

## UNIVERSITY OF MARYLAND Chemistry Graduate Program

### DESCRIPTION OF M.S. DEGREE REQUIREMENTS

This document describes the admission, course, and degree requirements for the M.S. degrees in Chemistry. The Chemistry graduate program emphasizes the Ph.D. degree and M.S. students are accepted only in rare cases. Financial assistance is not generally available to M.S. students. An M.S. degree is not required for admission to the Ph.D. program in Chemistry.

#### A. ADMISSION REQUIREMENTS

Admission to graduate study at the University of Maryland normally requires a minimum of a Bachelor of Science (B.S.), Bachelor of Arts (B.A.), or equivalent degree with a minimum of 30 semester or 40 quarter hours of chemistry, an overall grade point average greater than 3.0 (on a scale where the average grade is 2.0), and 3 letters of reference indicating a potential for independent, creative scientific research. The study program in Chemistry should have included at least 1 year of physical chemistry, 1 year of organic chemistry and 1 semester of inorganic chemistry, as well as laboratory courses in organic chemistry, physical chemistry and analytical chemistry. **These requirements represent minimum standards and the competition for available space may limit admissions to persons with credentials above these levels.**

The general Graduate Record Examination Scores (GRE - Verbal, Quantitative, Analytical) are required of all applicants; the Advanced Subject examination (Chemistry, Biochemistry, Physics, or Biology) is recommended but not required. Applicants from non- English speaking countries must also present the results of the Test of English as a Foreign Language (TOEFL) and the Test of Spoken English (TSE).

#### B. FIRST YEAR ADVISING

Initial advising of graduate students takes place during orientation immediately prior to the first semester at the University. Each incoming graduate student meets with an advising committee composed of faculty with expertise spanning the subdisciplines of Chemistry. The committee assists the student in their initial course selection so as to advance their knowledge and best prepare a student for their subsequent area of research specialization.

#### C. TEACHING REQUIREMENTS

The opportunity to serve as a Teaching Assistant is generally not offered to students in pursuit of a terminal M.S. degree. Special exceptions can be made at the request of M.S. students pursuing a thesis-option degree. International students will be required to pass an English assessment examination prior to appointment as a Teaching Assistant.

#### D. REQUIREMENTS FOR THE M.S. DEGREE - THESIS OPTION

- 30 credits of graduate coursework including 24 credits by the end of the fourth semester. A 3.0GPA or better is required. This program must include 12 credits

of coursework at the 600 level or higher, and at least 12 course credits must be represented by the Chemistry Core courses listed in the Description of Ph.D. Program and Degree Requirements. Two credits may be in Seminar (CHEM 889).

- Out of the total 30, 6 credits must be in research (CHEM799).
- Completion of a thesis based on the student's research.
- A final oral examination by the student's advisory committee

## **E. REQUIREMENTS FOR THE NON-THESIS M.S. DEGREE**

- 30 credits of graduate coursework. A 3.0 GPA or better is required. This program must include at least 20 credits of coursework at the 600 level or higher with at least 14 of the 600+ level credits in Chemistry or Biochemistry.
- Overall, a minimum of 18 of the total 30 credit hours must be in Chemistry or Biochemistry, of which 12 credits must be represented by the Chemistry Core courses listed in the Description of Ph.D. Program and Degree Requirements. The core courses must be completed by the end of the 4<sup>th</sup> semester in graduate school with a minimum grade of B in each course.
- Out of the total 30, 6 credit hours must be in CHEM 699 and two credits may be Seminar (CHEM 889).
- A scholarly paper must be submitted and approved by three faculty members. This paper must be at least 20 double-spaced pages in length and must be original work by the degree candidate. It may not have been prepared for any previous assignment, such as to satisfy the requirements for any course that the candidate has taken.

## **F. OFF-CAMPUS RESEARCH**

Because of the proximity of the University of Maryland to many national laboratories, students may have the opportunity to perform part of their research at one of these labs. A description of the proposed research and administrative arrangements must be prepared and submitted to the Graduate Program Director for prior approval.