

CHEMISTRY - M.S.

College of Arts and Sciences

Department of Chemistry and Biochemistry

www.kent.edu/chemistry

About This Program

The Master of Science degree in Chemistry provides opportunity in research in the areas of analytical, inorganic, organic and physical chemistry, as well as biochemistry. Many of the research topics are built around interdisciplinary themes in biomedical research (bioanalytical, bioinorganic and biophysical chemistry) and materials science (nanomaterials, liquid crystals, photonic materials, spectroscopy, surface science).

Contact Information

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- Connect with an Admissions Counselor: U.S. Student | International Student

Program Delivery

- **Delivery:**
 - In person
- **Location:**
 - Kent Campus

Examples of Possible Careers and Salaries*

Chemical technicians

- 2.8% slower than the average
- 68,100 number of jobs
- \$49,820 potential earnings

Chemistry teachers, postsecondary

- 4.3% about as fast as the average
- 26,400 number of jobs
- \$80,400 potential earnings

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- 4.3% about as fast as the average
- 26,400 number of jobs
- \$80,400 potential earnings

Food scientists and technologists

- 4.4% about as fast as the average
- 14,200 number of jobs
- \$73,450 potential earnings

Forensic science technicians

- 14.1% much faster than the average
- 17,200 number of jobs
- \$60,590 potential earnings

Secondary school teachers, except special and career/technical education

- 3.8% about as fast as the average
- 1,050,800 number of jobs
- \$62,870 potential earnings

Project management specialists and business operations specialists, all other

- 5.9% faster than the average
- 1,361,800 number of jobs
- \$77,420 potential earnings

Additional Careers

- Quality control
- Quality assurance
- Technology transfer
- Product development
- Formulation
- Research manager

* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics'

Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

For more information about graduate admissions, visit the graduate admission website. For more information on international admissions, visit the international admission website.

Admission Requirements

- Bachelor's degree from an accredited college or university
- Minimum 2.750 undergraduate GPA on a 4.000-point scale
- Official transcript(s)
- Goal statement
- Three letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions to waive) by earning one of the following:¹
 - Minimum 71 TOEFL iBT score
 - Minimum 6.0 IELTS score
 - Minimum 50 PTE score
 - Minimum 100 DET score

¹ International applicants who do not meet the above test scores will not be considered for admission.

Application Deadlines

- **Fall Semester**
 - Priority deadline: December 15

- **Spring Semester**
 - Priority deadline: September 15

Applications submitted by these deadlines will receive the strongest consideration for admission.

Program Requirements

Major Requirements

| Code | Title | Credit Hours |
|---|---|--------------|
| Major Requirements | | |
| CHEM 60894 | COLLEGE TEACHING OF CHEMISTRY | 1 |
| Chemistry Electives ¹ | | 19 |
| Chemistry Seminar Electives, choose from the following: | | 2 |
| CHEM 62191 | SEMINAR: ANALYTICAL CHEMISTRY | |
| CHEM 62291 | SEMINAR: BIOCHEMISTRY | |
| CHEM 62391 | SEMINAR: INORGANIC CHEMISTRY | |
| CHEM 62491 | SEMINAR: ORGANIC CHEMISTRY | |
| CHEM 62591 | SEMINAR: PHYSICAL CHEMISTRY | |
| Chemistry Seminars in Development/Problem Solving Electives, choose from the following: | | 2 |
| CHEM 60291 | SEMINAR: RECENT DEVELOPMENTS IN BIOCHEMISTRY | |
| CHEM 60391 | SEMINAR: RECENT DEVELOPMENTS IN INORGANIC CHEMISTRY | |
| CHEM 60591 | SEMINAR: RECENT DEVELOPMENTS IN PHYSICAL CHEMISTRY | |
| CHEM 61191 | SEMINAR: PROBLEM SOLVING IN ANALYTICAL CHEMISTRY | |
| CHEM 61491 | SEMINAR: PROBLEM SOLVING IN ORGANIC CHEMISTRY | |
| <i>Culminating Requirement</i> | | |
| CHEM 60199 | THESIS I ² | 6 |
| Minimum Total Credit Hours: | | 30 |

¹ Minimum 13 credit hours of graduate chemistry classroom courses are required; one of these courses must be outside the major area. At least half of the required credit hours must be taken at the 60000 level. The following courses may not be used to satisfy the requirements of the M.S. degree: CHEM 50166, CHEM 50266, CHEM 50366, CHEM 50466 and CHEM 50566.

² A thesis presenting and interpreting the results of original research is required. The Department of Chemistry and Biochemistry considers research to be a fundamental part of the M.S. degree. Areas in which research may be carried out are analytical chemistry, biochemistry, inorganic chemistry, organic chemistry and physical chemistry. The thesis must be successfully defended in an oral examination before the student's advisory committee.

Graduation Requirements

| Minimum Major GPA | Minimum Overall GPA |
|-------------------|---------------------|
| - | 3.000 |

- Minimum 18 credit hours must be for graduate credit other than research and thesis.
- No more than one-half of a graduate student's coursework may be taken in 50000-level courses.

- Grades below C are not counted toward completion of requirements for the degree.

Program Learning Outcomes

Graduates of this program will be able to:

1. Demonstrate an improved knowledge of a specialization within chemistry.
2. Plan and execute chemical experiments.