## 2008-2009

# Graduate Handbook & Regulations

**Department of Chemistry University of Cincinnati** 

#### DIRECTORY

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**FORMS** (in reverse order so that you can tear them off in sequence from the back in)

#### INTRODUCTION

The Division of Research and Advanced Studies at the University of Cincinnati was founded in 1906 in recognition of the need for special emphasis on graduate instruction and research in the pursuit of graduate degrees. Over the years there have been several organizational changes, the most recent being in 2006 that changed the title of the Division to The Office of the Vice Provost and Dean of the Graduate School.

The governing structure for graduate education relies on the All-University Graduate Faculty to determine educational policies and regulate requirements for advanced degrees. The executive officer of the graduate faculty is the Vice Provost and Dean of the Graduate School, who is assisted in these duties by the Graduate Council, the members of which are chosen as representatives of the major graduate program groupings

The All-University Graduate Faculty includes all faculty with full-time tenure track appointments in programs offering the master's or doctoral degree. This group of faculty determines the educational policy of the graduate division, regulates the admission of students, their candidacy and the awarding of degrees to them. They have the sole power in establishing requirements pertaining to all graduate degree programs, and to recommendation of candidates to the Board of Trustees for all advanced degrees (with the exception of the JD and MD degrees). In determining the educational policy of the Graduate Division, the graduate faculty does leave the departments free to determine specific courses of study, precise manners of instruction, and individual methods for evaluating the results of examinations. Consequently, the Department of Chemistry has formulated and revised over the years "Regulations Governing Graduate Study in Chemistry" at the University of Cincinnati. These are presented in Section B below, along with additional excerpts from the University Graduate Handbook that clarify certain points of interest to graduate students. Section A is devoted to Departmental and University procedures relating to application, admissions, pre-registration, registration, and graduate credits.

It is the intent of the Departmental regulations governing graduate study and this Departmental graduate handbook to be in complete compliance with the rules and policies of the University of Cincinnati graduate school. Amendments will be made as changes are made in the rules and policies of the graduate school. The URL for the graduate school is <a href="https://www.grad.uc.edu">www.grad.uc.edu</a> and the URL for the University Graduate Handbook is <a href="http://www.grad.uc.edu/file\_pdf/handbook.pdf">http://www.grad.uc.edu/file\_pdf/handbook.pdf</a>

#### **SECTION A**

#### **Application and Admission**

Students applying for admission to the graduate programs of the Department of Chemistry must submit a completed application form to the Graduate Admissions Secretary of the Department in order to be considered for admission and assistantships. Application forms and information about the graduate programs may be obtained by writing to the Department of Chemistry, PO Box 210172, or by calling (513) 556-9200 or by downloading them from the Department website (http://www.che.uc.edu). In addition to a completed application form, applicants are required to submit transcripts of all undergraduate and graduate work, as well as three letters of recommendation. The Graduate Record Examination (GRE) general test is

required for admission to the graduate programs of the Department of Chemistry. In addition, an application is not considered complete until a non-refundable \$40.00 application fee has been received.

For admission to full graduate standing in the Chemistry Department of the University of Cincinnati, a student must have a Bachelor's degree in Chemistry or a closely related field from a college or university regarded as standard by a regional or general accrediting agency. The Department does not have a fixed grade point average requirement for admission, recognizing the diversity of undergraduate programs in the country. Typically, the applicant should have a B average in relevant undergraduate coursework (math and science courses), or otherwise give evidence of promise of ability to do graduate work (such as letters of recommendation and scores on the GRE).

Students with undergraduate majors other than chemistry may be admitted provisionally if they lack essential undergraduate coursework in chemistry. Remediation of the deficiencies is decided on a case-by-case basis, and usually involves successfully completing one or more undergraduate courses, without graduate credit. Provisionally admitted graduate students may obtain full graduate standing when these deficiencies have been corrected, assuming they have also maintained a satisfactory academic record in all coursework taken as part of their graduate program.

Unclassified students may be admitted to the Graduate Division for study without being admitted to the graduate degree programs of the Department of Chemistry. Students so admitted may take courses for graduate credit, and these will generally be applied to degree requirements of the Department, should the student subsequently apply and be admitted to one of the graduate programs of the Department. Acceptance of these credits will also be contingent on satisfactory performance in these courses. NOTE: Unclassified students may not participate in any part of the Candidacy Examination.

Foreign students are only admitted to full graduate standing. Complete transcripts of undergraduate and graduate work in their native country and submission of results from the GRE are required. All foreign applicants are required to submit the results from the TOEFL and TSE, taken in the student's own country prior to admission. The Chemistry Department requires a score of 580 or greater for admission as a graduate assistant in the Department, and a score of 520 or greater if an assistantship is not sought. Students of foreign origin who have lived in the United States for two or more years may demonstrate English language proficiency in other ways, such as obtaining a degree in a U.S. college or university. Upon admission and arrival at the University of Cincinnati, all foreign students are required by state law to take the Oral English Proficiency Exam; those students not performing to a satisfactory level on this exam will not be permitted to perform teaching duties until satisfactory performance is demonstrated. Students will be informed of the courses available at the University, through which they may enhance their English language skills. Students not passing the exam will be retested according to the published University schedule of examinations. If a student has been awarded a teaching assistantship, yet does not pass this entrance requirement, the student will retain that assistantship for a maximum of one year and will generally be assigned duties within the Department that do not involve instruction/student contact. Beyond one year, if the student has not passed the Oral English Proficiency Exam, (s)he will not be eligible for a teaching assistantship. If the student passes the exam at a later

time, he or she may regain the assistantship (subject to satisfactory academic performance as defined in Section B of this handbook).

The Department of Chemistry endeavors to make prompt decisions when an application file is completed. The Department does not have a deadline for applications, but prospective applicants are encouraged to complete the process before March 1, as the resources of the Department for assistantships are often exhausted after that date. Individuals wishing to apply at other times of the year should discuss possibilities with the Graduate Program Director prior to applying. Admission decisions are based solely on the materials provided by the student in the application file, namely the application forms, transcripts of all college-level work, letters of recommendation and any additional relevant materials the applicant wishes to include. Admission decisions are not made on the basis of race, age, sex, sex orientation, religion, or handicap, except where the handicap may place the student or other students, faculty or staff in physical danger. Applications from minority groups and women are encouraged.

Students accepted into the graduate program of the Chemistry Department must complete the supplementary information form prior to registration. On this form, the student should enter both the name of the chemistry graduate program and its code number in the appropriate location. A physical exam is also required of entrants into the graduate program, including a tuberculin Tine test or chest X-ray within three months of registration.

The Department of Chemistry will grant, in appropriate circumstances, transfer of graduate credit from other accredited universities (for specific details and limits, see Section B, below). Normally, credit hours allowed for a transfer course will not exceed the quarter hours of any UC course(s) covering equivalent material.

