

# BIOLOGICAL SCIENCES COURSE LIST

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This document is a guide. Course offerings are subject to change.

Check with your advisor when planning your schedule. Email [BioAdv@pitt.edu](mailto:BioAdv@pitt.edu) or schedule an appointment in Navigate.

[Course Descriptions and Sample Syllabi can be found here](#)

## ABBREVIATIONS

**Pre-requisite:** complete with grade of a C (not C-) or higher before taking the course for which it is required.

**(c) = Co-requisite:** take either before or at the same time as the course for which they are required

**(HL)** = Higher Level Course (has Foundations + additional BIOSC course as pre-req)      **(Lab)** = Lab Course

**†even** = Only offered on even years

**†odd** = Only offered on odd years

**†varies** = Years offered varies

**PLE** = a field course offered at the Pymatuning Lab of Ecology. Field courses may satisfy one and only one lab requirement.

**Writing (W):** pre-req is ENGCOMP 0200 / W's are restricted by major / W's with lab or seminar are 1 credit add-ons.

## NOTES

**BIOSC 1010:** pre-reqs are ENGCOMP 0200; BIOSC 0350 or 0370 or 1000 or 1810 or 1130; Junior or Senior Level; BIOSC major only; >16 BIOSC credits

### Repeat Notes:

- BIOSC 1070 Human Physiology (Honors) and BIOSC 1250 (Human Physiology) are considered course repeats. You cannot take both. Choose either BIOSC 1070 or BIOSC 1250.
- BIOSC 1440 (Animal Behavior) and BIOSC 1140 (Behavioral Ecology) are considered course repeats. You cannot take both for credit. Although BIOSC 1140 is a field course with an experimental component, both courses cover much of the same material.

**Biochemistry:** Biochemistry Majors are required to take BIOSC 1810+1820 and are not permitted to substitute BIOSC 1000 for this requirement. All other students may take either BIOSC 1000 or 1810+1820. BIOSC 1000 and 1810 are considered course repeats, and you cannot take both for credit. Biological Sciences, Computational Biology, or Microbiology Majors who elect to take BIOSC 1810+1820 instead of BIOSC 1000 can count BIOSC 1820 as an elective for their majors.

