

CHEMISTRY (BACHELOR OF SCIENCE, B.S.)

Overview

Missouri Western's Bachelor of Science in Chemistry program prepares students to enter the dynamic chemical industry or to attend graduate programs in chemistry and related fields. Students get extensive lab experience and unique research opportunities in a challenging program that has been certified by the American Chemical Society since 1977.

Requirements

Code	Title	Credit Hours
General Studies		
Students must complete General Studies courses (http://catalog.missouriwestern.edu/undergraduate/university-information/academic-standards-regulations/baccalaureate-degree/#bachelor-general-studies)		42-47
Major Requirements		
CHE 111	General Chemistry I	5
CHE 120	General Chemistry II with Qualitative Analysis	5
CHE 310	Organic Chemistry I	3
CHE 311	Organic Chemistry Laboratory I	2
CHE 312	Organic Chemistry II	3
CHE 313	Organic Chemistry Laboratory II	2
CHE 321	Quantitative Analysis	4
CHE 326	Instrumental Analysis	4
CHE 340	Foundations of Physical Chemistry	4
CHE 370	Biochemistry I	4
CHE 380	Environmental Chemistry & Chemical Management	3
CHE 441	Advanced Inorganic Chemistry	3
CHE 442	Inorganic Synthesis	1
CHE 480	Advanced Physical Chemistry	4
MAT 167	Calculus with Analytic Geometry I	5
MAT 177	Calculus with Analytic Geometry II	3
or MAT 287	Multivariable Calculus	
PHY 110	College Physics I	4
PHY 111	College Physics II	4
Select one of the following:		3
CHE 470	Biochemistry II	
CHE 475	Internship in Chemistry	
CHE 490	Research in Chemistry	

Chemistry majors may seek career specialization by adding one or more of the following other degree programs.

Forensic Science: Students seeking entrance to career in forensic science or a graduate program in forensic science are encouraged to add a Minor in Criminal Justice. Elective choices within the minor should be discussed with an advisor in Chemistry and/or Criminal Justice.

Health Professions: Students seeking entrance into professional programs in pharmacy, medicine, dentistry or similar programs may

consider a Minor in Biology as they will complete several prerequisite biology courses. Elective choices within the minor should be catered toward specific entrance requirements, and should be discussed with an advisor in Chemistry and/or Biology.

Chemical Business: Students seeking a career in the chemical industry in sales, human resources, management, or business development are encouraged to complete a Minor in Business OR Entrepreneurship. Elective choices within the minor should be discussed with an advisor in Chemistry and/or Business.

Scientific Writing: Students seeking a career in scientific writing or graduate programs are encouraged to complete a Minor in Technical Writing. Elective choices within the minor should be discussed with an advisor in Chemistry and/or English.

Secondary Teaching: Students seeking to become a secondary teacher (grades 9-12) should pair this major with the BSE Secondary Education. This combination will ensure completion of both scientific and pedagogical content toward achievement of teaching certification through the Missouri Department of Elementary and Secondary Education. Note that other requirements beyond content must also be completed for certification, such as minimum GPA, a criminal background check, and standardized exams. Students seeking this career are advised in both Chemistry and Education.

University Graduation Requirements

1. Earn a minimum of 120 credit hours (100 level and higher, maximum of 6 CED credit hours applicable).
2. Earn a minimum of 30 credit hours in upper-division courses. Lower-division transfer courses accepted as meeting upper-division departmental course requirements cannot be used to fulfill this requirement.
3. Earn 30 of the last 45 credit hours at MWSU in institutional coursework (exclusive of credit by examination).
4. Participate in required departmental and campus wide assessments.
5. Fulfill the Missouri Constitution requirement.
6. Successfully pass the Missouri Higher Education Civics Achievement exam.