

The Master of Science Chemistry Program Policies, Procedures, and Guidelines

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Disclaimer

The information given in this document is intended to be an accurate description of the requirements of the various Chemistry graduate programs. The contents of this document are expected to evolve somewhat over time.

The users of this document should keep the following in mind.

1. If the document contradicts itself by setting forth mutually exclusive requirements, then the issue will be resolved, and the valid practice determined, at the time of application of the requirements by the Chemistry Graduate Committee and Chemistry Graduate Program Director.
2. If the document sets forth requirements or policies which are in conflict with Arts and Science Graduate School policies or University policies, then the policies from these administrative units take precedence over the Department policies.
3. If the document contains a policy or regulation which, at the time of its application, is deemed *not* to be in the best interest of the student as pursuing an advanced degree in Chemistry, then the Department has the right to change the policy, announcing the change to all graduate students and faculty, and incorporating the change into the next edition of these rules and regulations.

Introduction

While the intent of a program of study leading to the Master's Degree in Chemistry is to prepare students to be capable and independent chemists, orderly progression through the program demands that there be policies or rules and procedures. The policies and procedures for the Chemistry program are spelled out in this document. In addition, useful guidelines are also given which, while not defining policy, define good practice. It should be noted that some of the requirements stated in this document reflect **Villanova Graduate School** requirements and others are **Chemistry Department** requirements.

Admission Requirements (Full-time and Part-time):

When a student submits an application, the Chemistry Graduate Committee evaluates the application. The committee decides on whether to accept or reject the application, on whether to accept as matriculated or non-matriculated, and on whether or not to award a teaching assistantship if one has been requested (for full-time students only). Generally, students who apply for the full-time program will not be accepted without the award of an assistantship. The committee's recommendation is submitted to the Graduate School which, in its turn, evaluates the application. The applicant is informed in writing by the Graduate School about the outcome of their application.

Undergraduate Degree Requirements:

The student must have a bachelor's degree in a science discipline, or its equivalent. This degree may be certified by the Committee on Professional Training of the American Chemical Society, or be a bachelor's degree in any area, presenting acceptable credits for one year of study in both general chemistry and organic chemistry as well as at least two additional upper-level chemistry classes, for example one semester of study each in analytical chemistry and physical chemistry. Mathematics through integral calculus and one year of physics are also expected. Generally, students who have a bachelor's degree in Chemistry will have the necessary course prerequisites for admission into the program. Students having a degree in some other scientific discipline would do well to contact the Program Director to discuss deficiencies in course prerequisites and to devise a plan for remedying deficiencies either before or after acceptance into the program.

Undergraduate GPA Requirements:

An undergraduate quality point average of 3.0 or greater on a 4 point scale is required for admission by the Graduate School. However, admissions are holistic, and students with GPA's below 3.0 may still be considered (see also Non-Matriculated Status below).

The Graduate Committee also examines the GPA for science and chemistry courses and considers these in addition to the overall GPA.

Graduate Record Exams:

GRE scores are not required, but can be submitted if desired.

International Students:

A score of 80 or higher on the TOEFL iBT test or 6.5 or higher on the IELTS test is required for students who speak a native language other than English.

The ability to speak and understand both spoken and written English is crucial for success in the program. First, lectures are given in English. Second, graduate students who are teaching assistants must be able to communicate with the undergraduates in their charge. Finally, thesis track students must submit a written thesis written in acceptable English prose with few grammatical mistakes in order to graduate.

Matriculated vs. Non-Matriculated Status

If an applicant fulfills the requirements for acceptance into the graduate program, the applicant is accepted as a **matriculated** student. This status implies that the student may register for all the courses needed to complete the degree requirements and is subject to all of the policies associated with the program. If the applicant fails to meet all the standards for acceptance into the program or fails to submit all of the needed credentials (transcripts, letters of recommendation, statement of purpose etc.) the Chemistry Graduate Committee *may* recommend that the student be accepted as a **non-matriculated** student. A non-matriculated student normally is allowed to take **two** Chemistry graduate courses with the requirement that a B average (3.00) is attained for the two courses. In the case where non-matriculated status was granted because of *missing* credentials the Chemistry Graduate Committee will reexamine the complete credential package as well as the grades for the graduate courses taken, and decide whether or not to admit the student to matriculated status. In the case where non-matriculated status was granted because of *failure to meet stated standards*, the Chemistry Graduate Committee will examine the grades for the graduate courses taken and decide whether or not to admit the student to matriculated status.

