

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 30000-level completed at a Purdue campus
- At least one 50000-level Biology course other than BIOL 50000 or 54200
- 124 Total Credits

BIOLOGY:

1. BIOL 12100 Biology I: Diversity, Ecology and Behavior (2 cr.; fall)
2. BIOL 13100 Biology II: Development, Structure, and Function of Organisms (3 cr.; spring)
3. BIOL 13500 First Year Biology Lab (2 cr.; both)
4. BIOL 23100 Biology III: Cell Structure and Function (3 cr.; fall)
5. BIOL 23200 Laboratory in Biology III: Cell Structure and Function (2 cr.; fall)
6. BIOL 24100 Biology IV: Genetics and Molecular Biology (3 cr.; spring)
7. BIOL 24200 Laboratory in Genetics and Molecular Biology (2 cr.; spring)
8. BIOL 28600 Introduction to Ecology (2 cr.; spring)

9. One of these four options: (**Genetics majors may not use BIOL 43800, General Microbiology, or BIOL 439, Laboratory in Microbiology, to satisfy this requirement**)
 - a. BIOL 39500 Principles of Physiology (4 cr.; spring)
 - b. BIOL 39500 Macromolecules (3 cr.; fall)
 - c. BIOL 39500 Principles of Development (4 cr.; spring)
 - d. BIOL 43800 General Microbiology (3 cr.; fall) **and** BIOL 43900 Microbiology Lab (2 cr.; fall)

10. BIOL 41600 Viruses and Viral Diseases (3 cr.; spring)
11. BIOL 44100 Senior Seminar in Genetics (1 cr.; fall)
12. BIOL 48100 Eukaryotic Genetics (3 cr.; spring)
13. BCHM 56100 General Biochemistry (3 cr.; both) **or** CHM 533 Introductory Biochemistry (3 cr.; fall)
14. BIOL 50000¹ Introductory Module: Protein Expression plus two additional modules of BIOL 50000 (2 cr.; both) **or** 54200 (1 cr.; both) (various titles)

16. Six credits of the following:

BIOL 43800	General Microbiology (3 cr.; fall)	BIOL 57300	Molecular Biology of Animal Cells (3 cr.; fall)
BIOL 44400	Human Genetics (3 cr.; fall)	BIOL 58000	Evolution (3 cr.; spring)
BIOL 47800	Intro to Bioinformatics (3 cr.; fall)	AGRY 53000	Plant Genetics (3 cr.; fall)
BIOL 51600	Molecular Biology of Cancer (3 cr.; spring)	ANSC 51100	Population Genetics (3 cr.; fall)
BIOL 54100	Molecular Genetics of Bacteria (3 cr.; fall)	BCHM 56200	General Biochemistry II (3 cr.; both)
BIOL 55000	Plant Molecular Biology (3 cr.; spring)		

CHEMISTRY

1. CHM 11500 General Chemistry (4 cr.; both)
2. CHM 11600 General Chemistry (4 cr.; both)

3. One of these three options:
 1. CHM 25500 Organic Chemistry (3 cr.; both) **and** CHM 25501 Organic Chemistry Lab (1 cr.; both) **and** CHM 25600 Organic Chemistry (3 cr.; both) **and** CHM 25601 Organic Chemistry Lab (1 cr.; both)
 2. CHM 26505 Organic Chemistry (3 cr.; fall) **and** CHM 26300 Organic Chemistry Lab (1 cr.; fall) **and** CHM 26605 Organic Chemistry (3 cr.; spring) **and** CHM 26400 Organic Chemistry Lab (1 cr.; spring)
 3. CHM 25700 Organic Chemistry (4 cr.; both) **and** CHM 25701 Organic Chemistry Lab (1 cr.; both) **and one of:** CHM 33300 Principles of Biochemistry (3 cr.; both) **or** BCHM 30700 Biochemistry (3 cr.; both)

PHYSICS

One of these two options:

1. PHYS 22000 General Physics (4 cr.; both) **and** PHYS 22100 General Physics (4 cr.; both)
2. PHYS 17200 Modern Mechanics (4 cr.; both) **and** one of the following two choices:
 - A. PHYS 27200 Electric and Magnetic Interactions (4 cr.; both) **or**
 - B. PHYS 24100 Electricity and Optics (3 cr.; both) **and** PHYS 24200 Intro to Heat and Thermal Physics (1 cr.; spring) **and** PHYS 25200 Electricity and Optics Laboratory (1 cr.; spring)

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 - 22 credits

¹ Three credits of research, approved by the Genetics committee, may replace some or all of these modules.