#### Registration

A student must be registered in the graduate division in order to earn graduate credit, and must follow the procedures outlined above to gain admission to the graduate programs of the Department of Chemistry. A student is expected to register each quarter while in residence and active in the graduate program. A student may not attend classes until registration is completed. Students are encouraged to register through priority registration, which occurs during the middle of the preceding academic quarter, although registration may be carried out during the registration period immediately preceding the quarter in question. When registering by priority registration, payment, and/or confirmation is due by the specific due date indicated on the Priority Schedule bill. Students with a zero balance must still return the top portion of their schedule/bill to verify that they will be attending. Failure to pay, or confirm, will result in cancellation of the registration. If a student registers during final registration, a schedule/bill is produced immediately, and registration is complete only upon full payment. Later registration is available after the first official day of classes of the quarter, and carries with it a late fee. Students may alter their schedules once registered by completing a drop/add form. Classes may be added to a schedule only through Friday of the second week of classes (unless the college offering the course has established an earlier deadline). After that time, only drops will be processed. Graduate students in the Department of Chemistry are urged to consult with their Advisor and/or the Graduate Program Director prior to dropping a qualification course (see Section B, below). A student may also be withdrawn by the instructor at any time in the quarter when excessive absences have been incurred. Students are encouraged to consider the

financial ramifications of withdrawal (see the University Graduate Handbook, or current Learning Opportunities) prior to withdrawing.

Students may audit a course when the credits are not needed for the degree program, and the approval of the student's advisor has been obtained. Admission to a course with audit status is at the discretion of the instructor, who is not obligated to accept a student for audit. Audit hours do not count toward the 260 credit limit, nor are they included in the determination of full-time status. Students may also elect to take a course on a Pass/Fail basis, with the approval of both the student's Advisor and the instructor. Qualification courses in the Department of Chemistry may not be taken on a Pass/Fail basis.

Any and all courses taken outside the Chemistry Department, except those specified in the polymer option must be approved in writing prior to registration by the student's MS or PhD committee and the Graduate Program Director. This approval is required even if the course is not being used to satisfy any graduation requirement.

#### **Graduate Credits and Grading**

A full time course of study in the graduate program of the Department of Chemistry consists of registration for 12 or more graduate credits each quarter. Graduate credits are earned for successfully completing courses at the University of Cincinnati with course numbers of 700 or greater. Courses at the 500 or 600 level are considered dual level, and graduate credit may be earned for these courses, and applied to the course requirements for the MS or PhD degrees in the Department of Chemistry, subject to restrictions outlined in Section B of this handbook. Full-time students who receive a UGS are required to register for 12 graduate credits in each quarter that the UGS is received. More information concerning the linkages between registration credits and different forms of support can be found in Appendix I under Registration and Support

The maximum number of credits per quarter that may be taken (without an overload fee being charged) is 19. Courses taken with "audit" status count toward this limit of 19 credits. Students with outside work, or who for other reasons can devote less than full time to graduate study, will be allowed to register for fewer graduate credits, as recommended by the Graduate Program Director. Foreign students, under the terms of their visas, must be enrolled as full time students.

Grades are assigned by the instructor in each course, in accordance with the accepted policies of the graduate division. Recognized grades are: A (4.00), A- (3.67), B+ (3.33), B (3.00), B- (2.67), C+ (2.33), C (2.00), F (0.00), P, U, T, I/F, W, SP and UP. The grades P and U represent satisfactory and unsatisfactory performance, respectively, in certain advanced courses in the Department. T represents audit status (see above) while I/F indicates incomplete, when the student fails to complete one or more course requirements, such as the final examination. The grade of W denotes an official withdrawal, and SP and UP indicate satisfactory or unsatisfactory work for courses "in progress" and are generally used in the Department of Chemistry for thesis/dissertation research, which is ongoing and there is no basis for evaluation until the work is complete. SP and UP grades are then changed to the appropriate final grade. Note that by University regulations, a student cannot graduate with an NG or F grade in a required course. The Department must request a waiver of the requirement for each course.

#### **SECTION B**

#### **Academic Program Requirements**

The following section constitutes the "Regulations Governing Graduate Study" of the Department of Chemistry. These outline the requirements and procedures pertinent to both the MS and PhD programs of the Department, and are intended to comply with all regulations of the Graduate Division. Following these regulations are several sections that present additional relevant material.

#### Department of Chemistry Regulations Governing Graduate Study

These regulations supplement the regulations of the Office of Research and Advanced Studies, which are printed in the University Graduate Handbook and should be consulted.

The Graduate Program Director will act as Advisor to all new graduate students. By the third Friday of the Winter Quarter, each student planning on a research thesis (MS degree) or dissertation (PhD degree) shall select a Research Advisor, following the procedure outlined in Appendix I of these Regulations. After selecting a Research Advisor the selection form should be returned to the Graduate Program Director. The Graduate Program Director will continue as Advisor to all students throughout the first year of graduate study. Subsequently, the Research Advisor shall assume this role for individual students. The Research Advisor can be changed by the student at any time, subject to the conditions set out in Appendix I.

#### Registration

Students shall confer with their Advisor and with such faculty members as may be recommended to develop an appropriate program for the student. The student will then register in the manner prescribed by the University.

#### **Entering the Program**

An entering full-time student will normally take twelve credits of work. A graduate assistant with teaching duties usually takes three courses, seminar, teaching practice, and sufficient credits of research to total twelve. A research fellow or graduate assistant without teaching duties usually takes three courses, seminar, and research to total twelve credits. An entering student without an appointment will normally take three courses, seminar, and research to total twelve credits. Under ordinary circumstances the first courses taken are the first graduate courses required for the MS or PhD degree. Advanced courses in a given field may only be taken after the basic courses have been completed or with the permission of the instructor.

An entering graduate student who is deficient in undergraduate studies may be required by his/her Advisor to take certain undergraduate courses to make up such deficiencies. Graduate credit, however, will not be granted for these courses. In general, all students who enter under the auspices of the Office for Advanced Studies with chemistry as their major subject should

be familiar with the fundamental principles and the various types of laboratory techniques that characterize chemistry.

#### **SECTION C**

#### **Requirements for the MS Degree**

A student desiring to earn the MS degree in this department may do so under either of two plans. Plan A requires a research thesis, while Plan B is a non-thesis option. The requirements of each of these plans are given below (conditions for continuing university financial support and eligibility for the PhD program are discussed in the section titled Continuing Financial Support and Eligibility).

