

BIOCHEMISTRY

- A minimum 2.0 average in all biology courses required for this major is necessary to graduate
- A minimum of 32 credits at or above the 300-level must be completed at a Purdue campus
- At least one 500-level Biology course other than BIOL 500 or 542 must be completed for graduation
- 124 Total Credits are necessary to graduate

For Biochemistry Honors curriculum, see the back of this page

BIOLOGY

Core:

- | <u>First Year</u> | <u>Second Year</u> |
|--|---------------------------------------|
| 1. BIOL 121 (2) (fall) and BIOL 131 (3) (spring) | 3. BIOL 231 (3) BIOL 232 (2) (fall) |
| 2. BIOL 136, 137, 138, 139 (1 credit each)
(two of the four each semester; may be taken in any order) | 4. BIOL 241 (3) BIOL 242 (2) (spring) |

Other Required Biology:

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|---|--|
| 1. BIOL 415 ¹ (3) | 5. BIOL 529 ¹ or 550 ¹ or 573 ¹ (all 3) |
| 2. BIOL 420 ¹ (3) | 6. BIOL 500/542 ² (3 modules) |
| 3. BIOL 515 ¹ (2) or 519 ¹ (2) | 7. BCHM 561 (3) |
| 4. BIOL 517 ¹ (2) | 8. BCHM 562 (3) |

MATHEMATICS

1. MA [161 (5) and 162 (5)] **or** [165 (4) and 166 (4)] **or** 173 (5)
2. STAT 503 (3)
3. C S 177 (4) **or** 158 (3) **or** 154 (3)

CHEMISTRY

General:

1. CHM 115 (4)
2. CHM 116 (4)

Organic:

3. CHM 261 (3)
4. CHM 263 (1)
5. CHM 262 (3)
6. CHM 264 (1)

Analytical:

7. BCHM 221 (3) **or** CHM 224 (4) **or** CHM 321 (4)

Physical:

8. CHM 372 (4) **or** [373 (3) and 374 (3)]

PHYSICS

1. PHYS [220 (4) and 221 (4)] **or** [152 (4) and 241 (3) and 252 (1)]

ENGLISH

1. ENGL 106 (4) **or** 108 (3)
2. Choose one: ENGL 205, 304, 306, 309, 406, 419, 420, 421, 424 (3 credits each)

LANGUAGE

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|-------------------------------|----------------------------------|
| 1. 101 or 103 (both 3) | 2. 102 (3) (Unless 103 is taken) |
| 3. 201 (3) | 4. 202 (3) |

GENERAL EDUCATION Consult the College of Science General Education Handout.

FREE ELECTIVES Approximately 0 - 1 credit

¹This course may be replaced by one of the following courses: BIOL 416 (3), 438 (3), 511 (3), 537 (3), 595K (3). Only one substitution is allowed.

²Must include BIOL 500I. The other 500/542 modules may be replaced by BIOL 439 **or** by BIOL 514 **or** by four credits of undergraduate research (BIOL 394, 494 or 499--this must be approved in advance by the Biochemistry Area Committee).

BIOCHEMISTRY HONORS CURRICULUM

A 3.0 or higher graduation index is required to graduate in the Biochemistry Honors Curriculum.

In addition to the requirements listed for the Biochemistry program, at least two of the following courses/course sequences must be completed:

1. PHYS 152-241-252
2. CHM 321
3. CHM 373-374

In addition, MA 261 may be substituted for STAT 503 or C S 154 or 158 or 177.

Courses Fulfilling Biology Requirements Biochemistry Curriculum

Course	Cred	Sem	Course Title and Instructor
BIOL 121	(2 cr)	(F)	Biology I: Diversity, Ecology and Behavior. Dr. Dennis Minchella
BIOL 131	(3 cr)	(S)	Biology II: Development, Structure, and Function of Organisms. Dr. Kenneth Robinson
BIOL 136	(1 cr)	(F/S)	Quantitative and Problem Solving Skills. Dr. Laurie Iten
BIOL 137	(1 cr)	(F/S)	Handling Cells and Tissues; Microscopy. Dr. Laurie Iten
BIOL 138	(1 cr)	(F/S)	Information and Communication Skills. Dr. Laurie Iten
BIOL 139	(1 cr)	(F/S)	Measurements and Basic Solution Chemistry. Dr. Laurie Iten
BIOL 231	(3 cr)	(F)	Biology III: Cell Structure and Function. Dr. Peter Hollenbeck
BIOL 232	(2 cr)	(F)	Laboratory in Biology III: Cell Structure and Function. Dr. John Anderson
BIOL 241	(3 cr)	(S)	Biology IV: Genetics and Molecular Biology. Drs. Henry Chang and Tom Walter
BIOL 242	(2 cr)	(S)	Laboratory in Genetics and Molecular Biology. Dr. Susan Karcher
BIOL 415	(3 cr)	(F)	Introduction to Molecular Biology. Dr. Stephen Konieczny
BIOL 416	(3 cr)	(S)	Molecular Virology. Dr. Tracie Gibson
BIOL 420	(3 cr)	(F)	Eukaryotic Cell Biology. Dr. David Franklin
BIOL 438	(3 cr)	(F)	General Microbiology. Dr. Dorothea Thompson
BIOL 439	(2 cr)	(F)	Microbiology Lab. Dr. Tom Walter
BIOL 500	(2 cr)	(F/S)	Modular Upper-Division Laboratory Course. Faculty
BIOL 511	(3 cr)	(S)	Introduction to X-ray Crystallography. Dr. Jeffrey Bolin
BIOL 514	(2 cr)	(S)	Laboratory in Crystallography. Dr. Alan Friedman
BIOL 515	(2 cr)	(S)	Molecular Genetics. Faculty
BIOL 517	(2 cr)	(S)	Molecular Biology: Proteins. Dr. David Sanders
BIOL 529	(3 cr)	(S)	Bacterial Physiology. Drs. Louis Sherman and Tom Walter
BIOL 537	(3 cr)	(S)	Immunology. Dr. Jue Chen
BIOL 542	(1 cr)	(F/S)	Modular Upper-Division Laboratory Course. Faculty
BIOL 550	(3 cr)	(S)	Plant Molecular Biology. Dr. Stanton B. Gelvin
BIOL 573	(3 cr)	(F)	Molecular Biology of Animal Cells. Dr. Arnold Stein
BIOL 595K	(3 cr)	(F)	Methods and Measurement in Physical Biochemistry. Dr. Cynthia Stauffacher
BIOL 394	(1-4cr)	(F/S)	Special Assignment Research. Faculty
BIOL 494	(1-4cr)	(F/S)	Special Assignment Research. Faculty
BIOL 499	(1-4cr)	(F/S)	Biology Honors Thesis Research. Faculty
BCHM 561	(3 cr)	(F/S)	General Biochemistry I. Faculty
BCHM 562	(3 cr)	(F/S)	General Biochemistry II. Faculty