BIOLOGY
(for students entering Biology in Fall 2010 or later)

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 Intro. to Ecology & Evolution (2 cr.; spring) or BIOL 29500, Intro. To Evolution & Ecology (2 cr.; fall)
9. One of these four options:
   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. Fifteen credits from the following: must choose at least one from each of Groups A and B, and at least one course from the Laboratory list below.

Group A:
- BIOL 39500 Macromolecules (3 cr.; fall)
- BIOL 41500 Intro. to Molecular Biology (3 cr.; fall)
- BIOL 41600 Viruses and Viral Diseases (3 cr.; spring)
- BIOL 42000 Eukaryotic Cell Biology (3 cr.; fall)
- BIOL 43600 Neurobiology (3 cr.; fall)
- BIOL 43800 General Microbiology (3 cr.; fall)
- BIOL 43900 Microbiology Lab (2 cr.; fall)
- BIOL 44400 Human Genetics (3 cr.; fall)
- BIOL 44600 Cellular Microbiology (3 cr.; spring)
- BIOL 47800 Intro to Bioinformatics (3 cr.; fall)
- BIOL 48100 Eukaryotic Genetics (3 cr.; spring)
- 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)

Group B:
- BIOL 30100 Human Anatomy & Physiology (3 cr.; fall)
- BIOL 30200 Human Anatomy & Physiology (3 cr.; spring)
- BIOL 32800 Principles of Physiology (4 cr.; spring)
- BIOL 36600 Principles of Development (4 cr.; spring)
- BIOL 43200 Reproductive Physiology (3 cr.; fall)
- BIOL 44800 Multidisciplinary Design of Systems and Devices for Physiology Measurements (2 cr.; fall)
- BIOL 48300 Environmental & Conservation Biology (3 cr.; spring)
- BIOL 49300 Intro. to Ethology (3 cr.; fall)
- BIOL 53700 Immunology (3 cr.; spring)
- HORT 30100 Plant Physiology (4 cr.; fall)

Laboratory: Choose one option:
- BIOL 43900 Microbiology Lab (2 cr.; fall)
- BIOL 44800 Multidisciplinary Design of Systems and Devices for Physiology Measurements (2 cr.; fall)

Research (494 or 499), (maximum of 3 credits) will count toward the 15 credit requirement but will not count toward the Group A or B or the laboratory requirement.

BIOL 32800 (Physiology), 36600 (Development), 39500 (Macromolecules), 43800, and 43900 may satisfy #9 above OR count as part of the 15 credit requirement (#10), but not both.

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

If both BIOL 30100 & 30200 are completed, one of the two courses will count toward 15 credit biology elective requirement. The other course will count as free elective. If only BIOL 30100 or 30200 is completed, the credits will count only as free elective credit.

If BIOL 43900 is used as part of requirement #9, the Laboratory requirement in #10 will be waived. Student must still take 15 other credits of biology.

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 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 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 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 0-24 credits

BIOL 2/11