

Chemistry, MS

Learning Outcomes

Students will:

- demonstrate an understanding of fundamental and advanced chemical principles, beyond those typical of undergraduate academic training;
- understand and utilize modern experimental and/or computational techniques for chemical analysis;
- execute and interpret experiments using advanced techniques and instrumentation;
- maintain rigorous safety and ethical standards in handling chemicals and conducting research;
- effectively communicate scientific findings in written reports and presentations; and
- develop the ability to transition into educational, research, and other professional roles requiring advanced chemical experience.

Requirements

The Master of Science in chemistry requires a minimum of 30 s.h. of graduate credit. Students must maintain a Graduate College grade-point average of at least 2.75. The MS may be a primary degree objective or completed *en passant*, i.e., as part of pursuing the PhD in chemistry. The degree is offered with or without thesis.

Graduate study in chemistry is highly individualized. Students develop a plan of study in conjunction with a faculty advisor, which takes into account their previous preparation and educational goals. Coursework may include review courses and advanced courses, pedagogy, seminar, research, and professional development.

University of Iowa courses offered outside the Department of Chemistry and graduate transfer credit must be relevant to the student's plan of study, supported by the advisor, and approved by the department to count toward degree requirements.

The MS in chemistry requires the following coursework.

Core Courses

Course #	Title	Hours
Both of these:		
CHEM:5091	Graduate Chemistry Orientation	2-3
CHEM:7270	Ethics in Chemical Sciences	1

Research in Chemistry

Students must complete at least 3 s.h. in CHEM:7999 Research in Chemistry. Students completing a thesis are permitted, but not required, to apply an additional 6 s.h. of CHEM:7999 toward the elective requirement, for a maximum total of 9 s.h. toward the degree. Students completing the degree without thesis are permitted, but not required, to apply an additional 1 s.h. of CHEM:7999 toward the elective course requirement, for a maximum total of 4 s.h. toward the degree.

Divisional Seminar

Students completing a thesis must present a research seminar by completing one of the following courses for 1 s.h. Students completing the degree without thesis are welcome to enroll in a seminar course but are not required to do so.

Course #	Title	Hours
One of these:		
CHEM:5190	Seminar: Analytical Chemistry	1
CHEM:5290	Seminar: Inorganic and Chemical Education Research	1
CHEM:5390	Seminar: Organic Chemistry	1
CHEM:5490	Seminar: Physical and Environmental Chemistry	1

Elective Courses

Elective courses must bring the total credit to a minimum of 30 s.h. for the degree.

Graduate Education

Graduate education prepares students with advanced knowledge and skills in specialized fields. At the University of Iowa, the Graduate College advocates for student-centered graduate education and supports equitable application of rules and policies across graduate programs.

Academics

University of Iowa graduate credentials are regulated by policies and requirements found in the Graduate College Manual of Rules and Regulations. This includes minimum grade-point average (GPA) requirements for academic standing and degree conferral. The Graduate College sets the minimum requirement. Individual graduate programs may establish higher GPA requirements.

Admissions

Graduate student applicants must meet admission requirements for both the Graduate College and the program to which they have applied. University of Iowa graduate admission requirements are published by the Graduate College and on the Graduate Admissions website.

Financial Support

Graduate students might be eligible for financial support. Several contingencies apply, including degree program and award type, satisfactory progress toward degree, satisfactory completion of all duties related to an appointment, and availability of funding. Graduate students should inquire directly with their program for more information about funding availability. The Graduate Student Employment Standards govern the employment relationship between the University of Iowa and all graduate teaching and research assistants in all matters except wages, which are covered by an existing collective bargaining agreement or the conditions of an applicable federal grant.

Admission

Applicants for graduate admission should have a bachelor's degree with a major in chemistry or a related field, preferably with a grade-point average of 3.00 or higher. For application

information, contact the Department of Chemistry or visit its website.

Applicants must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations on the Graduate College website.

Career Advancement

Students with a chemistry degree can pursue careers in a wide range of fields. Learn more about career options for chemistry majors on the American Chemical Society website.

The Pomerantz Career Center offers multiple resources to help students find internships and jobs.