Notice of Accuracy

The following pages contain the procedures and requirements of the Ph.D. Program in Chemistry of The City University of New York. While we have tried to be as accurate as possible, undoubtedly errors of omission or fact may have crept into the preparation in spite of our efforts. Should you notice any, please call them to our attention. The Executive Officer will resolve any issues. The information contained in this Handbook is current as of Fall 2017 and is supplementary to the information and regulations contained in the Graduate Center Bulletin, Graduate Center Student Handbook, and Bylaws and Governance document of The Graduate School and University Center, which are also available online.

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# HANDBOOK FOR DOCTORAL STUDENTS IN CHEMISTRY

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* The forms and documents listed are available from the Chemistry program’s website www.gc.cuny.edu/chemistry. The forms are available under Path to Degree > Student Resources Students. Students are urged to use the website to print forms when they are needed, obtain the required signatures, and return them to the Chemistry office.
I. INTRODUCTION

The goal of the doctoral program in Chemistry at the City University of New York (CUNY) is to engage graduate students and faculty in individual and collaborative investigations to synthesize novel approaches to major unresolved research problems. The chemistry doctoral faculty is committed to training the next generation of leaders in the chemical sciences. Graduates are expected to make significant and original contributions to the field of chemistry regardless of whether they pursue careers in academia, government or industry.

Earning a Ph.D. in Chemistry at CUNY requires a substantial commitment to chemical research. The Ph.D. Program strives to make the process as simple, fair and flexible as possible. Program rules and policies are designed to ensure that our basic competency standards and general learning objectives are met without unduly limiting the inherent intellectual curiosity of our students. This document, the Student Handbook, is derived from the Program’s intellectual objectives and provides a framework of consistency regarding the expectations of our faculty and the rights and responsibilities of our students.

The Ph.D. Program works to ensure that every student meets all the requirements of the program in a timely manner. However, ultimately it is the student’s responsibility to follow the rules and regulations set by the Ph.D. Program in Chemistry, as detailed in this Student Handbook, and also those set by the Graduate Center, as described in the Graduate Center Student Handbook. Overlooking or violating these rules – especially those established by the Graduate Center over which this Program has no control – leads to serious consequences.
III. REQUIREMENTS SUMMARY AND CHECKLIST

The Ph.D. Program in Chemistry encourages students to use this checklist to facilitate their timely progress to degree. This checklist is also a communication tool between the student, dissertation committee and dissertation research advisor. It is important to make sure that everyone involved is on the same page with respect to the academic requirements and research progress.

- First Level Courses
  - Chem 71000
  - Chem 73000
  - Chem 75000
  - Chem 76000

- First Examination
- Responsible Conduct of Research Training Requirement
- Safety Training Requirement
- Two laboratory rotations
- Research mentor selection
- Grade for Seminar Course each semester enrolled
- Literature seminar

- Second Examination
  - Two Advanced Courses
  - Defense of an Original Research Proposal
  - Cumulative Exams (for Organic students)

- Annual Committee Meetings
- Residency requirement, 30 credits earned at The Graduate Center.
- 60 credits, minimum GPA of 3.0
- Research seminar
- Dissertation defense and successful completion of all requirements
III. RECOMMENDED TIMELINE FOR THE Ph.D. DEGREE

Although each student plots a unique trajectory through the requirements, the Program expects that most students will maintain the following schedule. Details for each item are covered later in this Student Handbook.

1. Year One: First Semester

   The ultimate goals of the first semester are for students to pass their First Level Courses and First Examination and then to select their dissertation research mentor. Students register for exactly 15 credits per semester. Each first year student enrolls in three of the first level courses in the Fall unless they have earned an exemption from the Qualifying Examinations. Students also register for the Seminar course in their subdiscipline each semester they are enrolled. The remainder of the 15 credits is made up using a variable number of credits of Chem 79500, First Level Laboratory Research. Chem 79500 includes lessons on professional development, pedagogy, and leadership, as well as presentations by doctoral faculty from which students identify research rotation mentors. Students perform two research rotations in the labs of potential research mentors in the Fall. Each student selects their dissertation research mentor in December and begins their thesis research in January.

2. Year One: Second Semester

   After the first semester, students enroll in coursework depending on their specific interests and needs. Any students with master’s degree from other institutions may apply in writing to have those credits transferred in their second semester (see section VI.8). All students register for the Seminar course in their subdiscipline each semester they are enrolled. A variable number of Chem 79500 credits are used to achieve 15 credits for the semester, these credits are given for research performed in the laboratory of the student’s research mentor. Organic students are expected to begin taking CUME exams in their second semester. By the end of year one, students who have passed their First Level Courses with a GPA of at least 3.0, passed the First Examination, received credit for safety training and training in the responsible conduct of research, performed two laboratory rotations and selected a dissertation research mentor are considered to be in
good standing with the Program.

3. Year Two

The goals of the second year are for students to advance to Ph.D. candidacy (Level III) by completing their required course work and their Second Examination, and to continue their thesis research. Many students will teach at their Mentor’s campus beginning in year two. Students register for 15 credits each semester, including any course work, their subdiscipline seminar course, and Chem 81000, Research for the Doctoral Dissertation, under their mentor’s supervision. Second year students may take courses outside of CUNY through the Inter-University Doctoral Consortium. Students will select the members of their Dissertation Committee and have a meeting in year two. Students are expected to advance to Level II by the beginning of Spring semester of their second year, and to Level III by the start of the Fall semester of their third year. To remain in good standing with the Program, students should complete their coursework, present their Literature Seminar, successfully defend their Original Research Proposal, and, if Organic, pass their CUME exams in year two.

4. Year Three

The goals of the third year are for students to advance to Ph.D. candidacy (Level III) and begin to prepare their research for presentation and publication. Level III students will register for Chem 90000, Doctoral Dissertation Research, with their research mentor and will register to audit their subdiscipline seminar course every semester until graduation. Students will have a second meeting of their Dissertation Committee in year three. To remain in good standing with the Program, students must advance to Ph.D. candidacy by the end of year three.

5. Years Four and Beyond:

Ph.D. candidates (Level III students) register for Chem 90000 and to audit their subdiscipline seminar each semester until graduation. Each student will have an annual Dissertation Committee meeting. Each student’s path to degree is distinct, but most students take about six years to solve a significant research problem and write their dissertation. Level III students in their fifth year are encouraged to apply for CUNY Graduate Center Dissertation Fellowships to fund their sixth year of study.
IV. COURSE AND EXAMINATION REQUIREMENTS

1. Qualifying Exams

   All entering graduate students take the Qualifying Exams in *organic, inorganic and quantum chemistry* upon arrival and before the start of classes. Each exam is used to assess a student’s prior preparation for the first level coursework that will be assigned in the first semester. These exams typically are made up of a multiple-choice questions. Performance in the Qualifying Exams is used for advisement of the student’s course selection. A grade of 75% or higher in the Qualifying Exam will permit the student to be exempted from the corresponding First Level course so long as it is not that student’s chosen subdiscipline of study.