**Other Department Electives:** You may use ≤6 credits of the following as BIOSC electives:

NROSCI 1000, 1012 (HL), 1017 (HL); CHEM 1830 (HL); MSNBIO 2614

## BIOSC FALL TERM OFFERINGS

| Number     | Title                                                                        | Cr | Term(s)         | Pre-Req or Co-Req (c)                             |
|------------|------------------------------------------------------------------------------|----|-----------------|---------------------------------------------------|
| 0350       | Genetics                                                                     | 3  | F, Sp, Sm       | BIOSC 0160, CHEM 0120                             |
| 0357 (Lab) | Molecular Genetics Lab                                                       | 2  | F               | BIOSC 0350, BIOSC 006X or 0157 or 0267            |
| 0370       | Ecology                                                                      | 3  | F, Sp, Sm @ PLE | BIOSC 0160                                        |
| 0373       | Ecology Lab (+1 cr. 0391 W, Fall only)                                       | 2  | F, Sm @ PLE     | (c)BIOSC 0370; BIOSC 006X or 0157 or 0267         |
| 1000       | Biochemistry                                                                 | 3  | F, Sp, Sm       | BIOSC 0160, CHEM 0310                             |
| 1010 (W)   | Communicating in the Biological Sciences (W) {BIOSC Majors only}             | 2  | F, Sp, Sm       | See Notes                                         |
| 1120 (HL)  | Biostatistics                                                                | 3  | F               | BIOSC 0160, core BIOSC, STAT 1000                 |
| 1130 (HL)  | Evolution                                                                    | 3  | F, Sp           | BIOSC 0350                                        |
| 1200       | Vertebrate Morphology                                                        | 3  | F               | BIOSC 0160                                        |
| 1203 (Lab) | Vertebrate Morphology Lab                                                    | 2  | F               | (c)BIO 1200; BIOSC 006X or 0157 or 0267           |
| 1223 (Lab) | Urban Ecological Field Studies                                               | 2  | F               | BIOSC 0370, BIOSC 006X or 0157 or 0267            |
| 1250       | Human Physiology (see notes)                                                 | 3  | F, Sp, Sm       | BIOSC 0160, CHEM 0120                             |
| 1253 (Lab) | Physiology Lab                                                               | 2  | F, Sp, Sm       | (c)BIOSC 1250 or 1070; BIOSC 006X or 0157 or 0267 |
| 1275 (HL)  | Genomics                                                                     | 3  | F, Sp           | BIOSC 0350                                        |
| 1350       | Plant Biology                                                                | 3  | F†odd           | BIOSC 0160                                        |
| 1405       | Global Change                                                                | 3  | F               | BIOSC 0370                                        |
| 1445 (HL)  | Animal Communication                                                         | 3  | F               | BIOSC 0370                                        |
| 1500 (HL)  | Cell Biology                                                                 | 3  | F               | BIOSC 1000 or 1810                                |
| 1503 (Lab) | Cell Biology Lab                                                             | 2  | F               | (c)BIOSC 1500 or 1050; BIOSC 006X or 0157 or 0267 |
| 1515       | Cancer Biology                                                               | 3  | F               | BIOSC 0350                                        |
| 1540       | Computational Biology                                                        | 3  | F               | BIOSC 0160                                        |
| 1630 (W)   | Computational Biology Seminar (W) {CB Majors only}                           | 2  | F               | BIOSC 1540                                        |
| 1810       | Macromolecular Structure & Function                                          | 3  | F               | BIOSC 0160, CHEM 0320                             |
| 1850       | Microbiology                                                                 | 3  | F, Sp, Sm       | BIOSC 0160, CHEM 0120                             |
| 1853 (Lab) | Introduction to Microbiology Lab                                             | 2  | F, Sp, Sm       | (c)BIOSC 1850; BIOSC 006X or 0157 or 0267         |
| 1863 (Lab) | Microbiology Lab {Micro Majors only} (+1 cr. 1861 W)                         | 3  | F               | (c)BIOSC 1850; BIOSC 006X or 0157 or 0267         |
| 1865 (HL)  | Microbial Physiology                                                         | 3  | F               | BIOSC 1850; 1000 or 1810                          |
| 1940 (HL)  | Molecular Biology                                                            | 3  | F               | BIOSC 1000 or 1810; 0350                          |
| 1943 (Lab) | Molecular Biology Lab Writing Practicum (+1 cr. 1951 W) {MolBio Majors only} | 3  | F               | (c)BIOSC 1940; BIOSC 006X or 0157 or 0267         |
| 1999 (HL)  | Medical Microbiology                                                         | 3  | F               | BIOSC 1850                                        |

