CHEMISTRY - M.S.

College of Sciences and Humanities
Department of Chemistry and Biochemistry
www.kent.edu/chemistry

About This Program

You will advance your expertise of chemistry through rigorous coursework and hands-on research across areas like organic, inorganic, analytical and physical chemistry. Working closely with faculty on interdisciplinary projects in fields like biomedical science and materials science, you will gain the skills to excel in research, industry or doctoral study. Read more...

Contact Information

- **Erin Michael-McLaughlin** | enmichae@kent.edu | 330-672-2032
- Connect with an Admissions Counselor

Program Delivery

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

Examples of Possible Careers and Salaries*

Chemical technicians

- 3.7% about as fast as the average
- 57,000 number of jobs
- $57,790 potential earnings

Chemistry teachers, postsecondary

- 2.2% slower than the average
- 25,400 number of jobs
- $86,220 potential earnings

Chemists

- 4.9% about as fast as the average
- 86,800 number of jobs
- $84,150 potential earnings

Food scientists and technologists

- 6.5% faster than the average
- 15,200 number of jobs
- $85,310 potential earnings

Forensic science technicians

- 12.8% much faster than the average
- 20,700 number of jobs
- $67,440 potential earnings

Secondary school teachers, except special and career/technical education

- -1.6% decline
- 1,094,500 number of jobs
- $64,580 potential earnings

* 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

All application materials (including applicable fee, transcripts, recommendation letters, etc.) 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	
Culminating Requirement		
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. Students must continually register for CHEM 60199 for maximum 6 credit hours toward the degree. Students may need to register for CHEM 60299 to complete the thesis requirement; however, those credit hours do not, whatsoever, count toward the degree.

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.

Full 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).