2. Safety Training

   All entering graduate students take a workshop on Chemical Safety offered by the CUNY Environmental Health and Safety Office. This mandatory training is offered before the start of classes. In addition, when a student begins to teach at a campus in year two and beyond, they are required to take the annual chemical safety training required at that campus.

3. Training in the Responsible Conduct of Research

   All entering graduate students take a workshop on the Responsible Conduct of Research (RCR) offered by the Office of Research and Sponsored Programs at the Graduate Center. The RCR workshop covers plagiarism, authorship attribution on publications, mentor-trainee relationships and the control of data. This mandatory workshop is offered in the Fall and the Spring semesters. All students must take this workshop in the first year of their graduate studies at CUNY.

4. Official Course Listing

   The complete list of courses and course descriptions is given on the Program website. The 7xxxx courses include the first level courses that are taken by most students (Chem 71000, 73000, 75000, and/or 76000). Other 7xxxx courses may be required by particular subdisciplines. Courses in the 805xx series are seminar courses, which meet one day in Fall semester and one day in Spring semester.
Chem 79500, 81000, and 90000 are research courses. Only first-level students may register for 79500. Second year students register for Chem 81000 after successfully completing the First Examination (III.5) and selecting a research mentor. Chem 90000 is taken only after being advanced to Ph.D. candidacy, also referred to as moving to Level III. (III.14)

The remaining courses in the 8xxxx series are advanced courses and special topics courses. Students must have completed all their 7xxxx-level requirements or have the permission of the instructor and the Executive Officer to register for 8xxxx courses. Grading in these courses is sometimes on a pass-fail basis. Many 8xxxx courses are given based upon student demand. If students are interested in having a particular course offered, they should contact the Executive Officer or the appropriate subdiscipline chair.

5. First-Level Courses and First Examination

The First Examination is composed of three required lecture courses and their three final examinations. The lecture courses that can be used to meet the First Examination requirement are:

Chem. 71000 Advanced Inorganic Chemistry 3 credits
Chem. 73000 Polymer Chemistry (open to those selecting the Polymer subdiscipline) 3 credits
Chem. 75000 Advanced Organic Chemistry I 3 credits
Chem. 76000 Introduction to Quantum Chemistry 3 credits

These are the First-level courses. Students are required pass three of the four first level courses. In addition, the final exam in each First-level course serves as a part of the first examination requirement. Each First-level course grade is determined solely by the instructor and is based on all the course requirements including the final examination. The First Examination grade is based solely on the final exam in the First-level course. The First Examination grade is determined by the course instructor and an independent second grader or graders selected by the corresponding subdiscipline chair. The First Examination grades and recommendations concerning student performance are presented by the corresponding subdiscipline chairs to the Executive Committee for its consideration.

First Examinations are graded on the basis of high pass, pass, conditional pass, and fail. The Executive Committee makes the final determination of a student's grade on each part of the First Examination. *To be certified as having passed the First Examination*
requirement, a student may have at most one conditional pass, which may not be in the subdiscipline in which the student intends to specialize. If any one of the three parts of the First Examination is failed, that particular examination must be repeated the next time it is offered. In some cases, it is recommended that the student repeat the appropriate course in the following semester to prepare for this examination.

The Executive Committee will evaluate the progress of every student on the First Examination. Satisfactory progress generally means passing all three parts of the First Examination during the first year, and attending any seminars and presentations that are required components of the program. Students who have not completed the First Examination requirement at the end of their third semester will be dismissed from the Program.

Based on the decisions of the Executive Committee, the Executive Officer will inform the students of their results on the examination and advise students of any other recommendations made by the Executive Committee. A student must make satisfactory progress on the First Examination in order to remain in the Ph.D. program.

Students may take Qualifying Examinations to be exempted from the First Examination courses not in their subdiscipline. A 75% grade on a Qualifying Examination allows a student to be exempted from the corresponding First Examination course. For example, the required course for a student of the physical chemistry subdiscipline is Chem 76000. A physical chemistry student who earns a 75% grade on the inorganic and organic chemistry Qualifying Examinations would not have to take Chem 71000 and 75000. The Qualifying Examinations are prepared by faculty of the inorganic, organic, and physical subdivisions based on standard undergraduate textbooks. The Qualifying Examinations are given during the week that precedes the beginning of the semester. (See Section IV.1)

During the first week of classes, a student may request a First-Level Exemption Examination in the First Examination course of their chosen subdiscipline, provided the student performs exceptionally well on the Qualifying Exam. If a student passes the exemption exam in the First Examination course of their chosen subdiscipline, the student is exempt from this course. For example, a physical chemistry student who passes the exemption examination in 76000 would not have to take his/her required First Examination course. The exemption examination is optional and is generally only taken by students who feel that their background in a particular area is strong enough to merit exemption from the 7x000 course. There is no penalty for failing an exemption exam.
6. Other Course Requirements

In addition to the First level courses and the subdiscipline specific seminar courses required of all students, students are required to take two additional advanced courses. Some subdisciplines recommend specific courses, they are given here:

Analytical Chemistry: two of the following 84903, 84904, 84905
Inorganic Chemistry: any two courses
Organic Chemistry: 75100 and a special topics course
Physical Chemistry: 76100 and 77000
Polymer Chemistry: 83901 and 83902
Molecular Biophysics: BICM 77000 and Chem 87901
Nanotechnology & Materials Chemistry: 78500 and 79051

The usual scheduling of courses is:

Fall: 71000, 73000, 75000, 76000, 87901
Spring: 75100, 78500, 79051, 83091, 83902, 84903, 84904, 84905
BICM 77000

Students must complete all of the required courses and must maintain an overall average grade of B or better, that is, a cumulative grade point average (GPA) of 3.0 or higher. When the Executive Committee reviews a student's performance, the student's GPA is considered in addition to progress in course work and First and Second Examination results.

7. Seminars

Students must take the appropriate seminar course (Chem 805xx) each semester they are registered. Chem 805xx is taken for credit until being advanced to candidacy, and after advancement is taken on an audit basis. The seminars include presentations by students and by invited faculty and outside speakers. Most of the presentations by students are made at the program’s Seminar Day, which are held at the end of each semester for one day, usually in December and in May. Each student is required to present at least two seminars while enrolled in the Ph.D. program. The student’s first
The seminar is on a literature topic approved by the student’s subdiscipline chair. The topic must not be closely related to the student’s dissertation research project. This seminar must be presented prior to advancing to Ph.D. candidacy. The last seminar is on the student’s thesis research and is generally given when the research project is nearing completion.

One of the purposes of the seminar program is to provide an opportunity for students to gain experience in making professional presentations. Students should consult both their research mentor and the doctoral faculty members directing the seminar for advice on seminar preparation and presentation. Students should practice their presentation with their mentor and research group. After the seminar, the student will receive a written evaluation of the presentation by the faculty members in charge of the seminar. The faculty members directing the seminar may ask students attending the seminar to prepare brief written evaluations of the seminar as well. These evaluations will also be given to the student presenting the seminar. Attendance is required at all seminars scheduled for a student’s subdiscipline. Attendance at other seminars of interest to students is encouraged.