#### Plan A (Thesis Option)

- a) Complete with passing grades 31 credits of graduate course work. (Grade point requirements are in e), below.) The 31 credits should include three courses in a major field, two courses in a second field, at least one course in a third field, 11 credits of Chemistry 771 (Introduction to Research) and 2 credits of Chemistry 995 (Seminar). Or, include 4 courses in the major field and 1 course in each of two secondary fields, 11 credits of 771 and 2 credits of Chemistry 995. Additional course work shall be completed after consultation with the student's Research Advisor or the Graduate Program Director to decide upon a suitable course work program. A maximum of 11 credits for graduate courses taken elsewhere is transferable toward partial fulfillment of this course work requirement, provided satisfactory grades have been earned. ("Elsewhere" may refer to other departments within the University of Cincinnati or from other colleges or universities.)
- b) Earn 16 graduate credits for research and prepare a satisfactory thesis. Preparation of the thesis involves the following steps:
- i) Choosing a Research Advisor and thesis topic (see Appendix I of the Regulations).
- ii) After selecting a Research Advisor, the student should inform the Graduate Program Director of the choice. After acceptance by the Research Advisor, the Graduate Program Director will notify the Department Head, who will appoint the student's Graduate Committee after consultation with the Research Advisor.
- iii) When the research work is completed, a formal thesis is prepared according to the regulations of the Office of Advanced Studies. The MS thesis must be submitted to members of the Graduate Committee one week prior to the Final Evaluation.
- c) All full-time graduate students must enroll in seminar each quarter they are in residence (consult the University Graduate Handbook for residence requirements). A maximum of two credits earned in seminar may be used to satisfy the above graduate course credit requirement.

- d) All Graduate Assistants involved in teaching must enroll in Laboratory Teaching Practice (Chem. 999) for the Autumn Quarter of their first year of graduate study. Credits earned in this course cannot be used to satisfy the above graduate course credit requirement.
- e) In accordance with present regulations of the Office of Advanced Studies, a student must maintain a B (3.00) average in order to obtain the MS degree. In addition, at least 2/3 of the minimum graduate credits necessary for the degree must be B (3.00) or higher.
- f) Final Evaluation: After all other requirements have been met, a student will appear before his/her Graduate Committee, and any members of the Graduate Faculty who may wish to attend, to defend his/her thesis and to answer general questions designed to test his/her competence in the field of his/her thesis and related fields.

The final, approved thesis shall be produced in the electronic form required by the Office of Advanced Studies, and must be submitted to the Office not later than 10 days before a Commencement. An additional copy of the thesis must be presented to the Research Advisor, in the Advisor's medium of choice. Degrees will be granted at the next regular Commencement.

<u>Note:</u> It is the student's responsibility to check the graduation section of the Advanced Studies web site, <u>www.grad.uc.edu</u>, for changes in the timing of submission of the thesis and application for graduation. These times change frequently and are not controlled by this Department, but they are absolute requirements.

#### Plan B (Non-thesis Option)

a) Complete with a passing grade 45 credits of acceptable graduate course work, at least 25 of which shall be taken in the department, including at least three courses in each of two (2) different fields of chemistry. Additional course work shall be completed after consultation with the graduate program director regarding a suitable program of course work. (Chemistry 771--Introduction to Research and any other credits for research shall not be considered as suitable for course work in this non-thesis option.) A maximum of 22 credits for graduate courses taken elsewhere is transferable toward partial fulfillment of this course work provided satisfactory grades have been earned. ("Elsewhere" may refer to other departments within the University of Cincinnati or from other colleges or universities.)

Or, for students formally admitted to the PhD program by the department, be admitted to candidacy for the PhD (vide infra) and accumulate sufficient research credits to reach the minimum of 45 graduate credits required for the degree.

- b) The Graduate Program Director becomes the student's Advisor upon the student's election of the non-thesis option (for students not in the PhD program).
- c) As in (c) Plan A.
- d) As in (d) Plan A.
- e) As in (e) Plan A.

f) Final Evaluation: After all other requirements have been met, a student will appear before his/her Graduate Committee appointed by the Department Head at the request of the student, and any members of the graduate faculty who may wish to attend, to answer general questions designed to test his/her competence in a specified area of chemistry. For students in the PhD program, completing the candidacy requirements for the PhD degree fulfills this final evaluation requirement.

#### **Requirements for the PhD Degree**

A student desiring to earn a PhD in the Department must fulfill the following requirements: (conditions for continuing University financial support and eligibility for the PhD program are discussed in the section titled "Continuing Financial Support and Eligibility" on page 16). Any and all courses taken outside the Chemistry Department, except those specified in the polymer option, must be approved in writing prior to registration by the student's PhD committee and the Graduate Program Director. This approval is required even if the course is not being used to satisfy any graduation requirement. Note: A student declared ineligible for the PhD program at any time may complete a thesis-MS program but will not be considered for readmission to the PhD program.

#### A) Qualification

All entering graduate students will be required to take the appropriate qualification courses (see below) during their first year of residency in the graduate program. The section below, "Requirements for Satisfactory Completion of Qualifying Courses" should be consulted for grade point average and other important considerations.

At least one course in each quarter must be in the student's major area.

#### **Autumn Quarter**

Three of the courses listed below. (See Polymer and Theoretical Chemistry Options below.)

Chem 601 - Biochemistry I (3 gr. cr.)

Chem 721 - Advanced Physical Chemistry I (3 gr. cr.)

Chem 741 - Advanced Analytical Chemistry I (3 gr. cr.)

Chem 751 - Advanced Inorganic Chemistry I (3 gr. cr.)

Chem 761 - Advanced Organic Chemistry I (3 gr. cr.)

NOTE: All full-time graduate students must enroll in seminar each quarter they are in residence (consult the University Graduate Handbook for residence requirements).

All Graduate Teaching Assistants involved in teaching must enroll in Laboratory Teaching Practice (Chem. 999) for the Autumn Quarter of their first year of service as a graduate assistant.

#### **Winter Quarter**

Two courses from the list below are to be taken in the Winter Quarter. These may be both in one Division or one in each of two Divisions. Four credits of chemistry 771, Introduction to Research, will also be taken.

Chem 602, Chem 604 Chem 722<sup>a</sup>, Chem 724 Chem 742, Chem 744, Chem 831 Chem 752, Chem 754 Chem 762, Chem 763

<sup>a</sup>Prerequisite for Chem 723

See Appendix I of these Regulations for the procedure to be followed in selecting a Research Advisor. At the time of selection of the Research Advisor the student shall declare a major area. Qualification and Candidacy requirements shall be fulfilled in this area. If a student decides to change the major area, permission must be obtained from the Division to which (s)he wishes to move and from the Research Advisor.

#### **Spring Quarter**

One of the courses offered in the student's major (see below) and approved by the faculty of the major Division, and 7 graduate credits of Chem. 771. A list of appropriate courses will be available to students prior to Spring Quarter registration from the Graduate Program Director.

