

# Graduate Student Handbook

# University of Florida Department of Chemistry Graduate Student Handbook

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#### 1. INTRODUCTION

This handbook is a compilation of policies and procedures of the chemistry graduate program at the University of Florida. It is meant to serve as a guide to help students as you make your way through the program. Note that this handbook does not cover all policies of the <u>University of Florida Graduate School</u>. Those policies are compiled in the <u>University of Florida Graduate Catalog</u> which is available at the Graduate School web site. You must follow both the chemistry department guidelines and the graduate school catalog as you pursue your advanced chemistry degree. It is also critically important for you to confirm division requirements with the division offices.

Usually, the first point of contact for students in the graduate program is the academic assistant listed below. The academic assistant will handle the processing of all forms relating to the program and can answer most questions about program policies and procedures. Students should feel free to contact the academic assistant or the Director of Graduate Studies regarding questions or other issues relevant to the program.

Note that this handbook summarizes the policies and procedures that were in effect on the date 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 may be asked to work toward a degree under the new policies instead of the policies that were in effect when the student was admitted.

Dr. Leslie Murray, Directors of Graduate Studies Lori Clark, Academic Assistant, III

#### 2. PROFICIENCY REQUIREMENTS

#### 2.1. Chemistry Proficiency/Placement Examinations

Entering students who plan to qualify in physical chemistry will take a placement examination during orientation. The exam is strictly diagnostic and will serve to illuminate the student's strengths and weaknesses as they relate to the fundamental core concepts in these fields of specialization. Your performance on the exam will help to guide your approach to your first Physical Chemistry core courses.

#### 2.2. English Language Speaking Proficiency

Newly admitted graduate students who are not native English speakers are required by Florida state law to present a score of 23 or higher on the speaking portion of the TOEFL or to pass the UF SPEAK test (score of 45 or higher) at the University of Florida. A student must pass this exam before they can be appointed as a teaching assistant. If you are conditionally enrolled in your first semester without the required TOEFL score, it will be expected that you will pass the exam before the end of your first semester of study. If a student does not pass the exam by the end of the first semester, then that student will not receive any further departmental support. Obtaining a score of 55 or 60 on the UF Speak Test or a 28 or higher on the TOEFL speak test will exempt you from taking English courses. Please visit the English Language Institute website for more information.

#### 3. ADVISEMENT

#### 3.1. Initial advisement

Entering students will be advised by a member of the graduate faculty during orientation. The main purpose of the initial advisement session is to select coursework for the first semester of study. Students should come to the advisement session prepared to discuss what courses they would like to take in the first semester. Advisement for subsequent semesters will usually be undertaken with the research advisor or in consultation with the graduate coordinator.

# 3.2. Registration Guidelines

Credit Requirements. Student supported by teaching or research assistantships must register for 9 credits in the fall and spring semester, unless special circumstances dictate otherwise (e.g., early departure, fellowship requirements). Registration guidelines for the summer semester will be distributed by the Graduate Office before the start of the term. Each student is expected to pay careful attention to registration instructions, including timelines and deadlines. Students are encouraged to consult with their advisor(s) and/or the graduate office should questions arise. Early registration is strongly recommended because missing the deadline (late registration) will result in a \$100 late fee.

**Drop-Add Procedure.** The normal drop-add period only extends about one week into the semester and less for the summer term. Changes in registration after the normal drop-add period must have exceptional justification and require Graduate School, College and/or University approval, which is given only based on strong justification. By default, the tuition for any courses which are dropped after the formal drop-add period will be billed to the student. Please note that, if you change your registration without consulting the graduate coordinator's office, you will be responsible for any fees incurred.

# 3.3. Selection of a Research Advisor

Your selection of a research advisor, who will serve as the chair of your supervisory committee, is a very important decision. It will strongly affect the course of your graduate studies and your professional life. Each research group in the department is unique, and it is to your benefit to be as open-minded as possible at the start of your program of study as you consider your interests and options. The following paragraphs specify the procedures followed at the University of Florida Chemistry Department for student selection of a major research advisor.

At the beginning of the fall semester every faculty member will present a 20-minute talk about their research. Each new first-year student is required to attend all talks. These presentations are intended to introduce students to as many faculty as possible in the most efficient manner. During your first semester, each first-year student is required to interview at least four faculty members, independent of divisional affiliation. All four interviews are required even for those students who already think they know which faculty member they wish to select as their first choice for an advisor. The interviews are required to ensure that each student has an opportunity to get to know about

several different research projects and to get to know the faculty. It is also important for the selection of the members of your graduate committee.

Students beginning study in the spring semester will receive individual orientation and may begin their faculty interviews as soon as they are enrolled. Spring students should plan to choose an advisor by February 28.

After the faculty interviews are completed, each student will submit their top 3 ranked choices for advisor to the graduate coordinator by October 15. Advisor assignments will be issued before the first week of November, after all faculty have agreed to their new students. This process should be completed by early November for students entering in the fall and by early March for students entering in the spring. Any faculty member may direct a student in any field of specialization by mutual agreement. There is no requirement regarding the choice of an advisor and the area in which a student qualifies. You should consult your division and advisor for any special considerations regarding specific requirements for the lab you are joining, your graduate program, and the composition of your Ph.D. committee.

# 3.4 Selection of a Supervisory Committee

By March 1 (July 1 for those beginning the program in the spring) of your first year, a Supervisory Committee must be selected (chosen with the help and guidance of your research advisor). Rules governing committee selection and composition depend on the degree path (Ph.D. or thesis M.S.), with those details given below.

# 3.4.1 Selection of a Ph.D. Supervisory Committee

The Ph.D. supervisory committee form can be found <u>here</u> or in the graduate resource links on the Chemistry website.

A Ph.D. Supervisory Committee must be comprised of at least four members of whom:

- a) two members must be from the student's qualifying division (in-division members) and preferably research active,
- b) one member must be selected from a division other than that in which the student is qualifying (out-of-division member), and
- c) one member must be from a department other than Chemistry (external member).

