FLORIDA A&M UNIVERSITY

COLLEGE OF SCIENCE & TECHNOLOGY

DEPARTMENT OF CHEMISTRY

Graduate Student Handbook

2012

DEPARTMENT OF CHEMISTRY
Graduate Program Handbook
2012

Master of Science Degree Program

The Department of Chemistry offers two options leading to the Master of Science degree in chemistry, a thesis option and a non-thesis option. The thesis option is designed to provide students with advanced course work and experience in chemical research. This option is desirable for students who plan to engage in chemical research or continue graduate studies toward the Ph.D. Degree in Chemistry. The non-thesis course type option is designed to provide students with a strong technical education, but with less emphasis on research. It is primarily designed for persons who wish to combine advanced work in chemistry with another profession, such as business or patent law, for persons already engaged in an industrial or governmental occupation requiring advanced work in chemistry or for persons engaged (or who will be engaged) in high school or junior college teaching of chemistry. All candidates for the Master of Science degree in chemistry must satisfy all additional requirements for the master's degree of the Department of Chemistry.

Admissions

Admission to Chemistry Program

Regular admission to the Master's degree program requires the applicants to have a 3.00 GPA over the last 60 semester hours (or 90 quarter hours) of undergraduate study, or earn a combined score of 300 on the verbal and quantitative sections of the Graduate Record Examination (GRE).

Admission of Special Students

A student who does not have the required 3.00 GPA or GRE scores may be admitted to graduate degree study as a special student, pending achievement of a satisfactory GRE score. Such special students shall be limited to 12 semester hours of coursework until they are fully admitted without qualification. Course credits exceeding the 12-hour limit by the student in the "special" admission category will not be accepted for degree credit. Special students are not eligible for financial assistance.

The 'Special student' should keep the Chairman of the departmental Graduate Committee informed of his/her progress in meeting the requirement.

Graduate Committee

The Graduate Committee will be composed of the Chairman of the department and one faculty member from each area of chemistry, namely, Analytical, Inorganic, Organic, Physical and Biochemistry. One member of the Committee, other than the Chairman of the department, will chair the Graduate Committee and serve as the Graduate Program Coordinator. The Committee will have, but not limited to, the following responsibilities:

1. Assign new students to faculty who would serve as their Advisors until the student chooses a Major Professor.
2. Review, at the beginning of each semester, the standing of each graduate student with regard to GPA and academic progress.
3. Place on probation the students who fail to meet the minimum cumulative GPA of 3.00 (See Grading Policy).

In short, the Graduate Committee will be responsible for insuring that all graduate students meet the minimum standards set forth in the University Catalog.

Advisement

The Graduate Committee will designate a faculty member as the Graduate Advisor for each new student. The faculty member will remain as the student's Advisor until the student chooses a research topic and a Major Professor (Thesis Director) for the research project. The Major Professor will then become the Advisor for that student.

At the beginning of each semester the graduate students are required to inform their Advisor/Major Professor the grades obtained in the courses they took the previous semester. The Advisor/Major Professor would then assess if the advisee is making satisfactory progress and report promptly to the Graduate Program Coordinator if any advisee fails to meet the minimum standards. The Graduate Committee will be responsible for taking appropriate action.

Courses Offered by the Chemistry Department

Core Courses

BCH 5041	Protein Biochemistry	3 credits
CHM 5155	Chemical Separation Methods	3
CHM 5225	Advanced Organic Chemistry	3
CHM 5460	Chemical and Statistical Thermodynamics	3
CHM 5610	Inorganic Chemistry Principles	3
CHM 6935	Chemistry Seminar	1

Elective Courses

BCH 5045	Nucleic acids	3 credits
BCH 5043	Enzymology	3
CHM 5150	Advanced Analytical Chemistry	3
CHM 5151	Spectrochemical Analysis Methods	3
CHM 5380	Topics in Organic Synthesis	3
CHM 5490	Chemical Spectroscopy	
CHM 5931	Special Topics	
CHM 5971	Graduate Thesis	

Note: Credits for Special Topics (CHM 5931) will not be counted towards the 31 credits required for the graduate degree.

Requirements for the Master of Science (M.S.) Degree

1. Complete at least thirty one (31) semester hours of graduate course work including sixteen (16) hours of core courses.

2. A. Students following the Thesis tract must complete, in addition to the core courses,
   a) Three (3) hours of elective courses.
   b) Twelve (12) hours of thesis research. Upon consultation with the Major Professor, six (6) of these hours may be substituted with elective courses.
   c) Successfully give an oral presentation and defend an acceptable thesis based on original laboratory research.

   B. Students following the Non-thesis option must complete, in addition to the core courses, nine (9) hours of electives and an approved project for three (3) semester hours. Up to six (6) hours of electives may be substituted with work experience if the candidate is employed in a chemical laboratory. At the end of the project the student should submit a bound written report to the Department.

