



The **Master of Science** in

# Chemistry

**The study of chemistry is the study of life itself.**

Chemists and those who study advanced chemistry have left an indelible mark on human history. That's because chemistry has always been essential for meeting the needs of life: food, shelter, health, energy, clean air and water, and more. Today, chemists continue to enrich our quality of life by providing new solutions to what we eat, what we wear, the technologies we use, how we treat illnesses, protect the environment... and the list goes on and on.

## **Master of Science in Chemistry**

The Master of Science in Chemistry at the University of Missouri–St. Louis includes advanced coursework in the areas of organic chemistry, analytical chemistry, biochemistry, physical chemistry and inorganic chemistry. The specific program of courses is flexible and may be designed to suit students' interests.

The Department of Chemistry and Biochemistry at UMSL boasts a strong research emphasis and a dedication to teaching, and also allows for substantial interaction between faculty and students. The department is equipped with modern instrumentation and computing resources, including outstanding NMR, microscopy, X-ray and mass spectrometry facilities, with two 300 MHz and one 600 MHz NMR spectrometers, two single-crystal and one powder X-ray diffractometers, a Bruker Maxis Plus HPLC-MS-MS and GC-MS facilities. Research specializations include the traditional areas of chemistry mentioned above, as well as medicinal chemistry and drug discovery, organometallic, supramolecular, surface chemistry, computational chemistry, magnetochemistry, laser spectroscopy and the study of new materials.

Upon completion of the degree program, graduates will be able to understand current chemical research and to apply this understanding to new problems in applied research, basic research and product development. What's more, the job outlook for those with an MS in chemistry is excellent as graduates are highly sought after for jobs in the chemical and life sciences industries, can expect higher salaries and have better potential for advancement to higher level positions. They are also well prepared to advance to pursue a PhD in chemistry.

## Transforming Lives

The Master of Science in Chemistry at UMSL is earned through our College of Arts and Sciences, the academic core of the University of Missouri–St. Louis. Through academic programs offered on- and off-campus, traditional and nontraditional students gain knowledge, skills and intellectual leadership for a variety of career paths, advanced study and research in many academic disciplines.

Our graduates are known for their professionalism on the job and their strong sense of civic responsibility. Students in our programs engage in creative and critical thinking, learn to analyze evidence, to appreciate patterns of complexity and to reflect on important issues that impact our daily lives. Students gain skill sets to prepare for a changing workplace that requires flexible, dynamic and well-educated employees.

Chemistry students have the opportunity to engage in hands-on research projects under the guidance of faculty with full access to all university facilities. The Chemistry Department maintains four chemical instrumentation centers (X-Ray Diffractions, NMR, Mass Spectrometry and Microscopy) that provide training for students and services for academic institutions and companies across the state. Additionally, chemistry students benefit from the Science Learning Building, a \$32 million addition to the UMSL science complex that provides state-of-the-art, dedicated teaching lab spaces for students.

### Serious education. Serious value.

The MS in Chemistry is designed to provide specialized knowledge, skills and training in a flexible format, with classes available in-person, online and in a hybrid format. You'll learn from highly qualified educators and researchers who hold terminal degrees from some of the world's most prestigious academic institutions.

The University of Missouri–St. Louis provides the knowledge, resources, tools, skills and support students need to be successful in our programs. Our comprehensive student support services include workshops, tutoring and career services to help you develop skills and strategies to be successful in the classroom and beyond. We're also committed to increasing access to higher education, and as such, UMSL is consistently ranked number one in affordability in the St. Louis region.

### Learn more at [chemistry.umsl.edu](http://chemistry.umsl.edu)

The University of Missouri–St. Louis is the largest public research university located in Missouri's most populous and economically important region. UMSL provides high-quality, affordable education to one of the most diverse student bodies in the state. No university is better connected to the surrounding region than UMSL. More than 75% of our graduates stay in St. Louis. The region needs a well-equipped workforce with strong communication skills, and UMSL is prepared to help you meet those needs. Choose the University of Missouri–St. Louis for chemistry.

## Career Opportunities

Analytical Chemist  
Biochemist  
Chemical Engineer  
Chemical Sales and Marketing  
Chemistry Teacher/Professor  
Environmentalist  
Food Scientist  
Forensic Scientist  
Laboratory Manager  
Materials Chemist  
Medicinal Chemist  
Preparative Chemist  
Product Developer  
Production Chemist  
Research Scientist  
Technology Development

### College of Arts and Sciences

1 University Blvd.  
303 Lucas Hall  
St. Louis, MO 63121  
314-516-5501

[artsience@umsl.edu](mailto:artsience@umsl.edu)  
[cas.umsl.edu](http://cas.umsl.edu)

### Department of Chemistry

1 University Blvd.  
316 Benton Hall  
St. Louis, MO 63121  
314-516-5311

[chemistry.umsl.edu](http://chemistry.umsl.edu)

### Office of Graduate Admissions

1 University Blvd.  
121 Woods Hall  
St. Louis, MO 63121  
314-516-5458

[gradadm@umsl.edu](mailto:gradadm@umsl.edu)  
[graduate.umsl.edu](http://graduate.umsl.edu)



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