This external member may be from any program in the university and not required to have expertise in the student's research area.

Additional members beyond these four may be added to the thesis committee at the discretion of the advisor. The committee must meet the criteria described above for a committee of four, before further members (in-division, out-of-division, or external) can be added.

Regardless of supervisory committee size, an oral qualifying exam or Ph.D. defense cannot be held with fewer than four members in attendance. The research advisor and student must attend these events in-person, but the remaining committee members can participate in real time using video or other acceptable forms of telecommunication.

# 3.4.2 Selection of an M.S. Supervisory Committee

For the M.S. degree, the committee consists of three faculty members. If a student wishes to have a formal minor outside the Chemistry Department, one member of the supervisory committee must be a representative of the outside department. No committee is required for the non-thesis M.S.

#### 3.5. Substitutions of Committee Members During Examinations

If a supervisory committee member, other than the research advisor or external, cannot be present at the student's oral qualifying examination or final defense, a graduate faculty member in the same academic area may substitute for the absent committee member. The substitute should sign the examination form noting the name of the absent member. No substitutions may be made for the research advisor or the external member of the committee.

Should a student require a substitute during the final exam, the substitute should not sign the signature page of the thesis or dissertation but **only sign the examination form**. The original committee member must sign the thesis or dissertation pages.

#### 4. PROGRAMS OF STUDY

#### 4.1. Overview

The University of Florida chemistry department offers programs of study leading to the M.S. (thesis and non-thesis), Master of Science in Teaching (M.S.T.), and Ph.D. degrees. Each degree program has specific requirements in terms of coursework, student seminars, qualifying examinations (Ph.D. only) and a thesis (M.S.) or dissertation (Ph.D.) that presents the results of an original research project. We offer a direct Ph.D. track without an intermediate M.S. degree. However, for those students who wish to earn an M.S., the conventional M.S.—Ph.D. track is available.

The following sections summarize chemistry department policies as they relate to the programs of study for the M.S. (thesis and non-thesis), M.S.T. and Ph.D. degrees. The University of Florida Graduate School also has policies that relate to programs of study for these degrees, which are summarized in the <u>Graduate Catalog</u>. Students should always confirm detailed requirements with the qualifying division program assistant.

#### 4.2. Student Evaluations

Graduate student progress is monitored by the graduate coordinator every semester. Each student will be notified in writing at the conclusion of every semester if they are deficient in any basic standard of performance. The faculty will carry out a formal evaluation of the progress of all chemistry graduate students at annual intervals. For first year students, good academic standing is defined by the chemistry department as a minimum GPA of 3.25 in all graded chemistry course work (excluding teaching grades). In addition, all first-year students are evaluated with respect to teaching performance, progress in research, and work ethic. This evaluation will take place in September of the second year. Students who are found deficient in this review may be asked to leave the program. Each

first and second year graduate student will be notified in writing of their status, as determined by the faculty reviews.

Beyond the first year, each graduate student's progress will be evaluated on grades, research, and teaching. This evaluation will be conducted by the student's committee, which will recommend to the faculty (by the middle of the student's sixth semester) that the student continue towards the Ph.D.; work towards an M.S.; or be terminated. If the student is asked to complete a terminal M.S. degree, departmental support will end upon completion of the student's seventh semester.

IMPORTANT: The graduate school requires a minimum GPA of 3.00 for a student to receive an assistantship and tuition waiver. One cannot receive a graduate degree at the University of Florida with a GPA below 3.00.

Additional student evaluations are also carried out annually by several of the divisions. You will be informed by the division head of any deficiencies which are noted. The nature of this evaluation process will vary from division to division.

Independent of these department-driven evaluations, students are required to complete an <u>individual</u> <u>development plan (or IDP)</u> annually, which is a student self-assessment of progress and development and required by the Graduate School. Upon completing the IDP, the research advisor is expected to meet with the student to discuss the completed plan, after which the advisor signs the IDP; *the IDP is the work of the student and should not be edited by the advisor*. This IDP meeting is to focus on how the advisor and student can work to address the student's identified areas in which they desire greater development.

#### 4.3. Department Course Requirements

**M.S. coursework.** The minimum course work required for a master's degree with thesis is 30 credits including up to 6 credits of the research course, CHM 6971. Students seeking a master's degree with thesis must register for a total of six credit hours in CHM 6971 and must be registered for CHM 6971 in their final semester. No accumulated credits of CHM 7979 will be counted toward the M.S. degree.

At least half of the required credits, excluding CHM 6971, must be in a field of study designated as the major.

Students entering the program with a previous M.S. degree are eligible for transfer of credit. A maximum of 15 transfer credits is allowed. These can include no more than 9 credits from institution/s approved by UF, with the balance obtained from postbaccalaureate work at the University of Florida.

**M.S.T. coursework.** The M.S.T. degree requires 36 total hours of credit distributed as follows.

18 hours of CHM at the graduate level, excluding 6943, 6971, 7979, 7980. This can include 6905 (Advanced Individual Problems), 6910 (Supervised Master's Research) and seminars.

6 hours of CHM 6943, Internship in College Teaching

# 9 hours in the College of Education

Plus 3 hours of other course work, 3000, 4000 or graduate level in any area besides chemistry. A chemistry graduate course may be substituted. Variations in these course requirements are possible with the approval of the graduate coordinator or faculty member serving as advisor for M.S.T. degree candidates.

**Ph.D. coursework.** A minimum of 90 credits beyond the bachelor's degree is required for the Ph.D. degree in all fields. All master's degrees counted as part of the minimum must have been earned in the last seven years. Six courses are required. Please refer to section 4.4.

