

# CHEMISTRY, MS

The Department of Chemistry and Biochemistry offers a graduate program of studies with a choice of areas of specialization in analytical, organic, inorganic and physical chemistry or in biochemistry. The student is expected to develop breadth of study beyond the boundaries of traditional areas and disciplines. The student is afforded the opportunity of interdisciplinary study in the Surface Studies Laboratory and in the Center for Great Lakes Studies.

## Admission Requirements

### Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines/>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines/>).

### Admission

An applicant must meet Graduate School requirements (<http://uwm.edu/graduateschool/admission/>) plus these departmental requirements to be considered for admission to the program.

1. Undergraduate preparation in chemistry and related areas equivalent to a chemistry major that includes at least two courses each of physical and organic chemistry with associated laboratories, and one course each in analytical and inorganic chemistry.
2. Reason Statement.

Applicants may be admitted with specific program-defined course deficiencies provided that the deficiencies amount to no more than two courses. The student is expected to satisfy deficiency requirements within three enrolled semesters. The deficiencies are monitored by the Graduate School and the individual graduate program unit. No course credits earned in making up deficiencies may be counted as program credits required for the degree. See Special Non-Thesis Option below for additional requirements for admission to that option.

### Standard Thesis Option

#### Major Professor as Advisor

The student must have a major professor to advise and supervise the student's studies as specified in Graduate School regulations. The entering student is assigned a temporary advisor; a permanent advisor must be selected by the end of the first semester of study. The major professor serves as the student's research mentor.

\* This requirement may be modified for part-time students who may be employed during normal hours of the seminar and colloquium.

Graduate School regulations require that a majority of all courses taken be at the 700-999 level.

Prior to initial registration, the student takes advisory examinations to assess that individual's preparation in analytical, organic, inorganic, physical, and biochemistry.

In consultation with the major professor, the student plans a program based on the results of these examinations. The student also must participate in at least one term of part-time teaching as a teaching assistant.

### Thesis

The student writes a thesis, essentially a formal report of that student's research. Since the MS is largely a research degree, the quality of research reported in the thesis is an important measure of the student's success in the program.

### Comprehensive Examination

The student must pass a final oral examination in defense of the thesis. At the discretion of the examining committee, this examination may include topics in addition to the thesis.

### Special Non-Thesis Option For Students With Professional Experience In Chemistry

#### Additional Admission Requirements

In addition to the general requirements noted above for the master's degree program, applicants must have a minimum of five years of professional chemistry experience beyond the BA or BS degree, including a sizable amount of research or development laboratory work. Since the Department of Chemistry and Biochemistry believes that the problem-solving experience of research is an indispensable part of graduate study, applicants will be interviewed by a faculty committee to assess the prior research experience as appropriate background for the program.

#### Major Professor as Advisor

The student must have a major professor to advise and supervise the student's studies as specified in Graduate School regulations. For this option, the major professor is chosen (by the Graduate Subcommittee) before admission to the program, and serves as a member of the committee which assesses the prior research experience of the student. The major professor should be from the area of chemistry in which the student intends to concentrate the major portion of course efforts.

## Credits and Courses

Minimum degree requirement is 30 graduate credits. Normally these include at least five 600-899 level courses, chosen by the student in consultation with the advisor. A minimum grade point average of 3.00 must be earned in formal coursework, not including research courses (CHEM 990-CHEM 996) or seminars (CHEM 912, CHEM 931-CHEM 935). Students must complete a minimum of 6 credits in research. The remaining credits are taken in research and seminars.

Code	Title	Credits
<b>Minimum Requirements</b>		
At least five 600- to 899-level courses		22
CHEM 912 Graduate Seminar (audit each semester and graded once)		8
<b>Total Credits</b>		<b>30</b>

## Additional Requirements

### Papers and Comprehensive Examinations

The student prepares two survey papers exploring subjects in more depth than the coverage in coursework. Of these, one is in a major area and one is in a minor area. These must be approved by the student's examining committee, which consists of three faculty members representing the areas of the papers. One paper must be approved at least six months before the comprehensive examination. An oral comprehensive examination covers both the areas of the papers and other areas at the discretion of the committee.

### **Time Limit**

The student must complete all degree requirements within five years of initial enrollment.