| BIOSC SPRING TERM OFFERINGS |                                                                  |    |               |                                                   |
|-----------------------------|------------------------------------------------------------------|----|---------------|---------------------------------------------------|
| Number                      | Title                                                            | Cr | Term(s)       | Pre- or Co-Req (c)                                |
| 0350                        | Genetics                                                         | 3  | F, Sp, Sm     | BIOSC 0160, CHEM 0120                             |
| 0353 (Lab)                  | Genetics Lab                                                     | 2  | Sp            | (c)BIOSC 0350; BIOSC 006X or 0157 or 0267         |
| 0370                        | Ecology                                                          | 3  | F, Sp, Sm@PLE | BIOSC 0160                                        |
| 1000                        | Biochemistry                                                     | 3  | F, Sp, Sm     | BIOSC 0160, CHEM 0310                             |
| 1003 (Lab)                  | Biochemistry Lab                                                 | 2  | Sp†varies     | (c)1000; BIOSC 006X or 0157 or 0267               |
| 1010 (W)                    | Communicating in the Biological Sciences (W) {BIOSC Majors only} | 2  | Sp, Sm, F     | See Notes                                         |
| 1050                        | Cell & Molecular Biology of Disease                              | 3  | Sp            | BIOSC 0160, CHEM 0120                             |
| 1070                        | Human Physiology (Honors) (see notes)                            | 4  | Sp            | BIOSC 0160, CHEM 0120                             |
| 1130 (HL)                   | Evolution                                                        | 3  | Sp, F         | BIOSC 0350                                        |
| 1250                        | Human Physiology (see notes)                                     | 3  | F, Sp, Sm     | BIOSC 0160, CHEM 0120                             |
| 1253 (Lab)                  | Physiology Lab                                                   | 2  | F, Sp, Sm     | (c)BIOSC 1250 or 1070; BIOSC 006X or 0157 or 0267 |
| 1275 (HL)                   | Genomics                                                         | 3  | F, Sp         | BIOSC 0350                                        |
| 1280 (HL)                   | Microbial Genetics                                               | 3  | Sp            | BIOSC 0350, 1850                                  |
| 0359 (Lab)                  | Genomics Lab                                                     | 2  | Sp            | BIOSC 0350, BIOSC 006X or 0157 or 0267            |
| 1857 (Lab)                  | Microbial Genetics Lab                                           | 2  | Sp†varies     | BIOSC 1850                                        |
| 1425                        | Sex and Gender in the Natural World                              | 3  | Sp            | BIOSC 0160                                        |
| 1435 (HL)                   | Environmental Physiology of Animals                              | 3  | Sp            | BIOSC 0370                                        |
| 1440 (HL)                   | Animal Behavior                                                  | 3  | Sp            | BIOSC 0370                                        |
| 1455 (HL)                   | Human Endocrinology                                              | 3  | Sp            | BIOSC 1250                                        |
| 1470 (HL)                   | Biophysical Chemistry                                            | 3  | Sp            | BIOSC 1000 or 1810                                |
| 1520 (HL)                   | Developmental Biology                                            | 3  | Sp            | BIOSC 0350                                        |
| 1523 (Lab)                  | Developmental Biology Lab                                        | 2  | Sp            | BIOSC 0350                                        |
| 1542 (HL)                   | Computational Genomics                                           | 3  | Sp†even       | BIOSC 1540, CS 0011                               |
| 1544 (HL)                   | Simulation and Modeling                                          | 3  | Sp†odd        | BIOSC 1540, CS 0011                               |
| 1550                        | Ecology & Evolution Seminar {E&E Majors only}                    | 1  | Sp            | BIOSC 0350, 0370, 1130                            |
| 1551 (W)                    | Ecology & Evolution Writing Practicum (W) {E&E Majors only}      | 1  | Sp            | (c) BIOSC 1550                                    |
| 1562                        | Molecular Bio Seminar {MolBio Majors only}                       | 1  | Sp            | BIOSC 1940                                        |
| 1564 (W)                    | Molecular Bio Writing Practicum {MolBio Majors only}             | 1  | Sp            | (c) BIOSC 1562                                    |
| 1570                        | Microbiology Seminar {Micro Majors only}                         | 1  | Sp            | BIOSC 1865 or 1280 or 1999                        |
| 1571 (W)                    | Microbiology Writing Practicum (W) {Micro Majors only}           | 1  | Sp            | (c) BIOSC 1570                                    |
| 1580                        | Biochemistry Seminar {Biochem Majors only}                       | 1  | Sp            | BIOSC 1820 and 1940                               |
| 1581 (W)                    | Biochemistry Writing Practicum (W) {Biochem Majors only}         | 1  | Sp            | (c) BIOSC 1580                                    |
| 1640                        | Computational Biology Research {CB Majors Only}                  | 3  | Sp            | BIOSC 1540, CS 0011                               |
| 1730 (HL)                   | Virology                                                         | 3  | Sp†even       | BIOSC 0350,1000,1850 or instructor permission     |
| 1859 (Lab)                  | Virology Lab (+1 cr. 1741 W)                                     | 2  | Sp            | BIOSC 0350, 1853 or 1863                          |
| 1760 (HL)                   | Immunology                                                       | 3  | Sp            | BIOSC 0350 and 1850                               |
| 1820 (HL)                   | Metabolic Pathways & Regulation                                  | 3  | Sp            | BIOSC 1810                                        |
| 1823 (Lab)                  | Biochemistry Lab (+1 cr. 1831 W) {Biochem Majors only}           | 3  | Sp            | (c) BIOSC 1820; BIOSC 006X or 0157 or 0267        |
| 1850                        | Microbiology                                                     | 3  | F, Sp, Sm     | BIOSC 0160, CHEM 0120                             |
| 1853 (Lab)                  | Microbiology Lab                                                 | 2  | F, Sp, Sm     | (c)BIOSC 1850; BIOSC 006X or 0157 or 0267         |
| 1945 (HL)                   | Advanced Molecular Biology                                       | 3  | Sp            | BIOSC 1940                                        |

