

## **INORGANIC SUPPLEMENT**

### TO THE CHEMISTRY DEPARTMENTS "INFORMATION FOR GRADUATE STUDENTS ABOUT PROCEDURES AND REQUIREMENTS" BULLETIN

#### **I. ADVISING OF INCOMING STUDENTS**

Each new graduate student is assigned a member of the Departmental Graduate Advisory Committee to serve as advisor until a supervisory committee is appointed for the student.

#### **II. SELECTION OF RESEARCH ADVISOR AND COMMITTEE**

Consult the Department of Chemistry Information to Graduate Students about Procedures and Requirements for rules concerning interviews of faculty, the establishment of your Supervisory Committee and choice of a research advisor.

#### **III. Ph.D. QUALIFYING PROCEDURE**

- A. *Cumulative Examinations.* A written examination will be given to potential Ph.D. candidates at least six (6) times per year. The exams are usually given during the Fall and Spring Semesters of each academic year. The date and subject of each exam will be announced at least one week prior to the exam. However, the exam may include unannounced material from recent seminars or the latest issue of *J. Am. Chem. Soc.*, *Inorg. Chem.* or *Organometallics*. Exams will be graded as Passed (P), Half-Passed (1/2-P) or Failed (F). A total of five (5) passes out of nine (9) consecutive examinations is required for continuation toward the Ph.D. degree. Students must begin taking the exams if they have completed CHM 6620. Students enrolled in CHM 6620 are encouraged to begin taking these exams and may take the exams while enrolled without having the attempts counted toward the nine (9) total attempts. However, passes will be counted toward the required total of five (5). Students who switch majors to Inorganic Chemistry after taking CHM 6620 will be given three free exams. A grade of "A" in CHM 6620 will be counted as one (1) Pass without counting toward the nine (9) attempts. Passes earned on the organic cumulative exams will be allowed to count up to two (2) of the required five (5) passes.
- B. *Oral Qualifying Examination.* Following completion of the cumulative exams and prior to completion of seven semesters of graduate study, the student will take the oral qualifying exam. Summer registration counts as one semester, so this requirement will typically be met prior to the end of the first semester of the third year if the student has been continuously registered following entry in the Fall Semester. No fewer than seven days prior to the exam date, the student must give the members of the supervisory committee the written portion of the qualifying exam (typed, double spaced). 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 written component and an oral component. Two options are available for the content of the written material and the accompanying oral exam, as described below:

**(Option 1) *Research report/proposal.*** The written material consists of a research report on the progress of the student in his/her research and a short proposal for future work on the project. The research report section will summarize the background of the project, describe the procedures used and the results obtained by the student, and discuss the 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"). The proposal will be a separate document suggesting future research directions related to the project. The length of the proposal section will normally be 5-8 pages (double spaced), and the content should reflect the student's view of important extensions of the research. It is expected for the research report that the student will initiate the first draft of the document and will be substantially responsible for its content. Although general discussions concerning future research may occur between the student and the research director prior to the preparation of the proposal, the proposal section should be written entirely by the student with no direct assistance or review by the research director. In the oral portion of the exam, the student will give a brief presentation on the research report and proposal. The oral examination will involve questions from the committee to determine the competence of the student in research and in the background needed to complete the proposed research.

**(Option 2) *Original proposal.*** The research proposal will be an original contribution different from the student's immediate area of research, on a topic chosen by the student and approved by the student's research advisor. The written material for this option is an extended abstract (usually about 6-12 double-spaced, typewritten pages). The research proposal will be used to initiate an examination of the student's background to determine if general competence exists that would enable the student to complete the project effectively. In advance of the oral qualifying examination, the student will send an announcement of the exam to the members of the committee, the department chairman and the Dean of the Graduate School, using a special form available in the chemistry department graduate affairs office. The Admission to Candidacy form is available in the chemistry department graduate affairs office and the candidate will see that this form is typed and ready for signatures. At the conclusion of the examination, if the candidate passes, the members of the committee sign the Admission to Candidacy form, which was prepared in the chemistry department graduate affairs office in advance of the examination. They also approve a checklist of requirements, prepared on a departmental form, also available in the chemistry department graduate affairs office, indicating any requirements which remain to be satisfied. Both of these forms are then submitted to the Graduate Coordinator. Between the oral qualifying examination and the date of the degree, a minimum of two semesters must elapse if the candidate is a full-time student, or one calendar year if the candidate is on a less than full-time basis. The semester in which the exam is passed is counted, provided the exam occurs before the midpoint of the term. The student's progress in research, cumulative exams, courses, and the seminar program will be evaluated yearly by members of the student's supervisory committee beginning in the student's second year of study. If deemed necessary by the committee, a meeting with the student may be held prior to the initiation of the Ph.D. candidacy qualifying procedure to provide guidance concerning the student's graduate program. Following entrance into Ph.D. candidacy, the student's progress toward the degree will also be monitored by the committee on a regular basis.

#### IV. COURSE AND OTHER REQUIREMENTS

- A. *Course Requirements.* Inorganic graduate students must complete with a grade of "C" or better the following courses:

*Required*

CHM 6620            Advanced Inorganic Chemistry I

*Select Two Electives*

CHM 6621            Advanced Inorganic Chemistry II  
CHM 6251            Organometallic Compounds  
CHM 6626            Applications of Physical Methods in Inorganic Chemistry  
CHM 6628            Chemistry of Solid Materials  
CHM 6670            Inorganic Biochemistry  
CHM 6680            Magnetism in Chemistry

In addition, they must satisfy the Ph.D. course requirements of the University, the Graduate School, the College of Liberal Arts and Sciences, and the Department of Chemistry.

- B. *Inorganic Seminar (CHM 6690).* Beginning in his/her second year, each student will present a seminar each year during the Fall or -Spring semester. Normally, the first seminar presented will consist of a review of the literature and other background material relevant to the student's research project and a description of any research results obtained to that point. In subsequent years the seminar will be a report on the student's research progress. 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. A letter grade will be assigned for each semester in which the student gives a seminar; S/U (satisfactory/unsatisfactory) grades will be given for other semesters. Seminar grades will be assigned by the CHM 6690 instructor. Only semesters in which a student receives a letter grade will be counted toward the department's 6000-level course requirements.
- C. *Final Oral Examination.* The final oral examination shall be a defense of the candidate's dissertation. The Report on Final Examination form (available in the chemistry department graduate affairs office) must be signed at this time and the candidate sees that this form is typed and ready for signatures. The student must provide the presumed final draft of the thesis to the committee one week prior to the oral examination.

#### V. Ph.D. GRADUATION STEPS

During the semester one wishes to receive the Ph.D. degree, the student must, by the deadlines in the yellow "Deadlines Bulletin" from the Graduate School, carry out all the steps described in the departmental Information for Graduate Students about Procedures and Requirements.