

University of Puerto Rico  
Río Piedras Campus  
Faculty of Natural Sciences  
Department of Chemistry  
Graduate Program

# ***REGULATIONS***

These rules apply to studies directed toward the degrees of MSc and PhD in Chemistry. These regulations have been approved by the Faculty of the Chemistry Graduate Program on **April 29, 2009**, 2009 and are consistent with the Certification 72 (1991-92) of the Academic Senate of the University of Puerto Rico, Río Piedras Campus.

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## **I. Mission and Profile of the Graduate Program in Chemistry**

### ***A. Program Mission***

The graduate students of the Graduate Program in Chemistry at the University of Puerto Rico, Río Piedras Campus, will develop their professions in an educational or industrial setting in Puerto Rico or at the international level. Graduates are expected to contribute to the economic, social and cultural development of Puerto Rico. Therefore, the mission of this Program is to prepare professionals with fundamental knowledge in chemistry and also to provide them with sufficient experience in a specialized area of chemistry. The preparation of professionals in chemistry at an advanced level involves the capacity to recognize important problems in the discipline and to design new solution strategies. In a broader context, the mission of the Graduate Program is to train professionals to practice their profession with the firm purpose of providing advanced knowledge in chemistry, thereby contributing solutions to our daily problems. The graduate students from this Program will work within their profession with the highest ethical principles, so that future generations can look upon them as an example of excellence.

### ***B. Profile of the Program***

The Graduate Program in Chemistry began offering a master degree in 1961, and in 1968 began to grant the doctoral degree. Currently, 161 doctoral degrees and 173 master degrees have been awarded. These graduate students work in diverse academic fields, such as academic research or industrial manufacturing, in Puerto Rico as well as abroad. In recent years, the Graduate Program has maintained an enrollment of approximately one hundred students, of which 50% are pursuing the doctoral degree. Approximately, 20% of our graduate students are international (Caribbean, South America and China), and this contributes to the scientific and cultural diversity of our Graduate Program. There are also a significant number of postdoctoral associates as well as undergraduate students with research assistantships. The graduate students of the Program use state-of-the art instrumentation laboratory equipment. Specialized degrees are awarded in the following areas: analytical, biochemistry, inorganic, organic, and physical chemistry. The Faculty actively searches for external funds and has improved the facilities with these funds, as well as with an increase in research assistantships and grants for graduate students. The number of annual research publications is also on the rise.

## II. ADMISSION TO THE GRADUATE PROGRAM IN CHEMISTRY

### A. Eligibility for Admission

The applicant must have a bachelor's degree or its equivalent with an overall undergraduate grade point average of no less than 3.00 and no less than 2.75 in chemistry. The applicant must have completed a one year course in general chemistry, organic chemistry and physical chemistry, including laboratory work, and have at least one semester of analytical chemistry (including laboratory) and inorganic chemistry. The applicant must also have knowledge of mathematics through integral calculus, and one year of general physics. It is highly recommended that the applicant have conversational abilities in Spanish and English given that courses are often offered in both languages.

### B. Application Process

To be considered for admission in August of the academic year, the applicant must submit the following materials to the Graduate Program Coordinator no later than February 28 of the year he or she is applying for admission.

1. The application form can be obtained in the Graduate Program Office, Facundo Bueso Building, room FB 264, second floor.
2. Transfer, Readmission or Reclassification Application forms as needed.<sup>1</sup>
3. Three (3) official transcripts which include a degree certification.
4. Results of the Graduate Record Examination (GRE). The applicant can also submit evidence that he or she has applied for the exam. The student will be responsible for submitting the scores to the Graduate Program Office.
5. Three (3) letters of recommendation from professors at the university where the student earned the bachelor's or master's degree.
6. Statement of Purpose indicating the student's interests in pursuing graduate studies.
7. Personal interview (if requested by the Admissions Committee).

The applicant will be notified by mail regarding acceptance to the Program no later than April 1st.

### C. Conditional Admission

An applicant who fails to fulfill one or more of the admission requirements, but who otherwise shows promise as a graduate student, may be granted conditional admission to the Graduate Program. To be considered for conditional admission it is required that the student has a general minimum grade point average of 2.75 and a 2.50 in chemistry. In this case, the applicant will be informed of the conditions that he or she must satisfy to be considered a regular bonafide student. Conditional admission means

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<sup>1</sup> The **Transfer** form is for students that come from accredited private universities in or outside Puerto Rico. The **Reclassification** form is for students who has graduated from the Río Piedras Campus of the University of Puerto Rico and are applying for admission to the Graduate Program the next semester following graduation. The **Readmission** form is for students that interrupt their studies for one or more semesters, students that obtain their bachelor degree at a campus of the University of Puerto Rico, or students that started their undergraduate studies at the Río Piedras Campus of the University of Puerto Rico, but finished their bachelor degree in an accredited private institution.

that the student will be on probation for a period of one year until he or she demonstrates academic progress. The Admission Committee will advise the student on the development of a class program that complies with these requirements. The Graduate Affairs Committee will determine if the student has fulfilled all conditions established by the Admission Committee after the first year of study. A student who does not satisfy the admission conditions during the allotted time will be dropped from the Program.

#### ***D. Transfer Credits***

Only graduate courses (or their equivalents) approved with A or B, taken within five years prior to the date of entrance to the Graduate Program can be considered for transfer credits. To apply for the acceptance of transfer credits the student should submit to the Chemistry Graduate Program Coordinator an official copy of his academic record and a copy of the form "Request for Credit Validation", as well as a description of the courses according to the University catalog where the graduate courses were taken. The form "Request for Credit Validation" can be obtained in the Chemistry Graduate Program Office. A maximum of a third (1/3) of the course credits required for the corresponding M.Sc. or Ph.D. that were earned at another institution can be accredited, or as determined by the Graduate Affairs Committee. Graduate courses taken at the Río Piedras Campus before admission to the Graduate Program may be counted toward the total number of credits earned. The student must present the Graduate Program Coordinator with a letter from the Registrar in which it is stated that such courses were not used to fulfill the requirements of the B.Sc. degree.

#### ***E. Placement Exams***

Once admitted, the student must take the placement exams given by the Chemistry Graduate Program. These exams are used to determine the strengths and possible deficiencies of the incoming graduate student in the four basic areas of chemistry, namely: analytical, inorganic, organic and physical chemistry. Results will also help the Graduate Program Coordinator in planning the graduate and/or undergraduate courses that the student must take during his or her first year of studies. Final recommendations will be coordinated with each Division as they will determine the score for each placement exam. These exams will be offered a week before the beginning of classes. All first year students must take these exams as it is an indispensable requirement for registration in the Program. Nonresidents should make arrangements to be in Puerto Rico the dates of these exams. If there is a deficiency in a given area, the student will have the option to take the undergraduate course (2 semesters) or a graduate class (1 semester) in that area. If the student decides to take the undergraduate course, he or she must attend classes, and comply with assignments and exams given by the professor. It is not necessary to register in the course or perform the laboratory work. However, the student should get an A or B in the course and he or she will request the professor to notify the Graduate Program Coordinator by letter of the grade obtained in that course. This course will not count as part of the requirements for advanced degrees. If, instead, the student decides to take any semester of a graduate class it should be passed with either A or B. The graduate course, however, will count as an elective for advanced degrees. The deficiency can be removed at any time during the graduate career, but this should be done at least one semester before graduation. If the student wishes to concentrate in an area where he or she has a deficiency, he or she should take a one year modular course in this area and obtain an average grade point average not less than 3.00 between the two semesters.