Thesis and Non-Thesis Options

There are two completion options available to students. The thesis option is the option recommended for students who wish to continue their education full-time and pursue research. Normally such graduate students are supported by teaching or research assistantships or fellowships. The non-thesis option is intended primarily for chemists who entered the workplace full-time upon obtaining their bachelor's degree and who wish to further their careers by means of the MS degree. The need to conduct thesis research is replaced by additional coursework. In special cases, students employed full-time in the chemical industry may be able to arrange thesis research at their place of employment; such students may elect the thesis option. Note that the course requirement for each option is different (see below).

Part-time vs. Full-time Status

In addition to the classifications given above, the Department of chemistry also distinguishes between “part-time” and “full-time” statuses. Ordinarily, a *full-time* student is a student who (1) is registered for one or more courses including “research courses”, (2) is committed to working in the laboratory on a thesis project on a full-time basis, and (3) who is performing services as a teaching assistant or as a research assistant. The full-time student spends the equivalent of a normal work week functioning as a Chemistry Graduate student. A *part-time* student is generally a student who is only involved with the program through being enrolled in one or two courses per semester and who is *not* involved as a teaching assistant or research assistant. The part-time student is most often the non-thesis option student who is gainfully employed full-time elsewhere.

If a student is required to have a letter written (for insurance purposes, etc.) verifying his or her full-time status, the student should provide both the request and necessary information to the Chemistry Graduate Program Director or the Department Chairperson.

Requirement Summary

THESIS: A minimum of 30 course credits are required:

1. Choose 2 core courses – 6 credits – from the 5 below:
 - a. CHM 7292: Core Organic Chemistry
 - b. CHM 7391: Core Inorganic Chemistry
 - c. CHM 7494: Core Physical Chemistry or CHM7100: Quantum Mechanics or CMH7200: Thermodynamics/Statistical Mechanics
 - d. CHM 7595: Core Analytical Chemistry
 - e. CHM 7693: Core Biochemistry
2. Choose 4 elective courses – 12 credits
3. CHM 7807, 7808, 7809; M.S. Research I, II, III – 9 credits
4. CHM 7810; M.S. Thesis – 3 credits
5. Satisfactory research, progress seminar, thesis defense, and thesis submission

Students completing the above course requirements with a total of thirty (30) credits and who find themselves finishing thesis research in subsequent semesters, must enroll in CHM 9080, Thesis continuing research – 0 credits.

NON-THESIS: The non-thesis option is available only to part-time students who do not have the opportunity to conduct research at Villanova University or their place of employment. As with the Thesis M.S. degree, a minimum of 30 course credits are required:

1. Choose 3 core courses – 9 credits – from the 5 below:
 - a. CHM 7292: Core Organic Chemistry
 - b. CHM 7391: Core Inorganic Chemistry

- c. CHM 7494: Core Physical Chemistry or CHM7100: Quantum Mechanics or CMH7200: Thermodynamics/Statistical Mechanics
- d. CHM 7595: Core Analytical Chemistry
- e. CHM 7693: Core Biochemistry

2. Choose 7 elective courses – 21 credits

ALL STUDENTS: All students must maintain a 3.0 overall GPA to stay in the program. The degree requirements must be completed within 6 years.

GPA Requirement

A student must maintain a GPA (grade point average) of at least 3.00 at all times in order to complete the degree requirements. Note that the GPA affects eligibility to proceed through various steps of the program. This is a Graduate School requirement.

The research course CHM7807 (Research I) receives a letter grade (assigned by the committee) upon successful completion of the progress seminar that will be included in the calculation of the GPA; if CHM7807 is taken prior to completion of the progress seminar, a grade of IP (in progress) will be assigned. If the progress seminar was unsuccessful but will be repeated at a later date, a grade of incomplete may be assigned. The research courses CHM7808 and 7809 (Research II and III) receive a grade of S (satisfactory) or U (unsatisfactory). The final research course CHM7810 (MS Thesis) will receive a grade of IP until the thesis has been submitted and *approved* by the department and the graduate school, at which point it will receive a grade of S. If necessary, a zero credit class (CHM9080; Thesis continuation) can be enrolled in if the thesis is not completed in the semester CMH7810 is taken. These research classes (with the exception of CHM7807) do not receive grades which can be included in the calculation of the GPA.

