For Microbiology Honors curriculum, see the back of this page

### BIOLOGY

**First Year**
- 1. BIOL 121 (2) (fall) and BIOL 131 (3) (spring)
- 2. BIOL 136, 137, 138, 139 (1 credit each)

(two of the four each semester; may be taken in any order)

**Second Year**
- 1. BIOL 231 (3) BIOL 232 (2) (fall)
- 2. BIOL 241 (3) BIOL 242 (2) (spring)

### Other Required Biology:

1. BIOL 438 (3)
2. BIOL 439 (2)
3. BIOL 529 (3)
4. BIOL 481 (3) or 515 (2) or 541 (3)
5. BCHM 561 (3)
6. BIOL 441 (1)

### Biology Electives:

(Select three credits from the following)

- **BIOI 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

**General:**
- 1. CHM 115 (4)
- 2. CHM 116 (4)

**Organic:**
- a. CHM 255 (3) and 255L (1), 256 (3) and 256L (1) or
- b. CHM 261 (3) and 263 (1), 262 (3) and 264 (1) or
- c. CHM 257 (4) and 257L (1) and either CHM 333 (3) or BCHM 307 (3)

### PHYSICS

PHYS [220 (4) and 221 (4)] or [152 (4) and 241 (3) and 252 (1) and 290D¹ (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 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 11 - 16 credits

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¹Students 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. CS 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
2. CHM 321
3. CHM 372 or 373-374
4. STAT 503
5. MA 262

Courses Fulfiling Biology Requirements
Microbiology Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Cred</th>
<th>Sem</th>
<th>Course Title and Instructor</th>
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<tbody>
<tr>
<td>BIOL 121</td>
<td>(2 cr)</td>
<td>(F)</td>
<td>Biology I: Diversity, Ecology and Behavior. Dr. Dennis Minchella</td>
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<tr>
<td>BIOL 131</td>
<td>(3 cr)</td>
<td>(S)</td>
<td>Biology II: Development, Structure, and Function of Organisms. Dr. Kenneth Robinson</td>
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<tr>
<td>BIOL 136</td>
<td>(1 cr)</td>
<td>(F/S)</td>
<td>Quantitative and Problem Solving Skills. Dr. Laurie Iten</td>
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<td>BIOL 137</td>
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<td>(F/S)</td>
<td>Handling Cells and Tissues; Microscopy. Dr. Laurie Iten</td>
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<td>BIOL 138</td>
<td>(1 cr)</td>
<td>(F/S)</td>
<td>Information and Communication Skills. Dr. Laurie Iten</td>
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<td>BIOL 139</td>
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<td>(F/S)</td>
<td>Measurements and Basic Solution Chemistry. Dr. Laurie Iten</td>
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<td>BIOL 231</td>
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<td>Biology III: Cell Structure and Function. Dr. Peter Hollenbeck</td>
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<td>BIOL 232</td>
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<td>(F)</td>
<td>Laboratory in Biology III: Cell Structure and Function. Dr. John Anderson</td>
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<td>Biology IV: Genetics and Molecular Biology. Drs. Henry Chang and Tom Walter</td>
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<td>BIOL 242</td>
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<td>Laboratory in Genetics and Molecular Biology. Dr. Susan Karcher</td>
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<td>BIOL 416</td>
<td>(3 cr)</td>
<td>(S)</td>
<td>Molecular Virology. Dr. Tracie Gibson</td>
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<td>BIOL 438</td>
<td>(3 cr)</td>
<td>(F)</td>
<td>General Microbiology. Dr. Dorothea Thompson</td>
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<td>BIOL 439</td>
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<td>(F)</td>
<td>Microbiology Lab. Dr. Tom Walter</td>
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<td>BIOL 441</td>
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<td>(F)</td>
<td>Biology Senior Seminar in Genetics. Dr. Susan Karcher</td>
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<td>BIOL 446</td>
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<td>(S)</td>
<td>Cellular Microbiology. Dr. Daoguo Zhou</td>
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<td>BIOL 478</td>
<td>(3 cr)</td>
<td>(F)</td>
<td>Introduction to Bioinformatics. Faculty</td>
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<td>BIOL 481</td>
<td>(3 cr)</td>
<td>(S)</td>
<td>Eukaryotic Genetics. Dr. Maureen McCann</td>
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<td>BIOL 500</td>
<td>(2 cr)</td>
<td>(F/S)</td>
<td>Modular Upper-Division Laboratory Course. Faculty</td>
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<td>BIOL 529</td>
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<td>(S)</td>
<td>Bacterial Physiology. Drs. Louis Sherman and Tom Walter</td>
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<td>BIOL 533</td>
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<td>Medical Microbiology. Dr. Zhao-Qing Luo</td>
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<td>BIOL 541</td>
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<td>BIOL 542</td>
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<td>BIOL 549</td>
<td>(2 cr)</td>
<td>(S)</td>
<td>Microbial Ecology. Dr. Allan Konopka. (alternate years)</td>
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BCHM 561 (3 cr) (F/S) General Biochemistry I. Faculty
BCHM 562 (3 cr) (F/S) General Biochemistry II. Faculty
Students who complete a course in physical chemistry (CHM 372 or 373) are automatically exempt from PHYS 290D.