

**STATE UNIVERSITY OF NEW YORK AT OSWEGO  
DEPARTMENT OF CHEMISTRY**

***MASTER OF SCIENCE PROGRAM***

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**GETTING AN M.S. IN CHEMISTRY IN TWO YEARS**

**1. QUALIFYING EXAMINATIONS**

- a) The graduate coordinator will use your qualifying exam results in recommending the appropriate courses to take to remove any deficiencies. You should take all the qualifiers in the first year, get familiar with the exams and make course choices according to your weakness.
- b) To prepare for qualifying examinations, review the corresponding undergraduate material.  
For Analytical, review Instrumental Analysis and Analytical Chemistry courses.  
For Biochemistry, review the two semester Biochemistry course book.  
For Inorganic, review the senior course and General Chemistry.  
For Organic, review the year-long course.  
For Physical Chemistry, review Thermodynamics, Kinetics, Quantum Chemistry and Spectroscopy.
- c) Qualifying exams are graded as pass/fail.
- d) Qualifiers are given three times a year and two exams per day over a three day period. They are given three days before the fall semester starts, three days before spring semester starts, and right after the spring semester is over. *Therefore you should plan to be here 3 days before the classes start. If you need housing arrangements, please call the department office for help.*
- e) You need to pass four qualifying exams from four different disciplines in order to apply for candidacy (see section 5. Candidacy)

**2. PROGRAM REQUIREMENTS**

- a) **General:** 30 semester hours for thesis and non-thesis, 34 semester hours for professional track, distributed between course work, a seminar presentation and research or internship, are required to complete the M.S. program (for thesis, non-thesis, or professional options)

**b) Courses:**

- 1) *The core program* requirement is 9 semester hours of courses (three courses) which must be in three different areas of chemistry (analytical, biochemistry, inorganic, organic or physical).
- 2) *Elective courses*: Between 9 -17 semester hours (selected under advisement and may be taken in departments other than Chemistry)
- 3) *Seminar (CHE 596, 1sh)*: All graduate students must register for CE596 in their third semester and present a seminar on a topic outside the student's primary field of study. The purpose of this requirement is to provide you an opportunity to critically examine a current literature subject, to summarize information and to deliver a visually attractive and well-organized oral presentation. A review or survey is not appropriate. *The topic of your seminar must be submitted to the seminar coordinator by the fifth day of classes of the third semester.* Scheduling will be accomplished by the seminar coordinator and you will be notified during the second week of classes. Therefore, you need to start thinking about a seminar topic in your second semester.

**3. REQUIREMENTS FOR THE THESIS AND NON-THESIS OPTIONS**

If you would like to do a thesis option, you need to talk to your research advisor about it very early. It requires more research and more data acquisition. Your research advisor can decide (with consulting to other faculty members) whether the project that you are (or will) working on is a thesis worthy project. In the thesis option, you can take CHE598 (research credits) up to 11 semester hours. A minimum of 6 semester hours is required. You have to write a thesis and submit to the department and defend you thesis in front of the faculty. In the non-thesis option you are required to take 3 semester hours of either CHE597 or CHE599. You have to write a paper which has to be approved only by your advisor.

**4. RESEARCH**

- a) All new graduate students will attend the "Chemistry Faculty Seminar" during the first semester to become acquainted with the research projects in the various laboratories. You must then meet the faculty members whose research appeals most to you to obtain more detailed information. You must select a research director as soon as possible, but not later than the end of the second semester. You are expected to attend weekly capstone presentations to make yourself familiar with the projects currently the faculty is working with undergraduate students.
- b) It is strongly recommended that you initiate research during your second semester in Oswego or **at the latest** during the summer at the end of your first year. This is to insure that you have the time required for all processes involved in a complete research experience. You need time to acquaint yourself with the literature in the area of your research, to learn specific laboratory techniques, to perform experiments and collect good quality data and to mull over the results and propose the best interpretations. This is a process that takes more than one semester of work and

certainly should not be equated to a collection of teaching-type/ cookbook-type experiments.

## **5. REQUIREMENTS FOR PROFESSIONAL OPTION**

a) Professional track students have to take 3 MBA courses in addition to their chemistry courses. MBA517 “Organization and Management: A Global Perspective” is a required course for the track. Students have to take two of the following elective MBA courses under advisements: MBA501, MBA502, MBA503, MBA505, MBA506, MBA515, and MBA516.

b) Professional track student has to complete an internship instead of research. Internships are required to be minimum 8 weeks 40 hours per week long. Students are responsible for finding an internship placement with the help of the Office of Experience Based Education. Students are required to write a report and to give a presentation after the internship. Student has to have a faculty mentor for their internship program. Once they find an internship, they have to talk to the graduate coordinator to choose an appropriate internship faculty mentor who will evaluate their internship. Student has to register 3 credits of GST691 for their internship and at least 1 credit of it has to be registered during their internship period (including summer), so they can be protected under school’s insurance.

## **6. CANDIDACY**

When you completed at least 12 semester hours of work in Oswego AND passed four qualifiers, you should apply for candidacy using the forms obtained from the Graduate Studies Office or from the Graduate Program Coordinator.

## **7. THESIS/ REPORTS**

Writing your thesis (M.S. thesis option) or your reports (M.S. independent study and research problem options) takes time and your supervisor may suggest significant revisions. You will, most probably, generate three versions of your thesis or report before your supervisor is satisfied with the quality of your work. This can not be accomplished in a week or two. Start your writing during beginning of your fourth semester!

## **8. ORAL DEFENSE**

For those who pursue the Thesis option, when your advisor believes your thesis is acceptable, he/she will schedule your final oral examination. We require a minimum of five copies of your thesis. These copies must be available for the faculty to read at least one week before the oral defense. You need to follow the college and departmental guidelines in the preparation of your thesis.