No more than 30 semester credits of a master's degree from another institution will be transferred to a doctoral program. All courses beyond the master's degree taken at another university, to be applied to the Ph.D. degree, must be taken at an institution offering the doctoral degree and must be approved for graduate credit by the Graduate School of the University of Florida. All courses to be transferred must be letter graded with a grade of B or better and must be demonstrated to relate directly to the degree being sought. The total number of credits (including 30 for a prior master's degree) that may be transferred cannot exceed 45, and in all cases the student must complete the Ph.D. qualifying examination at the University of Florida. In addition, any prior graduate-level credits earned at the University of Florida (e.g., a master's degree in the same or a different discipline) may be transferred into the doctoral program at the discretion of the supervisory committee and the graduate coordinator and by petition to the Graduate School. In such cases, it is essential that the petition demonstrate the relevance of the prior course work to the degree presently being sought. If a student holds a master's degree in a discipline different from chemistry, the master's work will not be counted in the program unless the department petitions the Dean of the Graduate School.

# 4.4. Chemistry Courses

The chemistry department has specific coursework requirements for graduate students in addition to those given above. As part of the coursework required for the graduate degree, each chemistry graduate student (M.S. and Ph.D.) is required to complete 18 credits of 5000-6000 level core courses with no less than 9 credit hours in the qualifying division and at least 9 credit hours of elective chemistry courses. To remain in good standing, a chemistry student must maintain a minimum 3.25 GPA in all coursework.

Students will normally be expected to complete the course sequence within the first five semesters of study. For entering Ph.D. students who have already earned an M.S. degree in Chemistry or a closely related discipline, coursework from the M.S. may be used to satisfy core course requirements for the Ph.D. (colloquially referred to as waiving a course), subject to approval by the advisor and graduate coordinator. An approved <u>course requirement waiver form</u> must be submitted to the Graduate Office (available on the department website). **Waiving a course does not transfer credit to a UF transcript** but only satisfies the departmental requirement.

Course requirements are divided into core courses specified by each division and elective courses as noted below

# Analytical

CORE COURSES: THREE REQUIRED

Analytical students must take three analytical courses selected from

CHM 6153 (Electrochemistry) CHM 6154 (Separations) CHM 6155 (Spectroscopy) CHM 6165 (Chemometrics)

CHM 6159 (Mass Spectrometry)

One analytical special topics course may be counted as a core course.

# **Chemical Biology**

CORE COURSES: THREE REQUIRED

All Chemical Biology students are required to take CHM 5305 (Chemistry of Biological Molecules) and any TWO of the following:

CHM 6301 (Introduction to Enzyme Mechanisms)

CHM 6302 (Chemistry and Biology of Nucleic Acids)

CHM 6303 (Methods in Computational Biochemistry)

CHM 6304 (Special Topics in Biochemical Mechanisms)

CHM 6306 (Special topics in Chemical Biology)

CHM 6036 (Chemical Biology)

PHA 6435 (Biosynthetic Logic of Medicinal Natural Products)

# Inorganic

CORE COURSES: THREE REQUIRED

All inorganic students must take three inorganic courses selected from:

CHM 6620 (Advanced Inorganic Chemistry I)

CHM 6621 (Advanced Inorganic Chemistry II)

CHM 6626 (Application of Physical Methods in Inorganic Chemistry)

CHM 6628 (Chemistry of Solid Materials)

CHM 6670 (Inorganic biochemistry)

CHM 6251 (Organometallic Chemistry)

#### **Organic**

CORE COURSES: THREE REQUIRED

All organic students are required to take:

CHM 5224 (Basic Principles for Organic Chemistry)

CHM 6225 (Advanced Principles of Organic Chemistry)

CHM 6226 (Advanced Synthetic Organic Chemistry)

# **Physical**

CORE COURSES: THREE REQUIRED

Physical Chemistry students are required to take

CHM 6470 (Chemical Bonding I)

Plus one from CHM 6461 (Statistical Thermodynamics) or CHM 6586 (Computational Chemistry)

And one from CHM 6490 (Molecular Spectroscopy) or CHM 6580 (Advanced NMR)

#### **Elective Courses**

Any three graduate level courses (5000 level and above) offered by the department, and excluding those listed as divisional seminars, colloquium, writing (< 2 credits, e.g., proposal or scientific), teaching, thesis, or research. Alternatively, out-of-department graduate courses can be considered as electives, but the student must submit written approval from their research advisor to the Graduate Office to register for any out-of-department graduate course (see below).

#### 4.5. Non-Chemistry Courses

In most cases, the classes taken to satisfy the coursework requirements for a graduate chemistry degree will be those offered by the chemistry department. Credit received for graduate-level courses taught by other departments may also be counted toward a chemistry graduate degree, provided those classes involve subject matter that is relevant to the student's degree program, and the student has received written approval from their research advisor and the graduate coordinator prior to registering for the course. Tuition waivers will not cover non-chemistry courses that are not approved in advance.

#### 4.6. Divisional and Departmental Seminars

All chemistry graduate students must register for one credit hour of departmental seminar (CHM 6935) during the first two semesters of graduate studies. Beginning your second year, each student must register for one credit hour of divisional seminar. Please follow the guidelines set by your qualifying division. Attendance at divisional seminars is always encouraged during the first year and required by some divisions. Seminars throughout the department are an important part of a student's graduate education. Fully engaged graduate students will often attend seminars in any division when the topics are of interest. Most divisions have detailed policies regarding student seminar presentations. Consult with the division program assistants for current details.

#### **Analytical**

Ph.D. candidates must present two seminars, one on a literature topic and one on their research. An additional seminar may be required based on the review of the analytical division faculty. All analytical graduate students beyond their first semester must register for Analytical Seminar, CHM 6190 every semester until graduation. First year students are encouraged to attend in their first semester and are required to attend in their second semester and thereafter. All students are graded, either on the quality of the presentation or on attendance. For attendance, the grading scale is:

- A 0-1 unexcused absences
- B 2 unexcused absences
- C 3 unexcused absences
- D 4 unexcused absences
- E 5 or more unexcused absences

To request approval of an excused absence, please contact the faculty member in charge of seminar in advance of the absence. The first 40-minute seminar (literature) must be given in the fall or spring semester of their second year. Students not complying with this deadline may be required to present an additional literature seminar prior to graduation. The 40-minute literature seminar must not be on a topic which the student's research group has worked on during the past 5 years and must not be a critical review of a broad research area. The topic for the literature seminar must be approved by both the research advisor and the faculty member in charge of CHM 6190 for the respective semester. The second seminar must be on the Ph.D. dissertation research. It must include substantial research results (or it will have to be repeated); thus, it will typically be in the final semester; indeed, the final Ph.D. defense may be scheduled to coincide with the seminar.

