



# Graduate Manual

IOWA STATE UNIVERSITY<sup>™</sup>  
**Department of Chemistry**

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## GRADUATE MANUAL

### Preface

This document is a compilation of the policies and practices of the Department of Chemistry and the Graduate College (Graduate College Handbook). It has been prepared to guide graduate students through the program. Few of the policies stated are so inflexible; however, that an exception cannot be made if circumstances warrant.

The Graduate Activities, Seminar and Library Committee (GASLC) is charged by the faculty with administration of the Chemistry Graduate Program. The committee, which consists of four or five professors appointed by the Department Chair, monitors the progress of all chemistry graduate students throughout their graduate careers and periodically updates this manual. The Graduate Student Liaison Committee (GSLC) is a Subcommittee of the GASLC. The GSLC, whose charge is to address graduate student concerns, is composed of the faculty members of the GASLC, plus 4-10 graduate students. The graduate student members of the GASLC are self-nominated and selected from among the self-nominations by the GASLC. The center of operations of the GASLC Committee is at the desk of the Student Services Specialist, located in the Department of Chemistry Office, 1605 Gilman Hall. Students may obtain the required Chemistry and Graduate College forms from the Student Services Specialist.

**ALL** forms should be submitted to the Student Services Specialist for an accuracy review before being submitted online.

The Graduate Bulletin Board is located immediately outside the Department of Chemistry Office, next to the graduate student mailboxes. This Bulletin Board displays notices of general interest.

The faculty has defined standards as to the length of time that students may receive full assistantship support (please see Section 10). Diligent effort on the part of the student in the early stages of graduate work is the best way to avoid a prolonged stay in graduate school.

Graduate students are invited to consult any member of the GASLC when that would be helpful. A list of the current members of the GASLC can be obtained from the Student Services Specialist.

The members of the faculty and staff would like to wish each graduate student in the Department the greatest possible measure of success. The years that you spend here will be, we hope, ones that you will look back on with fondness; may you inherit the joy of scientific inquiry which graduate study is intended to instill in every participant.

# 1. PROFICIENCY REQUIREMENTS

## 1.1. Proficiency in Chemistry

**1.1.1. Diagnostic examinations.** All entering graduate students take diagnostic exams in four areas: analytical, inorganic, organic, and physical. The exams are offered during the first week of orientation. The results are used to counsel students into suitable courses. Subsequent opportunities to pass the diagnostic exams are prior to the beginning of spring semester and during orientation week the following year.

Each exam is scored as "P" or "NP". A "P" signifies that the student is familiar with the material at the undergraduate level (Chem 211, 316; 301, 402; 331, 332; 321, 322) corresponding to a grade of "B" or better.

An "NP" represents a deficiency that must be removed as discussed in Section 1.1.2. Ph.D. candidates must demonstrate proficiency in four areas, M.S. candidates in three, including the major.

**1.1.2. Demonstrating proficiency.** Students must demonstrate chemistry proficiency for each discipline in which a deficiency was found by the end of the third semester in residence to remain in good standing (defined in Section 7.1) in the Chemistry Graduate Program.

A. **Clearing deficiencies.** This can be accomplished in any one of the following ways listed below. This choice should be made with the advice of the temporary advisor and/or major professor:

- 1) A student could demonstrate proficiency in the area(s) in which they did not pass the diagnostic examination by retaking the diagnostic examination(s) in January and again, if necessary, the following August. NOTE: If you forfeit the additional two opportunities to test, there will be no extension granted if a course needs to be taken.
- 2) A student could enroll in an approved graduate course in the deficient area and earn a grade of B- or better. The current list of acceptable courses follows:  
Analytical: CHEM 511, 512, 513, 516, 577 (576 is acceptable for EITHER analytical or physical, but not both)  
Inorganic: CHEM 502, 505, 571, 573, 574, 578  
Organic: CHEM 531, 537  
Physical: CHEM 561, 562, 563, 564, 575, 576, 580
- 3) A student could enroll in an appropriate undergraduate course and earn a grade of B- or better. This might be appropriate for a student who fared very poorly in the corresponding diagnostic. Such action by the student would be acceptable insofar as registration in an undergraduate course does not count for graduate credit. The appropriate undergraduate courses are:

Analytical: CHEM 316 w/lab  
 Inorganic: CHEM 402  
 Organic: CHEM 332  
 Physical: CHEM 324 or 325

- B. Should a student fail to clear a deficiency on the third attempt to pass a diagnostic exam, he or she must remove the deficiency by taking an appropriate course (as outlined in point A above) during the third semester in residence.

**All deficiencies MUST be cleared by using one or more of these mechanisms by the end of the third semester in residence.**

## 1.2. Proficiency in English - Graduate English Requirements for Nonnative Speakers of English

**1.2.1 Examination.** Graduate students whose native language is not English and who do not have a bachelor's or advanced degree from ISU or a US institution must take the English Placement Test at the beginning of their first semester of enrollment. This test is administered by the Department of English. It must be taken in addition to TOEFL (Test of English as a Foreign Language), which is taken as part of the admissions process. A student who does not pass this examination is assigned to one or more courses in the English 99 and 101 series. This course work must be completed during the first year of study. (There is a developmental course fee for the English 99 course.)

Non-native English-speaking ISU graduate students who meet or exceed the TOEFL or IELTS scores below are exempted from taking the English Placement Test. Self-enrollment in English 99 or 101 courses remains possible.

- Paper-based TOEFL (PBT)--600 (and above)
- Internet-based TOEFL (IBT)--100 (and above)
- IELTS—7.5 (and above)

A graduate student whose native language is not English but did graduate from a U.S. institution, is eligible to receive a waiver from the English Placement Exam requirement. Two conditions must be met:

1. The student must have received a bachelor's, master's, or Ph.D. degree from a U.S. college or university and
2. The language of instruction at that college or university must have been in English.

The Department of English will automatically process the waiver as long as official records are on file with the Office of Admissions.

### 1.2.2 Testing of Nonnative English Speaking Students

The Oral English Certification Test (OECT), administered by the Center for Communication Excellence (CCE) within the Graduate College is required of graduate students who fit **both** of these categories:

- Those who are not native speakers of American English (i.e., learned another language first), and
- Those who will be appointed/considered for a teaching assistantship,  
OR Will have some teaching responsibilities even if not a TA  
OR Is currently applying to the Preparing Future Faculty (PFF) or Graduate Student Teaching Certificate (GSTC) Programs

The OECT will be given during fall orientation. Registration for the test is the day before the test is administered.

A prospective teaching assistant who does not pass one or both parts of the OECT is required to successfully complete course work and be retested\* as enrollment is restricted for the English course(s) required for retesting, TAs cannot register for the courses online through AccessPlus (i.e., the procedure discussed in section 2.1 for other courses). Enrollment will be arranged during the first week of orientation.

\*The stipend of students who have not demonstrated proficiency in English and/or TA's not fully certified by the Oral English Certification Test, will be reduced according to the schedule shown in Section 10.

## 2.ADVISING AND REGISTRATION

### 2.1. At the Start

An orientation schedule will be provided for new graduate students on the first day of orientation in August.

**2.1.1. Temporary adviser.** The advisers will counsel students on academic matters until the assignment of a Major Professor is made in mid to late November.

**2.1.2. Initial counseling and registration.** Students will meet with members of GASLC acting as advisers to review the results of the diagnostic exams, to discuss their first semester's course work, and to fill in the registration form. The GASCL member must sign the registration form. The following are the steps to follow to complete registration for courses:

**Step 1:** The exact process will be determined and outlined prior to the beginning of orientation. You will either meet individually with your temporary major professor or as a group with a professor from your chosen area of research interest. They will help you complete the form. The Student Services Specialist will review your form prior to releasing you to register.

