

BIOLOGICAL SCIENCES COURSE LIST

Updated 2/23/24

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

Check with your advisor when planning your schedule. Email 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; >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

The follow courses CANNOT be used for any major in the BIOSC department: BIOSC 0041+0042, 1690, 1900, 1901, 1903, 1904, 1909

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 |
| 0352 (Lab) | Introduction to Molecular Genetics Lab | 1 | F | BIOSC 0350, BIOSC 006X |
| 0370 | Ecology | 3 | F, Sp, Sm @ PLE | BIOSC 0160 |
| 0390 | Ecology Lab (+1 cr. 0391 W, Fall only) | 1 | F, Sp†varies, Sm @ PLE | (c)BIOSC 0370; BIOSC 006X |
| 1000 | Biochemistry | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0310 |
| 1010 | Communicating in the Biological Sciences (W) | 2 | F, Sp, Sm | See Notes |
| 1120 (HL) | Biostatistics | 3 | F, Sp†varies | BIOSC 0160, core BIOSC, STAT 1000 |
| 1130 (HL) | Evolution | 3 | F, Sp | BIOSC 0350 |
| 1200 | Vertebrate Morphology | 3 | F | BIOSC 0160 |
| 1205 (Lab) | Vertebrate Morphology Lab | 1 | F | (c)BIO 1200; BIOSC 006X |
| 1221 (Lab) | Urban Ecological Field Studies | 1 | F | BIOSC 0370, BIOSC 006X |
| 1250 | Human Physiology (see notes) | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120 |
| 1255 (Lab) | Physiology Lab | 1 | F, Sp, Sm | (c)BIOSC 1250 or 1070; BIOSC 006X |
| 1275 (HL) | Genomics | 3 | F, Sp | BIOSC 0350 |
| 1350 | Plant Biology | 3 | F | BIOSC 0160 |
| 1445 (HL) | Animal Communication | 3 | F | BIOSC 0370 |
| 1500 (HL) | Cell Biology | 3 | F | BIOSC 1000 or 1810 |
| 1510 | Cell Biology Lab (+1 cr. 1511 W) | 1 | F | (c)BIOSC 1500; BIOSC 006X |
| 1540 | Computational Biology | 3 | F, Sp†varies | BIOSC 0160 |
| 1630 | 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 |
| 1855 (Lab) | Introduction to Microbiology Lab | 1 | F, Sp, Sm | (c)BIOSC 1850; BIOSC 006X |
| 1860 (Lab) | Microbiology Lab {Micro Majors only} (+1 cr. 1861 W) | 2 | F | (c)BIOSC 1850; BIOSC 006X |
| 1865 (HL) | Microbial Physiology | 3 | F | BIOSC 1850; 1000 or 1810 |
| 1940 (HL) | Molecular Biology | 3 | F | BIOSC 1000 or 1810; 0350 |
| 1950 (Lab) | Molecular Genetics Lab (+1 cr. 1951 W) | 2 | F | (c)BIOSC 1940; BIOSC 006X |
| 1999 (HL) | Medical Microbiology | 3 | F | BIOSC 1850 |