Students whose GPA fails significantly below 3.00 early in the program should realize that their likelihood of completing the program is jeopardized. Poor grades are cause for dismissal from the program, especially if it is unlikely that future performance will bring the average to the needed 3.00 value. Please see the Graduate School policy on Academic Probation for more information. If a student who holds a graduate assistantship, tuition scholarship or fellowship is placed on academic probation, the award is automatically rescinded.

Research, Thesis, and Thesis Defense

Research is a significant part of the training process and should involve the solving of a substantial chemical problem. The results of the research project will be presented to the department in the form of a written thesis and in the form of a public presentation at which questions will be asked by the audience. It is expected that the work will be of sufficient quality to form a significant contribution to a publication in a peer-reviewed journal and/or to be presented at external meetings or conferences.

Choice of Project, Research Director, and Advisory Committee:

It is strongly suggested that the students begin conducting research during the first semester of study. To facilitate the matching of students with Research Directors, students are required to make appointments to discuss research with three faculty members during August and September (for those starting in the Fall) or January and February (for those starting in the Spring) using the *Research Advisor Interview* form, which should be signed by all the faculty and returned to the Graduate Program Director or Administrator. By September 30th (or February 15th) students will submit a list of their top three choices (ranked from 1 to 3) for Research Advisor to the Graduate Program Director. The Graduate Program Director, in consultation with faculty, will then assign students to labs, trying to ensure that as many students as possible get their first choices of Research Advisor while simultaneously being responsive to faculty needs and lab space. Students will be notified of decisions by Fall (or Spring) Break. Note that there is nothing to prevent a student, with the support of a faculty member, from conducting research in a lab prior to the match process on a trial basis.

Once a lab has been joined and a project decided upon, the student will fill out the *Choice of Research Director* form, which should be submitted to the Graduate Program Director by October 31st (or March 15th). The student should also carefully read the *Statement of Research* that accompanies this form. In consultation with the Research Advisor, the student will ask two additional faculty members (at least one of whom is a member of the Department of Chemistry) to serve on the thesis committee. Full-time Continuing faculty can serve as committee members or co-advisors but cannot serve as the primary advisor. Note that in the case of co-advisors, two additional members of the thesis committee are still needed. The form will be placed in the student's file and represents a formal commitment between the student and faculty member to conduct and direct the research project respectively.

The student should normally expect to complete his or her research project under the direction of the faculty member signing the agreement. In rare cases, poor performance on the part of the student, personality clashes, changes in interests, etc. may necessitate a change in research project and Research Director. Such a change may be initiated by either the student or the faculty member. The initiator of the change must inform the Graduate Program Director *in writing* expressing the desire for a change and spelling out the reasons for the change. The Chemistry Graduate Program Director will consult with the Graduate Committee and indicate the approval of the change by placing a dated signature on the letter and placing in the student's file. In addition, a notation will be made on the original commitment form indicating the date that the commitment was terminated. The student must see to it that a new commitment form is filled out and signed and submitted to the Chemistry Graduate Program Director. *It is important to note that changing a project and Research Director will normally cause research work performed before the change to be ignored and will add to the time it takes to complete the degree requirements. Note that the Graduate School limits Teaching Assistantships to four semesters, making funding past two years difficult.*

Advisory Committee:

At the time the student chooses a Research Director, the student, in consultation with the Research Director, will choose two faculty members who will serve on the student's advisory committee or thesis committee. The Research Director will be the principal advisor to the student. The advisory committee will serve principally as evaluators of the student's progress on his or her thesis research and will serve as the Readers of the student's thesis.

Students entering the program in September, including BS/MS students, will give a seminar describing the progress of their research during the following June or July (generally while signed up for CHM7807). The progress seminar typically consists of background material, an introduction to the specific project being pursued, progress so far, and plans for completing the research project. The Research Director and advisory committee members will attend the seminar. The Research Director will also specify written requirements to be delivered to the committee, for example a draft of the Introduction to the Thesis or a Thesis Proposal describing the research plan going forward. (Students entering the program in January will undergo this process *in either December of their first year or early January* of their second year). The advisory committee will meet and assess the student's progress. The advisory committee (along with the Research Director) will record their evaluation on the *Evaluation of Seminar* form, which will be placed in the student's file. Evaluation of the progress seminar will indicate whether or *not* the research effort to date is satisfactory and, if it is not, will spell out the ways in which it is not satisfactory and provide recommendations for remedying deficiencies. The student will be graded as having 1) passed, b) passed with recommendations (to be dictated by committee), c) fail (literature/background), d) fail (research results/effort) or e) fail with a recommendation to be released from the program. In the case of c) the student will present another seminar thoroughly discussing the background of the project. In the case of d) specific case-by-case requirements will be presented to the student that will allow him/her to continue in the program, (i.e., regular examination of notebook, time sheet, contract, monitored research goals).

