the degree program is in the student’s best interest.

Choosing a Major Professor

Provisional Advisor: Each entering student has as a provisional advisor, the Chair of the Graduate Advising and Awards Committee (GAAC). The PhD supervisory committee will be GAAC until the student selects a Major Professor.

The **Provisional Advisor** for the 2013-2014 Academic Year is Dr. Geoffrey Strouse.

Introduction to Research: A very important objective during a student’s first semester is the selection of a research area and a research director. The “Introduction to Research” course (CHM 5823) offers incoming students the opportunity to be exposed to current research interests of faculty members of the Department. The course monitors student’s active participation by listing six (6) faculty of interest by **October 7, 2013**, and carrying out active lab explorations in at least three (3) of the chosen groups to select the Major Professor.

Selection of the Major Professor: A student’s Major Professor will be chosen after **November 6, 2013**. Prior to this date, the student should actively explore research in the groups of interest (3 minimum) through a formal lab exploration and is **required** to discuss his/her research interests with six (6) faculty members. At the outcome of this activity, by **November 6** the student is **required** to submit a list of three professors of interest, placing the most desirable research group on the top of the list, which will be communicated to all the faculty the next day. During the week of **November 6-13, 2013**, all students are **required** to finalize their group choice and submit a Major Professor Selection Form, which should be signed by both the student and the major professor, indicating that they reached an agreement on the student's joining the corresponding research group. Students who have not submitted the form on time, must select the Major Professor not later than the last Friday of classes during the first semester of enrollment -- **December 6, 2013** for those students who matriculated in Fall 2013.

Faculty will be notified of selection immediately by the GAAC Committee indicating ranking order. The GAAC also makes a recommendation to the departmental chair for finalized assignments, which takes into account the concurrent departmental TA per faculty policy. **Any student without a major professor by the provided deadlines will be switched to the Coursework Master's degree track until such time as he/she complies with the policy.** *Students without a Major Professor by the end of Spring Term will no longer be considered a continuing student in the department and will no longer be eligible for TA support.*

For students entering in January, a Major Professor must be selected by the last Friday of classes, but no later than **June 1st** with the approval of GAAC.

A formal notification form is available from the Student Affairs Office through the Graduate Chemistry and Biochemistry Blackboard site, and it should be used to report the choice of Major Professor and Program to the Chemistry Student Affairs Office. To be valid the form must be signed by the Major Professor and at least five (5) other faculty members with whom the student met to discuss research interests.

II. Qualifying Procedures

Admission into the Graduate School of Florida State University and the graduate program of the Chemistry and Biochemistry Department is just the first step toward earning a graduate degree. The Department presumes that students admitted to the program are interested in obtaining a Ph.D. degree in Chemistry and Biochemistry. However, students may be recommended to or elect to pursue an M.S. degree first. While it is not generally necessary to obtain an M.S. degree before the Ph.D. degree in Chemistry, as is the case in some other disciplines, the Department may require some students to complete an M.S. degree first.

Graduate Advising and Awards Committee

The Graduate Advising and Awards Committee (GAAC) provides entering students guidance concerning the selection of course work. In the second and subsequent years, this function is assumed by the student's Supervisory Committee along with its other responsibilities.

The GAAC meets with each entering student to evaluate and discuss his/her preparation for graduate studies. The GAAC bases its advice on the following information about each student:

1. A list of science and mathematics courses taken, with grades
2. GRE scores, with advanced chemistry examination score if available

The GAAC is charged with identifying the strengths of the student's academic preparation and with making recommendations of the graduate-level courses to be taken in the first year so as to enhance these strengths and provide breadth of background. In rare cases the GAAC may recommend that an undergraduate course be taken. When this occurs the grade in the course is included in the student's overall grade point average. The Department relies on the evaluation and recommendations of the GAAC in making the student's teaching assignment.