#### **Theoretical Chemistry Option**

Students selecting the Theoretical Chemistry option shall follow the following required qualification sequence. Autumn Quarter: Chem 721, one additional chemistry qualification course, and a math or physics course approved by the Advisory Committee on Theoretical Chemistry. Winter Quarter: Chem 722 or 724, an approved math or physics course, and Chem 771 (Introduction to Research). Spring Quarter: Chem 723 and Chem 771. In the Spring Quarter, the third quarter of a math or physics sequence may be substituted for the equivalent credits of Chem 771; however, this course will not count toward qualification. If this substitution is made, the substituted credits of Chem 771 shall be taken during the subsequent summer quarter.

#### **Polymer Chemistry Option**

Students selecting the Polymer Chemistry option shall substitute a course approved by the Polymer Advisory Committee for one of the required Autumn Quarter qualification courses. The Winter Quarter schedule shall follow the scheme above. In the Spring Quarter of the first year, the student may substitute 3 credits of a polymer course for the equivalent credits of Introduction to Research (Chem. 771); however, such a polymer course will not count toward qualification. If this substitution is made, three additional credits of Chem. 771 shall be taken during the subsequent Summer Quarter. The 11 hour requirement must be completed by the end of the Summer Quarter.

#### **Chemistry 771**

A written report and an oral seminar on research done for Chem. 771 will be evaluated by the student's PhD committee by the end of the quarter in which the student takes the 11<sup>th</sup> credit in the course. Failure to receive a grade of pass in Chem. 771 by the end of that quarter will result in ineligibility for the PhD program and Thesis MS program. This process may only be attempted once. The written report *must* be made available to the committee at least 7 calendar days prior to the defense.

#### **Requirements for Satisfactory Completion of Qualifying Courses**

To complete satisfactorily the qualifying course requirements, a student must, by the start of Winter Quarter of the  $2^{nd}$  Year:

- a) Receive a grade of P (pass) in Chem. 771, Introduction to Research. The grade for this course will be determined by the student's PhD Committee, appointed by the Department Head, consisting of at least three faculty members including the Research Advisor and at least one from outside the student's major area who is not the student's advisor.
- b) Pass the six (6) qualifying courses (other than Chem. 771) with an average grade of B+ (3.33) or higher, with the following provisions:
- i) Petitions to be exempt from specific qualification courses based upon courses completed elsewhere with a grade of B+ or better, will be considered if a qualification course has been taken in that same area and a grade of B+ (3.33) or better has been obtained. 'Elsewhere' is other departments at the University of Cincinnati, and other universities.

For example, a student entering in the Fall Quarter may receive the grades: Physical, B (3.00); Organic, B+ (3.33); Analytical, A (4.00). This student would be eligible to petition out of the subsequent courses in Organic and Analytical having achieved grades of B+ (3.33) or higher in these areas. However, since the student did not achieve a B+ (3.33) or higher in Physical Chemistry, no courses taken elsewhere in this area can be petitioned for use in qualification. Grades obtained in courses taken elsewhere are not counted in the qualification average.

- ii) Repeating a course in which a grade of B+ (3.33) has been earned or for which exemption has been granted is not permitted as a method of obtaining A grades (A, A-) needed to compensate for B (3.00) or lower grades.
- iii) As an alternative to taking a particular qualification course, an entering student may select the option of taking an exemption examination. The successful execution of any of these examinations would make the student eligible to petition out of subsequent courses in that area of chemistry based upon courses successfully completed elsewhere. Successful completion of a course exemption examination will be equivalent to a B+ (3.33) grade in any qualifying course. This option is available only to a student who has not previously received a grade in the course. A course exemption examination will be given in any qualifying course immediately prior to or at the beginning of each quarter in which the course is taught. A student must inform the appropriate Division

Chair, in writing, at least one week prior to the start of the course, of his/her intention to take a course exemption examination.

iv) University of Cincinnati undergraduates who continue into our graduate program may immediately petition out of any graduate qualification courses that they took as undergraduates. The grade awarded will be used to obtain the qualification average.

#### **B)** Graduate Credits

A candidate for the PhD degree must complete at least 135 graduate credits of course work and research, of which a minimum of 60 credits must be in his/her major field of specialization. Those 60 credits must include courses beyond the qualifying level other than seminar, research, or teaching practice. All PhD students who qualify by the end of their first year are required to take two courses beyond qualification to complete their coursework requirements. Students who have not so qualified are required to take three courses beyond qualification. Any graduate level course approved in writing by the student's committee and the Graduate Program Director that has not already been taken by the student in attempting qualification may be used without regard to what department or division teaches the course. Courses already taken at other Universities must also receive approval in writing by petition to the student's PhD Committee. All approvals must be reported to the Department Head and the Graduate Program Director. These additional courses taken outside of Chemistry may occasionally include particularly valuable courses that are not available for graduate credit. Such inclusion requires prior approval of the student's Graduate Committee and the Chemistry Department faculty. In these cases, the student may be exempted from the requirement that all credits be at the graduate level. The resulting graduate credit deficiency may be fulfilled by using research credits. The lowest grade acceptable for exemption by this mechanism will be a C (2.00).

#### C) Teaching Experience

All Graduate Teaching Assistants involved in teaching must enroll in Laboratory Teaching Practice (Chem. 999) for the Autumn Quarter of their first year of service as a graduate teaching assistant.

#### **D)** Candidacy Examination

A student is eligible to begin the Candidacy Examination process when (1) (s)he has qualified under Requirements for the PhD Degree, Section A of these Regulations, or (2) when (s)he has completed with an average of B+ (3.33) or better, the three qualification courses in the major area. A student is accepted as a PhD candidate after (s)he has successfully completed the Candidacy Examination and has completed all required course work for the degree (exclusive of research). The formal acceptance into candidacy will come in a letter from the Vice Provost and Dean of the Graduate School.

The Candidacy Examination consists of two parts: (1) a Second Year Seminar that focuses on mastery of the literature related to the student's project and understanding of the context of the research and; (2) a Third Year Seminar that focuses on demonstrating the

student's creativity and originality in executing the research project. Each of these seminars will also provide a report on the progress made on the student's research project.

#### 1) Second Year Research Seminar.

The purpose of the seminar is both to provide a progress report on the student's research to the student's PhD Committee and to demonstrate the student's understanding of the context of his/her research project.

Thus, the seminar will have a *strong emphasis on*:

- (a) an in-depth knowledge of the literature that is relevant to the student's project
- (b) an in-depth understanding of the experimental techniques being used in the project
- (c) the progress to date on their dissertation research.

Students will include in the seminar a review of the pertinent literature, and should expect questions about this. The seminar will proceed in the sequence: student presentation, questions from the general audience, audience departs, then a private meeting and oral exam with the Committee.