The seminars given by the student should be true research seminars. The student should receive some instruction on how to make a presentation and how to use technology to his or her advantage. Thus, in addition to assessing the content of the seminar, the advisory committee will assess the effectiveness of the presentation itself. In the event of an ineffective presentation, the advisory committee will make remedial recommendations and can require an additional presentation in which deficiencies will be remedied. In the case of inadequate or poor written requirements, the committee may also require revisions. The progress seminar will serve as the basis for the letter grade received in CHM7807 (Research I).

Thesis:

The culmination of the research project is the written thesis. The thesis is written when the Research Director declares that an acceptable project has been completed. Regarding general format, the student should familiarize himself or herself with bound copies of theses present in the Department's library. These can serve as guides for format and content. However, the student should obtain a copy of the Style Guide for Theses published by Graduate School as well as a copy of *The ACS Style Guide: A Manual for Authors and Editors*, published by the American Chemical Society. The former document spells out the specifics for margins and format required by the Villanova Graduate School. The *ACS Style Guide* has a wealth of information about the format of graphs, tables, and equations as well as information about abbreviations, punctuation and spelling. The department will also make available a template for student use, but students are urged to verify that this template does indeed satisfy the requirements (i.e. that no Graduate School requirements have changed).

It is expected that the thesis is written in grammatically correct English with correct spelling and punctuation. Students who are uncertain about their writing style, especially students for whom English is not their first language, should have the thesis read and checked for style and grammar by another person who can competently make the necessary corrections. It is not the place of the Research Director or Reader to make corrections of style and grammar, these should be taken care of *before* submitting the thesis to the Research Director and Reader. Either the Research Director or Reader may return the thesis for grammatical revision if they judge that too many errors occur in the writing style.

The thesis submitted to the Research Director *should be* complete. That is, it should have all chapters, tables, figures, references, table of contents, etc. However, the Research Director may agree to accept the thesis in stages if this serves the interest of both student and the Research Director. Once the Research Director deems that the thesis is complete or is close enough that it will be complete by the time of the thesis defense, the thesis defense date can be scheduled. Thesis defense dates CANNOT be scheduled until the advisor has received a draft of the thesis and given approval for the thesis to go forward. The complete thesis should be submitted to the Program Director and the thesis Readers (normally the members of the advisory committee). The Program Director and Readers MUST receive the thesis two weeks before the scheduled oral defense date, although, with the permission of the committee, this can be pushed back to one week before the defense date for the Readers. When the Readers have read the thesis, the Readers will provide written and/or oral feedback on any issues with the thesis to the student and Research Director. If the issues are significant, the Readers may require that the thesis be revised and resubmitted before proceeding with the defense and it may be necessary to involve the Research Director in the discussion of revisions. If the Readers agree to proceed with the defense in spite of the need for a revision, it is expected that the Readers will have sufficient time to check and approve the revisions when they are made. Sufficient time for the Research Director and Readers to assess the original thesis and subsequent revisions should be kept in mind when trying to meet University and Graduate School graduation deadlines for thesis submissions. It should not be expected that the process will be rushed so that graduation will occur on a desired date.

When the thesis is approved and signed by the Research Director and Readers, signature pages (signed by the Research Director and Readers) are submitted to the Department Chair for signature and then to the Graduate School. Please review the Villanova College of Arts & Sciences Graduate School web site for specific instructions on the number of copies of the thesis to be submitted and for the deadlines for submission.

Advising Process

The Chemistry Graduate Program Director is the advisor for new thesis option students until the time they choose their Research Director (and remains the academic advisor throughout their course of study). The Chemistry Graduate Program Director is the advisor for the non-thesis option students throughout their course of study. Students should feel free to consult with their advisor about program matters at any time.