First-Year Course Work

The recommended course load for first-year graduate students is nine hours (9h) of graduate courses each semester. Fewer hours may be recommended by the advising committee due to weakness in record. First-year students are required to take a minimum of twelve hours (12h) graded classroom courses during their first two (2) semesters. During the first semester, first-year students should take at least two (2) out of the three (3) general graduate courses offered by the Department.

Approval of GAAC and the professor of record for the course in question are both required to allow a first-year graduate student to drop a class following the normal Drop/Add period (4th day of classes). Please see the Student Affairs Coordinator to make a drop request of the GAAC.

Progress Reviews upon Completion of the First Two Semesters

The GAAC evaluates the progress of each first-year student. Based on the GAAC evaluation, one of the following recommendations will be filed and copied to the Major Professor for the student on or before June 15.

The evaluation is designated as one of the following:

1. **Satisfactory** – the student should continue in the graduate program
2. **Cause for Concern** – a plan of action should be developed to ensure the student's success in the program
3. **Unsatisfactory** – the student is dismissed from the graduate program

A recommendation of Cause for Concern will result in a further recommendation of

1. The student should first complete a Master's degree before continuing to the Ph.D. degree
2. The student should complete a Master's degree without the expectation of going on to the Ph.D. degree
3. The student should be reevaluated after an additional semester

GPA

The University requires that a student be placed on probation if his/her cumulative grade point average (GPA) in all courses taken for credit falls below 3.0 at the end of a term. If a 3.0 GPA is not attained by the end of the next full term of enrollment (excluding the summer term), the student will be dismissed.

Basis of GAAC Evaluation

The student's overall progress is reviewed before **June 1** of the second year by the GAAC. Satisfactory progress is demonstrated if the student:

1. Maintains a 3.0 GPA in classroom course work
2. Has completed a minimum of 6h or course work
3. Has selected a Major Professor
4. Exhibits a mature and professional approach toward courses, research, seminars, University and Department deadlines, and teaching

Petition to Review GAAC Recommendation

A student may petition the Department through the Associate Chair for Graduate Studies for re-consideration of a GAAC recommendation.

III. Student Progress Reports

University requirements for graduate studies require each student be evaluated by their supervisory committee each year. A copy of the report must be submitted no later than April 15th (with the exception of yr 1) to the Student Affairs Office is 310 DLC for inclusion in the student's file.

The Department has adopted the following procedure:

1. **At the end of the 2nd term of study (including summers) in the graduate program, each student will be provided an evaluation form the GAAC committee on or before June 15.** The student should provide a list of courses taken or being taken and the Major Professor Selection to the committee.
In the 5th term of study (including summers) and each year thereafter in the graduate program, each student must prepare a short Progress Report that consists of a brief review of research accomplished to date. The report consists of a brief review of the work accomplished to date on the research problem for the dissertation (or thesis) and an outline of the work remaining with a projected timetable for the completion of the dissertation (thesis). The report can be submitted to Supervisory Committee members at any time during the spring semester, **but no later than April 1.**
2. Upon submission of the report, the student arranges a meeting of his/her Supervisory Committee. The purpose of this meeting, which shall take place **no later than May 30**, is to discuss the student's progress. The student must be present at this meeting and must take an active part in the discussion. As it may not be possible in this period for all Committee members to be present, for the purposes of this meeting, a majority (more than half) of the members will suffice. If this is also not possible, the student should notify GAAC and request a time extension.
3. Within a week of the above meeting, but **no later than June 7**, the Major Professor should send a letter or memorandum to the student. The letter summarizes the results of this meeting, stating whether the student is making reasonable progress toward the goals in the Progress Report, and/or listing areas of concern. A copy of this letter or memorandum is sent at the same time to the Student Affairs Office for inclusion in the student's file and the University mandated Graduate Student Tracking system.
4. The Student Affairs Office notifies GAAC when students and/or faculty miss the deadlines.

IV. Requirements for the Ph.D. Degree

The Doctor of Philosophy degree in Chemistry is awarded at the Florida State University in each of the following areas: analytical, biochemistry, inorganic, materials, organic, and physical. A student may also major in a combination of two (2) of these area with permission from the University. The area will be chosen in consultation with the PhD supervisory committee. Although courses are required to achieve a high level of proficiency in one's field, the primary emphasis of the degree program is in the completion of an original research project that makes a substantial contribution to science.