8. Rotations

As a part of the process of selecting a mentor, students are required to perform at least two Rotations in laboratories of their choice during their first year. The Rotations must be performed at two different CUNY campuses and must be completed prior to selecting a dissertation research mentor. To obtain credit for their Rotations, students register for Chem 79500 during their first semester under the supervision of the Executive Officer. Rotations are short research experiences in a chemistry doctoral faculty member’s laboratory. The time commitment for a Rotation is 10 hrs. of work per week for five weeks. The student must contact the chemistry doctoral faculty member and ask for permission to perform a Rotation in their lab and to discuss what work they are expected to do as part of the Rotation. Students should select chemistry doctoral faculty members whose research is of interest to them, and that may be a potential mentor for them. In order to meet members of the faculty that are seeking Ph.D. students for their research, student attend a Research Seminars during their first semester, in which chemistry doctoral faculty from each campus present their research.
9. **Advisor Selection**

The two most important tasks for first-year students are making satisfactory progress on first-level courses and the first examination (Section III.5) and selecting a chemistry doctoral faculty member to supervise dissertation research. The choice of a dissertation research mentor is extremely important and requires careful consideration because changing research mentors will delay your progress to the Ph.D. degree. Specific questions about choosing a dissertation research mentor should be directed to the Executive Officer and the Subdiscipline Chairs. The following general suggestions are made to assist students in the selection of a dissertation research mentor.

Students may choose any member of the Doctoral Faculty in Chemistry as their research advisor. A listing of the members of the Doctoral Faculty in Chemistry is given on the Program website, [www.gc.cuny.edu/chemistry](http://www.gc.cuny.edu/chemistry). A faculty member that is not in the Doctoral Faculty of Chemistry may not be chosen as research advisor. It is important for students to familiarize themselves with the research interests of the chemistry doctoral faculty. Brief descriptions of the research interests of each chemistry doctoral faculty member are given at the website of the Ph.D. Program in Chemistry ([www.gc.cuny.edu/Page-Elements/Academics-Research-Centers-Initiatives/Doctoral-Programs/Chemistry](http://www.gc.cuny.edu/Page-Elements/Academics-Research-Centers-Initiatives/Doctoral-Programs/Chemistry)). Additional information may be available at the various college Chemistry Departments and at the websites for these departments. Many faculty members maintain their own websites; links to these can be found at the program’s website and the sites for the college Chemistry Departments.

Further introductions to the research of various chemistry doctoral faculty members will be made during Orientation and the Chem 79500 Seminar Series that is held for first year students during the Fall semester. Students are required to attend all the Chem 79500 seminars so that they understand the breadth of research opportunities available to them at CUNY. In addition, each student performs a minimum of two Rotations in research laboratories of their choice as part of the mentor selection process. Before agreeing to do a Rotation with a potential mentor, students should discuss the possibility of joining the research group with the mentor.

After completing their Rotations, students must make appointments with those members of the chemistry doctoral faculty with whom they are most interested in working and discuss possible thesis research topics with them. Students ask their
potential mentor’s about availability of funds to support the student during their studies. Most faculty members will give you reprints of their recent papers. Dissertations of former graduate students are available for inspection in the library and from the Executive Officer. Students should evaluate all of this material in making a decision.

When a student selects a research mentor, they inform all of the faculty members that they interviewed of the decision. The mentor selection form requires approval by the chemistry doctoral faculty mentor, their Department Chair, and their College Provost. Each signatory is responsible for providing the support promised to the student in their CUNY Science Scholarship in years two to five, as long as the student remains in good standing with the Program. The completed mentor selection form is submitted to the Executive Officer for approval.

Students should begin speaking with possible research mentors at the start of their first semester. The choice of a research mentor should be made no later than December 15 of the first year, and research should begin the following month. Students are expected to devote full time to research in the winter intercession and during summer months. Identifying a mentor who can support a student in years two through five is required to remain in good standing with the Program. Students who have not identified a mentor by the end of their first year will be dismissed from the program.

10. Changing Advisors

Because changing research mentors resulting in an obvious disruption of the student’s progress towards the Ph.D. degree, students are strongly urged to make as informed and as careful a decision on research mentor as possible in the first place. A written request to change research mentors with an explanation of the reasons must be presented to the Executive Officer along with a laboratory report of the student’s activities in their mentor’s lab. In addition, a new signed Mentor Selection Form must be submitted to the Executive Officer for approval as it guarantees the student support in years two to five of their CUNY Science Scholarship, provided the student remains in good standing with the Program. Professionalism demands that a student clean their laboratory and provide their mentor with a comprehensible laboratory notebook with data prior to changing labs. Because the transfer of a student from one college to another requires changes in financial support and teaching assignments at two colleges, the student should immediately notify both Department Chairs of the transfer and be proactive in making sure that their NYSHIP health insurance transfers to the new college as well.
11. **Subdiscipline Selection**

Please note that the choice of a research mentor is related to the selection of the subdiscipline in which the student intends to concentrate. The subdiscipline selection is made at the end of the first semester, when mentor selection is made, after successful completion of the First Examination. While many students choose the same subdiscipline as their faculty mentors, students are free to choose any subdiscipline they wish. The choice of subdiscipline determines the Second Examination requirements for the student.

12. **Changing Subdisciplines**

If a student wishes to change from one subdiscipline to another at a later time after the first semester, a written request to do so with an explanation of the reasons must be presented to the Executive Officer. Changing subdisciplines may result in a student having to take additional courses to fulfill the requirements of the new subdiscipline. The Executive Officer will notify the student in writing of their decision as well as the any additional course requirements.

13. **Second Examination Requirements**

The Second Examination for all students consists of two advanced courses and the preparation and defense of an original research proposal. Students in the Organic subdiscipline must pass a series of cumulative examinations (CUMEs) as an additional Second Examination requirement. Students who pass their Second Examination and earn 60 credits with a cumulative GPA above 3.0 are advanced to Ph.D. candidacy (Level III) and have earned an M. Phil. Degree from the Graduate Center. Students are expected to pass their Second Examination prior to the start of their third year of study. Students who do not pass their Second Examination by the start of their fourth year are not considered to be making satisfactory progress towards their degree and are required to register for weighted instructional units rather than Chem 81000 until they advanced to Ph.D. candidacy.

   a. **Courses**

As part of the Second Examination, each student is required to pass two advanced courses with a grade of B or better. Students should choose courses in consultation with their research mentor that reflect the individual needs of the student. In addition, students are required to present a literature seminar as part of their subdiscipline specific
b. CUMEs (Organic students only)

Cumulative examinations (CUMEs) are designed to facilitate the acquisition of a working knowledge of the organic chemistry and research literature. Earning a pass grade on three CUMEs in nine attempts is required to pass the CUME part of the Second Examination. Eight cumulative examinations are given each academic year and the topic may be announced up to a month before the examination date. Organic students begin taking cumulative exams in the Spring of their first year and are expected to pass three by the end of their second year. Students are not required to take every CUME offered, they may notify the subdiscipline chair that they will not be taking the exam or they may write ‘withdraw’ on the exam booklet. Examinations not taken are not counted as attempts. Organic students who have not passed at least two CUME exams by the end of their second year may be dismissed from the program.

c. Original Research Proposal

The purpose of the Original Research Proposal (ORP) is to encourage students to develop independent ideas based on a critical reading of the literature, to train students to define and solve significant scientific problems of current research interest independently, and to acquire training in grant writing. The topic proposed must therefore be clearly different from the student’s Dissertation subject and mentor’s areas of expertise. Since the process of developing the ideas behind an ORP begins with a thorough review of the literature, the preparation of the required literature seminar is useful in informing the student as to the current state of the field. In addition, students may develop their ORP as part of a course.