An M.S. candidate must give one 40-minute literature seminar, as defined above, before the M.S. defense. If the student continues for a Ph.D., they must then present the research seminar as discussed above.

# **Chemical Biology**

All students qualifying in the Chemical Biology division must register for CHM 6037 each semester beyond the first year. Attendance of all division seminars is required for CHM 6037 and strongly recommended during the first year. In the Fall of the third year of graduate study, students will present a 20-minute seminar in the division seminar series on the topic of the student's research toward a Ph.D.

#### Inorganic

Beginning in the third year, each student is required to present a seminar each year during the Fall or Spring semester. The first required seminar will consist of an introduction that frames the project appropriately followed by research results obtained to date. The seminar will be 18 minutes in length followed by 2 minutes of questions. In the fourth year the seminar will be 25 minutes in length followed by 5 minutes of questions. In the fifth year the student will present a full seminar on their research that is 40 minutes in length followed by 10 minutes of questions. The student is expected to provide an informative introduction that outlines the scope of the project and may relate current literature where appropriate, followed by significant research results. Members of the student's supervisory committee should be notified with a memorandum by the student of the date and time of the seminar. Helpful information on the presentation of seminars can be obtained from the CHM 6690 instructor or the divisional office. Each student will register for and attend CHM 6690 each semester.

# **Organic**

Organic seminars come in two flavors, those offered by graduate students and those given by external (invited) speakers. The former give graduate students the opportunity to practice public speaking, to learn their research area in-depth (for literature seminars), or to present research results. The latter expose students to the exciting science that is going on elsewhere in the world. Students qualifying in the Organic Division must adhere to the following seminar guidelines.

Thursday seminar attendance is *mandatory* (attendance will be taken) for all graduate students qualifying in the Organic Division for years 1–4, unless prevented by teaching duties. Letter grades will only be given for students in years 2–4. Students will register for CHM6390 and grades will be based on the quality of the presentation, for those presenting, or on attendance for others. The attendance grading scale is A>80%, B: 60-80%, C: 40-59%, D: 20-39%, E: <19%. Detailed guidelines regarding the presentation requirements are available in the organic division office.

#### **Physical**

Physical Chemistry students must register for the divisional seminar, CHM 6590, every semester, starting in their second semester until they graduate. First year students are strongly encouraged to register for the seminar in their first semester if they are within the 9-credit limit. If a student is not able to register for CHM 6590 within the 9-credit hour registration limit, they are expected to attend seminars when it fits within their schedule. Students are required to present a total of two half-hour length seminars during their tenure; suggested times are in the spring semester of their second year and in the fall semester of their fourth year. Seminars given in a student's second year semesters are intended to provide an introduction and motivation for their dissertation project, including any research results obtained to date. Seminars given in the student's fourth year are expected to provide an introduction that outlines the scope/significance of other project and may relate to current literature where appropriate, followed by their research results.

Please block out the physical chemistry seminar course time on your departmental schedule to aid in avoiding a teaching assignment that overlaps with the seminar.

Proposed Schedule for Student presentations:

Semester	Fall	Spring
Student Year	4th year	2nd year

#### 4.7. The Qualifying Exams; Becoming a Ph.D. Candidate

A major step on the way to earning a Ph.D. degree is the qualifying exam. This exam marks a transition from the more formal phase of the degree program involving coursework and the beginnings of a research project to the more informal but in many ways more important phase involving intensive pursuit of an independent research project, eventually leading to a dissertation. There is a written examination that takes place prior to the oral qualifying exam.

# 4.7.1. Written Candidacy Examination

The written candidacy examination seeks to assess broad knowledge on a specified topic. The exam consists of a written document using the <u>Written Candidacy Examination - Template</u>. The topic should be a contemporary research theme on the cutting edge of the student's area of chemistry, broadly defined. The extent to which the topic aligns with the student's current research is dependent on the Division and/or advisor preferences (see below). Please consult the <u>Written Candidacy Examination - Template</u> to aid in topic selection.

#### **Important Information:**

- 1. Sitting the oral qualifying exam **requires** successful completion of the written candidacy exam.
- 2. Missing deadlines and/or not following exam instructions will result in a failing grade.

#### **Timetable and Tasks:**

- 1. It is recommended that the written candidacy examination be completed during the 5<sup>th</sup> semester (e.g., the spring semester of the second year for students who traditionally start in fall).
- 2. The student must identify and gain approval for the topic of the written candidacy examination from their research advisor and then by at least two additional members of the supervisory committee no later than 3 months before the proposed oral qualifying examination date. The request for topic approval must be made electronically using the Written Candidacy Examination Topic Approval form. Additional division-specific criteria may apply (see below).
- 3. Once approved, the written exam must conform to the directions in the Written Candidacy Examination Template with supplemental guidance provided by the Division in which the student qualifies (see below). The completed written candidacy exam must be distributed electronically to all members of the supervisory committee no later than 2 months before the proposed oral qualifying examination date.
- 4. The written qualifying examination will be graded pass/fail by the supervisory committee based on the Written Candidacy Examination Graded Rubric. Each committee member will individually assign a grade, with a pass by a committee member requiring that the examination meets ≥50% passing expectations of the criteria in the rubric. All individual committee member grades will then be considered in aggregate; if ≥ 50% of individual grades assigned by committee members are passes, then a final grade of pass for the written candidacy examination will be awarded. Otherwise, the final grade assigned will be a fail or an unsatisfactory. The committee can deliberate by the medium of their choosing (e.g., video conferencing, email, or in-person).
- 5. The student will be **informed of the assigned grade one (1) month prior to the proposed oral qualifying exam date.** Students with an unsatisfactory performance on the written candidacy examination will be extended a second and final opportunity to pass. A **second attempt is due within one (1) semester of the originally proposed oral qualifying exam date**.
- 6. Students may be asked by their supervisory committee to field questions, discuss, and defend the written candidacy examination during the oral qualifying examination period.

