

# Chemical Measurement Science Minor

University of Michigan - Department of Chemistry

Effective: Fall 2019

The Chemical Measurement Science minor provides concentrated exposure to analytical chemistry that is appropriate across a wide variety of scientific areas.

**Exclusions: The Chemical Measurement Science minor is NOT open to student's majoring in:**

Chemistry, Biochemistry, Chemical Science, Interdisciplinary Chemical Sciences, Biomolecular Science

## 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	Completed	Typically Offered	Credits
PHYS 135 OR PHYS 140	Physics for the Life Sciences I		<i>F, W, Sp</i>	4
MATH 115	General Physics I		<i>F, W, Sp</i>	4
	Calculus I		<i>F, W, Sp, Su</i>	4

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

### Core courses

Course #	Course Description	Completed	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
CHEM 260 OR CHEM 370	Chemical Principles		<i>F, W, Sp</i>	3
CHEM 370	Physical and Chemical Principles Behind Biology and Medicine		<i>F</i>	3
CHEM 241	Introduction to Chemical Analysis		<i>F, W</i>	2
CHEM 242	Introduction to Chemical Analysis Laboratory		<i>F, W</i>	2
CHEM 447	Physical Methods of Analysis		<i>W</i>	3

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

Course #	Course Description	Completed	Typically Offered	Credits
CHEM 483	Advanced Methods in Physical Analysis		<i>W</i>	3
CHEM 545	Analytical Chemistry			3

\*Although prerequisites are not enforced, students who elect CHEM 483 or 545 should consider taking, or having taken, advanced physical chemistry beyond the CHEM 260/370 level.

### 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.