## ***F. Language Requirements***

All students registered in the Program should have a working knowledge of both Spanish and English. This is recommended since most teaching is done in Spanish, while the textbooks, scientific articles and references are in English. Moreover, most of the undergraduate teaching is done in Spanish. A student with a language deficiency can be admitted to the Program with the condition that he or she takes language courses that will help the student surmount this deficiency during his or her first year of studies. The Department of Chemistry can coordinate these courses with the College of Humanities and/or General Studies.

## **III. DEGREE REQUIREMENTS**

### ***A. Degree Candidacy***

A student who wishes to obtain a graduate degree must first be admitted as a candidate of the degree by the Chemistry Graduate Faculty. Advancement to candidacy means that the student has demonstrated that he or she is capable of fulfilling the requirements for the degree and has sufficient training to pursue independent research.

### ***B. Master's in Chemical Sciences***

1. Courses: The student must complete a minimum of 21 credits in graduate courses.

The requirement of graduate courses can be fulfilled as follows:

- 12 credits in core courses (6000 level)
- 6 credits in electives (6000 or 8000 level)
- 3 credits in the area of specialization (8000 level)

2. Qualifying Exams: At the end of the first year of graduate studies the student must pass two written qualifying exams, one of which must be in the area of specialization.

3. Proposal A (Research work plan): In this proposal the student must present his or her research plans to the thesis committee.

4. Seminar: A satisfactory (A or B) oral presentation of the student's thesis work will fulfill this requirement.

5. Group seminars: The student must register and attend research group seminars every academic semester. A minimum of six credits must be approved in his or her research area. These credits are in addition to the 21 credits required for the degree. (See B1).

6. Graduate Research: A minimum of six credit hours of research must be taken. Based on this work, the student must write and defend an acceptable thesis to the Department of Chemistry.

7. Teaching Assistant: The student must fulfill a minimum requirement of a year as a Teaching Assistant. The student must also register in the course Principles and Practices of Chemistry (Q 6905-6906; 6 credits) and fulfill all the requirements of this course.

8. Advancement to Candidacy: Advancement to candidacy for the MS degree will take into

consideration the performance in courses, the qualifying exams taken at the end of the first year of studies, the graduate seminar, the student's research plan and the recommendation of the student advisor. *This requirement should be fulfilled after the second year of graduate studies.*

### ***C. Doctor of Philosophy in Chemistry***

1. Courses: The student must complete a minimum of 30 credits in graduate courses distributed as follows:

- 18 credits in graduate courses (6000 level)
- 12 credits in electives, of these 9 credits must be in courses at the 8000 level.

The student should discuss with his or her research advisor before registering in chemistry courses. The research advisor may recommend that the student take courses in other areas such as biology, physics or mathematics, when it is thought that these courses will be necessary for the student's development as a researcher.

2. Qualifying exams: At the end of the first year of graduate studies, the student must pass three written qualifying exams, one in the student's area of specialization.

3. Proposal A (Research work plan): The student must present a research plan to the thesis committee, which will eventually become his or her dissertation.

4. Seminars: A minimum of two satisfactory graduate seminars (A or B) should be presented to the Graduate Faculty. One of these seminars will be the oral presentation of the student's dissertation.

5. Proposal B and *Comprehensive Oral Exam*: The student must present and defend an original written research proposal to the committee. This requirement also includes a comprehensive oral exam in the area of specialization.

6. Group Seminars: The student must register and attend all seminars relevant to his or her research group during his or her academic career. The student should pass a minimum of 12 credits in the corresponding research area. These credits are in addition to the 30 credits required for the degree (See C1).

7. Graduate Research: The candidate must take a minimum of 24 credit hours of graduate research. Based on this work, the student must write and defend a dissertation to the Department of Chemistry.

8. Teaching Assistant: The student should comply with a minimum requirement of one year, and should register in the course: Principles and Practices of Chemistry (Q 6905-6906; 6 credits) and fulfill its requirements.

9. Advancement to Candidacy: In the advancement to candidacy for the degree of Ph.D. the faculty will evaluate the: academic development of the student, qualifying exams taken at the end of the first year of study, graduate seminar, Proposals A and B, and the recommendation of the student's advisor. This requirement should be fulfilled by the end of the third year from the student's first admission to the Program.

## **IV. Description and evaluation criteria for degree requirements**

### **A. Graduate Courses**

The Graduate courses at the 6000 level are offered annually while courses at the 8000 level are normally offered every other year, although these are offered in the five basic areas of Chemistry.

The student should complete a minimum number of graduate courses as described in Section III (A-C.). It is very important that the graduate appropriately student plans his or her years of graduate studies in order to have the courses requirements completed at the time of graduation. The general grade point average must be 3.00 or higher in order to apply for graduation.

### **B. First Semester Rotations**

Students are required to do rotations in three laboratories during the first semester of the first year of study. This will expose them to various research labs and will enable better decisions on which research group to join.

- Students will register in special topics (CHEM 8999, 1 credit)
- Before the end of August of the Fall semester, each faculty member of the Program will make a poster presentation of his/her research interests. The purpose of this activity is to enable the students to make a better decision regarding in which three research groups he/she intends to rotate.
- Students will fill out and turn in to the Program's office Form C3a- CERTIFICATION OF RESEARCH LAB ROTATIONS (Appendix C). This form requires the signatures of the faculty with whom the students will do the rotations.
- Students are strongly encouraged to do one rotation outside of desired area of specialization, but it is optional to do so.
- Duration: The first three weeks of the month of September, October and November. The fourth week the student will prepare and turn in Form C3b-ROTATION REPORT (Appendix C) after the rotation advisor signs and assign the grade (PS/PN/PB/NP).
- The overall grade in the course will be the average of all the three rotations.
- If the student graduated from the UPR-Río Piedras, none of the rotations can be carried out in laboratories in which he/she has already conducted undergraduate research.

### **C. Graduate Research**

All graduate students (M.Sc. or Ph.D.) should form part of a research group before the second semester of the first year of study. It is an indispensable requirement of the Program that the student begin his or her research work as soon as possible and attends research group meetings. For this purpose, all graduate students, bonafide and fulltime, should register in CHEM 8999 (Graduate research) and in the group seminar corresponding to his or her area of study during each academic semester.

### **D. Qualifying Exams**

The qualifying exams are offered at the end of the second semester of the first year at the Program during the months of June and July. The student has two opportunities to pass these exams. Each

department will prepare and distribute a list of topics normally covered in these qualifying exams to the students. Copies of previous exams are normally available for review at the Natural Sciences Library. The student should apply for these exams by filling out form 2. (Appendix C-Form 2) A student in a transitory status or on probation is not authorized to take these exams.

**Grading:** The exams will be graded on an A, C or F basis. A grade of an A is defined as 60% or higher, a grade of a C is defined as 59-45%, and a grade of an F is defined as 44% or less, in all areas. In order to qualify for the Master's degree a student must pass two qualifying exams with A or C grades, as long as he or she has a grade average of 3.00 or better in the two-semester core course corresponding to the area of each C exam. For example, a student who wishes to major in physical chemistry and passes the physical chemistry exam with an A and the Analytical chemistry exam with a C, should hold an average of B or better in the courses 6215 and 6225 in order to qualify for an M.S.

1. *Master's Program:* The student must take all the qualifying exams requested during the exam period. A student who has not previously completed the modular courses required to take these exams when they are offered, or whose academic average in the modular courses is lower than 3.00, must postpone all the qualifying exams until he or she has taken all the courses or has improved his or her academic grade point average. The Coordinator will authorize the student to take the qualifying exams based on his or her academic average in modular courses and in the number of credits approved in graduate courses. It is the student's responsibility to confirm that his or her name appears on the official list of authorized students that are taking the exams.

