

GENETICS

Graduation Requirements:

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

BIOLOGY:

1. BIOL 121 Biology I: Diversity, Ecology and Behavior (2 cr.; fall)
2. BIOL 131 Biology II: Development, Structure, and Function of Organisms (3 cr.; spring)
3. BIOL 195T First Year Biology Lab (2 cr.; both)

4. BIOL 231 Biology III: Cell Structure and Function (3 cr.; fall)
5. BIOL 232 Laboratory in Biology III: Cell Structure and Function (2 cr.; fall)
6. BIOL 241 Biology IV: Genetics and Molecular Biology (3 cr.; spring)
7. BIOL 242 Laboratory in Genetics and Molecular Biology (2 cr.; spring)
8. BIOL 286 Introduction to Ecology (2 cr.; spring)

9. One of these three options:
 - a. BIOL 395G¹ Principles of Physiology (3 cr.; fall)
 - b. BIOL 395Y¹ Principles of Development (4 cr.; spring)
 - c. BIOL 438 General Microbiology (3 cr.; fall) **and** BIOL 439 Microbiology Lab (2 cr.; fall)

10. One of these two courses:
 - a. BIOL 395G¹ Principles of Physiology (3 cr.; fall)
 - b. BIOL 395Y¹ Principles of Development (4 cr.; spring)

11. BIOL 416 Molecular Virology (3 cr.; spring)
12. BIOL 441 Senior Seminar in Genetics (1 cr.; fall)
13. BIOL 481 Eukaryotic Genetics (3 cr.; spring)
14. BCHM 561 General Biochemistry (3 cr.; both) **or** CHM 533 Introductory Biochemistry (3 cr.; fall)
15. BIOL 500I² Introductory Module: Protein Expression plus two additional modules of BIOL 500 (2 cr.; both) **or** 542 (1 cr.; both) (various titles)

16. Six credits of the following:

BIOL 438	General Microbiology (3 cr.; fall)	BIOL 573	Molecular Biology of Animal Cells (3 cr.; fall)
BIOL 444	Human Genetics (3 cr.; fall)	BIOL 580	Evolution (3 cr.; spring)
BIOL 478	Intro to Bioinformatics (3 cr.; fall)	AGRY 530	Plant Genetics (3 cr.; fall)
BIOL 516	Molecular Biology of Cancer (3 cr.; spring)	ANSC 511	Population Genetics (3 cr.; fall)
BIOL 541	Molecular Genetics of Bacteria (3 cr.; fall)	BCHM 562	General Biochemistry II (3 cr.; both)
BIOL 550	Plant Molecular Biology (3 cr.; spring)		

CHEMISTRY

1. CHM 115 General Chemistry (4 cr.; both)
2. CHM 116 General Chemistry (4 cr.; both)

3. One of these three options:
 1. CHM 255 Organic Chemistry (3 cr.; both) **and** CHM 255L Organic Chemistry Lab (1 cr.; both) **and** CHM 256 Organic Chemistry (3 cr.; both) **and** CHM 256L Organic Chemistry Lab (1 cr.; both)
 2. CHM 261 Organic Chemistry (3 cr.; fall) **and** CHM 263 Organic Chemistry Lab (1 cr.; fall) **and** CHM 262 Organic Chemistry (3 cr.; spring) **and** CHM 264 Organic Chemistry Lab (1 cr.; spring)
 3. CHM 257 Organic Chemistry (4 cr.; both) **and** CHM 257L Organic Chemistry Lab (1 cr.; both) **and one of:** CHM 333 Principles of Biochemistry (3 cr.; both) **or** BCHM 307 Biochemistry (3 cr.; both)

PHYSICS

One of these two options:

1. PHYS 220 General Physics (4 cr.; both) **and** PHYS 221 General Physics (4 cr.; both)
2. PHYS 172 Modern Mechanics (4 cr.; both) **and** PHYS 272 Electric and Magnetic Interactions (4 cr.; both)

COLLEGE OF SCIENCE CORE REQUIREMENTS

Composition and Presentation; Teambuilding and Collaboration; Language and Culture; Great Issues; General Education; Multidisciplinary Experience; Mathematics; Statistics; Computing (see handout).

FREE ELECTIVES Approximately 0 - 28 credits

¹ Either of these courses will satisfy both requirement #9 and #10.

² Three credits of research, approved by the Microbiology and Molecular Genetics area committee, can replace these modules.