7. Students who do not earn a pass on the written candidacy examination after two attempts cannot continue the Ph.D. track but may be able to complete an M.S. degree. If exceptional circumstances are thought to warrant special consideration for a third and final attempt, a formal written petition by the student must be submitted to and then approved by the Director of Graduate Studies.

#### 4.7.2. Oral Qualifying Examination

The student must take the oral qualifying exam prior to completing seven semesters of continuous enrollment in graduate study, which corresponds to the Fall semester of the third year for a student starting in the program in a Fall term.

# Requesting an extension or delay to sitting the qualifying exam:

Although the advisor should have substantial say on when a student qualifies, including a request to postpone the exam past the deadline, an extension will require:

- i. A stated rationale<sup>a</sup> for the extension<sup>b</sup>,
- ii. Approval of that extension from the student, advisor, and the Division Head<sup>c</sup>, and
- iii. Final approval from the Director of Graduate Studies
- <sup>a</sup> The rationale and all approvals will be documented in the student's file with the Graduate Office.
- <sup>b</sup> If granted, extension requests *not* related to health or group changes may result in loss of TA support until the qualifying exam is completed and the student will be not in good standing until the exam is taken.
- <sup>c</sup> If the student's advisor is a Division Head, then a request will need approval from the student, advisor, and an in-division member of the thesis committee.

#### **Procedures:**

Oral qualifying examinations vary by division, with the procedures that have been adopted by each division in the department presented below. Students are to follow the procedures outlined by their qualifying division. Most divisions have detailed guidelines regarding formats, content and style. Note that there are specific rules regarding substitutions of committee members during the oral exams (see the <u>Supervisory Committee section</u>).

The student is responsible for arranging a suitable meeting time for holding their oral qualifying exam. Students are advised to use freely available online meeting planning applications (such as when2meet.com) to determine mutually agreeable times for committee members for the examination. Where appropriate, polls for availability should use time blocks that match the class meeting times for the university.

# Division Specific Written Candidacy and/or Oral Qualifying Examination procedures:

#### **Analytical**

You should contact the divisional office regarding specific proposals and formatting rules or other requirements that might apply.

#### Ph.D. Written Candidacy Examination

It is recommended that the written candidacy examination be completed in the fourth or fifth semester (e.g., the fall or spring semester of the second year for students who start in fall). The written candidacy exam must be successfully passed no later than 2 months before the oral qualifying exam.

The topic should be related to the student's current research, depending on the advisor's preferences. The topic will be identified by the students and must first be approved by the Ph.D. committee no later than 3 months before the oral qualifying examination. The completed written candidacy examination must be distributed electronically to all members of the dissertation committee no later than 2 months before the oral qualifying examination. Missing deadlines and/or not following the exam instructions will result in a failing grade.

#### Ph.D. ORAL QUALIFYING EXAMINATION

Ph.D. candidates are required to take the oral qualifying examination in their fifth or sixth semester or first half of their seventh semester after entering graduate school. Any exceptions must be approved by the division head.

The objective of this examination is to provide the student with the experience of consulting the literature and discussing and/or coming up with a viable research idea, considering the tasks and approach needed to bring this idea to a fruitful conclusion, and preparation of a proposal suitable for submission to a funding agency within the guidelines of a specified format.

The examination consists of a research proposal, a 15–20-minute oral presentation based on the proposal, and an oral examination by the supervisory committee. Questions asked will be based primarily on the proposal and topics related to it. The student should ask a supervisory committee member other than her or his thesis director to chair the oral qualifying examination. The student must also bring to the examination the Admission to Candidacy form. Details on the subject and format of the oral qualifying examination can be found in the Analytical Division Graduate Student Requirements document.

#### **Chemical Biology**

#### WRITTEN CANDIDACY EXAMINATION

The written examination should be completed in the fourth or fifth semester (fall or spring semester of the candidate's second year).

#### ORAL QUALIFYING EXAMINATION

The oral defense of the research proposal typically includes a brief (20-30 minute) slide presentation that describes the research plan, followed by an examination by the committee members. The slide presentation should concisely outline the significance, specific aims, and any key preliminary data for the project. Questions from the committee are primarily related to the student's research and

objectives but may also include any area that the committee wishes to explore is allowed.

# Inorganic

#### ORAL QUALIFYING EXAM

The student must provide their supervisory committee with their research report (typed, double spaced) at least seven (7) days prior to the exam date. The purpose of the Oral Qualifying Exam is to evaluate the student's chemistry background and research skills to determine if the student will be able to complete a Ph.D. dissertation. The exam consists of a research report and an oral defense.

The cover of the research report must list all members of the student's supervisory committee.

The research report consists of progress by the student in his/her research. The research report section will summarize the background of the project, describe the procedures used, the results obtained by the student, and discussion of those results. The format of the report should adhere to the American Chemical Society style recommendations for manuscripts submitted to ACS journals (see the "ACS Style Guide"). In the oral defense portion of the exam, the student will give a brief presentation on the research report. The oral examination will involve questions from the committee to determine the competence of the student in research and in the background needed to progress towards the Ph.D. In addition to defense of the research report, students must also be prepared to answer questions based on their written candidacy examination.

#### **Organic**

#### ORAL QUALIFYING EXAMINATION

#### OBJECTIVES AND PHILOSOPHY

The oral qualifying examination may be taken earlier than the  $7^{th}$  semester provided that the student (a) is in good academic standing (GPA > 3.0) and (b) has successfully completed the written candidacy examination. In cases where the oral must be scheduled later than the  $7^{th}$  semester and a *student's petition for an extension is denied, the student will be eligible only for an M.S. degree*.