2. *Doctoral Program:* Full time students who wish to proceed directly to the doctoral program without obtaining a master degree must pass three qualifying exams at the end of the second semester of the first year. To qualify for the doctoral degree the student must pass two qualifying exams with an A, but one should be in the concentration area. The third exam can be passed with an A or C, but the student should have a combined average of a 3.00 between the two semesters of the modular course (6000 level) corresponding to the exam in which the grade of C was obtained.

3. A student that fails one or more qualifying exams in June has a second opportunity in July of the same year to repeat these exams. If a student does not take the qualifying exam, he or she will automatically fail, unless the Graduate Affairs Committee has granted the student permission not to take it. However, he or she will not have an additional opportunity to fail. Based on the results of these exams and on course performance, the graduate faculty will decide if the student is admitted for candidacy to the master's or doctoral degree. If the student does not pass the required exams after two opportunities the student will be dropped from the Program.

### ***E. Proposal A - The Student Research Plans (M.Sc./Ph.D.)***

Before the end of the first semester of the student's second year (third semester) of studies, master and doctoral students, should present a plan of his or her research project to the Thesis Committee. The proposal has both written and oral components. Students should participate in a proposal writing workshop provided by faculty members of the Program.

- The written component will include an introduction (e.g. literature background), statement of the problem, methodology, preliminary results, planned experiments and anticipated research problems with alternatives to resolve them. The written part of the proposal should follow the present format used for proposals sent to the National Sciences Foundation or the National Institutes of Health.

- The deadline to turn in the written document is on the last Friday of October of the student's third semester in the Program. The student should give a copy to each member of his/her thesis committee and to the Coordinator of the Program.
- The students have to arrange a date to complete the oral component with the members his/her thesis committee. The oral presentation should be notified to the Committee and the Graduate Program Coordinator at least one month prior.
- The oral presentation will be no earlier than two weeks after the Committee has received the written document.
- If necessary (due to extraordinary circumstances and with the approval of the student's Committee) some oral presentations could be scheduled for early in the fourth semester (Spring semester of the second year).

The presentation of this proposal has various purposes, such as familiarizing the student with the literature related to his or her research project, organizing his or her ideas, and obtaining a position from the Committee members at an early stage in the project's development. The proposal also serves to ensure that the student has basic knowledge of laboratory techniques and has made arrangements with the necessary resources to do research and demonstrate that he or she has initiated the research.

## ***F. Graduate Seminars***

1. Purpose of the Seminar: The purpose of the graduate seminar is for the student to orally present the essence of a recent topic, demonstrate his or her abilities to find and organize recent information from literature on a new subject matter, and maintain the participants of the Graduate Program informed of recent developments of general interest. All graduate students should register each semester in the Graduate Seminar, specifically in the section corresponding to his or her area of concentration. The registration in these seminars is an indispensable requirement of the Graduate Program for the duration of the student's participation in the Program. Attending all the graduate seminars with invited speakers and professors from the Graduate Program, as well as student seminars corresponding to the student research area, is obligatory. A list of speakers, topics and dates will be posted at the beginning of each academic semester.

2. Seminar Schedule: The professor in charge of Q- 8901- 8902 (Graduate Seminar) will schedule the seminars for each semester, making sure that each student has the opportunity to satisfy the minimum requirements of the graduate seminars. The graduate student's first seminar will be scheduled during the Fall semester of the third year of study (fifth semester) by the professor in charge of the seminars.

- The seminar's subject can not be directly related to the area of research of the student or of one of the members of research group to which he/she belongs.
- **Abstract and Bibliography:** Fifteen copies of a summary (from four to ten pages) with references must be handed in to the Graduate Program Office one week before the seminar. This should not be a complete written version of the seminar. One copy will be kept on file at the Graduate Program Office. The bibliography should include only those references actually consulted by the student. The references must be prepared following the guidelines of the latest edition of "The ACS Style Guide". Alternatively, the student should follow the example of *J. Am. Chem. Soc.* or the ACS journal most closely related to his or her subfield of chemistry.

3. Seminar Evaluation: If a student does not pass his or her first seminar, he or she will be referred to the Graduate Affairs Committee who will decide if the student can present another seminar no later than the following semester. If a graduate student does not pass the seminar requirement, he or she will be dropped from the Program. A copy of the evaluation sheet used by the professors for seminar

evaluation can be found in Appendix B. This form outlines the criteria used in this evaluation and the distribution of points.

### ***G. Proposal B - Original Research Proposal***

The student should present and defend an original research proposal no later than the end of the third year of studies (sixth semester). The date to meet this requirement will be in accordance with the student, the research advisor coordinator and his committee. It is the student's responsibility to notify the Coordinator of the Chemistry Graduate Program of the date agreed upon.

The student should discuss the selected topic with his or her committee to make sure that it is appropriate and is approved by the committee. The student will prepare and submit four copies of the complete proposal to his research advisor and committee. The student will prepare and give an oral presentation lasting approximately 20 minutes. Then, the committee will evaluate the student. The committee will also evaluate the student's knowledge of the fundamental concepts of chemistry regarding his or her study area and the topic of the proposal. The committee will evaluate the results of the exam and the academic development of the student before proceeding to prepare the final evaluation. The proposal committee will nominate a president among its members who will communicate any suggestions of improvement to the student (Form C8 in the Appendix). Similar to Proposal A, the written part of the proposal will follow the present format used in the proposal sent to the National Sciences Foundation or the National Institutes of Health.

- Like the seminar, the Proposal's subject can not be directly related to the area of research of the student or of one of the members of research group to which he/she belongs.
- The research advisor of the student will not attend the oral defense of the proposal.
- The oral defense will be done no later than two weeks after the proposal is handed in to the committee members (Form C7 in the Appendix).

### ***H. Thesis or Dissertation***

As a result of this research, the student should write, present and defend a thesis or dissertation as a final requirement of the degree.

a. Thesis (or dissertation) manuscript: Once the student has completed a written draft of his or her thesis (or dissertation) containing an abstract, introduction, statement of the problem, experimental section, results, discussion and bibliography, he or she will hand in a copy to his or her research advisor and to each committee member. Simultaneously, the student will present a copy of a publication based on his or her research work. This publication should be come from a journal in which the articles are peer reviewed. This rule may only be exempted in special cases and by a unanimous decision from the student committee.

b. Oral defense: Prior to the oral defense of the dissertation and after handing in the written draft of the thesis (or dissertation) to the committee, the student should present a graduate seminar based on his or her research work. The date selected for the oral defense of the thesis (or dissertation) will be established by unanimous agreement between the student, the research advisor and his or her committee. In the oral defense, the student should do a brief presentation of not more than 15 minutes summarizing his or her research work as well as the results and major contributions to his or her study area. The student will be considered an expert in his or her area and therefore he or she should be able to demonstrate to the members of the committee his

or her knowledge of chemistry, (particularly related to his or her research work) present possible solutions to situations, and future ramifications and problems without solutions within his or her area. If the student committee finds that the defense has not been done at the expected level for the master's or doctoral degree, the student will be granted a reasonable amount of time to study work and defend it for the second and last time.

## V. General Procedures

### A. Orientation for New Students

New students should attend the Graduate Program's orientations during the week before classes begin. During this period, the student will receive an academic program designed taking into account the results of the entrance exams. Students awarded with a teaching assistantship must attend the training for teaching assistants offered annually during July. Also, all graduated students must attend security trainings for the chemistry laboratories that are offered annually by authorized personnel from the University of Puerto Rico.

