

# MICROBIOLOGY

- 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 Microbiology Honors curriculum, see the back of this page

## **BIOLOGY**

### First Year

### Second Year

#### **Core:**

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

#### **Other Required Biology:**

- |                 |   |
|-----------------|---|
| 1. BIOL 438 (3) | 4. BIOL 481 (3) <b>or</b> 515 (2) <b>or</b> 541 (3) |
| 2. BIOL 439 (2) | 5. BCHM 561 (3)                                     |
| 3. BIOL 529 (3) | 6. BIOL 441 (1)                                     |

#### **Biology Electives:** (Select **three** credits from the following)

*BIOL 416 (3), 446 (3), 478 (3), 500/542 (3 modules), 515 (2), 533 (3), 541 (3), 549 (2), BCHM 562 (3)*

**MATHEMATICS** MA [161 (5) and 162 (5)] **or** [165 (4) and 166 (4)] **or** [223 (3) and 224 (3)] **or** 173 (5)

**Math Electives:** (select **one** if MA 161-162 **or** 165-166 **or** 173 is chosen; **two** if MA 223-224):  
C S 177 (4) **or** 158 (3) **or** 154 (3); STAT 311 (3), [503 (3) **or** 511 (3)]; MA 261 (4)

## **CHEMISTRY**

- |                 |  |                |
|-----------------|--|----------------|
| <b>General:</b> | 1. CHM 115 (4)   | 2. CHM 116 (4) |
| <b>Organic:</b> | 3. a. CHM 255 (3) and 255L (1), 256 (3) and 256L (1) <b>or</b><br>b. CHM 261 (3) and 263 (1), 262 (3) and 264 (1) <b>or</b><br>c. CHM 257 (4) and 257L (1) and either CHM 333 (3) <b>or</b> BCHM 307 (3) |                |

**PHYSICS** PHYS [220 (4) and 221 (4)] **or** [152 (4) and 241 (3) and 252 (1) and 290D<sup>1</sup> (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**

- |                               |                                  |
|-------------------------------|----------------------------------|
| 1. 101 <b>or</b> 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 11 - 16 credits

---

<sup>1</sup>Students who complete a course in physical chemistry (CHM 372 or 373) are automatically exempt from PHYS 290D.

# MICROBIOLOGY HONORS CURRICULUM

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

In addition to the requirements listed for the Microbiology program, the following four courses/course sequences must be completed:

1. CHM 261-263
2. CHM 262-264
3. C S 154 or 158 or 177
4. MA 261

and at least three of the following courses/course sequences must be completed:

1. PHYS 152-241-252-290D<sup>1</sup>
2. CHM 321
3. CHM 372<sup>1</sup> or 373<sup>1</sup>-374
4. STAT 503
5. MA 262

## Courses Fulfilling Biology Requirements Microbiology Curriculum

<b>Course</b>	<b>Cred</b>	<b>Sem</b>	<b>Course Title and Instructor</b>
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 416	(3 cr)	(S)	Molecular Virology. Dr. Tracie Gibson
BIOL 438	(3 cr)	(F)	General Microbiology. Dr. Dorothea Thompson
BIOL 439	(2 cr)	(F)	Microbiology Lab. Dr. Tom Walter
BIOL 441	(1 cr)	(F)	Biology Senior Seminar in Genetics. Dr. Susan Karcher
BIOL 446	(3 cr)	(S)	Cellular Microbiology. Dr. Daoguo Zhou
BIOL 478	(3 cr)	(F)	Introduction to Bioinformatics. Faculty
BIOL 481	(3 cr)	(S)	Eukaryotic Genetics. Dr. Maureen McCann
BIOL 500	(2 cr)	(F/S)	Modular Upper-Division Laboratory Course. Faculty
BIOL 529	(3 cr)	(S)	Bacterial Physiology. Drs. Louis Sherman and Tom Walter
BIOL 533	(3 cr)	(F)	Medical Microbiology. Dr. Zhao-Qing Luo
BIOL 541	(3 cr)	(F)	Genetic Biology. Dr. Laszlo Csonka
BIOL 542	(1 cr)	(F/S)	Modular Upper-Division Laboratory Course. Faculty
BIOL 549	(2 cr)	(S)	Microbial Ecology. Dr. Allan Konopka. (alternate years)
BCHM 561	(3 cr)	(F/S)	General Biochemistry I. Faculty
BCHM 562	(3 cr)	(F/S)	General Biochemistry II. Faculty

<sup>1</sup>Students who complete a course in physical chemistry (CHM 372 or 373) are automatically exempt from PHYS 290D.