

# Chemistry Minor

## University of Michigan - Department of Chemistry

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

**Exclusions: The Chemistry minor is NOT open to student's majoring in:**

Biochemistry, Biomolecular Science, Interdisciplinary Chemical Sciences, Chemistry, Cell and Molecular Biology, Biology, General Biology, Neuroscience, Ecology and Evolutionary Biology, Plant Biology, and Microbiology.

**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	<i>F, W, Sp</i>	4
MATH 115	Calculus I	<i>F, W, Sp, Su</i>	4

**Minor Program requirements (at least 18 credit hours):**

**Core courses**

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

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

Course #	Course Description	Term Typically Offered	Credits
CHEM 215	Structure and Reactivity II	<i>F, W, Sp</i>	3
CHEM 216	Synthesis and Characterization of Organic Compounds	<i>F, W, Sp</i>	2
CHEM 241	Introduction to Chemical Analysis	<i>F, W</i>	2
CHEM 242	Introduction to Chemical Analysis Laboratory	<i>F, W</i>	2
CHEM 260 OR	Chemical Principles	<i>F, W</i>	3
CHEM 261 & CHE 330	Introduction to Quantum Chemistry ( <b>1 CR</b> ) Chemical and Engineering Thermodynamics ( <b>2 CR</b> )	<i>F, W</i> <i>W</i>	3
CHEM 302 OR	Inorganic Chemistry: Principles of Structure, Reactivity, and Function	<i>F, W</i>	3
CHEM 303	Introductory Bioinorganic Chemistry: The Role of Metals in Life	<i>F, W</i>	3
CHEM 402	Intermediate Inorganic Chemistry	<i>W</i>	3
CHEM 419 OR	Intermediate Physical Organic Chemistry	<i>F</i>	3
CHEM 420	Intermediate Organic Chemistry	<i>W</i>	3
CHEM 461	Physical Chemistry I	<i>F</i>	3
CHEM 482	Synthesis and Characterization- <b>ULWR</b>	<i>F</i>	3

**NOTES:** \* Students who do not place into CHEM 210 are strongly recommended to take CHEM 130. CHEM 130 or AP credits earned for CHEM 130 DO NOT count toward the minor.