### B. Registration

The registration of all chemistry graduate students (and other students who are taking chemistry graduate courses) will be done by the Graduate Program Coordinator. To avoid late registration problems, all graduate students will follow a special procedure that will be described during the orientation period. Students continuing in the Program should do pre-registration. The Chemistry Graduate Program will announce the courses that will be offered, place and dates for pre-registration. Before the pre-registration each student will:

1. Discuss his or her academic program with his or her research advisor. The Graduate Program Coordinator will serve as an advisor to students that have not selected their research advisor. All questions or problems related with his or her program should be discussed with the research advisor, the Graduate Chemistry Program Coordinator and/or the Graduate Affairs Committee.
2. Obtain from the Graduate Program Office the form for pre-registration (Appendix, Form C1a). Students who have started research or who are registered in course Chem 8999 or have a research assistantship should also fill out the form Authorization to Register in the Research and Research Progress Report from the Chemistry Graduate Program, (Appendix, Form C1b).
3. Each form must be signed by the research advisor.
4. On the day assigned for the pre-registration process each student will submit the requested forms containing the signatures of the research advisor and the student to the Coordinator.
5. During the period of registration at the beginning of each semester, the student should pick up his or her registration materials according to the schedule announced by the Faculty of Natural Sciences and complete his or her registration with the Registrar and Treasurer.
6. Changes in registration: Changes in registration are discouraged. A graduate student should plan his or her program carefully so that changes will not be necessary. If a student finds that it is

essential to make a change to his or her schedule, he or she should consult the University calendar for the dates assigned for adding or dropping courses. The Coordinator will make the registration changes with the authorization of the student's research advisor. By dropping a modular course the student will automatically enter probationary status. The student will remain on probation until he or she repeats and passes the modular course the next time it is offered.

### ***C. Selection of the Student Committee***

The student's committee should be named after the qualifying exams (Appendix, Form C5). This should consist of five members including the student's research advisor, two professors from the corresponding Division and two additional professors from the Graduate Program: one related to the research that the student is carrying out and one that is not. The first three committee members, including the research advisor, are selected by the student with the assistance of his or her research advisor. The two additional members are named by the Coordinator of the Chemistry Graduate Program with the assistance of the Graduate Affairs Committee and with the consent of the student's research advisor. All members should have the approval of the Coordinator and the Graduate Affairs Committee. Any change in the Student's Committee requires the approval of the Coordinator and the Graduate Affairs Committee. (Appendix, Form C6).

Divisions that do not have enough members to meet the requirement will have to make the necessary arrangements for the participation of qualified scientists. In the event that the student or the research advisor requires the participation from an external member of the Graduate Program, this person should be willing to participate in the Committee from the moment of its creation. A member of Student's Committee outside of the Department or Graduate Program should meet the following requirements:

1. Be an active researcher.
2. Present curriculum vitae with recent publications. The curriculum vitae should evidence experience and activity in the research field.
3. The member of the committee should understand the purpose of the evaluation requirement, that is:
  - the student's research plan and the original research proposal or thesis (or dissertation).
  - A copy of the Graduate Program's Regulations will be provided to this member.
4. The Graduate Affairs Committee will approve this member's participation in the Committee.

### ***D. Selection of the Research Advisor***

During the first semester, the student should interview researchers from his or her area of interest. At the beginning of the second semester of the first year of studies, the student should select his or her research advisor and attend the group's seminars. It is recommended that the student attend the group meetings or visit the research laboratories in order to make a well-informed selection of the research advisor. Once the student selects the advisor, he or she should fill out form 3. (Appendix, Form C3).

The student should select a research advisor that is a full-time member of the Faculty of the Chemistry Graduate Program. A student that wishes to do his or her research outside the Department of Chemistry must submit a written petition to the Graduate Affairs Committee requesting an authorization to do the research with a non member of the Chemistry Department. This researcher should comply with the requirements for external members. (See section V.C). If the request is approved, a member of the Faculty of the Chemistry Graduate Program will be designated to serve as the student's co-advisor.

The co-advisor will be selected by the student with the approval of the Graduate Affairs Committee and the Coordinator of the Program.

### ***E. Change of Advisor and/or Research Area***

If a student decides to change research projects and at the same time change his or her research advisor, the student should complete the form C4 in Appendix. This must be approved by his or her previous research advisor. The student has to complete Form C3. Both forms should be handed in to the Coordinator of the Graduate Program. If the change of thesis advisor involves a significant change in the research area, the change will not be approved until the Coordinator of the Program and the Graduate Affairs Committee complete an analysis of the student's academic file regarding qualifying exams and courses to guarantee that the student qualifies for the new area.

### ***F. Teaching Research Assistantship***

Students receiving institutional assistantships or external funds are known as Teaching Assistants or Research Assistants. The student should submit together with the assistantship application two official transcripts of his or her academic record, the medical examination form, an affidavit certifying that he or she does not have any debt with the Government of Puerto Rico. Non-resident students should obtain their social security number in the corresponding government agency as soon as they arrive to Puerto Rico. The Office of Exchange Students will send an I-20 form to non-resident students. Each student with a teaching assistantship should register in Chem 6905-6906, and those with a Research Assistantship must register in Chemistry 8999. The evaluation and course grade for the teaching assistantship will be sent to the Graduate Program and the Registrar by the professor in charge of the course. This evaluation will form part of the student's academic record in the Graduate Program's Office. **All graduate students, regardless of assistantship type (including fellowships) are requested to teach at least two academic semesters.**

The teaching or research assistants perform a combination of research and teaching duties, these include:

1. A research assistantship (without teaching responsibilities) requires a minimum of 20 hours a week of research during each semester of research and fulltime during academic recess.
2. A teaching assistantship requires 18 hours weekly of teaching (including preparation) for two semesters.

The teaching or research assistantships are available only to fulltime graduate student. This means that the student cannot have any other additional job. All graduate students are evaluated each semester by the Graduate Affairs Committee. This evaluation includes academic progress, course grades, progress in research and his or her performance of assistantship duties. If the academic grade point average of the student falls below 3.0 the student will immediately become ineligible for the assistantship in the department. It is the discretion of thesis advisor to provide research assistantship to a student on probation. Any student that has dropped out of the Program also will be automatically ineligible for any assistantship in the Department. Teaching assistantships available during the summer are limited. These will be given to those bonafide students who have good records as teaching or research assistants. **Master students will have a maximum of three years to hold a teaching or research assistantship and five years for a doctorate student.** After this time, the student's progress will be evaluated by the research advisor and committee to decide if it is worthy of an extension, in the event it is needed. Doctoral students that have passed the three qualifying exams will be recommended to receive stipends corresponding to the current salary scale for this degree.

## ***G. Research Thesis/ Dissertation***

A graduate student, either master or doctorate, who has fulfilled all the requirements of the degree and has completed the experimental part of their research work, will be able to enroll in the Thesis Continuation course, CHEM 6896 (master) or CHEM 8896 (doctoral), in order to be a student of the University of Puerto Rico when applying for graduation.

## ***H. Graduate Affairs Committee***

The Graduate Affairs Committee consists of a professor from each Division of the Faculty Chemistry Graduate Program. This Committee evaluates the academic progress of all graduate students each academic semester together with the Coordinator of the Graduate Program, and decides on matters related to the complying with the regulations.