Supervisory Committee

The Ph.D. Supervisory Committee should be formed, in consultation with the Major Professor, as soon after the Major Professor is chosen as possible and **no later than the last day of classes** of the third term of study (including summer).

The Supervisory Committee shall consist of the following faculty:

1. A minimum of three (3) faculty members chosen by the student. One of them should be the student's Major Professor, who shall act as Chair of the Ph.D. Supervisory Committee.
2. One (1) **tenured** faculty member from outside the Department who acts as the University's representative (referred to as Representative-at-Large or University Representative).

When the Major Professor is not a member of the Department of Chemistry and Biochemistry, an additional tenured faculty member from outside the Department is required to act as the University Representative. Furthermore, at least four (4) members of the committee, including the Major Professor and the University Representative, must have doctoral directive status.

The Supervisory Committee Form is available from the Student Affairs Office through the Graduate Chemistry Student Blackboard site. The student must meet the deadline for submittal of the Supervisory Committee form in order to register for the following term. **If the Supervisory Committee form is not submitted by the deadline, the student will not be permitted to register for the following term, which could result in a \$100.00 registration fee.**

Responsibilities of the Supervisory Committee

Supervisory Committee responsibilities include the following:

1. Determination and approval of the student's Program of Studies.
2. Approval, along with the GAAC, of any request to drop a class after the 4th day of classes by all non-first year students.

3. Administration of the Oral Comprehensive Exam by the end of the second year in residence (including summer terms) and Doctoral Preliminary Written Candidacy Examination by the end of the third year in residence (including summer terms).
4. Review of the progress of each student every year beginning with the student's second year in graduate studies (see Section III).
5. Function as the examining committee for the defense of the student's dissertation.

The Dean of the Graduate School, the academic dean (Dean of the Colleges of Arts and Sciences) and the Departmental Chair must be given the opportunity to attend examinations held by the Committee as non-voting members. Accordingly, these persons should be appropriately notified of meetings associated with items 3 and 5 above. Under special circumstances the academic dean or the Dean of the Graduate School may appoint a member to the Supervisory Committee to be responsible for the administration of the Preliminary Examinations of a student.

Program of Studies

The Department of Chemistry and Biochemistry **requires** the Supervisory Committee to meet together with the student to determine courses which constitute the Program of Studies of the student. The Program of Studies, signed by all members of the Supervisory Committee, is made available by the Student Affairs Office to the Department faculty for consideration. If no objections are raised within two (2) weeks, the Program is accepted and becomes part of the student's permanent record. If an objection is raised, final approval of the Program of Studies will be determined by action of the faculty at a scheduled faculty meeting. The student is responsible for securing approval of the Program of Studies for submission to the Chemistry Student Affairs Office no later than the last day of classes of the 4th term of enrollment, including summer terms. Earlier submission of the Program of Studies is encouraged. **If the Program of Studies is not submitted by the deadline, the student will not be permitted to register for the following term, which could result in a \$100.00 late registration fee.**

Doctoral Programs

Students will please consult with the Chemistry Student Affairs Office to ensure proper documentation and reporting of progress towards the completion of University requirements.

1. Students must pass a minimum of **18 credit hours** of chemistry-related, classroom-based courses. The average grade for the courses must be a 3.0 or higher. Additional courses may be added by the student's supervisory committee.
2. Students must assemble a **Supervisory Committee**, consistent with Departmental and University guidelines, no later than the end of the third term in the program (including summer).
3. Students shall meet with the Supervisory Committee once a year to review progress and complete required examinations.
4. The Major Professor selection may be made as early as November 7, 2013 but no later than **December 6, 2013**.
5. The CITI RCR Course (see page 5) or its equivalent must be completed no later than **December 6, 2013**. Program of Studies must be completed no later than **December 5, 2014**.