Students are encouraged to present their literature seminar in their third semester and their ORP in the fourth semester. The topic of the literature seminar must be approved by the respective subdiscipline chair. Students should request approval no less than one month before they intend to present their literature seminar. Literature seminars are presented on either the Fall or Spring seminar day and evaluated by the faculty present. Students who fail the literature seminar requirement are given an opportunity to present a literature seminar at the following Seminar Day.
The topic of the ORP must be approved at least three months prior to its defense. Students request approval for an ORP topic by submitting a one-page abstract identifying the topic of interest to the subdiscipline chair. Upon receipt the subdiscipline chair will assemble a Proposal Examining Committee (PEC) consisting of three members of the doctoral faculty in chemistry. The subdiscipline chair may serve on the PEC; the student’s research mentor may not be part of the PEC.

The subdiscipline chair and PEC reviews the topic and decides if it is appropriate within two weeks of receipt. Once the topic has been approved, the student must prepare a written Research Proposal. Four to six weeks should be enough for a capable, hard-working student to complete their ORP. The written research proposal itself should consist of no more than 10 pages excluding references and be prepared using 1.5-line spacing and 12-point font. It must include the following elements:

**Specific Aims:** significance of the subject, problem to be solved and/or hypotheses to be tested, objectives of the proposal, and strategy to be used to achieve these objectives.

**Background and Significance:** review of the pertinent background literature to place the proposal in perspective and consider alternative investigative approaches.

**Research Plan:** techniques, procedures, methods for analysis of the results, expected outcomes and possible pitfalls, projected timeline for major experiments and/or calculations.

**List of references**, including all authors, title, journal, volume, and inclusive pages for each article. References must also be cited at points in the proposal text where they are used; database software is strongly recommended to manage them.

Students send their written ORP to the PEC for review. The PEC will inform the student within 10 days regarding the suitability of the written proposal for oral defense. If the oral defense is not approved, the student is given an opportunity to address the deficiencies described by the PEC and resubmit a revised written proposal for approval.

For the defense of the Proposal the student must prepare a presentation that should last no longer than 30 minutes, excluding questions. The presentation is open to all members of the chemistry doctoral faculty. The presentation is followed by questions
from the examiners as well as a discussion about the viability of the proposed research plan. The student will pass or fail the ORP requirement by a majority vote of the PEC. If the oral defense is unsatisfactory, the student will be advised in writing of the deficiencies and asked to address them in written or oral form within four weeks. A student who fails the defense for a second time will be dismissed from the Program.

14. Advancement to Candidacy

At the end of the second year of study, students are expected to have successfully completed their First Examination and Second Examination. To be certified as a candidate for the Ph.D. degree, a student must have successfully completed:

a. all required course work with a minimum GPA of 3.0
b. 60 credits, with at least 30 taken at The City University of New York
c. First and Second Examinations

On completion of these requirements, students are required to meet with the Executive Officer and to establish that all course and other requirements for the subdiscipline have been met. Advancement to Candidacy means that all degree requirements except submission of the Ph.D. dissertation and the Final Examination have been met. The EO must approve the advancement to candidacy. Once approved, the chemistry office submits an electronic version of the Advancement to Candidacy for the Doctoral Degree form to the Graduate Center Registrar for approval. Students that advance to Ph.D. candidacy are automatically eligible to receive a Master of Philosophy (M.Phil.) degree from the Graduate Center.

15. Terminal Masters Degree

The Graduate Center awards an en route M. Phil. Degree to students who advance to Ph.D. candidacy as described above. If a student decides to withdraw from the Program prior to advancing to Ph.D. candidacy, they may request a master’s degree from the CUNY college at which their research was performed. These master’s degree may be M.A. or M.S. degrees. Students should consult with the campus Department Chair at
their campus as to the precise requirements for a campus-based master’s degree. In general, the requirements are, as follows:

1) a minimum of 45 credits with an average grade of B
2) passing the First Examination, and
3) satisfactory completion of a major research paper

The requirement of 45 credits cannot include courses for which SP grades are received or any advanced standing transfer credits. The student who wishes to receive a campus-based master’s degree should make an appointment with the Executive Officer and the campus Department Chair.

16. Dissertation Committee and Annual Committee Meetings

Once a research mentor has been selected and approved, the mentor and student will recommend a Dissertation Committee to the Executive Officer for approval using the Dissertation Committee Recommendation Form. The Dissertation Committee is chaired by the research mentor and must contain a minimum of two additional members of the CUNY doctoral faculty in chemistry. The Executive Officer is an ex officio member of all dissertation committees. Please note that at least one of the members of the Dissertation Committee must be a member of the doctoral faculty in chemistry at a college of the City University other than the one at which the research is being carried out. Meetings of the Dissertation Committee with the student are held annually to review the student’s progress and to make specific recommendations about both the research project and the student’s program of study.

The first Dissertation Committee meeting takes place during the third semester. Dissertation Committee meetings are then held at one-year intervals. The student will submit a written report to the members of the committee and to the Executive Officer at least two weeks before each meeting. This report should include not only a detailed description of the project and the work completed, but also a clear statement of the work to be undertaken in the coming year. All members of the dissertation committee will submit Dissertation Committee reports to the Executive Officer within one week of the meeting. Copies will be sent to the student. Students who fail to have an annual meeting of their Dissertation Committee will not be allowed to register.

Although meetings of the Dissertation Committee are required annually, the research mentor will convene a meeting at any time at the request of either the student or any
member of the Dissertation Committee. Further, additional members may be appointed to the Dissertation Committee by the Executive Officer at the request of any member of the Dissertation Committee.

The duties of the Dissertation Committee include an annual review and evaluation of the student’s academic record and of the progress of the research project, as well as planning of coursework and other subdiscipline requirements. The progress of the research project is evaluated from the student’s written reports and from discussions with the student at the meetings of the Dissertation Committee. A review of the student’s overall record should also be carried out at each Dissertation Committee meeting. This includes a review of the student’s progress in courses and in First and/or Second Examinations. Upon request, the Executive Officer will furnish details of the student’s record. Any specific recommendations that the Dissertation Committee might make about the program of study or the research progress of a student should be made in writing to the Executive Officer.