The qualifying examination will consist of two parts: (a) an original research proposal and (b) an up-to-date research progress report.

The objectives of the oral qualifying examination include:

- 1. To assess the student's progress on his/her independent research project.
- 2. To evaluate the student's ability to prepare and defend an independent research proposal in the area of organic chemistry.
- 3. To evaluate a student's understanding of the fundamental principles of organic chemistry, e.g. reaction mechanisms, common synthetic methods, theoretical principles of structure and bonding, etc.

- 4. To assess a student's ability to document their experimental (or theoretical) results in a manner consistent with publication in a peer-reviewed organic chemistry journal (e.g. *J. Org. Chem.* or *Org. Lett.*).
- 5. To assess the student's ability to think creatively "on their feet", answer questions, and defend their point of view.

# Eligibility and Scheduling

Once a student has passed the written qualifying examinations and remains in good academic standing, they are eligible and encouraged to start planning for the oral qualifying exam. Typically, a discussion with the student's Ph.D. mentor is sufficient to identify a time frame for when the event should occur, and again this should be no later than the 7<sup>th</sup> semester of residence (i.e., the fall semester of the third year for a student who began studies in August). In most cases the specific date will first vary depending on the student's research progress, Ph.D. mentor's travel schedule, and acceptance of the candidate's proposed research topic (see Section 2.5.3).

Once a candidate's proposed research topic is approved, they should identify a date and time where all members of the supervisory committee can be present. The candidate should allow *two hours* for the examination and is responsible for booking the examination room (e.g., Sisler 340) and a projector/computer. There are several ways to approach the committee members to decide on a date/time, and here are two that are generally appreciated:

- 1. Visit the committee member *directly* to obtain his/her schedule for no more than a two week period surrounding the planned date for the exam.
- 2. Use a scheduling website (e.g. www.when2meet.com) in conjunction with e-mail contact. In this case the student would propose a two-week period and reasonable time slots (e.g. starting no earlier than 9 a.m. and ending no later than 5 p.m.).

The student should not send an e-mail to a committee member simply asking them to relay their daily schedules for a particular time period.

**NOTE**: The Organic Division provides a highly detailed set of guidelines and formats for the preparation of the oral proposal document. It is very important that you obtain the latest version from the division office before you begin preparations.

#### **Physical**

#### ORAL QUALIFYING EXAMINATION

A student must take the oral qualifying exam within three months after passing the written candidacy exam or by the end of the fourth term of residence including the summer as one term, whichever is longer. The topic of the oral proposal may be the student's own choosing and may be in the area of the student's doctoral research.

# 4.8. The Final Exam and Dissertation, Thesis or Report

# M.S. THESIS, Ph.D. DISSERTATION

Both the M.S. and Ph.D. degrees in chemistry at the University of Florida are research-based, which means that the central feature of the program of study is pursuit of an independent research project under the direction of a chemistry faculty member. For both degree programs, this project culminates in the preparation and defense of a thesis (M.S.) or dissertation (Ph.D.) to be written by the student which provides background material and summarizes the research project. Successful completion of the writing of this thesis or dissertation, and defense of the thesis or dissertation before the degree committee, is the capstone feature of both degree programs.

Some notable facts regarding the thesis or dissertation preparation and defense are given below:

- A. The research advisor will determine the amount of work required for the thesis or dissertation.
- B. A final corrected version of the thesis or dissertation will be given to each member serving on the degree committee at least two weeks before the oral defense.
- C. An oral defense of the final version of the thesis or dissertation must be presented to the members of the student's committee.

#### M.S. Non-Thesis

In addition to completion of necessary coursework, the non-thesis master's degree requires successful completion of a final comprehensive examination, which will take the form of the written candidacy examination as above, except that (i) the topic requires approval from the Division Head and (ii) the examination is due to the appropriate Division Head at least one month prior to the end of the semester in which the student intends to graduate. A successful passing grade of the comprehensive examination corresponds to meeting  $\geq 50\%$  passing expectations of the criteria in the rubric.

#### 4.9. Time Limits for Degree Programs

For students working toward an M.S. degree, the degree requirements must be completed by the end of the sixth semester of enrollment. For students working toward a Ph.D. degree, the final defense must be completed within five years. Support for enrollment beyond these limits may be provided for students in good academic standing upon petition to the graduate coordinator.

#### 4.10 Overview of some relevant forms from the Graduate School.

Graduate School Forms need to be filled out by all graduate students as a way of keeping a record of the student's progress. Forms can be obtained from the academic assistant in the Chemistry Graduate Office.

#### ADMISSION TO CANDIDACY FORM

This form should be filled out prior to the Ph.D. oral qualifying exam. You should see the academic assistant in the graduate office to obtain this form one week prior to the oral exam.

#### FINAL DEFENSE FORM

This form must be prepared prior to the oral defense of the thesis (M.S.) or dissertation (Ph.D.). You should see the academic assistant in the graduate office to obtain this form one week prior to the final exam.

#### 5. SAFETY

The University of Florida Chemistry Department commits itself to ensuring that its students, staff, faculty members, visiting professors, and other researchers can perform their tasks in the safest environment and that all individuals have the proper safety equipment, sufficient training, and important information they need. To facilitate a safe working environment, everyone needs to take their responsibilities seriously. As a graduate student, your **responsibilities** include:

- taking safety classes (offered in the fall every year)
- wearing appropriate **protective equipment** (e.g. goggles, lab coats, closed shoes)
- **disposing of chemicals** in an appropriate way and leaving a clean lab space for others
- knowing how to act in an **emergency** (e.g. fire, burn)



If you have questions about safety procedures, please visit

the UF Chemistry safety website: http://www.chem.ufl.edu/facilities/safety.shtml

#### 6. WORKING AT THE UNIVERSITY OF FLORIDA

Graduate students in good standing in the University of Florida chemistry program are normally supported as either teaching assistants or graders (TAs) or research assistants (RAs). Students supported on assistantships receive a stipend which provides for living expenses while the student pursues their degree. Funds for teaching assistantships and graders normally come from the University of Florida. Funds for research assistantships normally come from faculty research grants.