This part of the Candidacy Examination is conducted by the student's PhD Committee as a Divisional seminar during Winter Quarter of the 2<sup>nd</sup> Year. If the committee feels that the student has not demonstrated appropriate development for this point in her/his career, in terms of progress on their research, mastery of the literature in their field, and ability to present their work in a professional manner, the committee will either remove the student from the Ph.D. program, or advise the student of her/his shortcomings and give the student one quarter to work on the areas that need improvement, seeking additional guidance from the committee as needed, and improve to a satisfactory level. For students given an additional quarter by the committee, the requirement will be repeated during the following quarter, and if the goals of this requirement are not met, the student will be removed from the Ph.D. track.

This requirement must be finished and passed by the end of the Spring quarter of the second year or (s)he will be ineligible for the PhD degree and further participation in the Candidacy Exams. University support will be extended for these students to the end of the Summer Term, if requested and a position is available.

#### 2) Third Year Divisional Dissertation Topic Seminar

The purpose of this seminar is to provide a progress report on the student's research to the Committee and to demonstrate creative thinking and intellectual initiative on the part of the student in developing independent ideas within their research.

Each student in the PhD program will present the Seminar describing the background and goals of the research undertaken and the progress achieved towards these goals. It should therefore also express in some detail the plan for the remaining work. This seminar will place an emphasis on the creative and original ideas developed and/or proposed by the student on the implementation and direction of the research project.

The entire seminar will proceed in the sequence: student presentation, questions from the general audience, audience departs, private meeting and oral exam with the PhD Committee The seminar examination will be scheduled as a Divisional Seminar during Autumn Quarter of the Third Year. If the committee feels that the student has not demonstrated appropriate development for this point in her/his career, in terms of progress on their research, original thinking and intellectual contributions to the project, and ability to present their work in a professional manner, the committee will either remove the student from the Ph.D. program, or advise the student of her/his shortcomings and give the student one quarter to work on the areas that need improvement, seeking additional guidance from the committee as needed, and improve to a satisfactory level. For students given an additional quarter by the committee, the requirement will be repeated during the following quarter, and if the goals of this requirement are not met, the student will be removed from the Ph.D. track.

A student must successfully pass this requirement of the Candidacy Examination by the end of the Winter Quarter of the third year in residence or (s)he will be deemed to have failed the Candidacy Examination and to be ineligible for the PhD degree. University support will be extended for these students to the end of the Summer Term, if requested and available.

After a student has successfully completed the PhD Candidacy Examination, and thereby entered Candidacy, the University Graduate Regulations require that Candidates be evaluated at least annually to determine their fitness to continue in the program. The Department's evaluation takes the form of research seminars similar to the Third Year Divisional Dissertation Topic Seminar. Thus, the seminar proceeds in the sequence: student presentation, questions from the general audience, audience departs, private meeting and discussion with the PhD Committee. The Committee will then determine whether the candidate has demonstrated satisfactory progress to be allowed to continue toward the PhD.

As for the Third Year Seminar, the student will be expected to describe the background and goals of the research undertaken and the progress achieved towards these goals. Most importantly, a detailed plan for the remaining work should be presented and discussed.

The post-Candidacy seminars must take place within one year after entering Candidacy, and within one year annually thereafter. It is recommended that it be given as early in each year as the progress of the research permits.

A student must successfully pass this requirement by the end of each year of residence after the third year or (s)he will be deemed to have failed the PhD program and to be ineligible for the PhD degree. University support will be extended for these students to the end of the Summer Term, if requested and available.

#### E) Dissertation

Present an acceptable dissertation on a topic related to his/her major field of study. Such a dissertation shall embody the results of original research, give evidence of high scholarship, and constitute a publishable contribution to knowledge. The following steps are involved in the preparation of an acceptable dissertation:

- 1) Through consultation with members of the faculty, each graduate student must choose a research topic and a Research Advisor (see Appendix I of these Regulations). A student may elect to work on a problem of his/her own, provided (s)he can find a member of the Graduate Faculty of the Department willing to act as Research Advisor for the proposed topic. Upon selecting a Research Advisor, the student should fill out the research selection form. The form should be presented to the Graduate Program Director who will forward it to the Department Head. The Department Head, in consultation with the student's Research Advisor, will appoint the student's PhD committee, and formally notify each member and the student.
  - 2) Successful completion of the candidacy examination (see above).
- 3) Once a student has successfully completed the candidacy examination requirement, the PhD Committee will evaluate annually (no later than the end of the Winter Quarter) the candidate's ability to complete an adequate dissertation. A summary of the meeting shall be placed in the student's file by the Chair of the student's PhD Committee. Such meetings shall be scheduled as a divisional seminar and shall involve a presentation by the student of research already done and an outline of further work anticipated. The continuation of the work of the student in the PhD program shall be decided at each such meeting.
- 4) When work on a chosen topic is nearing completion and before the dissertation is prepared, the student, in consultation with his/her Research Advisor, shall prepare a detailed summary (including pertinent experimental data) of his/her work. The summary shall be delivered to all members of the student's PhD Committee. The student may then schedule a pre-dissertation presentation (the 'closed defense') before his/her PhD committee, which shall take place no less than one week after the Committee has received the summary, and no less than one academic quarter before the anticipated Public Defense. After the committee has approved the pre-dissertation presentation and work on the chosen topic has been completed, the student shall then prepare a complete draft in the form required by the Office of Advanced Studies. When this draft is completed to the satisfaction of the student and his/her Advisor, copies shall be distributed to all members of the student's graduate committee. Within two weeks each committee member shall either (a) approve the dissertation or (b) consult with the student and his/her Advisor regarding revisions. After the dissertation has been approved by all members of the student's committee, it shall be produced in the electronic form required by the Office of Advanced Studies. At the same time, an abstract shall be prepared.

It is highly recommended that after a student is admitted to candidacy, (s)he complete all degree requirements (including writing and obtaining final approval of the dissertation) prior to leaving the Department, i.e., discontinuing full-time status. In unusual circumstances, a student may leave the Department before completing all requirements. In this case, the student shall either obtain a "Departmental leave of absence" (*vide infra*) or be evaluated periodically by the Division(s) and Committee. The Department recognizes that a student may encounter personal circumstances that require interruption of his/her degree program. In such cases, the student has the right to petition the Department Head for a "Departmental leave of absence." After conferring with the Division(s) concerned, the Department Head may grant such a leave that would normally encompass (a) a waiver of any or all Departmental regulations for a specific period of time, and (b) an assurance to the student that Departmental degree requirements already fulfilled by the student will be accepted upon return.

#### F) Public Defense

When all other requirements are fulfilled, the student will present a Public Defense of his/her dissertation before his/her Committee and all others who wish to attend. Consult the University Graduate Handbook for further details on the Public Defense.