**Step 2:** The student should go on-line on a computer in specified computer lab for orientation and register for first semester of classes. You will log into AccessPlus, click on the "Student" tab and click on "Register for Classes".

**Step 3:** The student completes the on-line Schedule form for Teaching Assistant and emails this form to the Undergraduate Teaching Office at [chemta@iastate.edu](mailto:chemta@iastate.edu).

### 2.2. Subsequent Semesters

**2.2.1. Registration.** Students must obtain a registration sheet in the Graduate Chemistry Office, complete the registration sheet and obtain their major professor's signature. The Student Services Specialist will then remove the "hold" so that the student may register by the Web through AccessPlus. The schedule of available classes is available at <http://classes.iastate.edu/>. After logging onto AccessPlus, click on "Register for Classes" under "Students".

**2.2.2. Changes in Schedule.** The "Request for Schedule Change" form, available from the Student Services Specialist, is used for drops, adds, credit changes. Limitations apply regarding the timing of such changes and are available at [www.registrar.iastate.edu/students](http://www.registrar.iastate.edu/students).



### 3. SELECTING A MAJOR AND A MAJOR PROFESSOR

#### 3.1. Areas of Study

**3.1.1. Major.** Options for graduate degree majors are:

- a. Chemistry
- b. Analytical Chemistry
- c. Inorganic Chemistry
- d. Organic Chemistry
- e. Physical Chemistry

Options b through e are the “traditional” disciplines. The availability of the first major, “Chemistry,” provides considerable flexibility in designing an interdisciplinary program of study. It is also the major to be selected by those who wish to specialize in “Chemical Education”.

**3.1.2. Minor.** A student may elect an optional minor in another discipline or in another department.

#### 3.2. The Major Professor

The major professor, who must be a member of the graduate faculty in the student’s declared major, serves as chair of the POS committee. The choice of a Major Professor represents an agreement between the graduate student and the professor to work together in planning academic studies and research for an advanced degree. Students should give this matter careful consideration, exploring conscientiously the available options as to major, research specialty and research group. The following policies are intended to promote a thorough exploration and a free decision on the part of all students.

##### 3.2.1. Learning about research programs

**CHEM 579.** All new graduate students must register for this course in their first semester. This course will acquaint students with the research underway in the Department.

In the Fall Semester, CHEM 579 consists of research presentations and one-on-one discussions with the faculty. As a part of the process, students are to engage in such personal discussions with at least three professors and obtain the signatures of those professors on the form provided during CHEM 579.

##### 3.2.2. Choosing a major professor

**Expressing the choice.** During CHEM 579, students will be asked to return the “Major Professor Preference Form” to the Student Services Specialist. On this form students state their preference for a Major Professor by listing up to three choices and numbering them 1 to 3 in order of preference with 1 being the first choice. In extenuating circumstances a student may elect to postpone the choice of Major Professor with Departmental approval, but for no longer than the end of Spring Semester.

The faculty will honor a student's preference for a given research group insofar as allowed by considerations of faculty workload, space, and research support.

**Early selection of a major professor** may be arranged by petition to the GASLC, with an adequate justification for the immediate initiation of research. If the petition is approved, the student may submit the "Major Professor Preference Form" after interviewing three professors and obtaining their signatures on the Major Professor Preference Form. The student is still required to attend **ALL** CHEM 579 presentations.

**Recording the choice of major and Major Professor.** Once the choice of the Major Professor has been ratified by the faculty, the student should submit to the Student Services Specialist the form entitled "Selection of Major Discipline and Major Professor" which can be obtained from the Student Services Specialist.

**Change of Major Professor.** A graduate student should make a careful selection of discipline and Major Professor. Nonetheless, in the rare event a change might be desired, a student should act promptly, preferably by the end of the second semester to avoid prolonging the time to an advanced degree. This is particularly so if the change also entails a change in major.

Any such change must first be adequately explored with the potential new Major Professor. If the new Major Professor concurs, then the student should give the reasons in a memorandum to the GASLC. The new Major Professor should sign the memorandum to indicate concurrence; the current Major Professor should also sign the memorandum to indicate cognizance of the pending change. The change requires the approval of the Department. If the POS Committee has already been constituted, the Graduate College must also be informed and a modification to the online Program of Study will need to be completed. Please see the Student Services Specialist for the process.

## 4. PROGRAM OF STUDY

### 4.1. The Program of Study Committee (POSC)

The student's personal POSC approves the Program of Study (POS), and conducts the preliminary oral exam (Section 5) and final exams. In addition, oversight of the student's progress is ensured by annual meetings of the POSC, which is assembled no later than the end of the student's second semester in residence.

**4.1.1. The Ph.D. committee** consists of five professors, and is chaired by the Major Professor. It must include at least three members, including the major professor, from within the student's major or program. The committee must include at least one member from a different field or discipline of emphasis so as to ensure diversity of perspectives.

If a student is pursuing a minor, then a faculty member from the minor discipline must be represented.

**4.1.2. The M.S. committee** consists of three professors, and is chaired by the Major Professor. One member must be from another discipline or department.

Students who are aiming solely for the M.S. degree should inform the Department as soon as possible, to avoid an excessive time to the degree. This form is available from the Student Services Specialist.

**4.1.3. Appointment of the POSC.** The student and Major Professor select the members and submit the "Program of Study Committee Agreement" form to the Student Services Specialist.

After you have put together your POS committee, you will need to complete your Program of Study. See section 4.2.3. **Preparing the POS**

**4.1.4. Changes.** A member of the POSC may step off this committee either permanently or temporarily and must be replaced by another faculty member in the same area or related discipline. This is done through the on-line system. Please see the Student Services Specialist as soon as you know you need to make a change so they can instruct you how to proceed. In the case of an emergency and a member of the committee other than the chair is not available for a meeting please contact the Student Services Specialist immediately.

**4.1.5. Annual POS Meetings.** The student and committee members will meet annually in a manner to foster student/faculty interactions as well as collaboration between the many divisions and departments. The purpose of the meetings is to provide informal discussion of planning and progress of the student's program and will include a short student-led discussion of their research. This discussion is designed to make the committee aware of the student's academic and research progress and allow for collaborative discussion by the student and faculty that may address on-going problems. The format of the discussion may include PowerPoint slides, transparencies, outline, or a chalk talk and last no more than 15 minutes to allow time for

discussion. **These meetings are not examinations.** No more than one member of the committee may be absent at these informal meetings. The Prelim Oral and Final Defense will substitute for these annual meetings. The “Program of Study Committee (POSC) Annual Meetings” form should be completed and returned to the Student Services Specialist upon completion of the meeting. This form is available from the Student Services Specialist.

With concurrence of the POSC, the student and major professor may choose an alternative format for the annual POS meetings **AFTER\*** the preliminary oral has been passed and if the student is in good standing with the department. In the alternative format, the student will prepare a 1 to 2-page document including their name, the name(s) of their major professor(s), the general status of the program of study (e.g. the year they entered the program, any outstanding courses to be taken), a summary of the research that has been completed in the last year, a summary of the research to be explored in the following year and a list of the student's publications. This document will then be given to the POSC (either electronically or by hardcopy). The student will then obtain signatures from the POSC on the “Program of Study Committee (POSC) Annual Meetings” form and return it to the Student Services Specialist. It is intended that this format will allow the students to have one-on-one interactions with their POSC members if there is a need for discussion. Note that either the student or the major professor can and should call a full meeting of the POSC at any time if they judge that a discussion with the POSC could be beneficial.