## ***I. Academic Status***

To be considered as a fulltime student, he or she must be registered in nine credit hours during a regular semester and six credit hours during the summer, unless registered in Continuation of Thesis or Dissertation (CHEM 6896 or 8896). It is expected that a first year student takes three graduate courses and a graduate seminar each semester. The student's academic average is computed using course grades as a base, except those that the student has repeated, in this case the best grade will be used to compute the average. Any course with C, D or F grade can be repeated when the course is offered again. If a student receives a grade less than a C (2.00) in any course, it may not be used to satisfy the graduation requirements, even though the grade is included in his or her academic average. A student is considered bonafide if his or her academic average is 3.00 or higher. If the academic average is lower than 3.00 the student automatically goes on probation at the beginning of the next semester. The student is removed from this probationary status as soon as he or she raises the academic average above 3.00. A student with probationary status will neither be eligible to take the qualifying exams nor be able to fulfill other degree requirements, such as graduate seminar or proposals A and B. Nevertheless, the student will be able to continue taking graduate courses, working on research and performing the assistantship depending on the discretion of the advisor. If the student does not meet this condition after having been on probation for one year, he or she will be dropped from the Program. If a student decides to leave the Graduate Program before completing the degree, he or she must submit a copy of Form C10 (Appendix C) to the Coordinator of the Program. If the student resigns from a teaching or research assistantship, he or she must submit the resignation by letter to the corresponding program or Department. A student who is dropped from the Graduate Program due to poor academic performance (GPA below 3.00), may apply for readmission to the Graduate Program only after having satisfied the deficiencies. Therefore, the student can take graduate courses with the approval of the Coordinator of the Graduate Program. The student should present evidence of the work carried out during the subsequent period from which he or she was dropped and also demonstrate that the deficiencies that caused such an action have little probability of appealing. The student should then follow the normal procedure to apply for readmission (Section II.B). A student who is not registered for the semester that he or she wants to be enrolled in, should request readmission to the Graduate Program and to the University. A student who obtained a master degree and decides to continue on with doctoral studies and is an active student, should apply for reclassification to the Program. Reclassification will be on the condition that the student passes the required qualifying exams. The necessary forms (Section IIB) can be obtained in the Office of the Graduate Program and submitted on the dates which are published in the official academic calendar of the University. The dates are usually in September for the second semester (which begins in January) and in February for the summer or

first semester. In situations where these procedures cannot be followed, students should be referred to the Coordinator of the Graduate Program.

**All readmissions to the Program will be evaluated by the Graduate Affairs Committee and if necessary, by the Admission Committee. A student with a master's degree who has been readmitted to the Program should apply for an extension to validate that their master's credits can be counted for the doctoral degree. The student should request the form "Request for Extension to Complete Degree Requirements" in the Office of the Graduate Program and present it to the Coordinator of the Graduate Program.**

Readmission to the Graduate Program will not be considered if the student has been dropped from the Program as a result of:

1. Not passing the required qualifying exams.
2. Not fulfilling the admission requirements for candidacy in the time limit specified.
3. Not satisfying the of the thesis or dissertation requirements in the time limit specified.

Any violation to the dispositions contained in this Regulation Handbook is sufficient reason to place a student on probation. The probationary status means that the student is not eligible for a teaching assistantship and may not present the qualifying exams, graduate seminar or the proposals A and B. Eventually, if the student does not comply with the conditions of his or her probation during the time established (usually one year), he or she will be dropped from the Program. If there is a justifiable cause for not meeting the conditions, the student must request a postponement by letter addressed to the Graduate Affairs Committee.

### ***J. Student Representatives***

Two graduate student representatives will attend all departmental and Graduate Faculty meetings. The student representatives will have a voice, but not a vote. They can request at any moment that the topics of interest to the graduate students be included in the agenda for the graduate faculty's future meetings. The Faculty representatives may be asked to leave the meeting when confidential matters pertaining to a graduate student are discussed. Student representatives will be invited to attend committee Faculty meetings when Graduate Program's issues are discussed. An open meeting to all graduate students from the Program will be announced by the Coordinator at the beginning of each academic year. The student representatives will be elected for that year at this meeting. The student representatives may call for graduate student meetings during the year to discuss problems or plan activities.

### ***K. Graduation***

The student will fill out the graduation application in the Registrar's Office during the first week of the semester in which he or she expects to complete all requirements of the degree. At the time of applying for graduation, the student is responsible to have already applied for reclassification, validated courses or extension for the validation of these courses if necessary. It is recommended that the student requests an evaluation of his or her academic record and status in the Graduate Program from the Coordinator of the Program at least one year before graduation. The student is responsible of removing the deficiencies and holding a 3.00 GPA at the time of graduation. Three bounded copies of the thesis or dissertation should be handed into the Chemistry Graduate Program no later than four weeks before the semester ends. Two of these bound copies will be kept at the Library of Natural Sciences and the third one will be kept in the Chemistry Department. An additional copy should be given to the research advisor. It is the student's responsibility to be aware of and meet all the degree

requirements. The Graduate Affairs Committee will advise the student with this task. A certification of graduation will not be given until the student hands in the bounded copies of the thesis or dissertation. It is a requirement of all doctoral students to register their thesis in the international bibliography bank of the University Microfilms Inc.

## Appendix A

### *Master of Science in Chemistry: Suggested Study Program*

#### **First Semester (Year 1)**

- Core graduate courses (6000 level) [6 credits]
- Elective course (6000 or 8000 level) [3 credits]
- Graduate Seminar (CHEM 8901) [1 credit]
- Chemistry Principles and Practices (CHEM 6905) [3 credits]
- Graduate Research (CHEM 8999): Laboratory rotations [1 credit]
- Selection of a Research Advisor (Deadline: Last day of classes)

#### **Second Semester (Year 1)**

- Core graduate courses (6000 level) [6 credits]
- Elective course (6000 or 8000 level) [3 credits]
- Graduate Seminar (CHEM 8901) [1 credit]
- Chemistry Principles and Practices (CHEM 6906) [3 credits]
- Group Meeting (CHEM 8005, 8205, 8405, 8605, 8801) [2 credits]
- Introduction to Graduate Research (Starting in January)

#### **First Summer (Year 1)**

- Qualifying Exams (pass a minimum of two)
- Thesis Committee Selection
- Start working on Proposal A
- Graduate Research (CHEM 8999)

#### **Third Semester\* (Year 2)**

- Proposal A: Research Work Plan [Deadline 1 (Written component): Last Friday of October; Deadline 2 (Oral Defense): Last day of classes]
- Graduate Research (CHEM 8999) [1-12 credits]
- Graduate Seminar (CHEM 8901) [1 credit]
- Group Meeting [2 credits]

#### **Fourth Semester (Year 2)**

- Elective course (Specialization area; 8000 level) [3 credits]
- Graduate Research (CHEM 8999) [1-12 credits]
- Graduate Seminar (CHEM 8901) [1 credit]
- Group Meeting [2 credits]

#### **Second Summer (Year 2) & beyond\***

- Graduate Research (CHEM 8999) [1-12 credits]
- Thesis Seminar Presentation (Fulfills the graduate seminar presentation requirement)
- Thesis Oral Defense

---

\* The registration and attendance to graduate seminars (CHEM 8901-8902) and group meetings each semester is an important requirement during the time the student is registered in the Graduate Program.

\* A graduate student, bonafide and full time, should complete all the requirements for the master's degree in three years.