6. Students shall give **one oral presentation** in the thematic seminar series no later than the end of the second year (sixth term in the program, including summer terms – **August 8, 2014**). At the discretion of the student's Major Professor, the presentation shall either be a critical review of a topic in the recent literature or focus on the student's research.
7. Students must pass an **Oral Comprehensive Exam** no later than the end of the second year (sixth term in the program, including summer terms – **August 7, 2015**). The exam is a *research prospectus* that focuses on the student's current knowledge of the field, knowledge of fundamentals, and their future research. The Supervisory Committee administers this exam, which commences with a 30 minute oral presentation by the student. A 1,000-word written summary shall be submitted to the Supervisory Committee two (2) weeks before the exam. Students are allowed no more than two (2) attempts to pass the Oral Comprehensive Exam. The student will enroll in 3 hours of graded research in the semester of his/her Oral Comprehensive Exam as well as the Master's Comprehensive Exam allowing an Master's Coursework to be granted.
8. All students must pass a Doctoral Preliminary **Written Candidacy Exam** no later than the end of the third year (ninth term in the program, including summer terms – **August 6, 2016**). To pass this exam the student must write a proposal on an *original research project*. The document shall follow the ACS-PRF-DNI proposal format and not exceed 1,700 words. Scheduling and topic selection must be coordinated with and approved by the Major Professor. The proposal shall be presented as a 20 minute talk and defended in front of the Supervisory Committee. Students are allowed no more than two (2) attempts to pass the Written Candidacy Exam.
9. Additional coursework, presentations, and/or examinations can be added at the discretion of the Supervisory Committee, as dictated by the student's performance in the program.

Ph.D. candidacy is granted **only** after completion of all the above requirements 1 through 9. All candidacy requirements shall be satisfactorily completed by the end of the third year (ninth term in the program, including summer). Failure to do so can result in automatic termination of doctoral degree-seeking status and redirection into the M.S. track.

10. After reaching Ph.D. candidacy, students must give at least **one (1) additional oral presentation** in our seminar series no later than the end of the twelfth term (fourth year, including summer) in the program. This talk will focus on the student's research results.
11. At least one (1) semester prior to the anticipated defense date, all students must pass an **oral data defense**, to be administered by the student's Supervisory Committee. The Supervisory Committee may waive this requirement if it deems that adequate research data was presented in the student's most recent oral presentation (item 7).
12. Prior to the dissertation defense, the student must have at least **one (1) first-author publication** (published or accepted) in a peer-reviewed research journal.
13. At least two (2) weeks prior to the dissertation defense, the **dissertation** must be submitted to all members of the Supervisory Committee. The dissertation defense shall be delivered by the student as a 30-40 minute oral summary of his/her major research accomplishments.

| Requirement to be completed: | Please list the Term and Year of Completion (Actual or Estimated) |
|--|--|
| Major Professor selected. RCR completion (proof submitted to Shellie Camp) | |
| Formation of Supervisory Committee (form to be submitted to Shellie Camp) | |
| Completion of the minimum 18-hours of chemistry-related, classroom-based coursework | |
| First Thematic Oral Seminar Presentation | |
| Oral Comprehensive Exam (Oral defense of 1,000 word written summary of your research prospectus) | |
| Written Candidacy Exam (Proposal of an original research project) | |
| Second Thematic Oral Seminar Presentation | |
| Oral Data Defense | |
| First Author Publication | |
| Dissertation Defense | |

Length of Time to Complete the Dissertation

The student is considered a candidate for the doctoral degree upon passing the Oral and Written Preliminary Doctoral Examinations. According to University rules, a doctoral candidate must defend his/her dissertation within five (5) calendar years of passing the Preliminary Exams.

The Department of Chemistry and Biochemistry's policy is that a Ph.D. student can be supported as a TA or RA only through the fifth (5th) year in the Departmental graduate program. Any student remaining in the Program beyond the fifteenth term (fifth year) must petition the Department for continuation in the program. The petition is reviewed by the GAAC committee.

