HEALTH & DISEASE

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 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 and Evolution (2 cr.; spring)
9. One of these four options: (Health & Disease majors must choose option D, BIOL 43800-43900)
   A. BIOL 32800 Principles of Physiology (4 cr.; spring)
   B. BIOL 36600 Principles of Development (4 cr.; spring)
   C. BIOL 39500 Macromolecules (3 cr.; fall)
   D. BIOL 43800 General Microbiology (3 cr.; fall) and BIOL 43900 Microbiology Lab (2 cr.; fall)
10. BIOL 30100 Human Anatomy & Physiology (3 cr.; fall)
11. BIOL 30200 Human Anatomy & Physiology (3 cr.; spring)
12. BIOL 41600 Viruses & Viral Diseases (3 cr.; spring)
13. Nine credits from the following: must choose at least one 500 level Biology course other than BIOL 54200
   - BIOL 32800 Principles of Physiology (4 cr.; spring)
   - BIOL 36600 Principles of Development (4 cr.; spring)
   - BIOL 39500 Macromolecules (3 cr.; fall)
   - BIOL 41500 Intro. to Molecular Biology (3 cr.; fall)
   - BIOL 42000 Eukaryotic Cell Biology (3 cr.; fall)
   - BIOL 43200 Reproductive Physiology (3 cr.; fall)
   - BIOL 43600 Neurobiology (3 cr.; fall)
   - BIOL 44400 Human Genetics (3 cr.; fall)
   - BIOL 44600 Cellular Microbiology (3 cr.; spring)
   - BIOL 44800 Physiology BioDesign Laboratory (2 cr.; fall)
   - BIOL 47800 Intro to Bioinformatics (3 cr.; fall)
   - BIOL 48100 Eukaryotic Genetics (3 cr.; spring)
   - BIOL 48300 Environmental & Conservation Biology (3 cr.; spring)
   - BIOL 49300 Intro. to Ethology (3 cr.; fall)
   - BIOL 50000 Intro. to Protein Expression (2 cr.; both)
   - BIOL 51100 Intro. to X-Ray Crystallography (3 cr.; spring)
   - BIOL 51600 Molecular Biology of Cancer (3 cr.; spring)
   - BIOL 51700 Molecular Biology: Proteins (2 cr.; spring)
   - BIOL 52900 Bacterial Physiology (3 cr.; spring)
   - BIOL 53300 Medical Microbiology (3 cr.; fall)
   - BIOL 53700 Immunology (3 cr.; spring)
   - BIOL 53800 Molecular, Cellular & Developmental Neurobiology (3 cr.; spring)
   - BIOL 54100 Molecular Genetics of Bacteria (3 cr.; fall)
   - BIOL 54200 Modular Laboratories (1 cr.; both)
   - BIOL 54900 Microbial Ecology (2 cr.; alternate spring)
   - BIOL 55000 Plant Molecular Biology (3 cr.; spring)
   - BIOL 55900 Endocrinology (3 cr.; fall)
   - BIOL 56200 Neural Systems (3 cr.; spring)
   - BIOL 57300 Molecular Biology of Animal Cells (3 cr.; fall)
   - BIOL 58000 Evolution (3 cr.; spring)
   - BIOL 58500 Ecology (3 cr.; fall)
   - BIOL 59100 Field Ecology (4 cr.; alternate fall)
   - BIOL 59200 Evolution of Behavior (3 cr.; spring)
   - BIOL 59500 Animal Communication (3 cr.; alternate fall)
   - BIOL 59500 Cellular Biology of Plants (3 cr.; fall)
   - BIOL 59500 Developmental Biology (3 cr.; fall)
   - BIOL 59500 Methods & Measurement in Physical Biochemistry (3 cr.; fall)
   - BIOL 59500 Protein Bioinformatics (2 cr.; spring)
   - BIOL 59700 Sex and Evolution (3 cr.; alternate fall)
   - BCHM 56100 General Biochemistry I (3 cr.; fall)
   - BCHM 56200 General Biochemistry II (3 cr.; spring)
   - BCHM 57200 Adv. Biochemical Techniques (2-4 cr.; fall)
   - CHM 53300 Introductory Biochemistry (3 cr.; fall)
   - HORT 30100 Plant Physiology (4 cr.; fall)

Research (494 or 499), (maximum of 3 credits) will count toward the elective requirement.

1 BCHM 56100 or CHM 53300 may count as a chemistry elective or as a biology elective but not both.

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:
   A. 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)
   B. 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)
   C. CHM 25700 Organic Chemistry (4 cr.; both) and CHM 25701 Organic Chemistry Lab (1 cr.; both) and 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 General Biochemistry I (3 cr.; both)
   E. CHM 53300 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)

PRE-PROFESSIONAL ELECTIVE (choose one)
1. ANTH 21200 Culture, Food & Health
2. ANTH 34000 Cultural Perspectives on Health
3. ANTH 35200 Drugs, Culture & Society
4. HK 44000 Human Diseases and Disorders
5. HK 44500 Epidemiology
6. PHIL 27000 Biomedical Ethics
7. PHIL 29000 Ethics & Animals
8. PSY 25100 Health Psychology
9. SOC 37400 The Health of Americans
10. SOC 57200 Comparative Healthcare Systems
11. SOC 57300 Human Side of Medicine
12. SOC 57400 Social Organization of Healthcare
13. SOC 57600 Health and Aging in America

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 0-19 credits

2This course may not be used to satisfy the College of Science General Education or Language & Culture requirements.

HLDS May 2010