| SPECIAL ENROLLMENT: Credits count toward degree but NOT toward any major |                                             |          |           |                                     |
|--------------------------------------------------------------------------|---------------------------------------------|----------|-----------|-------------------------------------|
| Number                                                                   | Title                                       | Cr       | Term(s)   | Pre-Req or Co-Req (c)               |
| 0047                                                                     | Anatomy Lecture with Lab                    | 4        | F, Sm     |                                     |
| 1690                                                                     | Experience in Undergraduate Teaching        | Variable | F, Sp, Sm | By arrangement only                 |
| 1900                                                                     | Biological Sciences Peer Advising           | 1        | F, Sp     | By arrangement only                 |
| 1901                                                                     | Independent Study                           | Variable | F, Sp, Sm | By arrangement only                 |
| 1903                                                                     | Undergraduate Research                      | Variable | F, Sp, Sm | By arrangement only                 |
| 1904                                                                     | Department Honors Undergraduate Research    | Variable | F, Sp, Sm | By arrangement only                 |
| 1909                                                                     | ASBMB Degree Certification Exam Preparation | 1        | Sp        | (c)1562, 1580; Biochem/Molec majors |

Scroll for more classes

| BIOSC SUMMER TERM OFFERINGS: ON PITTSBURGH CAMPUS |                                                                            |   |           |                                                   |
|---------------------------------------------------|----------------------------------------------------------------------------|---|-----------|---------------------------------------------------|
| 0350                                              | Genetics                                                                   | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120                             |
| 1000                                              | Biochemistry                                                               | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0310                             |
| 1010 (W)                                          | Communicating in the Biological Sciences (W)<br><b>{BIOSC Majors only}</b> | 2 | F, Sp, Sm | See Notes                                         |
| 1250                                              | Human Physiology (see notes)                                               | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120                             |
| 1253 (Lab)                                        | <i>Physiology Lab</i>                                                      | 2 | F, Sp, Sm | (c)BIOSC 1250 or 1070; BIOSC 006X or 0157 or 0267 |
| 1850                                              | Microbiology                                                               | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120                             |
| 1853 (Lab)                                        | <i>Microbiology Lab</i>                                                    | 2 | F, Sp, Sm | (c)BIOSC 1850; BIOSC 006X or 0157 or 0267         |

| BIOSC SUMMER TERM OFFERINGS: PYMATUNING LAB OF ECOLOGY                                                                                 |                                            |   |          |                                       |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---|----------|---------------------------------------|
| <b>Note: Class offerings vary from year to year</b><br><a href="https://www.ple.pitt.edu/courses">https://www.ple.pitt.edu/courses</a> |                                            |   |          |                                       |
| 0377                                                                                                                                   | Field Ecological Studies                   | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1140                                                                                                                                   | Field Behavioral Ecology                   | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1160                                                                                                                                   | Field Forest Ecology                       | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1170                                                                                                                                   | Field Freshwater Ecology                   | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1180                                                                                                                                   | Field Ecology of Amphibians and Reptiles   | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1230                                                                                                                                   | Field Ornithology (Ecology of Birds)       | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1270                                                                                                                                   | Field Ecology of Fish                      | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1310                                                                                                                                   | Field Wetland Ecology and Management       | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1330                                                                                                                                   | Field Botany                               | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1340                                                                                                                                   | Field Entomology                           | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1390                                                                                                                                   | Field Techniques in Ecology & Conservation | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| <b>1400 (HL)</b>                                                                                                                       | <b>Field Disease Ecology</b>               | 3 | Sm @ PLE | BIOSC 0370                            |
| 1415                                                                                                                                   | Field Mammalogy                            | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1420                                                                                                                                   | Field Wildlife Ecology and Management      | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1610                                                                                                                                   | Field Conservation Biology                 | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |

| BIOSC SUMMER TERM OFFERINGS: Yellowstone |                                         |   |    |                                        |
|------------------------------------------|-----------------------------------------|---|----|----------------------------------------|
| 1615                                     | Ecology and Conservation in Yellowstone | 3 | Sm | GEOL 0055 AND BIOSC 0835 or BIOSC 0160 |