To have continued support, either as a TA or an RA, the student must petition the Department by **March 1** of their fourteenth term in residence. If there is a likelihood of needing continued support a petition should be submitted, as petitions received after March 1 will not be considered. The Graduate Advising and Awards Committee then make a recommendation to the Faculty which must be approved by a vote at a Faculty meeting. *Only under the most extraordinary circumstances does the Department consider a petition for support beyond the sixth (6th) year*

Procedure for Requesting Continued Support:

Consistent with the national trend for PhD degrees requiring **5-6 years** to complete, support in **year 6** is typically granted if the student is making reasonable progress towards their PhD, as indicated by the Curriculum Vita and supporting documentation listed below. Granting continuing status in **years 7 or 8** are rare and must have a reasonable and compelling reason – i.e. advisor departs FSU, retires from FSU, or passes away, the student switches research programs in 2nd or third year, CATASTROPHIC instrumental failure, or a well-documented research restart after a failed project or PhD effort.

The student are required to submit a petition to the Graduate Advising and Awards Committee explaining the reason for the delay and requesting a sixth year of support

Students should submit for 6th year petition (likely approval):

- 1) **a letter from the student petitioning continuing status** along with a short progress report in the form of a **Curriculum Vita** as evidence of successful matriculation. The petition should clearly identify the **projected time of completion of the degree**.
- 2) **a letter from the advisor** should be included in support of the student petition.
- 3) **An educational plan for completion of the degree** indicating anticipated timeline signed by supervisory Committee.

Note: All 6th year students will need to have advanced to candidacy to be granted continuation status. Failure to have advanced to candidacy prior to the 6th year will result in immediate termination from the PhD program.

Students should submit for 7th year petition (often rejected):

- 1) **A letter petitioning continuing status**, along with a short progress report in the form of a **Curriculum Vita** and **an abstract of the PhD thesis** as evidence of successful matriculation. If you previously indicated in your letter to the GCAC committee that you intended to complete your degree in year 6, **please indicate what has limited your ability to complete the degree on-time and clearly outline a plan that will result in a PhD in a timely fashion**.
- 2) **A letter indicating the expected timeline to degree completion, which must be endorsed (signed) by all members of the student's PhD Supervisory committee**.
- 3) **A letter from the advisor** with his/her recommendation and expected timeline for completing the degree must be included as well.
- 4) **An educational plan for completion of the degree within 1-semester** signed by supervisory Committee.

Note: All 7th year students will only be appointed on a semester by semester basis and will require an update from supervisory committee prior to GAAC review.

8th year or beyond (typically rejected):

Students will not be supported past year 7 unless an extraordinary situation identified in previous years exist.

Ph.D. Dissertation

After passing the Preliminary Doctoral Written Candidacy Examination, the student must begin to register for dissertation hours, CHM 6980r. The student who has been admitted to candidacy must register for dissertation credits each term in which a substantial amount of work is being done on the dissertation. The minimum number of dissertation hours for completion of a doctoral degree is a twenty-four (24) semester hours.

Unsupported students in their last term who are only writing the dissertation may register for two (2) dissertation hours. University regulations and liability clauses are consistent with such enrollment practices.

Defense of Dissertation

This examination consists of the student's oral presentation and defense of the dissertation administered by the Supervisory Committee. The presentation is generally in the form of a seminar that is open to all students and Faculty; the rest of the exam is closed to students. It is the responsibility of the Major Professor to designate the time and place of the dissertation defense and to preside at the defense. In the event that one of the committee members (not the student and not the university representative) is absent, he or she may attend the defense through video-conferencing. A notice of the defense time and place should be sent to the student's Supervisory Committee and to the Faculty as a whole. The student is also responsible for submitting notification of the time and date of the dissertation defense to the Office of the Graduate School a minimum of two (2) weeks prior to the defense using the online Defense Announcement form.

The preliminary draft of the dissertation must be submitted to the clearance advisor of the Graduate School at least **four (4) weeks** in advance of the defense and to each member of the Supervisory Committee at least **two (2) weeks** before the date of the oral defense.