#### Annual Meeting Schedule:

<b>Year</b>	<b>Process</b>
Year One	File POSC to meet first year meeting requirement
Year Two	Committee meets in person prior to Preliminary Oral exam
Year Three	Preliminary Oral exam meets third year requirement
Year Four	Committee meets in person or use alternate format*
Year Five	Committee meets in person or use alternate format* or hold Final Oral exam
Year Six and beyond	Committee meets in person or use alternate format* or hold Final Oral exam

\*The alternative email format may be used for annual meetings after the preliminary oral exam has been passed. Students will still need to get a signature on the Annual Meeting form.

## 4.2. Degree Requirements

This section describes the requirements to obtain Ph.D. and M.S. degrees. Graduate study centers on research, carried out under the guidance of the Major Professor whose selection is described in Section 3. Expectations regarding research are summarized in Section 6.1. The focus of this section is on the other requirements, such as courses and preliminary examinations.

Students who wish to pursue the Ph.D. specializing in Chemical Education will obtain a degree in "Chemistry", as described below. The research component of their degree shall have two parts. The first component of the research will be carried out in the laboratories of any member in the Department who is active in a chemical research area other than Chemical Education. This component shall be of the quality and quantity of a M.S. degree, and the students will write a thesis, defend it, and obtain the M.S. Students may obtain this M.S. in one of the traditional disciplines or in "Chemistry", but must in any case fulfill the academic requirements for the Chemical Education specialty. The second component of the research may be carried out under the same or a different Major Professor and shall consist of research in the field of Chemical Education.

### 4.2.1. The Ph.D. Degree

#### 4.2.1.1. Graduate College requirements for all majors:

- (a) Complete  $\geq 72$  semester hours of graduate credit including 699. Courses that do not count for outside credit are 550, 555 and 579. Courses included within each major are defined in Section 4.2.1.3.
- (b) Pass courses on the POS with a B- or better.
- (c) Pass the preliminary oral exam conducted by the student's POSC.
- (d) Pass a final exam in defense of the thesis.

#### 4.2.1.2. Department of Chemistry requirements for all majors:

(a) **Coursework.** Students take at least 17 credit hours of 500-level chemistry courses (CHEM 550, 579, 599, 600, 611, 631, 660, and 699 are not counted toward the 17 credit requirement) or substitutions approved by the POSC and the Major Professor. Most individual majors have more specific requirements, as given in Section 4.2.1.3.

All students must take:

"Introduction to Research in Chemistry", CHEM 579, offered in Fall Semester.

"Safety in the Chemical Laboratory", CHEM 550, offered in Spring Semester.

(b) **Seminars.** Excellent communication skills are an important aspect of the graduate education and for future employment. Therefore, students must present at least one public seminar (on their research or on scientific

literature) before the end of their eighth semester in residence. An oral presentation to the chemistry department or at a regional, well recognized discipline specific, national or international meeting before the end of the eighth semester in residence may satisfy this requirement. Documentation of completion of the seminar is available from the Student Services Specialist. If the student has not completed this form by the end of the 7<sup>th</sup> semester and does not have a seminar planned for the 8<sup>th</sup> semester, the department will arrange a seminar in the department for the student for the 8<sup>th</sup> semester.

#### 4.2.1.3. Department of Chemistry requirements for specific majors:

The following courses must be included in the POS for each individual major.

Before graduation is approved, the student must complete all core courses listed on the Program of Study with a minimum grade of B and have achieved a cumulative GPA of 3.0 or greater. This grade requirement supersedes the minimum grade requirement specified by the Graduate College and mentioned in 4.2.1.1. (b).

**Chemistry:** No set course requirement. The selection of courses for this major are based on:

- Student input
- Major professor input
- Area of research
- Approval of POSC

**Chemical Education:** The chemical education specialty is administered as a “chemistry major”, but will ordinarily have the following requirements, subject to the agreement of the POSC. Students will take at least 12 units of 500-level chemistry courses, as outlined for one of the masters level programs (Section 4.2.2.3). Additionally, students will take 11 credits from the following courses to develop their understanding of education and education research: CHEM 555 (2) [required], STAT 587 (4) [required], STAT 575 (3), STAT 579 (1), STAT 582 (3), EDUC 533 (3), EDUC 541 (3), EDUC 546 (3), PSYCH 516 (3), RESEV 570 (3), RESEV 580 (3).

**Analytical:** CHEM 511 (3), 512 (3), 513 (3), 516 (3), plus 611 (1 credit each semester).

**Inorganic:** CHEM 502 (3), 505 (3), 600 (1 credit each semester) and at least 4 credits from two of the following courses: CHEM 571 (2), 573 (2), 574 (2), 578 (2).

**Organic:** CHEM 531 (2), 532 (2), 537 (3), 538 (3), Also, CHEM 572 (3 credits, with a grade of B or better) and 631 (1 credit each semester).

**Physical:** CHEM 561 (4), 563 (3), 583 (1), and 562 (3) or 564 (3); plus 660 (1 credit every semester). Each course requirement may also be met by the following substitutions: PHYS 591 for CHEM 561; PHYS 592 for CHEM 562; PHYS 531 for CHEM 563 (they may be particularly attractive to students interested in Chemical Physics).

**4.2.1.4. Minor requirements for students outside of the Department of Chemistry:** 12 hours in a discipline, chosen from:

Analytical: CHEM 511 (3), 512 (3), 513 (3), 516 (3).

Inorganic: CHEM 502 (3), 505 (3), plus 4 additional credits chosen by the student and POSC.

Organic: CHEM 531 (2), 532 (2), 537 (3), 538 (3) and 2 additional credits chosen by the student and POSC.

Physical: CHEM 561 (4), 562 (3), 563 (3), 564 (3).

General: CHEM 571 (2), 573 (2), 574 (2), 575 (3), 576 (3), 578 (2).

**4.2.1.5. Additional Specialties for students in Chemistry:** A Ph.D. student in chemistry may choose one of six specialties, in addition to major coursework. M.S. students may petition their POSC and the GASLC for permission to add a specialty. This addition should, however, not extend the student's time to degree. A minimum of 10 credits is required for each specialty. Any course which could be used to fulfill the requirements of the student's major may not be used for a specialty. Any special topics course offered by Chemistry (CHEM 601, 619, 632, or 667) which is not eligible for the student's major may count toward the specialty, with approval from the POSC. A course that satisfies the preceding requirements, and which is not listed below, may be used with approval from the Curriculum Committee and from the POSC. A student must choose at least one course from outside of chemistry. Suitable courses for the six specialties are:

**Materials Chemistry:** CHEM 571; MAT E 317, 334, 351; CH E 542; M S E 510, 552, 630, 652; PHYS 511, 512.

**Industrial Chemistry:** CHEM 574, 576, 578; CH E 415, 421, 562; STAT 587, 571, 575.

**Biomolecular Science:** CHEM 578; CH E 540, 625; BBMB 404, 405, 411, 615, 512X, 532, 553X, 675; 314; TOX 501.

**Chemical Instrumentation:** CHEM 513, 516, 576, 577; BBMB 411; PHYS 310.

**Forensic Chemistry:** CHEM 511, 512, 513, 516, 572, 577; BBMB 411; TOX 501; STAT 587 or 588.

**Chemical Education:** CHEM 555 [required]; STAT 587 [required], STAT 571; EDUC 533, 541, 546, PSYCH 516.

Students who do not have the prerequisite coursework (or equivalent) in their background for any of the above should contact the course instructor about waiving the requirement.

## 4.2.2. The M.S. Degree for students in Chemistry

### 4.2.2.1. Graduate College requirements

- (a) Complete  $\geq 30$  semester hours of graduate credit.
- (b) Pass courses on the POS with a B- or better, and a minimum GPA of 3.0.
- (c) Pass a final exam in defense of the thesis.