In addition to reviewing and evaluating a student’s progress in the Ph.D. program, the Dissertation Committee also must approve the student’s dissertation and conduct the Final Examination. These topics are discussed in the next section.

17. Submission of the Dissertation and Final Examination

After a student has been advanced to candidacy and when the research mentor and the Dissertation Committee approve, the student begins the process of writing the doctoral dissertation. Detailed Instructions for Preparing the Ph.D. Dissertation are available from the Registrar. What follows is a brief description of the procedures of the Chemistry Ph.D. program. Students are responsible for checking to make sure that they are not in arrears with the Bursar and that they do not owe any books to any CUNY library. Students begin the process by registering their intent to deposit and clearing all holds via Banner.

When you write the dissertation, it may be helpful to examine previously accepted dissertations to get some idea of acceptable format and style. Dissertations are available in the Mina Rees Library at The Graduate Center and in the Executive Officer’s office for your inspection. The organization of any dissertation depends to some extent on the nature of the work. Discuss the organization of your dissertation with your research mentor before you begin writing. A useful guide for writing professional papers in chemistry is the American Chemical Society’s ‘The ACS Style Guide: A Manual for
Authors and Editors’. Copies are available in the library or can be purchased from the American Chemical Society. The ACS Style Guide should be consulted for style, for the format of references, tables, and figures, and for many other questions about acceptable dissertation preparation. Questions about acceptable style and format should be addressed to the Dissertation Assistant (1-212-817-7069) in the Mina Rees Library before the dissertation is written. If the dissertation is not prepared according to the established guidelines, the Dissertation Assistant may refuse to accept it.

Footnotes are not generally used in Chemistry dissertations. Instead, references are numbered consecutively in the text and cited at the end of the dissertation.

When the first draft of the dissertation is completed, it should be read and corrected by the dissertation research mentor. After making all necessary corrections and with the approval of the research mentor, the dissertation is then presented to all of the members of the Dissertation Committee, along with a copy of the form Certification of Dissertation by Dissertation Committee Members. The Final Examination can be scheduled only after each member of the Dissertation Committee returns the form to the Executive Officer. The student should generally allow at least four weeks for the reading of the dissertation by the members of the Dissertation Committee. It is the student’s responsibility to notify each member of the Dissertation Committee that the dissertation is forthcoming and to arrange with them a specific date for the return of the Certification of Dissertation by Dissertation Committee Members form to the Executive Officer. If the members of the Dissertation Committee either accept the dissertation as presented or accept the dissertation with minor revisions, the Final Examination may be scheduled after the Certification of Dissertation forms have been received by the Executive Officer and forwarded to the Provost’s Office. The Final Examination cannot be scheduled until all of the Certification of Dissertation forms have been approved by the Provost. One copy of the dissertation and one copy of the student’s CV must also be sent to the Executive Officer at least two weeks before the defense is scheduled. The student arranges a day and time for the Final Examination with the members of the Dissertation Committee and then contacts the Executive Officer who will request that the Provost formally schedule the defense. Please note that the Office of the Provost needs at least two weeks’ notice to schedule a defense.

If one or more members of the Dissertation Committee require that major revisions be made before the Final Examination is scheduled, the dissertation is returned to the student for revision. The revised dissertation is submitted to the Dissertation Committee,
and the research mentor and two other members of the Dissertation Committee must accept it before the Final Examination can be scheduled. The process of scheduling the Final Examination was outlined in the previous paragraph.

**Important:** Approximate deadline dates for committee certification and deposit of dissertation are:

<table>
<thead>
<tr>
<th>Graduation in</th>
<th>Delivery of Dissertation Draft to Committee</th>
<th>Committee Certification and Request for Scheduling Defense</th>
<th>Successful Defense and Deposit of Dissertation</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>July 15</td>
<td>August 15</td>
<td>September 14</td>
</tr>
<tr>
<td>February</td>
<td>December 15</td>
<td>January 15</td>
<td>January 31</td>
</tr>
<tr>
<td>May/June</td>
<td>March 15</td>
<td>April 15</td>
<td>April 30</td>
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</tbody>
</table>

The actual dates for a given semester are given in the Graduate Center website under the title Deadline for Depositing a Dissertation or Thesis.

Please note that students must be registered during the semester when the dissertation is deposited. For example, if a student plans to deposit in the summer for a September graduation, you must register for the Fall semester. If the dissertation is deposited before the September 14 deadline, the Fall registration will be cancelled and the tuition bill zeroed out. However, if the September 14 deadline is missed, the Fall registration and the tuition bill will remain in effect.

The Final Examination is a public oral defense of the dissertation. The examining committee is Dissertation Committee with and the student’s dissertation research mentor acting as its Chair. A typical Final Examination consists of a public oral presentation of the dissertation by the candidate followed by questions in private about the work from the members of the examining committee.

Before the Final Examination, a student requests a copy of the form **Report of Final Examination**. This will be typed for the student and ready for the required signatures. After the examination, the committee decides which box to check and each member signs the form. The form is brought to the Executive Officer for signature and he/she forwards it to the Provost. If the dissertation requires only minor revisions, the research mentor must approve them and forward the **Approval of Revised Dissertation form** to the Executive Officer. In the rare circumstance that major revisions are required at this point, the entire Dissertation Committee must approve the revised dissertation.
Students must also bring with them to the Final Examination an original copy of the Approval Page that is signed by each member of the student’s Dissertation Committee and the Executive Officer. The original Approval Page is given to the library when the final dissertation is deposited.

The next step is the deposit of the final dissertation. Instruction for depositing the thesis are available online. Students may wish to consult with the Dissertation Assistant in the Mina Rees Library before they start writing their dissertation. Students submit an electronic copy of their dissertation for deposition in CUNY Academic Works as well as in ProQuest. In addition, the signed, original Approval Page is given to the library. The Dissertation Assistant may also give students instructions about their clearance with the Bursar, Financial Aid Office, Librarian, and Registrar.

Any research, whether or not it involves human subjects, must be approved by the Human Subjects Committee prior to starting the research. The approval form, signed on behalf of the Human Subjects Committee, must be included with the dissertation when it is deposited. No dissertation will be accepted without this form. Please contact Ms. Hilry Fisher, Director of Sponsored Research, 212-817-7523, for information.

