

# ECOLOGY, EVOLUTION AND ENVIRONMENTAL BIOLOGY

## 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:
  - A. BIOL 39500 Macromolecules (3 cr.; fall)
  - B. BIOL 39500 Principles of Development (4 cr.; spring)
  - C. BIOL 39500 Principles of Physiology (4 cr.; spring)
  - D. BIOL 43800<sup>1</sup> General Microbiology (3 cr.; fall) **and** BIOL 43900 Microbiology Lab (2 cr.; fall)
10. BIOL 58000 Evolution (3 cr.; spring)
11. BIOL 58500 Ecology (3 cr.; fall)
12. One of these two options:
  - A. Research<sup>2</sup> (BIOL 49400 or 49900; (1 cr.; both))
  - B. BIOL 59100 Field Ecology (4 cr.; alternate fall)
13. One of these three courses:
  - A. BIOL 59200 Evolution of Behavior (3 cr.; spring)
  - B. BIOL 59500 Animal Communication (3 cr.; alternate fall)
  - C. BIOL 59700 Sex and Evolution (3 cr.; alternate fall)
14. Seven credits of the following:

BIOL 43800 <sup>1</sup> General Microbiology (3 cr.; fall)	CE 35000 Environmental Engineering (3 cr.; both)
BIOL 43900 Microbiology Lab (2 cr.; fall)	CE 35200 Biological Principles of Environmental Engineering (3 cr.; both)
BIOL 44400 Human Genetics (3 cr.; fall)	ENTM 50000 Fundamentals of Entomology (3 cr.; fall)
BIOL 48300 Environmental & Conservation Biology (3 cr.; fall)	FNR 48800 Global Environmental Issues (3 cr.; fall)
BIOL 49300 Intro. to Ethology (3 cr.; fall)	FNR 50100 Limnology (3 cr.; fall)
BIOL 59100 Field Ecology (4 cr.; alternate fall)	FNR 54200 Ecology and Management of Declining, Rare, and Endangered Species (2 cr.; alternate spring)
BIOL 59200 Evolution of Behavior (3 cr.; spring)	FNR 54700 Vertebrate Population Dynamics (3 cr.; fall)
BIOL 59500 Animal Communication (3 cr.; alternate fall)	FNR 58100 Ecological Impact Analysis (3 cr.; fall)
BIOL 59700 Sex and Evolution (3 cr.; alternate fall)	POL 52300 Environmental Politics and Public Policy (3 cr.; fall)
AGEC 52500 Environmental Policy Analysis (3 cr.; spring)	SOC 53300 Environmental Sociology (3 cr.; spring)
ANTH 53500 Foundations of Biological Anthropology (3 cr.; fall)	
ANTH 53600 Primate Ecology (3 cr.; spring)	
BCHM 56100 <sup>3</sup> General Biochemistry (3 cr.; both)	

Other courses may be considered for this elective requirement (#14). See your advisor for more information.

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<sup>1</sup> BIOL 43800 may be used for requirement #9 or for requirement #14, but not both.

<sup>2</sup> Research must be in the lab of a Biology Department Ecology faculty member, or have the approval of a Biology Department Ecology faculty member.

<sup>3</sup> BCHM 56100 and CHM 53300 may count as a chemistry elective or as a biology elective, but not both.

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Other requirements are on the back of this page.

## **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)
4. One of these seven options:
  - A. BCHM 22100 Analytical Biochemistry (3 cr.; both)
  - B. CHM 22400 Introductory Quantitative Analysis (4 cr.; spring)
  - C. CHM 32100 Analytical Chemistry I (4 cr.; fall)
  - D. BCHM 56100<sup>3</sup> General Biochemistry I (3 cr.; both)
  - E. CHM 53300<sup>3</sup> Introductory Biochemistry (3 cr.; fall)
  - F. CHM 37200 Physical Chemistry (4 cr.; spring)
  - G. CHM 37300 Physical Chemistry (3 cr.; fall)

## **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 - 23 credits