### 4.2.2.2. Department of Chemistry requirements for all majors:

(a) Complete CHEM 550, "Safety in the Chemical Laboratory" offered during Spring Semester.

(b) Complete  $\geq 12$  credit hours, but not more than 16, of graduate course work exclusive of seminars, orientation courses (such as CHEM 550, 555, and 579), and research. Of the total credit hours, at least 6 must be within the major discipline, and 4 outside of the major discipline, as defined in Section 4.2.2.3. CHEM 571-578 are acceptable as 'outside' courses.

(c) Present at least one public seminar (on current research or on the scientific literature), prior to their final defense. An oral presentation at a regional, well recognized discipline specific, national or international meeting may satisfy this requirement. Documentation of completion of the seminar should be filed with the Student Services Specialist by completing the "Seminar/Oral Presentation Record" form available from the Student Services Specialist

### 4.2.2.3. Department of Chemistry requirements for specific majors.

Students must complete  $\geq 6$  hours in the major. Coursework acceptable for each major is defined below. Coursework required for the M.S. in each major is indicated by an asterisk.

**Chemistry:** No set course requirement. The selection of courses for this major are based on:

- Student input
- Major professor input
- Area of research
- Approval of POSC

**Analytical:** CHEM 511 (3), 512 (3), 513 (3), 516 (3), 611 (1, each semester)

**Inorganic:** CHEM 501 (2), 502\* (3), 505\* (3), 600\* (1)

**Organic:** CHEM 531\* (2), 537\* (3), 572 (3), and either 532\* (2) or 538\* (3)



**Physical:** CHEM 561 (4), 562 (3), 563 (3), 564 (3), 660 (1, each semester)

### 4.2.3. Preparing the POS

The student and Major Professor prepare the proposed Program of Study (POS). The form is then approved (or modified) by all members of the committee.

Once you have attended the POS meeting with the Student Services Specialist and received the packet of information, you can put your POS committee together. All committee members must sign the "Program of Study Committee Agreement" form which is the agreement for them to serve on your committee. Optionally, you can complete the "Program of Study Committee (POSC) Worksheet" (available from the Student Services Specialist or on the Graduate College webpage) to complete your POS form online.

To complete the form, log into Access Plus and click on the Student tab. Click on Grad Student Status. In the middle of the page, you will see a grey box labeled "My POS Form". Click on that to begin the process by following these steps:

- Modify Degree Program; everyone is listed as a Chemistry major so make sure to change it to your major area.
- Add your Expected Completion Date-semester and year
- Fill in your committee and make sure to designate the Major Professor(s) and Outside area member(s)
- If you have transfer courses, see the Student Services Specialist for assistance in completing this section
- Add your major courses and seminars to the first courses section. You should show a seminar every fall and spring semester until your anticipated graduation term.
- Add your CHEM 699 research credits to the research section until you have reached a minimum of 72 total credits.
- Hit save constantly so that you don't lose any data.

After you have entered all of the information, click SAVE and VALIDATE. This will show you errors. Fix them, SAVE and VALIDATE again and then **STOP!** Let the Student Services Specialist know that you have completed your form so they can check it over and then you will submit it. It will be routed to (1) your major professor, (2) your committee and (3) the DOGE for approval.

All students are expected to submit the POS no later than the 1st day of their third semester. Registration for the fourth semester will not be approved without completion and submission of the POSC.

**Transfer Credits:** Transfer credits from another domestic university may be added to your POS form. Transfer credit is not normally given for a course in an area in which a student received an "NP" on the Diagnostic Examination, for a course in which the student received a grade below B, or in courses that are not comparable to the 500-level courses at ISU. Transfer credit will not be awarded for courses applied to a student's undergraduate degree. Transfer requests must be accompanied by photocopies of the relevant transcripts, course syllabus, exams, and any other pertinent course materials.

The materials should be submitted to the Student Services Specialist who will then ask the professor who teaches the comparable course in the Department of Chemistry to review the materials and make a recommendation for acceptance of the transfer credit. The request for transfer credit should be submitted and confirmed before the POS is completed in the first semester of year 2. The form to request transfer of credit is available from the Student Services Specialist.

**Audits:** Audits are listed on a student's transcript only if the student obtains the instructor's approval on the "Request for Audit(s) to Appear on Transcript" form. A thorough listing of policies applying to auditing a course appears in the *Graduate College Handbook*. The form is available online or from the Student Services Specialist.

#### **4.2.4. Teaching Experience**

One semester of half-time teaching experience is required for a graduate degree. Normally such experience is gained as a TA in this Department, but equivalent, substantive prior science teaching as a high school teacher or as a TA at a university in which English is the language of instruction can be substituted. However, teaching done during a student's undergraduate career or as a teacher's aide does not qualify.

These possible reductions in the required TA service will not allow a student to be released from a teaching assistantship agreement, unless the change is acceptable to the Department.

#### **4.2.5. A Chemistry minor for MS students outside of the Department of Chemistry**

A minor in Chemistry for students from other departments seeking an MS degree, requires 10 credit hours of lecture courses carrying graduate credit at the 500 or 600 level, and exclusive of credit for seminars and research. The specific courses chosen require approval by the chemistry member of the student's POSC. In addition, your thesis must include the Chemistry minor information.

## 5. PRELIMINARY EXAMINATIONS AND Ph.D. CANDIDACY

The Preliminary Examination is designed to promote an integration of the student's knowledge, to require the student to stand up to oral questioning by experts in the field, and to screen students being considered for the Ph.D. degree.

### 5.1. Preliminary Oral Exam

**5.1.2** The Preliminary Oral Exam will take place no later than the end of the fifth semester in residence. The form for scheduling the oral exam is available from the Student Services Specialist and must be submitted to the Student Services Specialist **at least two weeks** prior to the preliminary oral exam.

Preliminary oral exams will comprise discussion in three broadly defined areas: (1) the student's general knowledge in the field of the major; (2) the student's research up to the time of the preliminary oral exam; and (3) proposed research. The student will prepare a presentation that addresses the latter two points. The research component of the preliminary oral examination is a presentation of the student's own research, including background and significance, objectives, results, conclusions and future work. For the proposed research part, the student may elect one of two options for conducting the preliminary oral examination. For either option, the student prepares a full written proposal that will be evaluated for significance, creativity, and feasibility. The proposal should have a maximum of 2,000 words, excluding references. A reasonable number of tables and figures should be included and these do not count towards the 2,000 word limit. References should be in ACS format, but with complete titles, as required by NIH and NSF.

#### 5.1.2.1 Option A:

The student will prepare and defend a research proposal as part of the preliminary oral exam. The proposal will be on the student's own future research.

The student prepares a full written proposal, giving copies to the members of the POSC a week before the preliminary oral examination. During the examination, the student will present, expand upon, and defend her/his understanding of her/his future research plan. The preliminary oral exam will conclude with general questions.

#### 5.1.2.2 Option B:

The student will prepare and defend an original research proposal as part of the preliminary oral exam. The proposal should not be related to the student's own research or to projects in the student's research group.

The student shall submit a pre-proposal for original research to his/her POSC. The pre-proposal must not be longer than 2 pages, excluding references. It will include a title, date, and concise statements of what questions will be

answered, why the problem is important, what will be done, the new and significant knowledge that can be anticipated and key references. A review of the pre-proposal will take place within a week of submission. The Major Professor will convey to the student a decision of "approved" or "not approved". In the latter case, suggestions for revision may be made, or the idea may be rejected, in which case the student is to submit a revised or a new pre-proposal.

