

## M.S. in Chemistry Description

The M.S. degree in chemistry is designed for students who intend to seek employment as a professional chemist or who plan to pursue the D.A. degree in chemistry at UM. This program requires the submission of a thesis based on original laboratory or theoretical research. The M.S. degree is not a prerequisite for the Ph.D. degree.

### Minimum Total Credit Hours: 30 Course Requirements

For the M.S. degree, a minimum of 30 hours of graduate credit are required, which must include 18 hours of formal nonremedial lecture courses, 1 hour each of Chem 659 and 750, 3 hours of Chem 700, and 6 hours of thesis (Chem 697). Credit for previous graduate-level course work may be applied towards these requirements at the discretion of the student's advisory committee and with approval by the department chairman.

All M.S. and Ph.D. students must take one CORE COURSE from each of four of the five specialty areas. Core courses for each area are:

- Analytical Chemistry (Chem 512, 514, 519)
- Biochemistry (Chem 534, 771)
- Inorganic Chemistry (Chem 544, 701, 702)
- Organic Chemistry (Chem 527, 528)
- Physical Chemistry (Chem 531, 532, 536)

A cumulative average of not less than B is required in the core courses.

A minimum grade of B is also required in each course in the student's area of specialization. These course and credit requirements are minimum requirements and may not be satisfied with remedial courses. Specific requirements for individual students in excess of the minimum may be imposed by the student's adviser and advisory committee.

### Other Academic Requirements

#### Thesis

A thesis, which must be a formal written account of the student's research results, is required of all M.S. degree candidates. The thesis is defended by the student in a final oral examination, which typically follows the student's final seminar. The student's advisory committee conducts the examination, which is not restricted to the content of the thesis.

#### Final Oral Examination

Satisfactory performance on an oral examination, as judged by the student's advisory committee, completes the competency requirements for the degree. This examination includes, but is not limited to, a defense of the student's thesis.

#### Seminar Presentations

Each student must make an initial oral presentation, which may be either a research seminar or a literature seminar to the assembled faculty and students of the department. The seminar will be evaluated by the faculty in attendance. Each student must also present a final seminar based on the contents of his or her dissertation or thesis to the same audience.