- 1) The Public Defense of the dissertation may be scheduled after the dissertation has been approved in form and content by the PhD Committee.
- 2) The student should obtain a graduation packet from the Office of the Vice Provost and Dean of the Graduate School. This contains detailed instructions for the graduation process, including all necessary forms, relevant deadlines, and the rules extant that govern the submission of the dissertation. These will include the form of submission, fees, and timelines. An additional copy of the dissertation must be presented to each Research Advisor in electronic format and as an unbound printed copy, or as by agreement.

#### **SECTION D**

#### **Continuing Financial Support and Eligibility**

There will be times at which determination of a student's satisfactory progress will be made. (Students entering the program other than at the beginning of the Autumn Quarter shall count their (full-time) residence from the beginning of the first Autumn Quarter in attendance.)

- 1) At the end of the Winter Quarter of a student's first year in the graduate program, support for the subsequent academic year from University funds will be based upon the following:
- a) For students in the PhD program, support will be offered only if qualification in at least four (4) courses has been achieved. Students having achieved qualification in only three (3) courses may be offered conditional support for the subsequent academic year. (The conditional requirement being the achievement of qualification in 4 out of 6 qualification courses by the end of the Spring Quarter.) A student in the PhD program who fails to qualify for support under (a), automatically becomes ineligible for the PhD program and may be considered for support under (b), below.
- b) For students in the MS program, support will be offered only if a B (3.00) average has been obtained in 5 of the 6 courses taken. Candidates for non-thesis MS degrees will not normally be offered support for the second year of residence.
  - c) Satisfactory discharge of contractual obligations.
- 2) At the start of the Autumn Quarter of a student's second year of residence, his/her eligibility for continuation in the PhD program requires:
  - a) Qualification in 4 out of 6 qualification courses.

- b) Satisfactory completion of Chem. 771.
- 3) At the end of the Winter Quarter of the second year of residence, a student in the PhD program should have completed his/her qualification in order to be eligible for continued University support for subsequent years. MS students will not normally be supported beyond the second year of residence.
- 4) At the end of the second year of residence a student who has failed to qualify shall be ineligible for further work in the PhD program and further University financial support.
- 5) A student must successfully pass all parts of the Candidacy Examination within the required time period to remain eligible for the PhD degree.
- 6) If a student's Committee feels that his/her ability to complete an adequate dissertation should be formally evaluated, a meeting of the Committee and the student will be scheduled for such purpose. At that meeting the student will present a report on research already done and an outline of that anticipated. The Committee shall then make a recommendation to the faculty for its action, which may include removing the student from the PhD program.
- 7) University Financial Support will not be offered to PhD students beyond the fifth year of residence.

Note: A student declared ineligible for the PhD program at any time may complete a thesis-MS program but will not be considered for readmission to the PhD program.

#### **Graduate Committees**

#### **MS Degrees**

All Committees for students seeking the MS degree shall be appointed by the Department Head and shall consist of at least two full-time members of the Chemistry Department faculty. For candidates for thesis-MS degrees, the Advisor shall chair the Committee. If non-members of the Department are appointed, the majority of members shall still be from the Department of Chemistry. The Committee shall administer the final evaluation and, if appropriate, shall rule on the research potential of the candidate.

#### **PhD Degrees**

Committees for PhD students shall be appointed originally by the Department Head upon recommendation of the student's Advisor(s). The PhD Committee shall consist of a minimum of three full-time members of the Faculty, two of whom shall be members of the student's major division, and at least one from outside the student's major area (the "outside member") who is not one of the student's research advisors. If faculty members of other departments are appointed, the Committee shall still have the majority of members from the Chemistry Department. Once the student has attained candidacy, the student's PhD Committee (new or continuing) will be appointed formally by the Vice Provost and Dean of the Graduate School, upon recommendation of the Department Head.

- a). The Chair of the PhD Committee is the Chemistry member from outside the student's major division until the student achieves candidacy (i.e., is Chair for these presentations: Chem. 771, Second Year Research Seminar, Third Year Seminar), at which time the student's dissertation advisor assumes the Chair (i.e., is Chair for these presentations: Predissertation Presentation and the Public Dissertation Defense).
- b). The addition of a member from outside the Department (including outside the University) that is involved in the student's research or provides relevant expertise is encouraged.

#### **Miscellaneous Requirements**

The normal load of a student devoting full time to graduate study is considered to be twelve graduate credits of work in any one quarter. Students will not be permitted to register for more than nineteen credits in any one quarter. A student will normally register for twelve graduate credits each quarter including the Summer Quarter until (s)he accrues 260 graduate credits. After such time (s)he must register for at least one graduate credit each Autumn Quarter to retain his/her candidacy. Students with 260 or more graduate credits (209 for those entering with a MS) are ineligible for funding from the State of Ohio. This applies to UGS and TA support.

Candidates for the PhD degree are advised to fulfill all non-research course credit requirements before the final year of residence.

Graduate students may, with the permission of the course instructor and their Advisor, be admitted as auditors to courses of study. Registered auditors may take all the regular examinations of the course. If the examination grades are unsatisfactory the privilege of auditing the course may be denied.

No course may be dropped unless permission is obtained from the course instructor and the student's Advisor. Except under extenuating circumstances, permission must be obtained before mid-quarter.

#### **Additional Notes**

There is no formal candidacy for the Master's degree; a student becomes a candidate for the Master's degree upon matriculation into the Master's program of the Department. However, to maintain status as a graduate student and be eligible for the MS degree, students must register for one credit each academic year during the Autumn Quarter. The requirements for the MS degree, outlined above, represent a minimum of one academic year's worth of full-time graduate study. A student following either Plan A or B toward a Master's degree in Chemistry must complete all requirements no later than seven years from the date of first registration in the MS program (the Vice Provost and Dean of the Graduate School, however, can grant extensions under extenuating circumstances). Students intending to receive the MS degree from the Department of Chemistry are responsible for ensuring that all of the requirements have been met, and that the procedures of the Graduate Division have been carried out

properly and on time. The dates by which application for graduation must be filed are available in the main office of the Department of Chemistry. Students should then pick up a graduation packet from the Office of the Vice Provost and Dean of the Graduate, which contains detailed instructions for the graduation process, as well as all necessary forms and relevant deadlines.

The doctoral degree will be granted for no less than the equivalent of three years of full-time graduate study. Prior to admission to candidacy, all doctoral students must remain enrolled for at least 12 graduate credits during each of three quarters within a span of five consecutive quarters, including the summer quarter, so long as they register for each autumn quarter involved. As noted above, a period of seven months must elapse between admission to candidacy and receipt of the PhD degree. After admission into candidacy for the doctoral degree, registration and fee payment for at least one quarter credit in the Autumn quarter each year is required if candidacy is not to lapse. Candidacy for the doctoral degree automatically terminates after four consecutive calendar years, although candidates may petition the Graduate Council through the Department for an extension of candidacy prior to its expiration, or for reinstatement if candidacy has expired. If reinstatement is approved, the student must retake and pass the formal candidacy requirement of the Department. Petitions shall be submitted on the approved form.