After approval of the pre-proposal, the student will prepare a full proposal, giving copies to the members of the POSC a week before the preliminary oral examination. During the examination, the student will present, expand on, and defend the idea. The preliminary oral exam will conclude with general questions.

## 5.2. Advancement to Candidacy

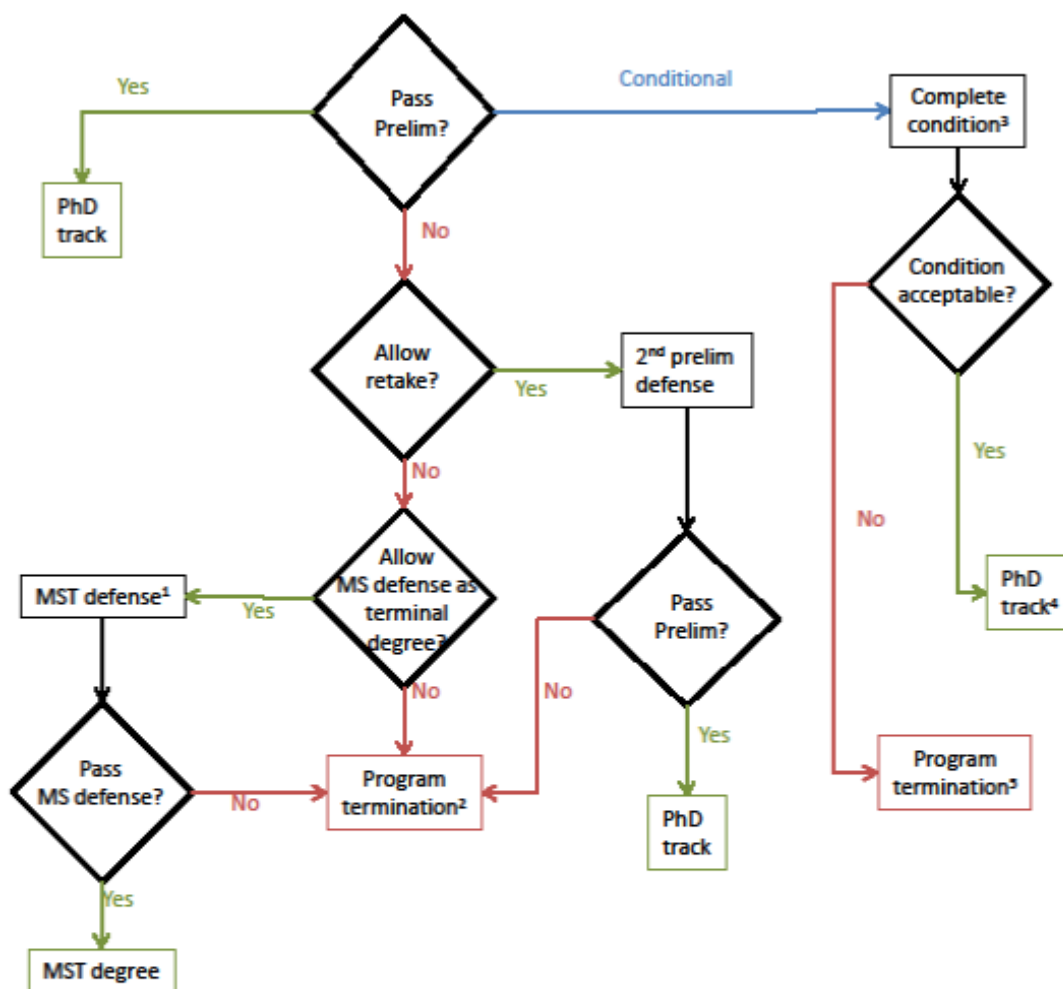
**5.2.1** The Preliminary Oral Examination can have one of the following outcomes, which are summarized in the flow chart on the following page:

**(a) Pass:** The student is admitted to Ph.D. candidacy.

**(b) Conditional Pass:** (subject to specified remedial action, such as submission of a research report, further academic course work). Promotion to Ph.D. candidacy is delayed until the conditions are met. The conditional pass is to be used, for example, when the student is unprepared for the presentation, is unable to defend the proposal, needs to rewrite the proposal, or has not completed sufficient research to the committee's satisfaction. A deadline for conditions to be met should be decided on by the POSC. At the latest, this deadline should be no later than the end of the semester immediately following the exam. Failure to meet the conditions of the conditional pass within that time frame is grounds for termination of support/assistantship.

**(c) Fail:** A failure will result if the student is unable to show a clear understanding of the research he or she is involved in, or clearly lacks an understanding of chemistry. The POSC might require the student to terminate with an M.S. degree. The POSC may decide as to whether or not the student may be allowed to repeat the exam or a part of it. Six months must elapse between the first exam and any repeat.

**5.3. Time Limitations.** The preliminary oral exam should be passed by the end of the fifth semester in residence to avoid a reduction of the assistantship stipend (See Section 10).



- 1 File new POS and RCA for MS degree (30 credits and 3 committee members). Due to Graduate College by **final oral examination date** of the semester before planned defense date.
- 2 Memo is required from POS stating that student will not be continuing in program.
- 3 The most common conditions are rewriting the proposal and redefining the research. A M.S. prerequisite with or without a separate preliminary oral exam may be a condition (Student must file new POS for MS degree (30 credits). Due to Graduate College by **final oral examination date** of semester before planned defense date.). Other conditions are possible and multiple conditions can apply.
- 4 Memo is required from POSC stating that student has completed conditions and is admitted to PhD candidacy.
- 5 Memo is required from POS stating that student has not completed conditions and will not be continuing in program.

## 6. RESEARCH, THESIS, AND GRADUATION

### 6.1. Research

The content of research resulting in a thesis is the basis for awarding the M.S. and the Ph.D. degrees at ISU. Usually a student will begin to participate in research work before having been admitted to Ph.D. candidacy. After attaining candidacy, the advancement and completion of the thesis research should become the central objective of the student's study and work.

### 6.2. Other requirements

**Continuous Registration:** All graduate students, including off-campus and part-time students are required by the Iowa Board of Regents to register for at least 1 Cr. or "R" Cr. each semester after passing the preliminary oral exam. This policy involves fee payment for Fall and Spring semesters each year. Off-campus M.S. students need register only for the semester they plan to hold their final oral/defense. Note that graduate students on an assistantship appointment must be registered for a minimum of 9 credits fall and spring semesters and 1 credit for summer semester.

**Application for Graduation:** The application for graduation should be made by the end of the third week of the semester in which the student expects to receive the degree. This form is completed in Access Plus. If the student does not graduate in that semester, they must cancel the request in Access Plus before the cancellation date and submit a new one for the anticipated semester of graduation.

**Tuition and Fees for the Final Semester:** When registering for their final semester, students planning to finish should be aware of Graduate College and ISSO deadlines on the termination of Graduate Assistantships. Please check the Graduate College deadline sheet or see the Student Services Specialist for a list of Graduate College deadlines. Missing deadlines will result in the cancellation of your graduation.

**The Final Examination:** The final examination is conducted by the POSC. The candidate submits a copy of the thesis to each member of the POSC **TWO WEEKS** in advance. The final defense consists of a publicly announced oral presentation, which is open to the public, followed by a closed examination. This applies both to Ph.D. and M.S. candidates. The convening of the final exam rests with the student and Major Professor. The "Request for Final Oral Examination" form is available from and is returned to the Student Services Specialist **at least THREE WEEKS** prior to the Final Examination. At the same time the student turns in this request form, it is recommended that they also provide a curriculum vitae to be included in the student's file. The Major Professor completes the "Report of Final Oral Examination" and returns it to the Student Services Specialist immediately after the exam.