   C. Students who wish to pursue a Teaching career must complete, in addition to the core courses, twenty-one (21) hours of education courses in the College of Education.

3. A cumulative GPA of at least 3.00 on a 4.00 scale.

4. All graduate students who are financially supported by the University are required to:
   a) Discuss with their Major Professors and agree upon a research schedule (40 hours/week) and abide by it. Mentors will sign a Time-sheet for their graduate students. The graduate students are to carry out their research and their course work concurrently.
   b) Produce a progress report of their research at the end of each semester. This report, signed by the Major Professor should be forwarded to the Chairman of the departmental Graduate Committee by the first week of the following semester. The Graduate Committee will meet to evaluate the student's progress report and to decide if the student should continue in the program.

5. Passing grade (70%) in a written Comprehensive examination.

Seminar

All graduate students should register for the seminar course in their second year of study and present a seminar on a topic different from their research topic. All graduate students, including those who have satisfied the minimum seminar requirements for the degree program, are expected to actively participate in Graduate seminar each semester except the semester in which their thesis is defended.

Comprehensive Examination

1. All graduate students must pass a written comprehensive exam in their major area of Chemistry (Analytical, Inorganic, Organic, Physical and Biochemistry) in which they are conducting research or a Non-thesis paper. It should be done before defending their thesis (Thesis track) or submitting their written report (Non-thesis track).

2. The examination, prepared by three faculty members in the student's area of chemistry, one of who will be a Graduate Committee member, will be administered by the Graduate Program Coordinator.

3. The exam will be conducted once during the Fall semester (second week of October) and once during Spring semester (second week of February). The Graduate Committee will determine the exact date, time and place of the exam. Once the exam is conducted in a semester it will not be conducted again that semester.

4. The exam will be graded independently by all three faculty members who prepared the exam. In order to pass the exam, the candidate should receive a minimum score of 70% from at least two evaluators, one of who must be the Major Professor.

5. A graduate student will have two chances to pass the comprehensive exam. If a student fails to pass the second time, the student will be dropped from the program.

Grading Policy

All students must maintain a cumulative GPA of 3.00 or a "B" average in graduate school. Only a grade of 'B' or higher is acceptable for core courses. A required / core course must be repeated if a grade lower than a 'B' is received. For all other courses (electives) the grade of "C" or better is acceptable. A graduate student who receives a C, D or F grade, which fails to meet the requirements of the program must retake the course. Only the higher grade shall be used in computing the overall GPA, but both grades will remain on the transcript. A graduate student may repeat no more than two courses in the graduate program, and may repeat each course only once. A grade forgiveness form must be submitted by the student to the Registrar's Office after the course is retaken and prior to graduation.

The grade of "I" is given only when the student has not completed all the assignments for the course but passing otherwise. As per the instructions of the Dean of the College of Science & Technology, a separate form indicating the deficiencies to be removed, has to be filled in and signed by the instructor and the student. If the "I" grade is not removed before the end of the next semester it would turn into an "F" grade.

If a student's cumulative GPA falls below 3.00 or if the student receives a grade of "U" in any phase of the thesis / research the student shall be placed on probation for one semester. If a student has already been receiving money, they will not be paid during the time they are placed on probation. If a student's cumulative GPA falls below 3.00 for two consecutive semesters, the student will be suspended from the graduate program. Notice of probation and suspension will be communicated in writing to the student by the Chairman of the department.

Additional information pertaining to satisfactory performance in courses, withdrawals, auditing from a course, appeals of grade assignment, probation, suspension and readmission are given in the University Catalog under School of Graduate Studies and Research.

Financial Assistance

Financial aid is available to full time students in the form of Assistantships, Fellowships, Matriculation fee waivers, out-of-state fee waivers and thesis incentive awards through the Office of the Dean of Graduate Studies and Research.

Financial assistance will only be granted for a maximum of two years to fully-admitted, full-time, degree-seeking graduate students who are in good academic standing. Full-time graduate students must enroll for nine (9) credit hours during Fall and Spring semesters and six (6) credit hours during summer semester. Most graduate students should be prepared to pay some of the graduate study costs utilizing their own funds. Financial assistance is not guaranteed and it will depend on the funding received by the Chemistry department.

Thesis

At the end of the first semester a student should select a research topic and a research advisor who would be called 'Major Professor' or 'Thesis Director'. Each student should discuss potential research projects with at least three members of the Chemistry faculty before selecting one of them as their research advisor. The student should give a written statement to the major Professor of their intent to join the Professor's lab group and the date of joining. The terms of employment (if applicable) and termination thereof should be discussed by the student and the Major Professor and put in writing. If, for any reason, the student decides to leave the Major Professor and join another group, they should do so before the end of the second semester in the department. Beyond the second semester the students lose the option to change their Major Professor.