V. STUDENT SUPPORT : The CUNY Science Scholarship

Students entering the Ph.D. Program in Chemistry are offered a CUNY Science Scholarship upon admission. The CUNY Science Scholarship provides five-years of support that includes a stipend, eligibility for low-cost health insurance through NYSHIP, and a tuition waiver. The first year of the CUNY Science Scholarship is paid by The Graduate Center, the following years by the student’s research mentor and their campus. Thus, the financial support of a mentor is a requirement to remain in good standing with the Program. After the first year, part of the student’s support may derive from a campus teaching assignment. A student’s teaching assignment each semester is at the college the student selects for doctoral research. Before the beginning of each semester, students must meet with the chair and/or graduate deputy chair at their college to discuss their teaching assignment. It is the responsibility of the student to make sure their eligibility for NYSHIP in continuous throughout their graduate studies at CUNY.
VI. STUDENT ADVISEMENT

The Executive Officer is responsible for the overall administration of the Ph.D. Program in Chemistry. The Executive Officer can be contacted at the office of the Ph.D. Program in Chemistry at The Graduate Center, Room 4310.

Entering students will meet with the Executive Officer to select courses for their first semester. As of the second semester students may, in addition, seek the advice of the subdiscipline chairs and their research mentors on course selections. Students are encouraged to consult the Executive Officer for advice or information about any aspect of the Ph.D. Program in Chemistry as the need arises. Subdiscipline chairs are always available for student advisement concerning examinations and other requirements of their subdiscipline.

Useful contact information is given below.

EXECUTIVE OFFICER
Graduate Center
Professor Brian Gibney (212) 817-8136 bgibney@brooklyn.cuny.edu

DEPUTY EXECUTIVE OFFICER
To be named

ASSISTANT PROGRAM OFFICER
Graduate Center
Ms. Kathleen Stolarski (212) 817-8135 kstolarski@gc.cuny.edu

SUBDISCIPLINE CHAIRS
Analytical
Professor Robert Nolan (212) 817-8248 rnolan@gc.cuny.edu
The Graduate School and University Center
Inorganic
Professor Andrei Jitianu (718) 960-6770 andrei.jitianu@lehman.cuny.edu
Lehman College
Organic
Professor Ryan Murelli  (718) 951-5000 x2821  rpmurelli@brooklyn.cuny.edu
Brooklyn College
Molecular Biophysics
Professor Themis Lazaridis  (212) 650-8364  tlazaridis@ccny.cuny.edu
The City College of New York
Nanotechnology and Materials
Professor Stephen O’Brien  (212) 650-8371  sobrien@ccny.cuny.edu
The City College of New York
Physical
Professor Jianbo Liu  (718) 997-3271  jianbo.liu@qc.cuny.edu
Queens College
Polymer
Professor Michal Kruk &  (718) 982-4050  michal.kruk@csi.cuny.edu
Professor Nan-Loh Yang  (718) 982-4066  nanloh.yang-cepm@csi.cuny.edu
The College of Staten Island

DEPARTMENT CHAIRS

Brooklyn College
Professor Maria Contel  (718) 951-5758  mariacontel@brooklyn.cuny.edu

The City College of New York
Professor Ruth Stark  (212) 650-6953  stark@sci.ccny.cuny.edu

Hunter College
Professor Michael Drain  (212) 772-5330  chairche@hunter.cuny.edu

Lehman College
Professor Pamela Mills  (718) 960-8743  pamela.mills@lehman.cuny.edu

College of Staten Island
Professor Qiao-sheng Hu  (718) 982-3901  qiaohu@xch.csi.cuny.edu

Queens College
Professor Susan Rotenberg  (718) 997- 4195  susan.rotenberg@qc.cuny.edu

York College
Professor Ruel Desamaero  (718) 262-2657  rdesamero@york.cuny.edu
VII. SOME PRACTICAL MATTERS

Program Affiliation
All publications (abstracts, posters, preprints, papers, patents) shall carry the following Program Affiliation along with the appropriate campus affiliation: Ph.D. Program in Chemistry, The Graduate Center of the City University of New York, New York, NY 10016

Vacations
Research is the core of the graduate program. In order to successfully complete your studies within the five years of your CUNY Science Scholarship support, it is usually necessary to work long hours and make efficient use of your time. You are entitled to all University Holidays and any additional vacation time is the purview of your research mentor.

Travel Abroad
Students who travel abroad for purposes related to their work at CUNY are required to purchase international travel insurance. The paperwork must be submitted to the Office of the Vice President of Student Affairs at the Graduate Center at least two weeks prior to departure. Details and forms can be found here.

Departmental Communication
The Program routinely updates students on changes in departmental policies, research and funding opportunities and their progress to degree using their Graduate Center email address. It is Graduate Center policy that personal email addresses not be used for official communications.

Mailing Addresses
Please inform the APO upon change of local address and telephone number while a student, and upon graduation.

Health Insurance
The CUNY Science Scholarship provides eligibility for low-cost health insurance through NYSHIP. When students transition between CUNY campuses (Graduate Center to
campus at the end of year one; campus A to campus B when they change mentors) their health insurance is not automatically transferred. In addition, when students are placed on full grant support by their mentors and relieved of teaching duties, their health insurance is not automatically retained. Students need to be proactive in ensuring that their NYSHIP coverage is continuous.

Conference Presentation Support
Students who are presenting their work at conferences may apply to the Graduate Center for financial support. To receive this funding, the academic affiliation must be listed as the Ph.D. Program in Chemistry, The Graduate Center of the City University of New York, New York, NY 10016 in the conference program, printed and/or online.

Career Guidance
While the unemployment rate for Ph.D. chemists is typically low, it is incumbent on the student to plan and execute their own career path. Program graduates find employment in traditional careers (postdoctoral training, academic appointments, industry jobs, government labs) and increasingly in alternative careers (consulting, science writing, patent law, public policy, etc.). Career planning should start in year one with an Individual Development Plan (IDP) which offers students a chance to self-reflect and evaluate their career motivations and options. The Program encourages the use of the American Chemical Society’s ChemIDP as a career guidance tool. Students are encouraged to seek career guidance advice from their faculty mentor, dissertation committee members, their subdiscipline chair and the Executive Officer. Students are also directed to the range of services offered by The Office of Career Planning and Professional Development and the Teaching and Learning Center at the Graduate Center.

Transfer Credits
Students that wish to receive transfer credit for graduate courses taken elsewhere must apply in writing to the Executive Officer for transfer credit. The credits transferred are ‘blanket credits’ that raise the number of credits earned by the student, but do not substitute for courses. The Executive Officer can only evaluate transfer credits once the student has passed their first examination requirement. The Executive Officer completes the “Advanced Standing Transfer Credit Recommendation” (Appendix H) and submits it to the Registrar for approval. Credits transferred in this way do not affect the course
requirements you must complete as a student in the Ph.D. program, but they do affect your tuition level as explained below. Students who have earned a master’s degree elsewhere may receive a maximum of 30 advanced standing transfer credits provided an official transcript and diploma is submitted with the application. Please be advised, however, that transfer credits cannot be used toward the credit requirement of the campus-based master’s degree (see below).

VIII. Registration, Tuition, and Fees

1. Registration
Information about registration procedures, deadlines and a schedule of tuition and fees is published at the beginning of each semester on the GC website. It is important that students register on time to avoid late registration fees even if the exact courses change before classes start or during the Drop/Add period. Failure to register for classes by the end of the Drop/Add period results in immediate dismissal from the Program.

