



The **Master of Science** in

Biochemistry and Biotechnology

Master the key to understanding the life sciences.

Biochemistry is the study of biology and chemistry, and the processes that take place within living organisms. Biotechnology is the end result of these studies, combining biology and chemistry with mathematics and physics to produce useful products, as well as biochemical techniques and physical analyses, for a better understanding of biochemistry. Biochemistry and biotechnology are so closely linked because an understanding of biochemical processes is required before that knowledge can be applied to technology, all of which is at the core of the life science industry.

Master of Science in Biochemistry and Biotechnology

The Master of Science in Biochemistry and Biotechnology at the University of Missouri–St. Louis is offered in cooperation with the Department of Biology and the Department of Chemistry and Biochemistry. This integrated, interdisciplinary degree program covers both the basic principles and the technological applications of biochemistry and biotechnology, providing candidates with the training they need to take advantage of the many job opportunities in the life sciences industry. Most courses are offered in formats that accommodate working students, and online options are available in many, but not all, semesters. An Emphasis in Professional Science option is also available to offer a unique perspective on the business, financial and legal aspects of biotechnology research.

Many students engage in individual research projects in the labs of biochemistry and biotechnology faculty members, and many graduates are employed in industry or academic laboratories. Graduates have also gone on to pursue further training in PhD programs or professional schools of optometry, dentistry, medicine or veterinary medicine.

2+3 BS/MS Dual Degree Program

The Master of Science in Biochemistry and Biotechnology is also offered in the 2+3 program format. This unique 2+3 dual degree program provides a pathway for students to earn both a bachelor's and a master's degree in Biochemistry and Biotechnology with fewer total credit hours than would be required to complete each degree independently. Once all requirements have been met, students will be awarded both a BS and an MS and are able to enter the job market with a competitive edge.

Transforming Lives

The Master of Science in Biochemistry and Biotechnology 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.

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.

The Biology Department at UMSL ranks in the top 20 percent of the nation's research institutions, based on scholarly productivity and federal research grant funding. 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. Biochemistry and Biotechnology students have the opportunity to engage in hands-on research projects under the guidance of faculty, and also benefit from our 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 Master of Science in Biochemistry and Biotechnology is designed to provide specialized knowledge, skills and training in a flexible 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. UMSL welcomes transfer students, and our transfer specialists will assist you with getting the most transfer credits possible. We're also committed to increasing access to higher education, which is why UMSL is consistently ranked number one in affordability in the St. Louis region.

Learn more at biotech.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. Seventy-three percent of our graduates stay in St. Louis. The region needs a well-equipped workforce with biochemistry and biotechnology skills, and UMSL is prepared to help you meet those needs. Choose the University of Missouri–St. Louis for biochemistry and biotechnology.

Career Opportunities

Biochemical Engineer
Biochemist
Chemist
Clinical Research Specialist
Enzymologist
Food Scientist
Forensic Biologist
Geneticist
Hydrologist
Inorganic Chemist
Mineralogist
Molecular Biologist
Pharmaceutical Researcher
Pharmacologist
Quality Assurance/Regulatory Affairs
Teacher

College of Arts and Sciences

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Biochemistry and Biotechnology Program

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Office of Graduate Admissions

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