## ***Doctor in Philosophy in Chemistry: Suggested Study Program***

### **First Semester (Year 1)**

- Core graduate courses (6000 level) [9 credits]
- Graduate Seminar (CHEM 8901) [1 credit]
- Chemistry Principles and Practices (CHEM 6905) [3 credits]
- Graduate Research (CHEM 8999): Laboratory rotations [1 credit]
- Selection of a Research Advisor (Deadline: Last day of classes)

### **Second Semester (Year 1)**

- Core graduate courses (6000 level) [9 credits]
- Graduate Seminar (CHEM 8901) [1 credit]
- Chemistry Principles and Practices (CHEM 6906) [3 credits]
- Group Meeting (CHEM 8005, 8205, 8405, 8605, 8801) [2 credits]
- Introduction to Graduate Research (Starting in January)

### **First Summer (Year 1)**

- Qualifying Exams (Must pass three)
- Thesis Committee Selection
- Start working on Proposal A
- Graduate Research (CHEM 8999)

### **Third Semester\* (Year 2)**

- Proposal A: Research Work Plan [Deadline 1 (Written component): Last Friday of October; Deadline 2 (Oral Defense): Last day of classes]
- Elective course (6000 or 8000 level) [3 credits]
- Graduate Research (CHEM 8999) [1-12 credits]

### **Fourth Semester (Year 2)**

- Elective course (Specialization area; 8000 level) [3 credits]
- Graduate Research (CHEM 8999) [1-12 credits]

### **Second Summer (Year 2)**

- Graduate Research

### **Fifth Semester (Year 3)**

- Third year seminar (Fulfills the graduate seminar presentation requirement)
- Elective course (Specialization area; 8000 level) [3 credits]
- Graduate Research (CHEM 8999) [1-12 credits]

### **Sixth Semester (Year 3)**

- Proposal B: Original research proposal. The subject of this proposal may be, but not necessarily, related to the subject of the third year seminar.
- Elective course (Specialization area; 8000 level) [3 credits]
- Graduate Research (CHEM 8999) [1-12 credits]

### **Third Summer (Year 3) & beyond\***

- Graduate Research (CHEM 8999) [1-12 credits]
- Thesis Seminar Presentation
- Thesis Oral Defense

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\* The registration and attendance to graduate seminars (CHEM 8901-8902) and group meetings each semester is an important requirement during the time the student is registered in the Graduate Program.

\* A graduate student, bonafide and full time, should complete all the requirements for the doctoral degree in five years.

**Form A3- ACADEMIC STATUS SHEET**

Name: \_\_\_\_\_

Student's number: \_\_\_\_\_

Date: \_\_\_\_\_

Date of entrance to the Program \_\_\_\_\_

Classification  MSc;  PhD

Specialization Area:  Analytical;  Biochemistry;  Inorganic;  Organic;  Physical Chemistry

Placement Exam

(Deficiencies):  Analytical;  Inorganic;  Organic;  Physical Chemistry

Qualifying Exams:  Analytical;  Biochemistry;  Inorganic;  Organic;  Physical Chemistry

Teaching Assistantship Requirement:  Yes  No

Committee Members

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

Proposal A; Presentation date: \_\_\_\_\_

Graduate Seminar; Presentation date: \_\_\_\_\_

Proposal B; Presentation date: \_\_\_\_\_

Thesis dissertation; Presentation & defense date: \_\_\_\_\_

Courses Passed:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

## APPENDIX B

### GRADUATE SEMINAR EVALUATION SHEET

CHEM 8901-8902

Name of Student: \_\_\_\_\_

Title of Seminar: \_\_\_\_\_

Date of Seminar: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Evaluator Signature: \_\_\_\_\_

SCORE

I- Summary (abstract) (20 points) - - - - - \_\_\_\_\_/20

Evaluation Criteria:

- 1- Actuality or pertinence of the theme.
- 2- Selection of a subject of general interest and appropriate for a general audience.
- 3- How well does the summary represent the oral presentation?
- 4- Style, orthography, organization, format (complies with ACS format).
- 5- Use of representative references or of greater relevancy.
- 6- Originality in writing and proper credit given to other scientists.

Comments and/or Recommendations:

\_\_\_\_\_

II- Presentation (60 points)

Evaluation Criteria:

A- Introduction or Background - - - - - \_\_\_\_\_/20

- 1- Clearly and precisely expressed the problem or subject matter of the seminar?
- 2- The topic was integrated as an adequate perspective?
- 3- Did the student demonstrate sufficient knowledge of the background of the subject?
- 4- Were the objectives of seminar presented clearly?

B- Description of Topic - - - - - \_\_\_\_\_/20

- 1- The presentation was organized and coherent.
- 2- A clear and logical presentation of the methodology of the experiments and the results.

3- Critical analysis of the results; extensive knowledge of the topic.

4- Clear presentation of the conclusions.

C- Presentation Techniques ----- /20

1- Emphasis placed on important points and concepts (vs. monotonic).

2- Clear and organized presentation of diagrams, schemes, figures, tables, graphics (¿Did he or she explain its significance, its relevance to the subject?)

3- Good use of audiovisual resources.

4- ¿How interesting did he or she make presentation to generate the audience's interest?

5- Was eye contact established with the audience?

6- Adequate use of time. (no less than 45 minutes for presentation)

Recommendations:

---

III- Questions (20 points) ----- /20

Evaluation criteria

1- Could the student have contributed and expanded more in the answers than presented in the seminar or abstract? (e.g. others examples, others resources).

2- Did the student demonstrate to have a solid knowledge of the subject?

3- Did the student have confidence when asked questions (appear to be comfortable and secure)?

TOTAL POINTS EARNED ----- /100

Recommendations:

---

---

---

---

Total Evaluation:

100-90 A (Excellent)

89-80 B+ (Very good)

79-70 B (Good)

≤69 (FAILED)

---

Note for Evaluator: Please consider the following:

Subject level of difficulty: 1 2 3 4 5

Knowledge or experience that the evaluator 1 2 3 4 5

has on the subject:

(Low and high score)

The answer to these two questions will be considered as supplementary information for the Seminar Coordinator of (Chemistry

8901-02) not necessary criteria for the final qualification that the student will obtain. Therefore, the answer is optional.

## APPENDIX C

### PRE-REGISTRATION FIRST SEMESTER 20\_\_-20\_\_

Name \_\_\_\_\_

Student's number \_\_\_\_\_

\_\_\_\_\_  
Advisor's Name

\_\_\_\_\_  
Advisor's Signature

Mark with an X the courses that you wish to take during the semester of August to December, 20\_\_.

Course Credits Date Hour Professor Room

Q-6011 Inorganic Chemistry Theory I 3

Q-6215 Analytical Chemistry Theory 3

Q-6411 Organic Chemistry Theory I 3

Q-6612 Advanced Physical Chemistry I 3

Q-6811 Advanced Biochemistry I 3

Q-6896 Master Thesis Continuation 0

Q-6905 Principles and Practices of Chemistry I 3

Section 1 - General and Analytical Chemistry

Section 2 - Organic Chemistry

Section 3 - Physical Chemistry

Q-8005 Inorganic Chemistry Seminar I 2

Q-8205 Analytical Chemistry Seminar I 2

Section 1

Section 2

Section 3

Q-8405 Organic Chemistry Seminar I 2

Section 1

Section 2

Section 3

Section 4

Q-8605 Physical Chemistry Seminar I 2

Section 1

Section 2

Section 3

Section 4

Q-8801 Biochemistry Seminar I 2

Section 1

Section 2

Q-8896 Doctoral Thesis Continuation 0

Q-8901 Graduate Seminar I 1

Section 1

Section 2

Q-8999 Graduate Research 1-12

Section 13

Section 16

Section 19

Other course are offered during the corresponding semester:

**PRE-REGISTRATION SECOND SEMESTER 20\_\_-20\_\_**

Name \_\_\_\_\_

Student's number \_\_\_\_\_

\_\_\_\_\_  
Advisor's Name

\_\_\_\_\_  
Advisor's Signature

Mark with an X the courses that you wish to take during the semester of January to May, 20\_\_.

