

BACHELOR OF SCIENCE IN CHEMISTRY, 2024-25

For more information about policies and requirements, please see the UMKC 2024-25 Catalog.

FIRST YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
CHEM 211 & 211L General Chemistry I	5	CHEM 212R & CHEM 212LR General Chemistry II	5
MATH 120 Precalculus	5	MATH 210 Calculus I	4
GEFSE 101 First Semester Experience	3	ENGLISH 225 Intermediate Academic Prose	3
ENGLISH 110 Introduction to Academic Prose	3	GECRT-SC Critical Thinking in Natural & Physical Sci	3
		BIOLOGY 250 Careers in Biological & Chemical Sciences or LIFE-SCI 201 Careers in Health	1
TOTAL	16	TOTAL	16

SECOND YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
CHEM 321 & 321L Organic Chemistry I	4	CHEM 322R & CHEM 322L Organic Chemistry II	4
PHYSICS 240 Physics for Scientists and Engineers I	5	PHYSICS 250 Physics for Scientists & Engineers II	5
MATH 220 Calculus II	4	MATH 250 Calculus III	4
Communication Requirement (COMM-ST 110, 140, 212 or 277)	3	GECRT-SS Critical Thinking in Social & Behavioral Sciences	3
TOTAL	16	TOTAL	16

THIRD YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
CHEM 431 Physical Chemistry I	3	CHEM 432 Physical Chemistry II	3
CHEM 341WI Analytical Chemistry I: Quantitative Analysis	4	CHEM 437WI Experimental Physical Chemistry I	3
CHEM 410 Chemical Literature	1	GECRT-AH Critical Thinking in Arts & Humanities	3
BIOLOGY 251 (recommended elective; or LIFE-SCI 202 in Spring)	1	GECUE Civic & Urban Engagement	3
GECDV Culture & Diversity	3	General Elective	3
Constitution Requirement (HISTORY 101, 102, POL-SCI 210, CJC 364 or HON 230)	3		
TOTAL	15	TOTAL	15

FOURTH YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
CHEM 382 Inorganic And Organic Synthesis	2	CHEM 442R Analytical Chemistry II: Instrumental Analysis	3
CHEM 367 Bioorganic Chemistry or BIOLOGY 441 Biochemistry	3	CHEM 451R Inorganic Chemistry	3
CHEM 471 Intro to Polymer Chemistry	3	CHEM/BIOL/PHYSICS/MATH Major Elective 300/400 level	3
General Elective	3	General Elective	3
General Elective	3		
TOTAL	14	TOTAL	12

Additional Graduation Requirements: Civics Exam and HEIghten Exit Exam

Total Credits to Graduate: 120

School of Science and Engineering

Why Major in Chemistry



Beyond The Classroom

Students build experience by participating in our **student-led teams or organizations**:

- Baja Racing Team
- Esports
- Math Club
- Pre-Professional School Societies
- Society for Biomaterials
- Students Interested in Chemistry
- Women in Science

Students interested in health care find support by joining our **Pre-Professional Societies** related to medicine, dentistry, pharmacy, veterinary medicine, optometry, and physician assistant.

Our connection to the Kansas City community allows students to **easily shadow medical and industry professionals**.

The **BS in Chemistry is accredited** by the American Chemical Society.



Personalize Your Degree

Earn a BA or BS in Chemistry with the **flexibility to easily to double major**.

Students **add a variety of minors to diversify** their studies and better prepare for industry, teaching, research, or professional school.

Our BS in Chemistry nearly completes the requirements for a Biology minor.

Students interested in a professional medical program work with a pre-health advisor who assures they are prepared for their desired path.

Explore different interest areas and learn new skills by participating in **innovative and ground-breaking research** alongside faculty mentors. Research spans across electrochemistry, nanomaterial synthesis, 3D printing polymers, and more!



After Graduation

SSE offers two **STEM Career Fairs** every year to connect students with industry professionals.

Kansas City is renowned for its **strengths in bioscience and medical research**, including:

- comparative medicine, cardiology, health care information, neuroscience, pharmaceutical development, outcomes research, and oncology

The flexibility of a Chemistry degree allows students to explore a variety of career interest, as well as, **graduate programs and professional school**.

Our graduates often find **employment** at companies such as Catalent, Garmin, Honeywell FM&T, MRI Global, Mosaic Diagnostics, and Stowers Institute for Medical Research.

Easily earn a **master's degree** through our BS to MS program which allows students to complete a graduate degree at undergraduate tuition rates.