

Biochemistry Minor

University of Michigan - Department of Chemistry

The Biochemistry minor provides a broad and general exposure to the traditional areas of the biochemical sciences.

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

Biochemistry	Interdisciplinary Chemical Sciences	Microbiology
Biomolecular Science	Biology	Neuroscience
Chemistry	General Biology	EEB
MCDB or CMB	Biology, Health and Society (BHS)	Plant Biology

* Pharmaceutical Sciences major

Prerequisites:

- AP credit for Physics (125 or 139) will fulfill the Physics requirement.
- AP credit for Math (120) will fulfill the Math requirement.
- AP credit for Biology (174, 192, or 195) will fulfill the Biology requirement.

Course #	Course Description	Typically Offered	Credits
PHYS 150 OR PHYS 140	Fundamental Physics for the Life Sciences I General Physics I	<i>F, W, Sp</i> <i>F, W, Sp</i>	4 4
MATH 115	Calculus I	<i>F, W, Sp, Su</i>	4
BIO 172	Introductory Biology: Molecular Cellular and Developmental	<i>F, W, Sp</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
CHEM 215	Structure and Reactivity II	<i>F, W, Sp</i>	3
CHEM 260,	Chemical Principles	<i>F, W</i>	3
CHEM 230 & 261,	Physical Chemical Principles and Applications AND Introduction to Quantum Chemistry	<i>F, W</i>	3/1
CHEM 370	Physical and Chemical Principles Behind Biology and Medicine	<i>F</i>	3
CHEM 351 OR **BIOCHEM 415 OR **MCDB 310	Fundamentals of Biochemistry Introductory Biochemistry Introductory Biochemistry	<i>F, W</i> <i>F, W</i> <i>F, W, Sp, Su</i>	4 4 4

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

Course #	Course Description	Typically Offered	Credits
CHEM 241	Introduction to Chemical Analysis	<i>F, W</i>	2
CHEM 242	Introduction to Chemical Analysis Laboratory	<i>F, W</i>	2
OR			
CHEM 245	Biomedical Analytical Chemistry	<i>F, W</i>	2
CHEM 246/247	Biomedical Analytical Chemistry Laboratory I and II	<i>F, W</i>	2
CHEM 451	Advanced Biochemistry I Macromolecular Structure and Function	<i>F, W</i>	4
CHEM 452	Advanced Biochemistry II Cellular Processes	<i>W</i>	4
BIO 305	Genetics	<i>F, W, Sp, Su</i>	4

All students may only share only one required course between a major and the biochemistry minor. (College of Engineering students, please see a Chemistry Department Advisor.)

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.

** If MCDB 310 or BIOLCHEM 415 is selected then you must take CHEM 451 or 452 as your elective to complete the minor.

* Students can still earn a BS Pharmaceutical major and a Biochemistry minor by sharing their Biochemistry course (CHEM 351 or MCDB 310 or Biolchem 415) and taking three or four of the following courses/sets of courses to get to the 18 credits needed to complete the minor: (CHEM 451, CHEM 452, Biology 305, (CHEM 241 and 242 or CHEM 245, 246, and 247)).