Scroll for more classes

| BIOSC SPRING TERM OFFERINGS | | | | |
|-----------------------------|--|----|------------------------|------------------------------------|
| Number | Title | Cr | Term(s) | Pre- or Co-Req (c) |
| 0350 | Genetics | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120 |
| 0351 (Lab) | Genetics Lab | 1 | Sp | (c)BIOSC 0350; BIOC 006X |
| 1005 (Lab) | Introduction to Biochemistry Lab | 1 | Sp+varies | (c)BIOSC 1000 |
| 0370 | Ecology | 3 | F, Sp, Sm@PLE | BIOSC 0160 |
| 0390 | Ecology Lab | 1 | F, Sm @ PLE, Sp+varies | (c)BIOSC 0370; BIOC 006X |
| 1000 | Biochemistry | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0310 |
| 1005 (Lab) | Introduction to Biochemistry Lab | 1 | Sp+varies | (c)1000; BIOC 006X |
| 1010 | Communicating in the Biological Sciences (W) | 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 | CHEM 0120, GPA 3.25 |
| 1120 (HL) | Biostatistics | 3 | F, Sp+varies | BIOSC 0160, core BIOC, STAT 1000 |
| 1130 (HL) | Evolution | 3 | Sp, F | BIOSC 0350 |
| 1250 | Human Physiology (see notes) | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120 |
| 1255 (Lab) | Physiology Lab | 1 | F, Sp, Sm | (c)BIOSC 1250 or 1070; BIOC 006X |
| 1275 (HL) | Genomics | 3 | F, Sp | BIOSC 0350 |
| 1280 (HL) | Microbial Genetics | 3 | Sp | BIOSC 0350, 1850 |
| 1285 (Lab) | Genomics Lab | 1 | Sp | BIOSC 0350, BIOC 006X |
| 1290 (Lab) | Genetic Engineering Lab (+1 cr. 1291 W) | 1 | Sp+varies | BIOSC 1855 or 1860 |
| 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 |
| 1530 (Lab) | Developmental Biology Lab (+1 cr. 1531 W) | 1 | Sp | (c)BIOSC 1520; BIOC 006X |
| 1540 | Computational Biology | 3 | F, Sp+varies | BIOSC 0160 |
| 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 (+1 cr. 1551 W) | 1 | Sp | BIOSC 0350, 0370, 1130 |
| 1560 | Cell & Dev Bio Seminar (+1 cr. 1561 W) | 1 | Sp | BIOSC 1500; (c)1520 |
| 1562 | Molecular Bio Seminar (+1 cr. 1563 W) | 1 | Sp | BIOSC 1940 |
| 1570 | Microbiology Seminar (+1 cr. 1571 W) | 1 | Sp | BIOSC 1865 |
| 1580 | Biochemistry Seminar (+1 cr. 1581 W) | 1 | Sp | BIOSC 1820 |
| 1640 | Computational Biology Research {CB Majors Only} | 3 | Sp | BIOSC 1540, CS 0011 |
| 1730 (HL) | Virology | 3 | Sp+even | BIOSC 0350,1000,1850 or permission |
| 1740 (Lab) | Virology Lab (+1 cr. 1741 W) | 1 | Sp | BIOSC 0350, 1855 or 1860 |
| 1760 (HL) | Immunology | 3 | Sp | BIOSC 0350, suggest 1000 |
| 1820 (HL) | Metabolic Pathways & Regulation | 3 | Sp | BIOSC 1810 |
| 1830 (Lab) | Biochemistry Lab (+1 cr. 1831 W) | 2 | Sp | (c) BIOC 1820; BIOC 006X |
| 1850 | Microbiology | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120 |
| 1855 (Lab) | Introduction to Microbiology Lab | 1 | F, Sp, Sm | (c)BIOSC 1850; BIOC 006X |
| 1945 (HL) | Advanced Molecular Biology | 3 | Sp | BIOSC 1940 |
| 1998 (HL) | Beneficial Microbes | 3 | Sp | BIOSC 1850 |

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 | Communicating in the Biological Sciences (W) | 2 | F, Sp, Sm | See Notes |
| 1250 | Human Physiology (see notes) | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120 |
| 1255 (Lab) | Physiology Lab | 1 | Sp, Sm | (c)BIOSC 1250 or 1070; BIOSC 006X |
| 1850 | Microbiology | 3 | F, Sp, Sm | BIOSC 0160, CHEM 0120 |
| 1855 (Lab) | Introduction to Microbiology Lab | 1 | F, Sp, Sm | (c)BIOSC 1850; BIOSC 006X |

BIOSC SUMMER TERM OFFERINGS: PYMATUNING LAB OF ECOLOGY

Note: Class offerings vary from year to year

<https://www.ple.pitt.edu/courses>

| | | | | |
|------------------|--|---|-----------------|---------------------------------------|
| 0370/0390 (Lab) | Ecology + Ecology Lab (Combined lecture/lab) | 4 | Sm @ PLE | BIOSC 0160; BIOSC 006X |
| 1140 | Behavioral Ecology | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1160 | Forest Ecology | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1170 | Freshwater Ecology | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1180 | Ecology of Amphibians and Reptiles | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1190 | Aquatic Entomology | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1220 | Ecological Field Studies | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1230 | Ornithology (Ecology of Birds) | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1270 | Ecology of Fish | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1310 | 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+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1360 | Ecology of Fungi | 3 | Sm @ PLE+varies | 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 |
| 1400 (HL) | Disease Ecology | 3 | Sm @ PLE | BIOSC 0370 |
| 1415 | Field Mammalogy | 3 | Sm @ PLE+varies | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1420 | Wildlife Management | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |
| 1610 | Conservation Biology | 3 | Sm @ PLE | BIOSC 0160 or BIOSC 0835 or GEOL 1641 |

SPECIAL ENROLLMENT: Credits count toward degree but NOT toward any major in the BIOSC department

| Number | Title | Cr | Term(s) | Pre-Req or Co-Req (c) |
|-----------|---|----------|-----------|---|
| 0041+0042 | Anatomy for the Health Professions with Lab | 3+1 | F, Sm | Must take lecture AND lab as co-reqs |
| 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)1560, 1562, 1580; Biochem/Molec majors |