The examination must be completed no later than the sixth (6th) week during the summer semester. The deadline dates for submission of dissertations each term should be verified with the Office of the Graduate School and with the Chemistry Student Affairs Office. At least two (2) weeks before the date of the examination, the student should submit the Defense Announcement online form to the Graduate School, Room 314 Wescott. A student will be required to repeat the defense of the dissertation if the final ETD is not submitted to the Clearance Advisor in the Graduate School **within 60 days of his/her defense**. At the time of defense, students should be expected to have given the committee a final or close to final version of the dissertation. The student **should only be awarded a PASS (P) for the defense if minimal revisions and corrections** are required. To pass the defense of thesis, the student must receive a unanimous vote of "Pass" by his or her committee. The Major Professor and the Department Chair must sign the final degree clearance form, and payment of outstanding charges is made to the University cashier before requesting the Dean's signature.

V. Requirements for the Thesis M.S. Degree

The thesis-type M.S. program is designed to provide the student advanced work in chemistry and experience in chemical research. The MS thesis may represent a terminal degree, a recommended step towards the PhD from the student's supervisory committee, or an election by the student. This program is appropriate for a student who plans to engage in chemical research or to continue graduate studies for the doctoral degree (although in general an M.S. degree is not required for a Ph.D. degree).

Supervisory Committee

The Supervisory Committee has the responsibility to determine, approve, and sign the student's Program of Studies and to conduct the defense of the thesis and to approve of it.

The Supervisory Committee normally will consist of:

1. Three (3) faculty members chosen by the student. One of these faculty should be the Major Professor, who shall act as Chair of the Master's Supervisory Committee.
2. When the Major Professor is not a member of the Chemistry and Biochemistry Department, an additional faculty member who is a member of the Department is required.

The Supervisory Committee should be formed as soon as possible after a Major Professor has been chosen, but no later than the last day of classes of the third term of enrollment in graduate study, including summer terms. **If the Supervisory Committee form is not submitted by the deadline, the student will not be permitted to register for the following term, which could result in a \$100.00 late registration fee.**

Program of Studies

The Supervisory Committee will meet with the student to determine a suitable program of studies. The Program of Studies, signed by all members of the Supervisory Committee, must be forwarded to the Chemistry Student Affairs Office to become part of the student's permanent record. The Program of Studies should be submitted no later than the last day of classes of the student's 4th term of enrollment. **If the Program of Studies is not submitted by the deadline, the student will not be permitted to register for the following term, which could result in a \$100.00 late registration fee.**

Course Requirements

The University requires that the M.S. Program of Studies include a minimum of thirty (30) semester hours at the 5000 level including a minimum of six (6) hours of thesis credit (CHM5971r). Eighteen (18) of the thirty (30) hours must be taken on a letter grade basis, which are typically completed within 2 years. 4000 level course may be credited towards the thirty (30) hour minimum with Supervisory Committee approval.

GPA

A “B” (3.0) average must be maintained in completed classroom course work. No course with a grade below “C” will be counted toward the eighteen (18) hour requirement. Only 4000 level and above courses, including graded research hours, are used to calculate the GPA.

Thematic Seminar Requirement

Each candidate is required to give at least one (1) **thematic oral presentation** in his/her area of concentration by the end of the sixth (6) term of residency (including summer terms).

Written Component

A student receiving a MS-thesis degree will be required to pass a written component consisting of three questions from their supervisory committee. The response will be reviewed by the committee members and graded as Pass, preliminary Pass, or Fail. A preliminary Pass requires an oral defense of the student response. To pass the written requirement a Pass of two (2) out of three (3) is required.

Thesis/ Length of Time to Complete the Thesis

The student prepares the thesis in consultation with the Major Professor. During the period in which the thesis research is performed, the student should register for at least six (6) hours of thesis credit, CHM 5971. The student is required to register for a minimum of two (2) hours of thesis credit, CHM 5971, during his/her final semester of enrollment.

