Chemistry Minor

University of Michigan - Department of Chemistry updated Fall 2025

The Chemistry minor provides a broad and general exposure to the traditional areas of the chemical sciences.

Department of Chemistry course sharing policy:

No more than one course counted toward the 18-credit Chemistry minor may also be used to meet a requirement for a major. (Requirements for a major, in this instance, include both the major requirements and major prerequisites.) If students have completed more than one Chemistry minor course (core or elective) that is also part of their majors, then they should share only one of these courses and must complete unique Chemistry minor electives to reach the 18 credit minimum for the minor.

Prerequisites: - AP credit for Physics (125 or 139) will fulfill the Physics requirement.

- AP credit for Math (120) will fulfill the Math requirement.

Course #	Course Description	Typically Offered	Credits
PHYS 150 OR 140	Fundamental Physics for the Life Sciences I OR General Physics I	F, W, Sp	4
MATH 115	Calculus I	F, W, Sp, Su	4

Minor Program requirements (at least 18 credit hours):

Core courses

Course #	Course Description	Typically Offered	Credits
CHEM 210	Structure and Reactivity I	F, W, Sp	3
CHEM 211	Investigations in Chemistry: Laboratory	F, W, Sp	2

Elective Courses: Electives should be selected in consultation with an advisor.

Course #	Course Description	Term Typically	Credits
CHEM 215	Structure and Reactivity II	F, W, Sp	3
CHEM 216	Synthesis and Characterization of Organic Compounds	F, W, Sp	2
CHEM 241	Introduction to Chemical Analysis	F, W	2
CHEM 242	Introduction to Chemical Analysis Laboratory	F, W	2
CHEM 230	Physical Chemical Principles and Applications	F, W, Sp	3
OR		-	
CHEM 260	Chemical Principles	F, W	3
OR		-	
CHEM 370	Physical and Chemical Principles Behind Biology and Medicine	F, W	3
OR		•	
*CHE 330	Chemical & Engineering Thermodynamics		3
OR	,	•	
*BIOMEDE 221	Biophysical Chemistry and Thermodynamics		3

CHEM 302 OR	Inorganic Chemistry: Principles of Structure, Reactivity, and Function	W	3
CHEM 303			
	Introductory Bioinorganic Chemistry: The Role of Metals in Life	F	3
CHEM 399	Undergrad Research– 3 credits only	F, W	3
CHEM 402	Intermediate Inorganic Chemistry	W	3
CHEM 419	Intermediate Physical Organic Chemistry	F	3
OR			
CHEM 420	Intermediate Organic Chemistry	W	3
OR		-	
CHEM 421	Org. Chem of Drug Desig		3
CHEM 436	Polymer Synthesis and Characterization	W- even yrs	3
CHEM 447	Physical Methods of Analysis	W	3
CHEM 461	Physical Chemistry I	F	3
CHEM 463	Thermodynamics and Kinetics	W	3
CHEM 474	Environmental Chem	F	3
CHEM 482	Synthesis and Characterization- <i>ULWR</i>	F	3
CHEM 483	Physical and Instrumental Chemistry	W	3
CHEM 511	Materials Chemistry	W	3
CHEM 538	Organic Chemistry of Macromolecules	W	3

Exclusions: The Chemistry minor is NOT open to students majoring within the Department of Chemistry

^{*}CHE 330 or BIOMEDE 221 only fulfills this requirement for students in the College of Engineering. Students from all other schools/colleges may choose (CHEM 230, CHEM 260, or BIOPHYS 370/CHEM 370). If an Engineering student wishes to use CHE 330 or BIOMEDE 221 to fulfill this requirement, they should consult with a Chemistry advisor so that approval of the course can be noted on the audit.