Course Credits Date Hour Professor room

Q-6012 Inorganic Chemistry Theory II 3

Q-6225 Advanced Instrumental Chemistry 3

Q-6412 Organic Chemistry Theory II 3

Q-6611 Advanced Physical Chemistry II 3

Q-6812 Advanced Biochemistry II 3

Q-6896 Master Thesis Continuation 0

Q-6906 Principles and Practices of Chemistry II 3

Section 1 - General and Analytical Chemistry

Section 2 - Organic Chemistry

Section 3 - Physical Chemistry

Q-8006 Inorganic Chemistry Seminar II 2

Q-8206 Analytical Chemistry Seminar de II 2

Section 1

Section 2

Section 3

Q-8406 Organic Chemistry Seminar II 2

Section 1

Section 2

Section 3

Section 4

Q-8606 Physical Chemistry Seminar II 2

Section 1

Section 2

Section 3

Section 4

Q-8802 Biochemistry Seminar II 2

Section 1

Section 2

Q-8896 Doctoral Thesis Continuation 0

Q-8902 Graduate Seminar II 1

Section 1

Section 2

Q-8999 Graduate Research 1-12

Section 13

Section 16

Section 19

Other courses are offered during the corresponding semester:

**Form C1a- GRADUATE RESEARCH-CHEMISTRY 8999**

**A. AUTHORIZATION FOR REGISTRATION IN RESEARCH COURSE\***

Year 20\_\_\_\_-20\_\_\_\_;

Semester: [ ] 1; [ ] 2

Name \_\_\_\_\_

Student's number \_\_\_\_\_

Date of Admission to the Program \_\_\_\_\_; Classification [ ] MSc; [ ] PhD

Date Starting Research \_\_\_\_\_ Number of Credits Requested \_\_\_\_\_

Thesis Title \_\_\_\_\_

\_\_\_\_\_  
Advisor's Name

\_\_\_\_\_  
Advisor's Signature

\_\_\_\_\_  
Date

**B. SAFETY RULES**

1. All students should use security glasses at all times in the laboratory. Regular glasses are not acceptable. Neither should contact lenses be used in the laboratory.
2. Students should use closed-toe shoes when working at the laboratory.
3. Students must wear appropriate protective clothing (lab coat) in the laboratory.  
(Note: Wearing shorts in the lab is prohibited.)
4. Not less than two people are allowed to work in the laboratory.
5. Students working with toxic, flammable or irritating substances must use the aspirator.
6. Students should notify the supervisor of any accident in the laboratory immediately.

This is to certify that I read and understand the rules of the laboratory described and I agree to obey these rules and others that are specified (for example: on the Chemistry Hygiene Plan of the laboratory) as a condition to continue at the laboratory. I understand that a deliberate violation is a sufficient reason for my removal from the course.

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
*\* Note: Parts A and B of this form should be filled out by all students during the pre-registration period. The form should be handed in at the Chemistry Graduate Program. At the end of semester, the student will receive a new form to fill out Form C1b, this should be discussed with the advisor, before handing it in to the Chemistry Graduate Program.*

**Form C1b- RESEARCH PROGRESS REPORT**

(To be completed by the student at the end of the semester in progress).

Progress Report for the period of \_\_\_\_\_ and \_\_\_\_\_.

To be completed by the professor at the end of semester in progress.

GRADE: PS \_\_\_\_ PN \_\_\_\_ PB \_\_\_\_ NP \_\_\_\_

\_\_\_\_\_  
Professor's Name

\_\_\_\_\_  
Professor's Signature

\_\_\_\_\_  
Date

## Form C2- Application for Qualifying Exams

First Round \_\_\_\_\_ Second Round \_\_\_\_\_

The due date to hand in this application is \_\_\_\_\_.

Name \_\_\_\_\_

Student's number \_\_\_\_\_

Select the exams that you will take:

| Area               | June  | July  |
|--------------------|-------|-------|
| Organic            | _____ | _____ |
| Physical Chemistry | _____ | _____ |
| Analytical         | _____ | _____ |
| Biochemistry       | _____ | _____ |
| Inorganic          | _____ | _____ |

### Notes:

1. This application should be filled out by all graduate students who wish to take the qualifying exams.
2. Students who have not applied to take the qualifying exam will not be permitted to take them.
3. An absence at a qualifying exam translates to a zero on the exam and will count as one of the two opportunities that the student has to pass each exam.
4. Any petition related to the qualifying exams should be done by writing to the Committee of Academic Affairs through the Coordinator of the Program within two weeks of before the exam.

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

**Form C3a- CERTIFICATION OF RESEARCH LAB ROTATIONS**

Name: \_\_\_\_\_ Student's number: \_\_\_\_\_

Date\*: \_\_\_\_\_

I certify that I have contacted the following professors to participate of a rotation in their respective research labs:

**Rotation #1: (First three weeks of September)**

1. Professor's Name: \_\_\_\_\_

Professor's Signature: \_\_\_\_\_

**Rotation #2: (First three weeks of October)**

2. Professor's Name: \_\_\_\_\_

Professor's Signature: \_\_\_\_\_

**Rotation #3: (First three weeks of November)**

3. Professor's Name: \_\_\_\_\_

Professor's Signature: \_\_\_\_\_

Approved by:

\_\_\_\_\_  
Graduate Program Coordinator

\_\_\_\_\_  
Date

FINAL GRADE: PS \_\_\_\_ PN \_\_\_\_ PB \_\_\_\_ NP \_\_\_\_

\_\_\_\_\_  
\* Due date to submit this document: **LAST FRIDAY OF AUGUST**

**Form C3b- ROTATION REPORT**

Name: \_\_\_\_\_

Student's number: \_\_\_\_\_

Date\*: \_\_\_\_\_

Rotation:     [ ] #1; [ ] #2; [ ] #3

A. Describe your experience in the space below (Continue on the back of this form if necessary.)

B. Comment on the student's performance during his rotation in your research group:

\_\_\_\_\_  
Professor's Name

GRADE: PS \_\_\_\_ PN \_\_\_\_ PB \_\_\_\_ NP \_\_\_\_

\_\_\_\_\_  
Professor's Signature

\_\_\_\_\_  
Date

\* Parts A & B are to be completed by the student and the professor, respectively. This form is due at the CGP office the **LAST THURSDAY** of the month of the rotation.

**Form C3c- CERTIFICATION OF SELECTION OF RESEARCH ADVISOR**

Name: \_\_\_\_\_ Student's number: \_\_\_\_\_

Date\*: \_\_\_\_\_

I have decided to do my graduate research with \_\_\_\_\_  
Professor's Name

on the Project entitled \_\_\_\_\_  
\_\_\_\_\_.

Project description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

Approved by:

\_\_\_\_\_  
Advisor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Graduate Program Coordinator

\_\_\_\_\_  
Date

\_\_\_\_\_  
\* Due date to submit this document: **LAST DAY OF CLASSES** of the first semester.