**Graduation Approval and Electronic Thesis Submission:** The Graduate College requires the approval of the major professor and program before it can review the final copy of the document and you upload it to ProQuest/University Microfilms. The "Graduate Student Approval Form" is online, but will be provided by the Student Services Specialist.

This form must be completed and mailed, emailed with an attachment, or hand carried to the Graduate College office in 1137 Pearson Hall by the published deadline each term. After the form is received, the student is given approval to sign on to ProQuest's Web site and submit their thesis electronically for review and final deposition.

## 7. SCHOLASTIC STANDARDS AND THE EVALUATION OF STUDENTS

### 7.1. Remaining in good standing

Graduate College policies stipulating requirements for academic grades, probation, appointments, etc., are given in the Graduate Student Handbook, <http://www.grad-college.iastate.edu/publications/gchandbook/homepage.html>.

The GASLC evaluates each student's progress in graduate studies. First year students are evaluated at the end of their first semester in residence and again with the entire graduate student population at the end of spring semester. The faculty as a whole, not just the GASLC or the Major Professor, will determine whether the student is making satisfactory progress toward the degree being sought, based on the academic and research performance of the student.

These areas are pertinent:

- Active involvement in research as soon as is feasible within the limitations of the time necessary to choose a Major Professor and a research problem. The student should have exhibited sufficient proficiency in the chosen research area by the end of the first year that the Major Professor may have a basis for judging whether or not it would be to the student's benefit to remain in the chosen area, or indeed, to remain in the Graduate Program. The extent to which a student can become deeply involved in research during the first year will, of course, depend upon the major area and the student's preparation and program.
- Performance in research as determined by the Major Professor and POSC. The criteria are the motivation, aptitude and capacity of the student for research. A student is expected to be productive and competent as a research scientist, and to be able to communicate with members of the research group, discipline, and profession. Familiarity with current literature in the student's major discipline is mandatory.
- The preliminary oral exams, which are to be taken by the end of the fifth semester in residence.
- Maintenance of a grade point average  $\geq 3.0$  in academic POS courses (exclusive of research).
- Proficiency in English.
- Proficiency in Chemistry.
- The student and the Major Professor are expected to be in communication regarding research performance. Major Professors should keep students

apprised of their progress.

## 7.2. Review of first-year students.

At the end of the first semester, students are provided with timely information on their scholastic standing. Because of the limited amount of information available at that time, this first review is preliminary in nature, and is based upon their grades and additional evaluations solicited from the faculty. The GASLC then places each student in one of the following groups:

**Group I:** Satisfactory progress.

**Group II:** Some indication of possible scholastic weakness as evidenced by a GPA slightly below 3.0, or a grade of C or C+ in one course, or the completion of only one substantive course during the first semester. Such students are sent a letter expressing mild concern about their progress.

**Group III:** Serious scholastic difficulties. These students are encouraged to show substantial improvement in order to be permitted to continue. Students should consult their Major Professor and/or a member of the GASLC in writing or in person, to avoid further academic difficulty.

## 7.3. Annual review of students

**Review data:** At the completion of Spring Semester all professors are asked to evaluate students on research, teaching performance, and overall intellectual and research potential. The evaluating professor may be familiar with the student from an academic course or as a teaching supervisor.

As part of the evaluation process, the faculty recommends that each professor meet with each of his/her students to discuss research progress and progress toward the degree at least twice per year.

The faculty within each major then recommends to the entire faculty the tentative placement of students in one of the eight scholastic groups described below, and the students are so informed in writing.

### Scholastic groupings:

**Group A:** Admitted to Ph.D. candidacy. The student must have passed the preliminary oral and demonstrated proficiency in Chemistry and English.

**Group B:** Satisfactory progress toward the Ph.D., prior to admission to candidacy. A student in **B** may obtain an M.S. degree while progressing toward a Ph.D. degree.

**Group MSC:** A student plans to terminate with an M.S. degree by choice. The POSC will consist of 3 members only. A student who may go on to the Ph.D. degree should not be in this group, and an **MSC** student who later decides to work for the Ph.D. degree will still be held to the time requirements, which include the time in **MSC**. Students who are in this group will be financially responsible for one half of their tuition costs.

**Group MSP:** These students are required to complete an M.S. thesis before



they can be considered for Group **B**, and should endeavor to do so by the end of the second year.

**Group MST:** A student in this group will terminate graduate studies with an M.S. degree. Students who are in this group will be financially responsible for one half of their tuition costs.

**Group D:** Uncertain Degree Status. This is a temporary assignment, and students will not normally remain in Group **D** beyond the third academic semester.

Students in Group **D** must carefully plan their courses, research and exams to ensure two objectives in the second year: (1) to determine whether they will be able to continue towards the Ph.D.; (2) to be able to complete the M.S. degree promptly if called upon to do so.

The faculty of the major will recommend to the faculty as to whether a student in Group **D** should be moved to Group **B**, **MSP** or **MST**. The performance during the first semester of the second year is therefore crucial.

**Group F:** No graduate degree

**Group S:** Special cases

#### 7.4. Academic Probation

If a graduate student does not maintain a cumulative 3.0 grade point average on all course work taken, exclusive of research credit, he or she may be placed on academic probation by the Dean of the Graduate College. Grades earned by graduate students in undergraduate courses are included in the calculation of the grade point average. Academic probation judgments are made on the basis of grades in course work only.

In addition, if a graduate student does not maintain a cumulative 3.0 grade point average on course work taken in the program of study for their graduate degree, exclusive of research credit, he or she will be considered to not be in good standing by the Department of Chemistry.

New, first-term, degree-seeking graduate students who fall below a 3.0 GPA at the end of their first semester at Iowa State University will be given a one term grace period to bring their grades back to a 3.0 GPA. These students will receive a warning letter from the Graduate College.

While on academic probation a doctoral student will not be admitted to candidacy for a degree and if appointed to a graduate assistantship, he/she will not receive a Graduate College tuition scholarship. If a student is to qualify for a tuition scholarship, he/she must be removed from probation by the tenth class day of the term.

To insure that registration does not take place without a review by the program, the Graduate College places a hold on future registrations by a student on probation. Before the student registers for each term, the Chair of the GASLC must review his or her record and recommend in writing if the

Graduate College should permit further registration. Before graduation is approved, the student must complete all courses listed on the program of study with a minimum grade of B and have achieved a 3.0 GPA or greater in the program of study.

## **8. ASSISTANTSHIPS**

### **8.1. Teaching Assistantship**

Appointment as a TA is contingent upon proper certification as a result of the OECT (Section 1.2.2); if a Fully Certified level is not attained, the stipend will be reduced based on the OECT rating (see timeline chart in Section 10).

### **8.2. Fellowships**

Students making excellent progress are encouraged to apply for outside fellowships (NSF, NIH, etc.). Departmental fellowships are awarded by the GASLC during the Spring Awards Ceremony based on faculty nominations.

### **8.3. Students without Departmental Support**

Such students become eligible for graduate assistantships only by action of the GASLC and the Chair of the Department. *Admission without support carries with it no assurance that an assistantship will ever be awarded.* To be eligible for departmental support, students must have completed at least 7 credits of graduate courses other than research and seminars at ISU; maintained a GPA of >3.0 (excluding research and seminars) at ISU; demonstrated proficiency in English, and obtained the concurrence of their POSC. Of course, funding must also be available.

## **9. PROGRESS TOWARD THE GRADUATE DEGREE**

### **9.1. Normal Academic Progress**

A student in good standing must maintain a 3.0 grade point average in the POS, make timely progress in preliminary written and oral exams, and demonstrate accomplishments, diligence, competence and progress in research. These expectations are given in more detail elsewhere in this manual.