#### **6.1 Florida Residency**

The Department of Chemistry requires that non-international students apply for Florida residency. Immediately upon your arrival to the university, you should file your domicile form with the Alachua County Courthouse. *One month prior to the start of your second year*, you should submit your application for residency, along with supporting documents [e.g., apartment lease, employment contracts, utility and phone bills], to the University of Florida Registrar. The residency packet is available at 222 Criser Hall. Florida residency will not be granted until the packet has been submitted and approved.

# 6.2. Teaching Assistantships/Graders

Students supported as teaching assistants or graders will be assigned specific duties which may include one or more of the following: teaching laboratory sections, grading papers, maintain office hours and proctoring exams. It is important that these considerable responsibilities be taken seriously. If illness, accident, or an emergency prevents you from meeting your commitment, you must inform your teaching supervisor and help make arrangements to cover that duty. For anticipated absences from your teaching duties (e.g., a talk at a conference), you must complete a leave of absence form (available on the departmental website) and submit it to the graduate coordinator. In the event of extraordinary circumstances (e.g., serious health problems, pregnancy) the Department will make every effort to provide a suitable TA assignment. However, it may not be possible to do so in every situation.

Teaching assistantships are always provided contingent upon satisfactory performance. Teaching evaluations are made each semester. A poor teaching evaluation will result in a letter of reprimand. Students with two letters of reprimand will no longer be provided teaching assistantships.

#### 6.3. Research Assistantships

Through mutual agreement, a student may work for a professor on a research problem and while doing so be supported as a research assistant. The duties of such an assignment are given to the student by the supervising professor.

# 6.4. Summer Support

Graduate students at the University of Florida Chemistry Department are supported in the summer as either teaching assistants, graders or research assistants, as in the academic year. Graduate education in chemistry is a full time, 12 month per year engagement.

# 6.5. Time Limit on TA Support

Teaching assistantship support is normally made available to graduate students for only a limited time. A student pursuing a Ph.D. degree may be supported from departmental funds for no more than 5 calendar years (15 academic semesters), and a student pursuing an M.S. degree may be supported for no more than 3 years (9 academic semesters).

It should be noted that while most chemistry graduate students are supported as either teaching or research assistants, no student is ever guaranteed financial support. Unsatisfactory performance of teaching duties, poor academic performance in course work or research work can be cause for termination of financial support at any time.

Finally, graduate education is primarily a research experience and as such, it is impossible to predict the outcome and time required to complete a degree. Situations arise in which the research demands more than the average time and for students in good standing, support will be provided beyond these limits whenever possible.

# 6.6. Payroll

All the University of Florida employees receive bi-weekly paychecks on alternate Fridays (26 installments every two weeks throughout the year). The departmental human resource office can inform you of the payday schedule. Direct deposit is required of all University employees.

# 6.7. Holidays

Graduate students are entitled to take as holidays the days on which the University is officially closed. In addition graduate students are allowed 5 sick days during the year. Any leave beyond the allotment requires approval of the research advisor and notification of the Graduate Coordinator. Students will not normally receive a departmental stipend for extended leave beyond that indicated above.

University Holidays	# of Days
New Year's Day	1
Martin Luther King Day	1
Spring Break	5
Memorial Day	1
Labor Day	1
Independence Day	1
Homecoming	1
Veterans Day	1
Thanksgiving	3
Christmas	1

#### 6.8 Leave

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 to minimize conflicts with your teaching or research obligations. Students holding a research assistantship should discuss any 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 present for any training sessions and TA meetings held by your teaching supervisor. You must also be present for all grading and proctoring activities at the conclusion of the semester. If you cannot be here at any time during a semester, there is a strict protocol to follow. You must complete a "Leave of absence approval" 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 director of graduate studies. Teaching assistants who neglect this procedure will automatically receive a letter of reprimand, and students with repeated offenses may become ineligible to hold a teaching assistantship.

# 6.8.1 Leave of Absence (Sick Days, Family Leave, Maternity Leave, etc.)

The department follows the university's policies when graduate students need a leave of absence.

Please see the official policies here: https://hr.ufl.edu/manager-resources/recruitment-staffing/hiring-center/current-employees-status-changes/graduate-assistant-leave-of-absence-process/

Three types of leave are defined as:

- 1. Personal time with pay: Graduate assistants are eligible for personal time with pay for up to five (5) days per semester appointment.
- 2. Paid Family Leave of Absence: Graduate assistants are entitled to eight (8) weeks of paid family leave during any 12-month period for a variety of reasons defined at the link above.
- 3. Research Leave of Absence: A graduate assistant may request unpaid leave of absence for a semester or a year to pursue research related to their academic program, subject to university approval.

Students planning leave should advise their research director and coordinate with the graduate studies office.

# 6.9. Outside Employment

The graduate assistantship (research or teaching) is expected to support the student during graduate studies. Therefore, it is the policy of the chemistry department to not permit students to hold outside employment. Exceptions to this policy include temporary consulting and tutoring. Graduate students may not be compensated for tutoring any student for whom they have a grading responsibility.

#### 6.10 Maintaining a Safe and Respectful Campus

UF actively promotes equal opportunity policies and practices to prevent sexual discrimination and harassment. This commitment applies to all students and employees and reflects the University's belief that education and employment decisions and access to university activities should be based on individuals' abilities and qualifications and not on irrelevant factors, as well as that the University values broad diversity within our community and is committed to diversity and eliminating discriminating. To support UF's vision of an academic and work environment free of discrimination, UF requires completion of the online training program Maintaining a Safe and Respectful Campus.

My Self Service > myTraining > Maintaining a Safe and Respectful Campus.

UF GET803v OLT

The Department of Chemistry requires that there be no dating between a graduate teaching assistant and any student who is taking a class in which they are an instructor.

