

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 OR CHEM 260 OR CHEM 370 OR *CHE 330 OR *BIOMEDE 221	Physical Chemical Principles and Applications	F, W, Sp	3
	Chemical Principles	F, W	3
	Physical and Chemical Principles Behind Biology and Medicine	F, W	3
	Chemical & Engineering Thermodynamics		4
	Biophysical Chemistry and Thermodynamics		4

CHEM 302 OR CHEM 303	Inorganic Chemistry: Principles of Structure, Reactivity, and Function	W	3
	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 OR CHEM 420 OR CHEM 421	Intermediate Physical Organic Chemistry	F	3
	Intermediate Organic Chemistry	W	3
	Org. Chem of Drug Desig		3
	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- ULWR	F	3
CHEM 483	Physical and Instrumental Chemistry	W	3
CHEM 511	Organometallic Chemistry	W	3
CHEM 538	Organic Chemistry of Macromolecules	W	3

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

*CHE 330 or BIOMEDE 221 only fulfill 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 complete this requirement, they should speak to a Chemistry advisor so that approval of the course can be noted on the audit.