The Department has set standards as to timely progress. It is not to a student's advantage to prolong the time toward a graduate degree. To avoid an unduly long time to attain a graduate degree, students should exert due effort in the early stages of their graduate work, paying careful attention to program deadlines.

### **9.2. Conditions of appointment; stipend reductions**

The Department will reduce the assistantship stipends of students not making timely progress; in extreme cases, it will not renew a graduate assistantship.

**10. GRADUATE PROGRAM REQUIREMENT TABLE**

<b>Level of Attainment</b>	<b>Level of stipend and tuition reduction if requirements for attainment are not reached by the start of the year shown</b>
<b>English proficiency</b> <ul style="list-style-type: none"> <li>• Completion of Graduate English Exam by end of 2<sup>nd</sup> semester</li> </ul>	By the beginning of the 5 <sup>th</sup> semester: 5% reduction in stipend. By the beginning of the 7 <sup>th</sup> semester: 10% reduction in stipend. By the beginning of the 9 <sup>th</sup> semester: No support in stipend.
<b>Chemistry proficiency</b> <ul style="list-style-type: none"> <li>• Completion of diagnostics or clearing of any deficiencies by end of 3<sup>rd</sup> semester.</li> </ul>	Students entering 4 <sup>th</sup> semester must petition their POSC for continued support if the deficiencies are not cleared. The POSC makes a recommendation to the GASLC based on the comments of the POSC, which then makes the final decision. There will be no support after the 5 <sup>th</sup> semester, except in circumstances approved by the POSC, the GASLC, and the Department Chair.
<b>OECT</b>	At the beginning of the 1 <sup>st</sup> semester: TA status. “1-2” rating = no reduction. “3” rating = 10% reduction in stipend per month. “4” rating = 20% reduction in stipend per month.
<b>M.S. Degree</b> (required or desired)	By the beginning of the 7 <sup>th</sup> semester: 5% reduction in stipend. By the beginning of the 8 <sup>th</sup> semester: No support in stipend.
<b>Ph.D. Candidacy</b> <ul style="list-style-type: none"> <li>• Completion of preliminary oral examination by the end of 5<sup>th</sup> semester</li> </ul>	By the beginning of the 6 <sup>th</sup> semester: 5% reduction in stipend. By the beginning of the 7 <sup>th</sup> semester: No support in stipend. Includes time to prior M.S. degree at ISU.
<b>Ph. D. Degree</b>	By the beginning of the 11 <sup>th</sup> semester: No support in stipend. Students entering Year 6 (and Year 7) must petition their POSC for continued support in stipend and tuition. The student must obtain the “Request for Support” form, schedule a meeting of his/her POSC, and present a completion plan to the POSC. The POSC makes a recommendation to the GASLC based on the results of the POS meeting, which then makes the final decision. The GASLC will either implement full support for students in good standing who are expected to complete their dissertation in the next year, or zero support for students making insufficient progress to expect completion in the next year. There will be no support after Year 6, except in circumstances approved by the POSC, the GASLC, and the Department Chair.

## 10.1 MAJOR MILESTONE CHECKLIST

Semester 1	<input type="checkbox"/> Take Diagnostic exams (all) <input type="checkbox"/> Pass OECT (Int'l) <input type="checkbox"/> Pass English Placement Exam (Int'l) <input type="checkbox"/> Select major professor
Semester 2	<input type="checkbox"/> Second chance to take Diagnostic exams <input type="checkbox"/> Attend POS completion meeting
Semester 3	<input type="checkbox"/> Complete POSC <input type="checkbox"/> Last chance to take Diagnostic exams
Semester 4	<input type="checkbox"/> Schedule Year 2 Program of Study meeting
Semester 5	<input type="checkbox"/> Complete Preliminary Oral Examination
Semester 7	<input type="checkbox"/> Schedule Year 4 Program of Study Meeting
Semester 8	<input type="checkbox"/> Complete Public Seminar or a time will be assigned to you during the Wednesday afternoon seminar time
Semester 9 or 10	<input type="checkbox"/> Schedule Year 5+ Program of Study Meeting (if not defending thesis)
Semester 11	<input type="checkbox"/> Complete Request for Support for 6 <sup>th</sup> Year Paperwork (if not defending thesis)

## 11. VACATION AND LEAVE POLICIES

### 11.1 Personal time off for RA appointments

- 11.1.1 Arrangements for vacation and leaves of absence are made between the graduate assistant and that assistant's supervisor; graduate students do not accrue vacation or sick leave. A graduate assistant on a teaching appointment should also get approval of their teaching supervisor. When a graduate student employee needs to be absent either for personal reasons or illness, the supervisor should be understanding and accommodating to that need. At the same time, the graduate assistant should attempt to plan personal leave so that it does not interfere with or cause neglect of the duties associated with his or her appointment. Supervisors of graduate assistants are responsible for ensuring that their assistants do not exceed reasonable limits for leave.
- 11.1.2 For all absences, you are required to submit an absence requests to the Department. These will be filed in the main office for each major professor. These forms are available in the main office, 1605 Gilman Hall.
- 11.1.3 Assistants whose appointments are in the Ames Laboratory submit Ames Laboratory absence requests. Students on Department of Chemistry appointments obtain and submit their forms in the Department office.
- 11.1.4 Research Assistants should take their vacation so that it can be conveniently worked into the research plans of their major professor.

### 11.2 Personal time off for TA appointments

Graduate students should not make personal travel plans far in advance for dates falling during the Fall or Spring academic semesters. This is critical because most research advisers don't know who will be on TA or RA. All students should consult closely with their research advisers about any vacation plans.

#### **TAs may not miss teaching responsibilities due to vacation or personal leave.**

- 11.2.1 TAs who do not attend the first organizational meeting of the semester will not be paid from the beginning of the TA appointment until the first day that they return to work. In fall, the start date is August 16th; in spring, it is January 1st.\* TAs are not be paid for days when teaching responsibilities are missed due to personal travel.
- 11.2.2 TAs who miss teaching responsibilities prior to the end of finals week will not be paid for any days following the missed work through the end of the appointment. In the fall and spring semesters, this means no pay from the date that they leave through December 31st and May 15th, respectively.
- 11.2.3 TAs who miss teaching responsibilities either the week prior to or following Thanksgiving or spring break will not be paid starting from the date of the first missed work assignment and until their return to ISU including the five days of recess or break.

**\*TAs are to be back and ready to work on Wednesday morning the week prior to the start of classes.**

Warning: International TAs with expired visas are advised to not travel outside of the U.S. for Thanksgiving, spring, or winter break. Travel delays due to visa issues will be considered leave without pay and will follow guidelines 1 – 3 above.

All graduate students whether on a research or a teaching appointment are required to complete an absence request form anytime that they leave Ames on a weekday, with the exception of University Holidays or in cases of illness. The form must be signed by the research adviser and, if on teaching appointment, their teaching supervisor and Joe Burnett or Terry Fernando.

#### Exceptions

- A. In cases of illness, a funeral, a family emergency, or other extraordinary circumstances that prevent a teaching assistant from fulfilling their teaching responsibilities, the teaching assistant shall follow specific course policies for notifying your teaching supervisor and finding a replacement. Teaching assistants in general chemistry must contact personnel in the undergraduate chemistry office (1608 Gilman Hall). It is critical that TAs keep Renee Harris and the Student Services Specialist fully apprised of their situation.
- B. If the absence is because the teaching assistant will attend a professional meeting, the teaching assistant must find a replacement that is acceptable to their teaching supervisor at least two weeks prior to the meeting. The teaching assistant must cover all teaching obligations (teaching recitations or labs, grading, proctoring, help center hours, staff meeting, etc.). The substitute teaching assistants are not paid by the department.