Students who have not yet passed all parts of the First Examination must make an appointment with the Executive Officer for advisement and registration each semester. Students who have completed the First Examination should submit a completed “Registration and Student Status Form” to the Executive Officer for approval.

Students in good standing may register for a course given at one of the colleges of CUNY using the Permit Out form that requires the approval of the Executive Officer. The registration for that course, either for credit or on an audit basis, is included as part of the student’s registration at The Graduate Center. No additional tuition is required for courses taken at other CUNY campuses.

After their first year, matriculated CUNY doctoral students may cross register for courses in the graduate schools of arts and sciences of the following institutions: Columbia University (including Teachers College), Fordham University, New School University, Rutgers University, Princeton University, Stony Brook University, and New York University. The general terms for participating in the Interuniversity Doctoral Consortium are described in the Graduate Center Student Handbook, importantly a CUNY course similar to the requested non-CUNY course must not offered at the Graduate Center. A registration form is available in the Office of the Registrar and requires approval by both the Executive Officer and Registrar. Any registration questions regarding the
consortium should be addressed to the Office of the Registrar. Academic or policy questions should be directed to the Office of the Vice President for Student Affairs.

a. **Auditing of Courses**
Full-time Ph.D. candidates are permitted to audit additional Ph.D. courses if they choose, at no cost. Any full-time graduate student may audit undergraduate CUNY courses without charge with the approval of the appropriate undergraduate authority and the Executive Officer. Auditing undergraduate courses is sometimes recommended when a student’s undergraduate training in a particular subdiscipline is not sufficient for the student to pursue successfully the first-level Ph.D. course in that subdiscipline.

b. **Adding and Dropping Courses**
During the first three weeks of each semester students have the option of adding and/or dropping courses from their initial program. During this period, courses can be dropped without penalty. If a student elects to withdraw from a course after the first three weeks of the semester, a grade of W will appear on the transcript for this course. Approval of the Executive Officer is required to add or drop courses. See the *Graduate Center Student Handbook* for information on fee consequences of withdrawing of courses.

c. **Leave of Absence**
A leave of absence may be granted to a student wishing to interrupt doctoral study for up to one year. International students are advised to contact the Office of International Students concerning the effect of a leave of absence on their immigration status. The leave request must be made in writing prior to the semester during which the leave will be taken (Appendix F). Each request for leave, preferably on a semester basis, must be approved by the Executive Officer and be cleared by the Offices of Financial Aid, Chief Librarian, Business, and International Students. Following these approvals, the request is sent to the Office of Student Affairs at the Graduate Center which grants the leave of absence. Requests for an extension of a leave of absence, for no more than one additional year, must follow the same procedure. A student cannot be granted a total of more than two years (four semesters) of leave of absence during his/her entire period of matriculation. Official leave of absence time is not counted
toward the time limit for completion of degree requirements. Any student subject to induction or recall into military service should consult the veterans' adviser (the Registrar) before applying for an official leave.

d. Withdrawal and Readmission

Students who wish to voluntarily withdraw from the Program must submit a Request for Withdrawal form. The request must be approved by the Executive Officer who forwards the request to the Registrar. Clearance from the Business Office, the Bursar, the Librarian, the Director of Residence Life, the Office of International Students, and the Director of Financial Aid is required before the withdrawal can become effective. Students who voluntarily withdrawal may be readmitted to the Program at a later date. All applications for readmission are handled by the Registrar. Written approval of the Executive Officer is required.

2. Tuition

The value of the tuition paid by the Graduate Center on behalf of the students as part of their CUNY Science Scholarship is dependent on the number of credits of graduate work completed. This includes credit for courses taken as a student in the Ph.D. Program in Chemistry as well as any credit for graduate courses taken elsewhere for credit.

Each student starts as a Level I student for tuition purposes. Advancement to Level II tuition requires a minimum of 45 earned credits of graduate work and successful completion of the First Examination requirement. Advancement from Level I to Level II is automatic. Incomplete grades do not count toward the total 45 credits earned. Students who are making good progress towards their degree are expected to advance to Level II at the end of their third semester of study. Student who transfer in graduate credits may advance at the end of their second semester of study.

Each student remains at Level II until the requirements for advancement to candidacy have been met. These requirements are: (1) the completion of a minimum of 60 credits; (2) the completion of all required courses; and (3) passing the Second Examination. Advancing to Level III requires the approval of the Executive Officer. Once Level III has been attained, a student is a Ph.D. candidate and registers each semester for Dissertation Supervision (90000) for 1 credit and their subdiscipline specific Advanced Seminar course (805xx), which is taken on an audit basis. Additional lecture courses may also be taken on an audit basis. If a Level III student (Ph.D. candidate) wishes to take a lecture course
for a letter grade, additional tuition must be paid for the course as described in the “Announcement of Courses.”

Your bill each semester should reflect your correct tuition level. If it does not, or if you think an error has been made, contact the Executive Officer or the Registrar to petition for a change of level. This must be done by the end of the third week of classes (see the calendar in the “Announcement of Courses” for the exact date each semester). No changes in level status will be allowed in that semester after that date.

3. Fees

Student are responsible for any campus-based fees including, but not limited to, activity fees, technology fees and consolidated services fees. These fees are about $200 per semester. The fees imposed are not covered by the CUNY Science Scholarship.
IX. **Summary of Requirements for the Degree of Doctor of Philosophy**

A student who follows the course of study presented in Section IV.5 and completes an acceptable dissertation will have completed all of the requirements for the Ph.D. degree. The following are the general requirements of The Graduate Center. These requirements are also stated in the *Bulletin*.

1. At least 30 of the credits required for the degree must be taken in residence at the City University. Doctoral students are expected to spend one year in full-time residence at the City University. This consists of a schedule of no less than 12 credits or the equivalent for each of two consecutive semesters.

2. All work must be completed no later than eight years after matriculation. A student who matriculates after completion of 30 credits of acceptable work must complete all requirements within seven years.

3. At least 60 credits of approved graduate work, including the course requirements in the field of specialization, are required for the degree.

4. Each student must pass a First Examination in his or her field. The examination shall be oral and/or written and may be administered in parts over an extended time period. A student may continue in the doctoral program after completing 45 credits only if he or she has passed this examination.

5. A Second Examination is required.

6. To be certified as a candidate for the Ph.D., the student must complete all required course work, with at least an overall B average, of which at least 30 credits must be taken at the City University; the Second Examination; and any special departmental requirements for certification.

7. The student must complete a dissertation embodying original research that must be defended at an oral Final Examination and be deposited in the Mina Rees Library of The Graduate Center before the degree is granted. The student must be registered during the semester the degree is granted.
X. GRADUATE CENTER CONTACTS

Chief Diversity Officer and Title IX Coordinator
   Edith Rivera, Room 7301; 212 817-7405

504/ADA Coordinator:
   Vice President for Student Affairs, Matthew Schoengood, Room 7301; 212 817-7400.