The University requirement is that the work for a Master’s degree be completed within seven (7) years from the time the student first registers for graduate credit. In Chemistry an M.S. student may be supported as a TA or as an RA for a period of three (3) years from the time the student enters the graduate program. To be supported beyond three (3) years, the student must petition the Faculty:

1. The student should submit a petition to the Graduate Advising and Awards Committee, explaining the reason for the delay and requesting a fourth year of support.
2. The student’s Major Professor must write a letter justifying the request.
3. The student’s supervisory committee must write a memorandum concerning the request. The vote of the supervisory committee members in favor and against the request must be indicated in this memorandum.

The Graduate Advising and Awards Committee must then make a recommendation to the Faculty which must be approved by a vote at a Faculty meeting. Only under the most extraordinary circumstances does the Department consider a petition for support beyond the fourth year.

Defense of Thesis

This oral examination consists of a 30 minute Oral Presentation of Research, a 30 minute Oral Defense of the Thesis (Question and Answer session), and an Oral Defense of Basic Chemistry Knowledge of their fields (consisting of 30 minutes or more) before the student’s Supervisory Committee. It is the responsibility of the Major Professor to designate the time and place of the thesis defense and to preside at the defense. In the event that one of the committee members (not the student and not the university representative) is absent, he or she may attend the defense through video-conferencing. A notice of the defense time and place should also be sent to all

members of the student's Program Faculty and the entire Departmental faculty, as well as to the Office of the Graduate School with a copy of the thesis. Within the Department, the student must submit to each member of the Committee a copy of the thesis at least **two (2) weeks** before the defense is held. The signed Manuscript Signature form and a copy of the signed title page with original signatures should be turned in to the Chemistry Student Affairs Office immediately after the defense. Another original of the signed title page must be submitted to the Office of the Graduate School located in 314 Wescott Building. To pass the defense of thesis, the student must receive a unanimous vote of "Pass" by his or her committee.

The deadline for submission of theses to the Graduate School can be found online on Blackboard for each term. The student should verify this date with the Chemistry Student Affairs Office. A student will be required to repeat the defense of the thesis if the final approved ETD is not submitted to the Clearance Advisor in the Graduate School **within 60 days of his/her defense**. At the time of the defense, students should be expected to have given the committee a final or close to final version of the thesis. The student **should only be awarded a PASS (P) for the defense if minimal revisions and corrections are required**. The Major Professor and the Department Chair must sign the final degree clearance form, and payment for any outstanding charges must be made to the University cashier before requesting the Dean's signature.

Readmission to Ph.D. Policy for M.S. Thesis Students

For those students who have been terminated from the program due to receipt of an unsatisfactory performance rating from their supervisory committee, readmission to the program is forbidden.

For those students that have been recommended to defend an MS thesis by their supervisory committee, completion of the M.S. Thesis does NOT automatically guarantee readmission as a Ph.D. degree seeking student.

For those students electing to take a MS thesis as an intermediate degree on the way to the PhD without a Reason for Concern recommendation, the student is automatically continued in the PhD program.

The student will be recommended for readmission by vote from the following:

1. His/her Supervisory Committee
2. Approval by GAAC

The M.S. Thesis will substitute for the written part (cumulative, comprehensive) of the Ph.D. candidacy; however, it will not substitute for the oral presentations or the oral component of the Ph.D. candidacy for the student.

The M.S. thesis will supplant the 3.0 coursework GPA of the Department but does not correct the 3.0 requirement of the University.

The M.S. coursework will count for the required 18h of graded coursework in the Ph.D. program.