Teaching assistants play a crucial role in the teaching mission of our department. As such, it is extremely disruptive to students and course instructors to have teaching assistants take vacation time during their teaching responsibilities. This is especially true at the beginning of the semester when course instructors are trying to get courses running smoothly and at the end of the semester when the instructors need teaching assistants to help successfully close out the semester and to correctly assign final grades. When a teaching assistant accepts a position, they have a professional obligation to teach for the complete academic semester, including attending the organizational meeting(s) held the week prior to the start of a semester and through the end of final exam week. Teaching assistants do not have paid vacation days. There are circumstances when an individual may not be able to fulfill her or his teaching obligations (illness, funeral, family emergency, etc.); under these circumstances, the teaching assistant must work with the course instructor and support staff (laboratory personnel and/or the undergraduate chemistry office) to assure that his/her classes are covered.

**11.3. All other leaves of absence**

**11.3.1. Maternity leave.** A six month extension on stipend reductions (Section 10) is automatic.

**11.3.2. Military leave.** These are honored upon petition.

**11.3.3. Other leaves.** These are handled as special cases.



## 12. GRADUATE STUDY BY FULL-TIME EMPLOYEES

Full-time employees of ISU or another employer who pursue a graduate degree must have the background expected of regular students, including the required technical courses a Chemistry major takes and an appropriate grade record. Applicants are invited to correspond with the Department concerning their suitability for admission. Applicants who do not qualify may be admitted as Special Students in an effort to fulfill admission requirements.

Because of the special circumstances involved, it is recommended that the student, the employer, the Major Professor and the Department agree, in writing, on the plans and time schedule of the candidate.

Immediately prior to the semester in which graduate study will begin, the student is to take the diagnostic exams in all four areas. Proficiency requirements in Chemistry and English must be met promptly.

The student should complete the forms "Recommendation for Committee Appointment" and "Program of Study" at an early date.

Full-time employees, like other students, are required to undertake an original research project and defend their thesis before the POSC. Results of a routine or repetitive nature that lack a creative, original component are not acceptable. If a student plans to include in the thesis research done in fulfillment of job requirements, not only must the employer agree, but such students should delineate in advance to their POSC their intentions in a written statement, so that the suitability of such plans may be judged at an early stage.

The time requirements stated elsewhere in this document will be appropriately extended for full-time employees.

### **13. GRADUATE STUDENT ACADEMIC MISCONDUCT**

Academic misconduct by graduate students is taken very seriously. The more serious cases involve cheating or plagiarism on preliminary written and oral examination, thesis or dissertation. Plagiarism involves taking or passing off as one's own the ideas or writings of others. Other individual's ideas or writings should always be openly acknowledged and thoroughly referenced. Such matters of misconduct are very serious violations of academic ethics and usually result in dismissal from the University without a degree.

Cheating on a course examination or plagiarism on a paper related to a course is also academic misconduct. If a graduate student is believed to have plagiarized a term paper or to have cheated on an exam, most often that situation is handled informally between the professor and the student or by a representative of the Department. The student or the faculty member may ask for more formal review by the Dean of Students' office using policies developed for ensuring that due process is followed. A formal investigation of the situation may be conducted by the Dean of Students office, a hearing held by a committee of the all-university judiciary, and a recommendation made to the Vice President for Student Affairs. The student may appeal to the Vice President for Student Affairs if he/she is not satisfied with the decision of the hearing committee.

## 14. ISU UNDERGRADUATE STUDENTS IN CONCURRENT GRADUATE DEGREE PROGRAM

**14.1** Several programs provide opportunities for well qualified ISU juniors and seniors majoring in those curricula to apply for admission to both a bachelor's and graduate certificate or master's degree programs. The minimum requirements for admission to the concurrent program are generally the same as those required for full admission to the Graduate College. (Also, since these students have not received their undergraduate degrees, they must be making good progress toward a bachelor's degree.) A student request form for "Concurrent Enrollment for Undergraduate Student Wishing to Pursue a Graduate Certificate or Degree." The form can be obtained from the Graduate College Web site at <https://www.grad-college.iastate.edu/student/forms/> and circulated for the appropriate signatures. Other requirements include:

- Official enrollment and fee payment will be as a graduate student.
- The graduate degree or graduate certificate will be awarded only at the same time as, or after, the undergraduate degree is conferred.
- Students interested in a research career may be able to apply for graduate research assistantships while in a concurrent degree or graduate certificate program.
- Students in concurrent degree programs may, subject to Program of Study committee approval, double count up to 6 ISU credits of major or nonmajor graduate credit courses for both a Bachelor's degree and a certificate or Master's degree.
- For students pursuing a concurrent undergraduate bachelor's degree and graduate certificate, at least 12 graduate credits cannot be double counted and a maximum of 6 graduate credits can be double counted for both the bachelor's degree and the graduate certificate (when the graduate certificate requires more than 12 credits).
- A student in a bachelor's and master's concurrent degree program cannot be on a Ph.D. track during the concurrent program.

<b>Degree</b>	<b>Bachelor's Major</b>	<b>Certificate/ Master's Degree</b>	<b>Certificate/ Master's Major</b>
B.S.	Chemistry	M.S.	Analytical Chemistry
B.S.	Chemistry	M.S.	Chemistry
B.S.	Chemistry	M.S.	Inorganic Chemistry
B.S.	Chemistry	M.S.	Organic Chemistry
B.S.	Chemistry	M.S.	Physical Chemistry

Information and text included in this manual has been compiled from previous Department of Chemistry Graduate Manuals and the Iowa State University Graduate College Handbook, which may be accessed at:

<http://www.grad-college.iastate.edu/publications/gchandbook/homepage.html>

## **Funding for Graduate Assistants and Post docs in Connection with the Arrival of New Children**

(Revised July 2013)

### **Background**

An increasing number of graduate assistant and postdoctoral appointees are beginning families during their appointment periods. Faculty mentors, departmental and college administrators have voiced a strong need to provide short term funding for a reasonable period following the arrival of children to provide an environment that is supportive of all stakeholders. Short term funding is particularly important in the case of graduate assistants and post docs because of the typically short appointment periods, as well as the short term, goal-oriented nature of the projects that typically fund their appointments.

### **Intent**

1. Provide short term funding for up to six weeks to temporarily replace the normal mission-oriented funding for all graduate assistants and post docs who will be the primary care-giver after the birth or adoption of a child. Typically, the primary care-giver is the mother, but we recognize there may be circumstances where the father will be the primary care-giver.
2. Funding will be limited to a total of six weeks but may be shared by two parents if both are graduate assistants or post docs (for example, three weeks each).
3. The maximum period of short term funding will be for six weeks at the stipend rate of the care giver.
4. The primary care giver GA or post doc will request the period of bridge funding desired.
5. All graduate assistants and post docs or pre docs who can document their care giver status as the primary care-giver will be eligible for short term funding, regardless of their stipend funding source.
6. Graduate assistants and post docs or pre docs shall be allowed to return to their original appointment, according to the terms of their original appointment, following the bridge funding period.

### **Funding Source**

The bridge funding will be provided by an equal match from the Graduate College and the academic home college of the graduate assistant or by an equal match from the Graduate College and home academic college or equivalent employing unit of the post doc.

Bridge Funding effective 7/1/2013

7/9/2013

Form is available at:

[http://www.grad-college.iastate.edu/common/forms/faculty\\_forms.php](http://www.grad-college.iastate.edu/common/forms/faculty_forms.php)