All dissertations approved for the PhD degree from the Department of Chemistry will be published in the form of a master microfilm negative with University Microfilms. In addition, a 350 word abstract of the dissertation will be published in Dissertation Abstracts. Detailed information concerning form may be obtained from the Office of the Vice Provost and Dean of the Graduate School. As with MS candidates (above), all students intending to graduate with the PhD degree are responsible for fulfilling all the requirements of the Department and the University, and following all appropriate procedures in a timely fashion. Upon application for graduation with a PhD degree, the student should pick up a graduation packet from the Office of the Vice Provost and Dean of the Graduate School. This contains detailed instructions for the graduation process, as well as all necessary forms and relevant deadlines.

The Department of Chemistry has no foreign language requirement for either the MS or the PhD degree.

#### **Registration and Support**

A student must be registered as full time (FT) when receiving any TA support at any time during the academic year or summer. Students supported by a grant need only register FT for the academic year. This will not jeopardize their student health insurance in the summer provided they were covered by it during the prior spring quarter, since that coverage will be extended into the summer.

Students with a University Graduate Scholarship (UGS) must register FT prior to entering Candidacy. When in Candidacy, and the coursework is completed, the UGS awarded will cover only the number of credit hours registered for. A possible concern for some students not registered FT in the summer is that they will be required to contribute to the OPERS retirement system. These funds will eventually be returned.

Some Fellowships and Research Assistantships (RA) require the student to be FT, and this may or may not include the summer.

In all the above situations, when in doubt (and, preferably, even when not) the student is urged to consult and confirm his registration with the Graduate Program Director.

#### **Special Rules and Provisions**

The Department of Chemistry joins with the University of Cincinnati in reaffirming its policy that discrimination on the basis of race, religion, national origin, sex, sex orientation, handicap, or age will not be practiced in any of its activities. Complaints involving abridgment of this policy should be addressed to the Affirmative Action Coordinator.

Students, once enrolled, have the right to review their educational records, except as excluded by law, including the student file maintained in the Department office. In order to gain a review of these records, along with appropriate explanation or interpretation, the student should first address the Department Head. Should the student encounter any difficulty in obtaining the kind of review requested, the question should be referred to the Dean of the College of Arts and Sciences, and/or to the Office of the Registrar. The student file in the Department office will be treated with confidentiality, so that the only access afforded university faculty or staff is on a need-to-know basis.

The University of Cincinnati has well-defined grievance procedures for resolving specific problems and issues. Students are referred to the University Graduate Handbook, which is available from the Office of the Vice Provost and Dean of the Graduate School.

Academic dishonesty in any form is a serious offense and cannot be tolerated in the Chemistry Department, or the academic community. Dishonesty in any form, including cheating, plagiarism, deception of effort, falsification of data or results, or unauthorized assistance may result in a failing grade in a course and/or suspension or dismissal from the Graduate Division.

A student may also be dismissed from the Graduate Program of the Department of Chemistry by action of the Faculty for professional malfeasance, or an academic record that does not meet the standards of the MS program.

Revision: December 5, 2007

#### APPENDIX I

#### AND A RESEARCH ADVISOR

#### **General Considerations**

During the first quarter of graduate work, beginning graduate students are advised to acquaint themselves with all faculty members of the Chemistry Department and to ascertain their research interests. In addition to attending all of the scheduled faculty presentations, this is best achieved by attending various group seminars, by consulting the list of Faculty Research Projects Available as Graduate Research Topics, (prepared and distributed to each new student during the Autumn Quarter), and by visiting the faculty web pages at <a href="http://www.che.uc.edu">http://www.che.uc.edu</a>.

Ideally, the research problem should originate with the student. In practice, however, professors ordinarily suggest possible problems and the student selects one of them. If any student has in mind a problem on which (s)he would like to work, (s)he should discuss it with the faculty member to whose interest it is most closely related. If the problem is judged to be sufficiently well defined, and if the faculty member is willing to direct it and is accepting students, there is no reason why it should not be worked on for a thesis or dissertation. Even if (s)he has his/her own problem in mind, or has come with the expectation of working with a particular professor, the student is still required to discuss possible research problems with at least three faculty members, as is mentioned in a later section, before making his/her decision.

Working hard at something in which one is not really interested is a fate to be avoided if possible. For this reason the student should be sure that his/her choice of problem is determined, insofar as possible, by his/her fundamental interest in the subject. Since the student will be associated with the Research Advisor for a long period of arduous work this choice must be given serious consideration.

#### **Procedure**

In order to encourage students to think seriously about the selection of a problem and to consider various possibilities, each is required to consult with a minimum of three faculty members before arriving at a decision. This specification is complied with by having the faculty members, after the consultation, sign the sheet appended to these regulations. Only faculty members who have been interviewed by the student may be requested as potential advisors in the selection process.

When the necessary conferences have been held, the student will select three preferred Research Advisors of the faculty interviewed, list them in order of preference on the sheet, and return it to the Graduate Program Director. This must be completed no later than the beginning of Finals Week of the first quarter of residence (generally the Autumn Quarter). The Graduate Program Director will determine whether the faculty members are able and willing to accept the student. If so, the arrangements will be completed, and the student, the student's new Research Advisor, and all faculty who have been consulted will be informed of the decision so that there may be no uncertainty about how matters stand. When the process of selecting the Research Advisor is completed the student shall declare a major area. It is expected that the

selection process will be completed by the first Friday of classes of the second quarter of residence (generally the Winter Quarter). Failure to be admitted into a research group is grounds for removal from the PhD program.

Students who enter with the MS degree are also expected to follow this procedure. When, however, a student continues from an MS problem to a PhD problem without a change of Research Advisor, no consultation with other faculty members is required.

It is Department policy that original research materials and documentation, i.e., research notebooks, spectra, electronic files, etc., remain with the Advisor when a student leaves that group. The student may make copies of documentation for his/her records.

#### **Changing Research Advisor**

A student contemplating a change of Research Advisor should not pursue that change without first consulting with the Department Head, who, with the Graduate Program Director, will determine the willingness and ability of the intended new Research Advisor to accept the student. Only after that determination has been made may the student proceed to execute the change in Research Advisor, and must follow the procedure described in the appended form.