Coordinator, Sexual Harassment Panel:
   Professor Michelle Fine; 212 817-8710.

Campus Director of Public Safety:
   John Flaherty; Room 9117; 212-817-7761

Ombuds Officer:
   Martin R. Gitterman; Room 3311; 212 817-7191. The Ombuds Officer offers complete confidence to any individual in the GSUC community in discussing informal as well as formal solutions to any problem.

Assistant Vice President for Faculty and Staff Relations:
   Yosette Jones Johnson, Room 8403; 212 817-7700.
XI. CHEMISTRY Ph.D. PROGRAM GOVERNANCE

The CUNY Ph.D. Program in Chemistry was established in 1962 and graduated its first Ph.D. in 1966. The Ph.D. program is consortial in nature with the Program administered through the Graduate Center, but comprised of faculty at CUNY campuses appointed to the CUNY Doctoral Faculty in Chemistry by the Provost of the Graduate Center. At present, the faculty members of the Ph.D. program are drawn primarily from several senior colleges of the City University of New York: Brooklyn College, The City College of New York, Hunter College, John Jay College of Criminal Justice, Lehman College, Queens College, The College of Staten Island, and York College. Each of these CUNY campuses have at least five faculty appointed to the doctoral faculty in the Ph.D. Program and are therefore considered to be fully participating member of the consortium. The Program also has Doctoral Faculty at the CUNY Advanced Science Research Center (ASRC), Medgar Evers College, the Borough of Manhattan Community College, Bronx Community College, and Baruch College. Students may select their research mentor from any member of the CUNY Doctoral Faculty in Chemistry at any of the CUNY campuses or at the ASRC.

1. The Executive Officer

The Ph.D. Program in Chemistry is headed by an Executive Officer appointed by the President of the Graduate Center for a term not exceeding three years. The Executive Officer may be reappointed. The Executive Officer presides at meetings of the program’s faculty and Executive Committee, and serves as chair of the program’s standing committees on Faculty Membership and Admissions and Awards. The Executive Officer may appoint a Deputy Executive Officer for a term not exceeding one year. The Deputy Executive Officer may be reappointed.

2. The Executive Committee

The governance of the Ph.D. Program in Chemistry is the responsibility of the Executive Committee that is elected by the faculty. The Executive Committee consists of the following faculty members:

- The Executive Officer
• The Deputy Executive Officer
• The Chairs of the campus Departments fully participating in the Program
• The Subdiscipline Chairs of the Ph.D. Program
• The faculty representatives of the Ph.D. Program to the Graduate Council

Furthermore, any fully participating campus that does not have two representatives on the Executive Committee may elect a representative to serve on the Executive Committee.

The Executive Committee also contains student members elected from, and by, the students in the Ph.D. Program in Chemistry. The student members of the Executive Committee are, as follows:

• The Ph.D. Program’s student representatives to the Graduate Council
• The Ph.D. Program’s student representatives to the Doctoral Student’s Council

These student members provide a crucial perspective on policy matters before the Executive Committee. Their participation is welcomed, except during Executive Committee discussions of matters involving judgment of student academic performance or doctoral faculty professional competence. In cases where there is no agreement on the propriety of student participation in an Executive Committee or standing committee deliberation, the Executive Committee or standing committee, respectively, votes as a whole to decide the question.

The Executive Committee calls at least one meeting per year of the faculty, at which the Executive Committee presents a report; a quorum at this meeting consists of 25 persons or 50 percent of the faculty, whichever is smaller. The Executive Committee calls a meeting at least once a semester with the students in the program. The procedures of the Executive Committee and its standing committees are governed by Robert’s Rules of Order, Newly Revised, in all cases in which they are applicable.
3. **Subdiscipline Chairs**

The program has seven subdisciplines: Analytical, Inorganic, Organic, Molecular Biophysics, Nanotechnology and Materials, Physical, and Polymer. The faculty in each subdiscipline of the Ph.D. Program elects a subdiscipline chair to a two-year term of office. The subdiscipline chairs recommend, to the Executive Officer, faculty to teach courses, and arrange for the administration and grading of examinations in their subdiscipline. Results of student performance on first and second examinations are presented by the subdiscipline chairs to the Executive Committee for its consideration. Each subdiscipline chair is available to students to offer advice and information concerning specific subdiscipline requirements. The faculty members of each subdiscipline decide whether or not to have a Steering Committee for that subdiscipline, to consist of members elected by the faculty in that subdiscipline for two-year terms. Each Steering Committee includes a student member from that subdiscipline, elected by the students in that subdiscipline for a one-year term.

4. **Standing Committees**

a. The **Faculty Membership Committee** is comprised of the members of the Executive Committee. The Faculty Membership Committee is responsible for review of continued membership of each faculty member on the doctoral faculty, and for nomination to the Provost of members of the doctoral faculty in Chemistry. The guidelines for nomination include a determination that the prospective faculty member will make a significant contribution to the needs of the program, and evidence of:
   (1) significant research relevant to the Ph.D. Program in Chemistry;
   (2) qualification to teach a doctoral course in Chemistry or provide other doctoral-level training; and/or
   (3) qualification to supervise doctoral dissertations or other graduate-level research.

b. The **Curriculum and Examinations Committee** is comprised of the subdiscipline chairs and one student member elected for a one-year term by the students program-wide. The Curriculum and Examination Committee reviews curriculum, submits
curriculum recommendations to the Executive Committee, and recommends to the Executive Committee procedures and standards for the conduct of examinations.

c. The **Admissions and Awards Committee** is comprised of two members of the Executive Committee. The Admissions and Awards Committee recommends admissions and awards procedures and standards for the program.

d. The **Elections Committee** consists of three faculty members and three students, each appointed for a two-year term by the Executive Officer in consultation with the Executive Committee.

   i. The Elections Committee solicits nominations program-wide for faculty representative(s) to the Graduate Council (two-year term) and student representative(s) to the Graduate Council (one-year term), and supervises the conduct of these elections. Only faculty members vote for faculty representatives, and only students vote for student representatives. All Chemistry doctoral faculty members and all matriculated Chemistry doctoral students are eligible to vote and are eligible for election. The Elections Committee notifies, through the Executive Officer, the doctoral faculty of each fully participating college that does not have two of its members on the Executive Committee of the need for the election of a faculty representative to the Executive Committee.

   ii. The Elections Committee solicits nominations from the faculty within each subdiscipline for election of the chair of that subdiscipline and supervises the conduct of this election.

   iii. The Elections Committee solicits nominations from the matriculated students program-wide for election of a student representative to the Curriculum and Examinations Committee and supervises the conduct of this election.

   iv. The Elections Committee solicits nominations from the students within each subdiscipline for election of a student representative to the subdiscipline’s Steering Committee, if one exists, and supervises the conduct of this election.

   v. Elections take place in the Spring semester before April 1. All new terms of office commence in the Fall semester.

   vi. All elections are by mail or electronic ballot.