Time Limitations

The Graduate School of Arts and Sciences requires that students complete all of their degree requirements within six years. Teaching Assistantships are limited to two years. Students who have completed all requirements other than the thesis requirement can enroll in a 0-credit thesis continuation class until they defend and submit their thesis and do not need to pay tuition.

Transfer of Credits

The graduate school allows the transfer of 6 credits of graduate courses from other schools to be applied to the degree requirements. However, only the credits are transferred, not the grades. Grades for courses transferred from other universities are *not* counted in the student's GPA.

The student who has already completed one or two courses at another institution can petition the department to accept the course or courses for transfer. A *Transfer of Credit Record form* can be obtained from the Chemistry Department office or from the Graduate School of Arts and Sciences web site. This is to be filled out by the student and sent to the Chemistry Graduate Program Director. This form should also be accompanied by a description of the course(s), usually a copy of the catalog description of the course or a course syllabus, as well as a copy of the transcript giving the grade in the course. If the Chemistry Department approves the transfer, the *Transfer of Credit Record form* will be signed and sent to the Graduate School. The student will be notified of the approval and requested to have the Registrar of the school where the course was taken send an official transcript to the Villanova Graduate School.

If a student desires to take one or two courses at another university, the student should get pre-approval by the Chemistry Department. The student should contact the Chemistry Graduate Program Director and verbally discuss the transfer. The student should then give a written request for pre-approval of the course providing the Chemistry Graduate Program Director with a course description, normally a catalog description or a syllabus. If the Department is willing to accept the course for transfer, the Chemistry Graduate program Director will send the student a written confirmation of this fact. When the course is completed, the student is to follow the procedures outlined above for the actual transfer of credit. Along with the completed transfer form, the student should refer to the pre-approval given by the department.

Courses from other Villanova Departments

Sometimes courses may be available in other graduate programs at Villanova which might be acceptable substitutes for Chemistry graduate course electives. Permission can be given to take these courses in special cases; however the student must obtain permission from the Chemistry Graduate Program Director *before* signing up for such courses. The student must request permission and include a description of the course in the request. In general, two such courses from outside the Chemistry department will be permitted. The courses should be roughly equivalent to Chemistry courses or be relevant for the student's area of study since the Master's Degree is a Chemistry degree. For example, a student specializing in biochemistry might find relevant classes from the Biology department.

Teaching Assistants

Teaching assistants are governed by a Graduate School policy which may be found at the Arts & Science Graduate School web site. The Graduate School states that approximately fifteen hours per week of teaching related activities are expected. It also states that, while holding a teaching assistantship, no other employment may be had by the assistant.

The chemistry department depends very strongly on the work provided by the teaching assistant. The proper running of laboratories calls for constant supervision by the teaching assistants. Teaching

assistants must contact the faculty member in charge of laboratories and obtain specific charges concerning duties.

A general description of the responsibilities of teaching assistants follows with the understanding that individual responsibilities may vary somewhat.

Laboratory instruction – Students are assigned to act as teaching assistants in undergraduate (or occasionally graduate) Chemistry laboratory classes. Typically, students are assigned to TA three lab sections (or the equivalent) per semester. To complete their duties (details depending on the class and professor for whom the student is TAing), the students must:

- Review the assigned experiments before each laboratory period and be prepared to answer student questions on experimental procedures, notebook preparation, waste elimination, and safety.
- Show up before the beginning of the laboratory period to set up anything required for that day's experiment.
- Take attendance.
- Proctor laboratory quizzes.
- Monitor the students as they complete their experiments, taking special note to the proper use of equipment and supplies, the use of appropriate personal protective equipment, and their adherence to safe laboratory practices.
- Ensure that students are working independently without unauthorized collaboration or "sharing" of laboratory data.

Grading – Graduate students are responsible for grading laboratory assignments in most lab classes; these can range from worksheets to full lab reports. Generally faculty will provide students with rubrics for grading. Occasionally a student is assigned to be a grader for a non-laboratory course, in conjunction with proctoring (see below).

Laboratory preparation – In addition to getting everything ready for the day's experiment (part of the routine duties of a TA), some students will be assigned "prep TA" duties in lieu of a lab section. The prep TA is responsible (typically working alongside a Chemistry staff or faculty member) for preparing all of the reagents for a multi-section lab class.