VI. Requirements for the Coursework M.S. Degree

1. The University requires that for a Coursework M.S. Degree a student must complete a minimum of **32 semester hours of coursework, of which at least 21 must be taken on a letter-grade basis (A, B, C)**. These courses are normally at the level of 5000 or above, but some courses numbered at the 4000 level may be permitted with the approval of the student's Supervisory Committee. The University also requires that the work for the M.S. degree be completed within seven (7) years from the time the student first registers for graduate credit. Normal coursework completion for a MS coursework is the fifth semester of residence.
2. The student must take at least **14 hours of Chemical Research** under the supervision of the Research Supervisor that shall lead to a written report or an oral report presented in a group setting. The research for this report may be based on either laboratory or library work
3. The student must choose a thematic area of concentration by taking at least 12 hours of formal coursework (i.e., not including seminars, research, or DIS courses) in one (1) of the three (3) thematic areas: Chemistry of Health, Chemistry of Energy and Environment, and Advanced Measurements in Chemistry. In special cases this total may include courses from more than one (1) thematic area if the student's Supervisory Committee (see below) and the Graduate Advising and Awards Committee approve. Some advanced courses (4000 level and above) taken on a letter-grade basis from other Departments may be counted towards the 21 hours required if approved by the student's Supervisory Committee.
4. The student must **maintain a 3.0** grade point average in all classroom courses taken on a letter-grade basis.
5. Each candidate is required to give at least one **Thematic oral presentation** in his/her area of concentration unless waived by the Supervisory Committee with the approval of GAAC.
6. Each candidate is required to teach a minimum of one (1) semester.
7. **Each candidate must pass the Written Component** consisting of three questions from their supervisory committee. The response will be reviewed by the committee members and graded as Pass, preliminary Pass, or Fail. A preliminary Pass requires an oral defense of the student response. To pass the written requirement a pass of three (3) out of (3) is required.

Supervisory Committee

The Supervisory Committee **shall consist of three (3) members**. The GAAC will assemble the Supervisory Committee in consultation with the student. Two members will consist of the GAAC chair and the Research Supervisor.

The Supervisory Committee has the responsibility of approving the student's Program of Studies (if the Graduate Advising and Awards Committee have not already done so) and of ensuring that all the above requirements are met.

Terminal Degree

A coursework Master's Degree in Chemistry and Biochemistry is a terminal degree. The degree may be recommended following the first year by the GAAC committee or subsequent years by the Student's supervisory Committee. *A student that has been placed in the MS coursework track is not eligible for TA support from the department in the terms following the decision.*

The MS coursework degree may be an appropriate degree for the following:

1. State workers with B.S. in Chemistry who wish to advance their careers.
2. Students who are funded via industrial, military, or governmental agencies specifically for a MS coursework degree. These students will not receive financial support from the department.
3. Students who want to teach Chemistry at the high school or, possibly, the community college level.
4. Ph.D. program students who fail the Oral Comprehensive Exam or who choose to leave the program because of personal reasons.
5. Others who can only attend graduate school part-time.

Students should be made aware of the fact that some industrial interviewers regard the coursework M.S. degree as only marginally better than a B.S. in Chemistry. Students should also recognize that a thesis M.S. is the more appropriate stepping-stone leading to the Ph.D. Except under the most unusual circumstances, the Chemistry and Biochemistry Department regards the coursework M.S. as a terminal degree.

Appendix A

Required Departmental Forms

All Chemistry and Biochemistry Department required forms can be found online through the Chemistry Graduate Students Blackboard site under Organizations. These include, in order of submission to the Student Affairs Office:

Major Professor Selection form (use the form for your chosen program area)

Doctoral (Ph.D.) or Master of Science (M.S.) Supervisory Committee forms (use the correct forms for the respective degree level)

Doctoral (Ph.D.) or Master of Science (M.S.) Thesis or Master of Science (M.S.) Coursework Program of Study form (use the correct form for the respective degree level)

Doctoral (Ph.D.) Oral Comprehensive Exam form

Doctoral (Ph.D.) Written Preliminary Candidacy Exam form

Doctoral (Ph.D.) Defense of Dissertation form

Master of Science (M.S.) Oral Defense of Thesis form

Copies of these forms are included in this handbook; however, it is the student's responsibility to locate the forms online and electronically fill out as much of the form as possible before printing to gather signatures and submitting to the Student Affairs Office. Handwritten forms will not be accepted.