**Form C4- RESIGNATION FROM THE ADVISOR AND/OR RESEARCH AREA**

Name \_\_\_\_\_ Student's number \_\_\_\_\_

Entrance date to the Chemistry Graduate Program \_\_\_\_\_

Advisor \_\_\_\_\_

Project initiation date \_\_\_\_\_

Number of research credits (total) \_\_\_\_\_

Resignation effective date \_\_\_\_\_

Reasons: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

Approved by:

\_\_\_\_\_  
Advisor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
President of Graduate Affairs Committee

\_\_\_\_\_  
Date

\_\_\_\_\_  
Graduate Program Coordinator

\_\_\_\_\_  
Date

**Form C5- CONSTITUTION OF THE STUDENT COMMITTEE**

Name \_\_\_\_\_ Student's number \_\_\_\_\_

Application date \_\_\_\_\_ Degree: Master \_\_\_\_\_ Doctoral \_\_\_\_\_

Interest area/specialty in the graduate program: \_\_\_\_\_

Proposal preliminary subject / thesis / dissertation:

\_\_\_\_\_  
\_\_\_\_\_

Proposal composition for the student Committee:

|                                      |                    |                     |
|--------------------------------------|--------------------|---------------------|
| _____<br>Director of proposal/thesis | _____<br>Signature | _____<br>Department |
|--------------------------------------|--------------------|---------------------|

|                                   |                    |                     |
|-----------------------------------|--------------------|---------------------|
| _____<br>Name of committee member | _____<br>Signature | _____<br>Department |
|-----------------------------------|--------------------|---------------------|

|                                   |                    |                     |
|-----------------------------------|--------------------|---------------------|
| _____<br>Name of committee member | _____<br>Signature | _____<br>Department |
|-----------------------------------|--------------------|---------------------|

|                                   |                    |                     |
|-----------------------------------|--------------------|---------------------|
| _____<br>Name of committee member | _____<br>Signature | _____<br>Department |
|-----------------------------------|--------------------|---------------------|

|                                   |                    |                     |
|-----------------------------------|--------------------|---------------------|
| _____<br>Name of committee member | _____<br>Signature | _____<br>Department |
|-----------------------------------|--------------------|---------------------|

|                              |               |
|------------------------------|---------------|
| _____<br>Student's Signature | _____<br>Date |
|------------------------------|---------------|

Composition approved by:

|                                       |               |
|---------------------------------------|---------------|
| _____<br>Graduate Program Coordinator | _____<br>Date |
|---------------------------------------|---------------|

**The signature of the committee members is evidence of their disposition to be included in the student committee.**

**Form C6- Change of Student Committee Application**

Name \_\_\_\_\_ Student's number \_\_\_\_\_

Date of Application \_\_\_\_\_ Degree: Master \_\_\_\_\_ Doctoral \_\_\_\_\_

Change requested: \_\_\_\_\_

Justification: \_\_\_\_\_

I agree to form part of the Proposal Committee / thesis of this student:\*

|                                      |                    |                     |
|--------------------------------------|--------------------|---------------------|
| _____<br>Director of proposal/thesis | _____<br>Signature | _____<br>Department |
| _____<br>Name of committee member    | _____<br>Signature | _____<br>Department |
| _____<br>Name of committee member    | _____<br>Signature | _____<br>Department |
| _____<br>Name of committee member    | _____<br>Signature | _____<br>Department |
| _____<br>Name of committee member    | _____<br>Signature | _____<br>Department |

\_\_\_\_\_  
Student's Signature \_\_\_\_\_  
Date

Composition approved by:

\_\_\_\_\_  
President of Graduate Affairs Committee \_\_\_\_\_  
Date

\_\_\_\_\_  
Graduate Program Coordinator \_\_\_\_\_  
Date

*\* The signature of other Committee members is evidence for their disposition to be part of the student Committee. The signature of the Coordinator of the Graduate Program and of the President of the Graduate Affairs Committee is evidence of the approval of the Committee composition.*

**Form C7- Application for Student's Defense of the Proposal /Thesis/Dissertation**

Name \_\_\_\_\_ Student's number \_\_\_\_\_

Date of Application \_\_\_\_\_ Degree: Master \_\_\_\_\_ Doctoral \_\_\_\_\_

Student's Committee members:

We have received a copy of this student's proposal / thesis / dissertation. We request that the defense of this proposal/thesis will be set for:

\_\_\_\_\_, 20\_\_ in \_\_\_\_\_ at \_\_\_\_\_.  
Month Date Place Time

\_\_\_\_\_  
Director of proposal/thesis\* Signature Department

\_\_\_\_\_  
Name of committee member Signature Department

I certify that this student has met or will meet with all Graduate Program requirements for the defense of the proposal / thesis this semester.

Application approved by:

\_\_\_\_\_  
Graduate Program Coordinator Date

*\* On the defense of doctoral proposal this space will be completed by the President of the Committee. On the defense of dissertation this space will be completed by Research Advisor.*

B. Defense:

Approved \_\_\_\_\_ Not Approved \_\_\_\_\_

Commentaries by the Committee for additional changes to the document:\*

---

\* *The student commits to make the necessary changes. It is the research advisor's responsibility to see to it that the student makes said changes.*



**Form C9- APPLICATION TO DROP GRADUATE COURSES**

Name \_\_\_\_\_ Student's number \_\_\_\_\_

Entrance date \_\_\_\_\_ Degree seeking: \_\_\_\_ M.Sc.; \_\_\_\_ Ph.D.

Type of assistantship: \_\_\_\_ Teaching; \_\_\_\_ Research

Advisor \_\_\_\_\_

|             |                  |         |         |
|-------------|------------------|---------|---------|
| Course name | Code (QUIM XXXX) | Section | Credits |
|-------------|------------------|---------|---------|

Instructor \_\_\_\_\_

Reasons: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

This semester's complete schedule:

| Course name | Code (QUIM XXXX) | Section | Credits | Instructor |
|-------------|------------------|---------|---------|------------|
| _____       | _____            | _____   | _____   | _____      |
| _____       | _____            | _____   | _____   | _____      |
| _____       | _____            | _____   | _____   | _____      |
| _____       | _____            | _____   | _____   | _____      |

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Advisor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Program Coordinator's's Signature

\_\_\_\_\_  
Date

**Form C10- RESIGNATION FROM THE GRADUATE PROGRAM**

Name \_\_\_\_\_ Student's number \_\_\_\_\_

Entrance date \_\_\_\_\_ Degree seeking: \_\_\_\_ M.Sc.; \_\_\_\_ Ph.D.

Type of assistantship: \_\_\_\_ Teaching; \_\_\_\_ Research

Advisor \_\_\_\_\_

Effective date of resignation \_\_\_\_\_

Reasons: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Advisor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Program Coordinator's 's Signature

\_\_\_\_\_  
Date

Postal address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone: (Home) \_\_\_\_\_ (Cell) \_\_\_\_\_ (Work) \_\_\_\_\_

E-mail: (Home) \_\_\_\_\_ (Work) \_\_\_\_\_

Current or future workplace and address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Appendix D

### QUESTIONNAIRE FOR GRADUATE STUDENTS TO UPDATE PERSONAL DATA

Name: \_\_\_\_\_ Student's number: \_\_\_\_\_

Entrance date: \_\_\_\_\_ Thesis Defense Date: \_\_\_\_\_

Degree obtained: \_\_\_\_\_ M.Sc.; \_\_\_\_\_ Ph.D. Specialization: \_\_\_\_\_

Title of Thesis: \_\_\_\_\_

\_\_\_\_\_

Home address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Work address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: (Home) \_\_\_\_\_ (Cell) \_\_\_\_\_ (Work) \_\_\_\_\_

E-mail: (Home) \_\_\_\_\_ (Work) \_\_\_\_\_

Would you like to belong to the CGP Alumni Association? \_\_\_\_\_ YES; \_\_\_\_\_ NO

Comments\*: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Please mail it to the following address:

COORDINATOR  
CHEMISTRY GRADUATE PROGRAM  
UNIVERSITY OF PUERTO RICO-RIO PIEDRAS  
PO BOX 23346  
SAN JUAN, PUERTO RICO 00931-3346

\_\_\_\_\_

*\* We welcome your suggestions and constructive criticism to the Program. We encourage you to send us your professional development information (e.g. CV, résumé) to be included in the next Graduate Program bulletin.*