Summer

Full-time students remain on campus during the summer between the first and second years to conduct research. Students are highly encouraged to apply for summer funding from the graduate school. Those who apply but do not receive funding are given first priority for summer TA assignments, which bring additional salary beyond the 9-month stipend. The department strives to provide all full-time students with additional income during the summer, and has been successful in recent years.

Special Cases

Sometimes circumstances arise which affect the student's ability to meet the requirements for the Masters degree and some flexibility may be warranted. It is not possible to anticipate all special cases and make provision for them. Should the student believe that he or she needs some adjustment in the way they are fulfilling the requirements, the student should discuss the issue with his or her advisor. After discussion with his or her Research Advisor, the student should then petition, *in writing*, the Chemistry Graduate program Director or the Graduate Deans of Arts and Sciences, for the exception. Be sure to spell out (1) the requirement for which you are requesting adjustment, (2) the proposed method of making the adjustment, and (3) the reasons which led to the need for the adjustment, and (3) the reasons which led to the need for the adjustment. After the request has been considered, the student will be notified, in writing, from the Chemistry Graduate Program Director or the Graduate Dean of Arts and Sciences about the outcome of the petition. The student should keep a copy of this written notification for future reference.

BS/MS Program

The combined BS/MS degree program is intended for Villanova Undergraduate Chemistry and Biochemistry majors. Students apply for this program early during the Spring semester of their junior year. This program has features which are unique from the Masters programs described above. Students in this program should be aware of these differences (see below).

Students will apply for the program in the second semester of their Junior year. **The application deadline is typically March 20th.** Applicants will be notified on the outcome of their application toward the end of April. The application form and additional information are available on the Department website. All applicable materials, including letters of recommendation, must be received by the deadline for application. Eligible students must meet the following minimum requirements:

Completed Physical Chemistry lecture and lab (CHM3411/3403; Chem Majors) or Biochemistry I and lab (CHM4621/4603; Biochem majors)

Have an overall GPA of 3.0 or greater

Have a GPA in math and science courses of 3.0 or greater (technical GPA)

The Graduate Record Examinations (GREs) are not required. Interested students who meet the above requirements must submit an application, a personal statement (two pages maximum) and three letters of recommendation. The personal statement should include an explanation of career objectives and their reasons for seeking admission into the BS/MS program. Acceptance into the program is not automatic, and selection of students will be made by a committee comprised of Chemistry graduate faculty. No more than five students will be accepted into the BS/MS program in a given year. It is required that students applying for the BS/MS program discuss it with their potential research advisor first (see below), and strongly recommended that they begin working in that lab no later than fall of Junior year.

Curriculum:

Students will take the normal undergraduate chemistry Curriculum in their first three years of study. In their fourth year, students will normally take three CHM graduate courses. The three graduate courses will be applied to both the B.S. and M.S. degrees. A 3.0 average must be maintained in the program, including for graduate courses taken in the fourth year. The student will be awarded the B.S. degree after completing the fourth year of study.

At the end of the fourth year, the student is formally accepted into the Chemistry Graduate Program. During the summer between the fourth and fifth year, the student must return to campus to take additional courses (including at a minimum the CHM7807 research course) and complete a progress seminar. In the fifth year, students will take four additional courses (including research and thesis courses), and complete a research project under the supervision of a faculty mentor. The total number of classes required (10) is unchanged from the standard full-time master's program.

Thesis Requirement:

At the time of application, the student must have already identified a Research Director who must write one of the letters of recommendation indicating their willingness to take the student. Together, the student and research Director will choose a topic and research will begin no later than Fall of the fourth

year of study. When a student has completed the research, as determined by the Research Director, the student will write his/her thesis and then present a seminar to the entire Chemistry Department.

Funding:

Students admitted to the BS/MS program are not formally admitted to the graduate program until the completion of the fourth year. Courses taken during the fourth year are assigned the undergraduate tuition rate. The Chemistry Department currently hires undergraduate students as teaching assistants in the general chemistry laboratories. Students accepted into the BS/MS program will be given priority for these positions in both semesters of their fourth year of study.

During the Spring semester of the fourth year, students may apply for a Graduate Assistantship for the fifth year. The assistantship will include a tuition waiver for the fourth summer and the fifth year. To be eligible for the Graduate Assistantship, the student must maintain a "B" average (3.0) in the graduate courses taken during the fourth year, and meet all other admission requirements.