Once a student has chosen his/her Major Professor the latter would select, in consultation with the student, a 'Thesis Committee'. The thesis committee will consist of a minimum of three faculty members, one of who will be from outside the department. The Major Professor will also serve as the Chairman of the Thesis Committee.

A 'Thesis / Dissertation Research Approval' form must be obtained from the Dean of Graduate Studies, completed and submitted back to the Dean of Graduate Studies.

The student should conduct a literature survey and write up a thesis proposal or 'Prospectus'. It may not exceed eight (8) pages. It should include a brief introduction, specific aims,

methodology, anticipated results and bibliography. The prospectus will be submitted to the Thesis Committee who will review and provide recommendations. The 'Prospectus' may also be presented orally. The student should start conducting experiments only after approval of the prospectus.

The Major Professor will arrange for the Thesis Committee to meet, at least once every semester, to review the progress of the student's work and to suggest changes, if necessary. The graduate student should produce a progress report of his/her research at the end of each semester. This report, signed by the Major Professor should be forwarded to the Chairman of the Departmental Graduate Committee by the first week of the following semester. The Graduate Committee will meet to evaluate the student's progress report and to decide if the student should continue in the program.

After completion of the experiments the student will write up the thesis in the standard documentary style making revisions suggested by the Major Professor. Guidelines for writing Thesis have been posted by the Dean of Graduate Studies at their Internet site. Copies of the thesis will be submitted to the Thesis Committee members for necessary changes, corrections and approval. Students must register for at least one thesis hour each semester while writing the manuscript, and also must be registered in the semester they graduate.

The Major Professor will provide an abstract of the thesis to the Chairman of the department and schedule a date for the oral defense. A 'Thesis Defense Announcement' form, filled out and signed by the Major Professor and the Chairman of the department should be submitted to the School of Graduate studies and Research.

A minimum of two weeks should elapse between the submission of the thesis to the Thesis Committee and the oral defense of the thesis by the candidate. Also, notice of the thesis defense should be displayed in the building. The last day a graduate student may defend his/her thesis is thirty days before the end of the semester.

The oral defense will consist of a public lecture followed by questions from the general audience. The candidate will then undergo an oral examination, in private, by the 'Thesis Examination Committee'. The latter will consist of the members of the Thesis Advisory Committee, a graduate faculty designated by the Dean of Graduate Studies and the Major Professor who will serve as the Chairman of the Thesis Examination Committee. Any correction to the thesis would be given to the candidate at this time. The Major Professor would make sure that the corrections are carried out.

A two-thirds majority of the Thesis Examination Committee must vote affirmatively for a graduate student to have defended successfully his/her work. The Thesis Examining Committee Chairman shall certify in writing to the Dean, College of Science & Technology, whether the candidate passed or failed his/her defense. If the student fails, one re-examination is allowed.

Following the defense, the student should make all corrections and get the approval signature from all the members of the Thesis Examination Committee except the Graduate Dean's designee. The thesis should be copied on the required paper and bound in officially approved olive green color with a hard back. The candidate should submit at least four bound copies of the thesis within thirty- days (30) of a successful defense. The copies will be distributed as follows: one each to the University Library, Office of the Dean of Graduate Studies & Research, the Chemistry Department and the Thesis Director (Major Professor).

Schedule for Completing Tasks and Submitting Forms & Thesis

The following should be completed and filed according to the schedule before a student is awarded the Graduate degree:

Form / Notice	To	Due date
Student's request to join a Lab group	Faculty member	End of First semester
Decision to follow Thesis / Non-thesis track	Major Professor & Graduate Program Coordinator	End of Second semester
Prospectus (Thesis track)	Thesis Committee	Before starting research
Thesis Research Approval Form	Graduate Studies	First two weeks of the semester student begins the writing process
Comprehensive Exam	Graduate Coordinator	Before defending thesis
Application for graduation	Department	Beginning of the semester in which thesis or report will be defended
Defense Announcement Form	Graduate Studies	Two weeks before date of defense of thesis
Defense of Thesis	Thesis Examination Committee	At least thirty days before the end of semester
Notification of Defense Outcome	Graduate Studies	Within one week after the defense
Final Bound copy of thesis	Graduate Studies	Within 30 days after the defense

Graduation Policy

An application for graduation must be signed and submitted to the Department of Chemistry Office at the beginning of the semester in which the student expects to defend his/her thesis. Students must be registered at Florida A & M University in the semester in which they are awarded M.S. Degree.

Time Limitation

All work applicable to Master's degree requirements must be completed within five years from the time a student is admitted into the program.