

## ***Chemistry is Everywhere.***

Chemistry is the central science. All of life depends upon intricate and coordinated chemical reactions. All the materials of nature and those that are made by humans have properties arising from the details of their chemical structure, and on the properties of the elements, compounds and ions of which they are composed. A vast range of products developed in the 20<sup>th</sup> century are based on chemistry and many new 21<sup>st</sup> century products will be based on chemistry such as batteries for electric vehicles, diagnostic kits for personalized medicine, and many others. Solutions to many of the major problems facing humanity today are being sought using chemistry, such as those in areas of energy, healthcare, environmental sustainability, climate change, and resource usage.

Chemistry degree holders are sought for employment in many established industries such as pharmaceuticals, biotechnology, foods and beverages, cosmetics, consumer products, automotive, aerospace, basic materials, fuels and energy, agriculture, and environmental protection. Many chemistry degree holders are employed by government labs at the local, state and national levels and for federal agencies such as the Food and Drug Administration, Environmental Protection Agency, Department of Energy, National Air and Space Agency, and National Institutes of Health. Holders of bachelor's degrees can meet the national need for qualified high school chemistry teachers, and those with advanced degrees can teach at colleges and universities. Chemistry degree holders also work for crime labs and hospitals. Chemistry is also an excellent background for work in patent law and in regulatory affairs. The rate of acceptance of chemistry majors into medical schools and related health professions is among the highest of all majors.

### **Why Study Chemistry at UM – Saint Louis?**

Our department is especially proud of:

- Excellent placement of our graduates in the chemical industry.
- Success of alumni who have gone on to earn professional or advanced degrees.
- High level of participation of our majors in undergraduate research opportunities.
- Our excellent instrumentation and facilities accessible to both undergraduate and graduate students.
- Each student has his/her own experienced faculty advisor.
- Our BS degree program has the distinction of being certified by the American Chemical Society.
- Our lab facilities for undergraduates are now all in the new state-of-the-art Science Learning Building.
- We distribute over \$40,000 in scholarships annually from alumni-funded endowments.

## **Companies in the Saint Louis region that employ chemists.**

Some are headquartered in St Louis or are locations of international companies. There are numerous job opportunities for chemistry graduates in the Saint Louis area and this is only a partial list. UMSL Chemistry graduate either have been employed or are currently employed at all of these companies.

Pfizer, <https://www.pfizer.com/>

Bayer Crop Sciences, <https://www.cropscience.bayer.com/contact-us>

Nestle – Purina, <https://www.nestlepurinacareers.com/locations/st-louis/>

Millipore – Sigma, <https://www.sigmaaldrich.com/united-states.html>

Mallinckrodt, <https://www.mallinckrodt.com/>

Zoltek, <https://zoltek.com/>

Novus International, <https://www.novusint.com/en-US/>

Steris, <https://www.steris.com/>

Jost Chemical, <https://www.jostchemical.com/>

Thermo Fisher (Patheon), <https://patheon.com/>

Sensient Technologies, <https://www.sensient.com/>

Chemia, <http://www.chemiacorp.com/>

EAG Labs, <https://www.eag.com/>

Biomerieux, <https://www.biomerieux-usa.com/>

Carboline, <https://www.carboline.com/>

Huvepharma, <http://www.huvepharma.us/>

Air Products, <https://www.airproducts.com/supply-modes/prism-membranes>

Curium Pharma, <https://www.curiumpharma.com/>

American Radiolabeled Chemicals, <https://www.arcincusa.com/>

The impact of the chemical industry on the US economy is vast, as can be learned about here: <https://www.americanchemistry.com/About/>

## **ACS career resources**

Videos and descriptions of chemistry careers from the American Chemical Society:

<https://www.acs.org/content/acs/en/careers/college-to-career/chemistry-careers.html>

## **Resources for students**

Free chemistry books as PDFs: <https://bookboon.com/en/chemistry-ebooks>

Interactive Science Simulations: <https://phet.colorado.edu/>

MIT Open Courseware: <https://ocw.mit.edu/courses/find-by-topic/#cat=science&subcat=chemistry>

## **UMSL Chemistry videos**

Coming soon!

## **Interesting chemistry links**

How soap kills coronavirus: [https://www.youtube.com/watch?v=s2EVlqq1\\_f8](https://www.youtube.com/watch?v=s2EVlqq1_f8)