

CHEMISTRY - M.S.

College of Arts and Sciences

Department of Chemistry and Biochemistry

www.kent.edu/chemistry

Contact Information

- Program Coordinator: **Erin Michael-McLaughlin** | enmichae@kent.edu | 330-672-0032
- Chat with an Admissions Counselor

Fully Offered

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

Admission Terms

- Fall
- Spring
- Summer

Examples of Possible Careers*

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

*Note

Source of occupation titles and labor data is 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.

Description

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).

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) by earning one of the following:
 - Minimum 525 TOEFL PBT score (paper-based version)
 - Minimum 71 TOEFL IBT score (Internet-based version)
 - Minimum 74 MELAB score
 - Minimum 6.0 IELTS score
 - Minimum 50 PTE score
 - Minimum 100 Duolingo English Test score

For more information about graduate admissions, please visit the Graduate Studies admission website. For more information on

international admission, visit the Office of Global Education's admission website.

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.

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements ¹		
CHEM 60199	THESIS I ¹	6
CHEM 60894	COLLEGE TEACHING OF CHEMISTRY	1
Chemistry Electives ^{2,3,4}		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	
Minimum Total Credit Hours:		30

¹ 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.

² Minimum 13 credit hours of graduate chemistry classroom courses are required; one of these courses must be outside the major area.

³ At least half of the required credit hours must be taken at the 60000 level.

⁴ 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.

Graduation Requirements

- Minimum 18 credit hours must be for graduate credit other than research and thesis.