Duluth Campus

Chemistry M.S.

Chemistry and Biochemistry

Swenson College of Science and Engineering

Link to a list of faculty for this program.

Contact Information:
Department of Chemistry and Biochemistry, 246 Chemistry Building, 1039 University Drive, Duluth MN 55812 (218-726-7212; fax: 218-726-7394)
Email: chem.@d.umn.edu
Website: http://www.d.umn.edu/chem/graduates/

- Program Type: Master's
- Requirements for this program are current for Fall 2017
- Length of program in credits: 31
- This program requires summer semesters for timely completion.
- Degree: Master of Science

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The master of science program offers a broad-based education in chemistry that is well suited for students going on to doctoral programs, careers in industry, or professional schools. Both Plan A (with thesis) and Plan B (without thesis) are available. For Plan A, emphases include analytical, biological, inorganic, organic, and physical chemistry. The faculty includes members from the departments of Chemistry and Biochemistry, Chemical Engineering, and Mechanical and Industrial Engineering in the Swenson College of Science and Engineering; the departments of Biochemistry and Molecular Biology, and Medical Microbiology and Immunology in the Medical School; as well as members from the Natural Resources Research Institute, and the College of Pharmacy.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

The preferred undergraduate GPA for admittance to the program is 3.00.

Applicants must have completed an undergraduate chemistry or biochemistry major. Coursework should include inorganic chemistry, physical chemistry, calculus, and physics.

General GRE is strongly encouraged, but not required.

International applicants must submit score(s) from one of the following tests:

- TOEFL
  - Internet Based - Total Score: 79
  - Internet Based - Writing Score: 21
  - Internet Based - Reading Score: 19
  - Paper Based - Total Score: 550
- IELTS
  - Total Score: 6.5
- MELAB
  - Final score: 80

Key to test abbreviations(TOEFL, IELTS, MELAB).

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

Plan A: Plan A requires 15 major credits, 6 credits outside the major, and 10 thesis credits.The final exam is oral.

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Plan B: Plan B requires 25 major credits and 6 credits outside the major.The final exam is oral. A capstone project is required.
Capstone Project: The Plan B requires writing three papers in the major and related fields.

This program may be completed with a minor.

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

A minimum GPA of 3.0 is required for students to remain in good standing.

All students must complete 31 credits. All students must complete at least 15 credits in the major field and at least 6 credits in a related field or minor. In addition, Plan A students must register for 10 thesis credits; Plan B students must complete an additional 10 course credits and write three papers. Attendance and presentation at the chemistry seminar are required. Individual programs are designed to best serve the interests of the student. 4xxx courses must be approved by the director of Graduate Studies.

Major Field (14 cr)

At least 14 credits in course credits have to taken for both Plan A or Plan B programs. Other courses may be approved by the director of Graduate Studies.

Take 14 or more credit(s) from the following:

- CHEM 5xxx
- CHEM 8xxx

Chemistry Seminar (1 cr)

CHEM 8184 - Seminar (1.0 cr)

Related Field (6 cr)

At least 6 credits be taken outside the major for both Plan A and Plan B programs. These credits outside the major must be taken from approved related fields.

Plan A or Plan B

Plan A

Students must take 10 thesis credits, and write and defend a thesis on original research as part of the final oral examination.

CHEM 8777 - Thesis Credits: Master's (1.0 - 18.0 cr)

or **Plan B**

Additional 10 course credits

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