Revision: September 9, 2008

# DEPARTMENT OF CHEMISTRY CHANGE OF ADVISOR CLEARANCE FORM

Name	Date
This form must be completed before a student is research advisors.	considered to have officially changed
a) Consultation with the Department Head	
	Department Head
b) Student Certification I understand that any funding which was availab stays with that group and does not follow me. I furthe eligibility for Departmental funding (5 years for a Plincrease due to changing my research advisor.	er understand that the time frame for
	Graduate Student
c) Operations Office  1. All laboratory and office keys have been returned 2. All other borrowed equipment has been returned 3. Xerox card has been returned 4. Satellite card has been returned 5. Stockroom charge cards have been returned	
<ul> <li>d) Stockroom</li> <li>1. All tools have been returned</li> <li>2. All other borrowed equipment has been returned</li> </ul>	Manager of Service
<ul> <li>e) Research Lab</li> <li>1. All other borrowed equipment has been returned to</li> <li>2. Original research materials and documentation such ave been turned over to the original advisor.</li> <li>3. Work areas have been cleaned, glassware washed et</li> <li>4. Any hazardous materials have been either turned or disposed of.</li> </ul>	h as research notebooks, spectra etc., etc.
	Original Research Advisor
f) Chemistry Graduate Program Director	
	Graduate Program Director

# Request for Permission to take a Course Outside of the Chemistry Department

This form is only required f	for courses whic	ch are NOT	part of the norm	al curriculum.
I			request tha	t I be allowed to take
the following course:				
	 Number		Titl	
Department	rumber		110.	
Reason:				
Approval by Dissertation A	dvisor:	YES	NO	
Signature/Date:				-
Approval by Graduate Prog		YES	NO	
Signature/Date:				_

# **Appointment of a Dissertation Committee Alternate**

Because of travel schedules it is impossible for the PhD con	nmittee of
to meet in a timely fashion. As a result Prof	essor has
been appointed as an alternate for Professor	·
All committee members are in agreement with this	change.
Date	
Student	
Chair	
Missing Member	
Alternate Member	
Other Member	

#### **Dissertation Defense Schedule**

GENERAL INFORMATION:	
STUDENT'S NAME	
DATE	
DISSERTATION TITLE:	
DEFENSE INFORMATION:	COMMITTEE NAMES:
LOCATION	CHAIR
DATE	
TIME	
PREVIOUS DEGREES (EXCLUDING	G Associate Degrees)

THIS FORM NEEDS TO BE TO THE MAIN CHEMISTRY OFFICE TWO WEEKS BEFORE YOUR SCHEDULED OPEN TO GET THE POSTING DONE IN TIME.

### **Authorization to Schedule Public Defense of Dissertation**

Candidate's Name	
As a member of the above named candidate's committee, I have a the candidate's dissertation and approve it in form and content. T issues remaining to be addressed in the dissertation before it will the University. This form does NOT constitute final approval of provides authorization to schedule the Public Defense.	There appear to be no <i>major</i> be suitable for submission to
Committee Chair (Dissertation Advisor) Signature	Date
Committee Member Signature	Date
Committee Member Signature	Date
Committee Member Signature (if committee has four members)	Date
Based on the recommendation of the candidate's committee, indicauthorized to schedule the Public Defense of the dissertation.	cated above, the candidate is
Graduate Program Director Signature	Date

### **Results of the Closed Defense of Dissertation**

Name		
Date		
Committee Members		
-		
-		
-		
Defense was	Successful	Unsuccessful

**Special Instructions to the Student** 

# **3<sup>rd</sup> Year Dissertation Topic Seminar**

STUDENT		
TITLE		
Date of Defense		
	Result of Presentation	
	Pass Fail	
Signature of Chair		_
<b>Faculty Present</b>		_
		_
		_
		_
		_
1. Depth/breadth of l	Evaluation Criteria background preparation for seminar	
2. 2. P. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	eweng out a property to a section.	
2. Progress on disser	tation research	
G		
3. Depth/breadth of	understanding of dissertation research	

4. Extent of plans for future for dissertation research
5. Extent and quality of independent intellectual contribution to the implementation of the project so far.
6. Originality and creativity of independent ideas on the direction of the project.
7. Quality of oral presentation (e.g., organization, clarity, graphics, appropriateness of literature citation, poise, length, balance)
8. Response to questions (e.g., accuracy, appropriateness, whether convincing, defensive/combative, knowledgeable)
Areas for Improvement:
Additional Comments:

# 2<sup>nd</sup> Year Research Seminar

STUDENT		
TITLE		
Date of Defense		
	Result of Presentation	
	Pass Fail	
Signature of Chair _		-
Faculty Present		-
_		
-		
_		
_		•
1. Thoroughness of lit	Evaluation Criteria terature review	
2. Ability to relate cu	rrent thesis research to previous work in this and	d related fields
2. Homey to relate cul	trent thesis research to previous work in this and	related fields
3. Appropriate contex	xt for research direction	

4. Progress on dissertation research
5. Depth/breadth of understanding
6. Extent of plans for future
7. Quality of oral presentation (e.g., organization, clarity, graphics, appropriateness of literature citation, poise, length, balance)
8. Response to questions (e.g., accuracy, appropriateness, whether convincing, defensive/combative, knowledgeable)
Areas for improvement:
Additional comments:

# **Chemistry 771 Presentation**

STUDENT		
TITLE		
Date of Defense		
	<b>Result of Presentation</b>	
	Pass Fail	
Signature of Chair		<u>-</u>
<b>Faculty Present</b>		_
		_
		_
		_
		_
	Evaluation Criteria	
1. Depth/breadth o	of background preparation	
2. Progress on disse	ertation research	

3. Depth/breadth of understanding

4. Extent of plans for future
5. Quality of oral presentation (e.g., organization, clarity, graphics, appropriateness of literature citation, poise, length, balance)
6. Response to questions (e.g., accuracy, appropriateness, whether convincing, defensive/combative, knowledgeable)
7. Quality of written presentation (e.g., organization, clarity, focus, detail, persuasive)
Areas for improvement:
Additional comments:

#### UNIVERSITY OF CINCINNATI DEPARTMENT OF CHEMISTRY Report of Selection of Research Advisor

	(Student Name
aculty Interviews: All students must into	erview a minimum of three faculty members.
Signature of Faculty Member	Date of Interview
PhD / N	MS degree in the research group of
2 <sup>nd</sup> Choice	
3 <sup>rd</sup> Choice	
Grand Director Director	_ Date
ignature of Graduate Program Directo	r
	Date
ignature of Accepting Faculty Member	

# Chemistry 995 Seminar Sign-up Sheet Quarter/Year:

Name:						
atten quart this f	der to obtain a passing grade for Chemistry d an average of one seminar each week (tot ter is required). Please have a faculty memb form to verify your attendance and return the ctor at the end of the quarter.	al of 10 seer present	eminars/signatures a t at the seminar sign	ı		
	<b>Faculty Member</b>		Date			
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

10. \_\_\_\_\_