#### 7. DEPARTMENTAL OPERATIONS AND GENERAL INFORMATION

#### 7.1. Student Offices

For the first semester, graduate students are normally assigned a desk in a research laboratory on the basis of available space. After the student has chosen a research advisor then they should move to office space in that professor's laboratory. Students should not move from their assigned desk until their selection of a research advisor has been approved by the graduate coordinator.

# 7.2. Building Security and Keys

An administrator in the department's Central Receiving will issue to you the keys that you will need. Usually you will receive two keys, one that unlocks the external building doors and another that unlocks your office / lab. It shall be clearly understood by all those receiving keys that they shall:

- Exercise great care to prevent loss. Report any losses of keys immediately to the Chemistry Department Central Receiving.
- Not loan a key to anyone.
- See that the outside door used is locked when entering or leaving the building after regular hours.
- Under no circumstances allow anyone into the building after hours who is not a holder of a building key.
- Report to the University Police and to the Department chair any unusual or suspicious occurrence or persons found in the Chemistry building complex after the buildings are normally closed.

# 7.3. Mail, E-mail, IT services and FERPA

#### 7.3.1 Mail

Graduate student mailboxes are located on the second floor of Leigh Hall. Delivery of US mail and University of Florida campus mail is made to these boxes. Although most official communications are made by email, you should check your box occasionally for departmental and university memoranda and notices. Note that most students will share a box with another student so please be respectful of each other's mail.

#### 7.3.2 E-Mail

Each graduate student is required to have a departmental @chem.ufl.edu e-mail account which everyone generally forwards to their Gatorlink account (@ufl.edu). Check these frequently. The Chemistry department has designated e-mail as an official form of communication within the department. It is important that you check your e-mail frequently to stay informed.

# 7.3.3 Student Privacy

The University of Florida follows strict guidelines with respect to student privacy as dictated by the 1974 Family Educational Rights and Privacy Act (FERPA). Full details are available at the University web site: http://www.registrar.ufl.edu/ferpa.html

# 7.3.4. Chemistry IT Services

The departmental IT services shop is your source for all things related to computer, internet, software, poster printing.

# What the IT Shop Provides:

- ·Network Access
- ·UF E-mail Support
- ·Research Group Web Space
- ·File Storage & Backup
- ·Helpdesk Support
- ·Purchase Consulting
- ·Security Oversight
- ·PC Repair & Installations
- ·Poster Printing Services
- ·Software License Management

See the IT Shop website for the latest information:

https://itshop.chem.ufl.edu

# **Need Assistance? Have a Question?**

- ·Send e-mail to support@chem.ufl.edu
- ·Stop by the IT Shop (LEI 116-D) between 8am 5pm
- -Or call 352-392-7885

#### **Policy Review**

# University of Florida's Acceptable Use Policy:

http://www.it.ufl.edu/policies/aupolicy.html

·A must read! Covers Your Rights & Responsibilities, General Rules,

Enforcement, Security & Privacy, Commercial Use, E-mail Use, Web pages, etc.

#### **Departmental Policies**

#### **Network Access:**

https://itshop.chem.ufl.edu/policies-and-guidelines/network-access

#### **Personally Owned Computers:**

https://itshop.chem.ufl.edu/policies-and-guidelines/non-university-computer

·A must read! Network Usage, Personal Computer Responsibility.

# For Your Personal Devices (includes laptops, phones, tablets, etc...)

# **Network Registration:**

·If you own a desktop or laptop computer that you plan to use on the

Department's network using an Ethernet connection, you need to register that computer with the IT Shop.

# **Security:**

·All personal computers, in use on our network, need to run a current and self-updating antivirus scanning utility. All Operating Systems should be configured to auto-update to ensure that all patches are installed in a timely manner.

McAfee Virus Scan Enterprise is available FREE to all UF faculty, staff, and students for both business and personal use.

#### **Software:**

Lists of software that UF and the Department of Chemistry license for you use can be found here.

#### 7.4. The Chemistry Department Stockroom

Many of the chemicals, supplies, gases and equipment needed in research labs may be purchased from the Department Stockroom. Stockroom purchases are recorded at checkout and are charged to a teaching or research grant account. Reports of purchases by each research group will be furnished to faculty members directing the research groups. Your research advisor will provide guidance on the account number to use for stockroom purchases.

# 7.5. Procedure for Work Injury

Worker's Compensation 433A Stadium West Box 115008 workcomp@ufl.edu

Phone: (352) 392-4940

Fax: 392-8329

TDD: 1-800-955-8771

REPORTING A WORK-RELATED INJURY

If you are injured while performing your job you must:

- 1. Notify your supervisor immediately. You/your supervisor must then contact the UF Workers' Compensation Office (UFWC) at 392-4940. UFWC will complete a First Report of Injury or Illness form for you. Even if you do not think you need medical care, you should contact UFWC to discuss your injury.
- 2. If you require medical attention, contact UFWC prior to going to a medical care provider. UFWC staff will assist you in selecting an authorized medical care provider to treat your injury, thereby insuring that you do not incur any expenses.
- 3. Remember to seek treatment only from an authorized medical provider as set forth in the Workers' Compensation Employee Handbook. If you are uncertain as to what procedures to follow, please contact the UF Workers' Compensation office for assistance.
- 4. When you arrive at the authorized medical provider's facility, show the provider your copy of your First Report of Injury or Illness form.
- 5. Provide your supervisor and the UFWC office with medical documentation of your work status, and inform your supervisor and the Workers' Compensation office of any subsequent changes. The authorized medical provider must support all requests for time off due to an injury in writing.

- 6. Contact your supervisor daily or according to a schedule established by your supervisor in order to keep him or her informed about your treatment and recovery.
- 7. You must attend all of your scheduled medical appointments. Failure to do so may result in disciplinary action up to and including termination. 8. Read the modified duty program statement. Once your medical provider has released you to return to work (regardless of the limitations or restrictions the medical provider assigns), you must be willing and available to return to the workplace.