Course Number & Title

☐ BIOL2000 Molecules & Cells (fall/spring)

☐ BIOL2010 Ecology & Evolution (fall/spring)

☐ BIOL2040 Investigations in Molecular Cell Biology Lab (fall/spring) NOTE: Taken after BIOL2000

☐ Category A: Genetics & Genomics
  One from the following:
  • BIOL3050 Genetics (fall/spring) – 4 cr
  • BIOL3060 Genetics (summer only)
  • BIOL3150 Introduction to Genomics (spring) – 4 cr

☐ Category B: Physiology & Organismal Biology
  One from the following:
  • BIOL3030 Introduction to Physiology (fall)
  • BIOL4110 Ornithology (not offered in 2022-2023)
  • BIOL4320 Developmental Biology (fall)
  • BIOL4330 Human Physiology with Lab (spring) – 4 cr
  • BIOL4450 Behavioral Ecology (spring)
  • BIOL4540 Neuroscience (spring)

☐ One Advanced Experience Course (see the listing on reverse side)
  NOTE: Undergraduate Research can be used to satisfy the Advanced Experience requirement or one biology elective only if the student completes two semesters of research in the same laboratory

☐ Choose Biology courses 3000 level or above to bring the total Biology credits to 33
  NOTE: 9 of the 33 credits may be from the approved BA elective list (or from another course preapproved by the department)

CO-REQUISITES

Chemistry
  ☐ General Chemistry 1 & 2 with Labs (CHEM1109-1110; 1111-1112)

Math
  ☐ Calculus 1 (MATH 1100) or equivalent
## 2022-2023 BIOLOGY ELECTIVES

Biology Electives are 3 credits each unless otherwise noted.

### Fall 2022

- Introduction to Physiology (BIOL3030)
- Cell Biology (BIOL3040)
- Genetics (BIOL3050) – 4 cr
- Experimental Methods in Organismal Biology (BIOL3140)
- Virology (BIOL4090)
- Inflammation and Disease (BIOL4120)
- Microbiology (BIOL4140)
- Introduction to Bioinformatics (BIOL4200)
- Human Anatomy with Lab (BIOL4260) – 4 cr
- Developmental Biology (BIOL4320)
- Vaccination and Immunity (BIOL4440)
- Principles of Immunology (BIOL4570)

### Spring 2023

- Cell Biology (BIOL3040)
- Genetics (BIOL3050) – 4 cr
- Foundations of Microbiology (BIOL3090)
- Introduction to Genomics (BIOL3150) – 4 cr
- Deep Sea Biology (BIOL4030)
- Population Genetics (BIOL4250)
- Medical Biochemistry and Metabolism (BIOL4290)
- Human Physiology with Lab (BIOL4340) – 4 cr
- Biological Chemistry (BIOL4350)
- Molecular Biology (BIOL4400)
- Behavioral Ecology (BIOL4450)
- Investigations in Biological Research (BIOL4500)
- Cancer Biology (BIOL4510)
- Neuroscience (BIOL4540)

### BIOLOGY ELECTIVES OFFERED IN OTHER DEPARTMENTS

#### Fall 2022

- Biochemistry I (CHEM 4461)
- Synthetic Biology (CHEM5513)

#### Spring 2023

- Biochemistry II (CHEM4462)
- Drug Discovery and Medicinal Chemistry (CHEM5510)

### ADVANCED EXPERIENCE COURSES

#### Fall 2022

**Seminars (3 credits)**
- Nobel Winning Res in Medicine or Physio (BIOL5010) — 2 cr
- Microbial Community Ecology (BIOL5071) — 2 cr
- Emerging Therapeutics (BIOL5075) — 2 cr
- Topics in Advanced Cell Biology (BIOL5095)
- Environmental Disruptors of Development (BIOL5130)
- Immunity and Infectious Disease (BIOL5230)
- Cancer as a Metabolic Disease (BIOL5420)
- Biology of the Nucleus (BIOL5700)

**Advanced Labs (3 credits)**
- Research in Molecular Phylogenetics (BIOL4075)
- Research in Molecular Biology Lab (BIOL4830)
- Investigations in Cellular Re-Programming (BIOL4890)
- Advanced Lab in Cell Imaging (BIOL5450) — 2 cr

#### Spring 2023

**Seminars (3 credits)**
- Nobel Winning Res in Medicine or Physio (BIOL5010) — 2 cr
- Recombinant DNA Technology (BIOL5060)
- Emerging Therapeutics (BIOL5075) — 2 cr
- Microbiome and Human Disease (BIOL5100) — 2 cr
- Vaccine Development & Public Health (BIOL5150)
- Topics in Biomechanics (BIOL5380)
- Cancer as a Metabolic Disease (BIOL5420)
- Genomics and Personalized Medicine (BIOL5430)

**Advanced Labs (3 credits)**
- Research in Molecular Biology Lab (BIOL4830)
- Research in Molecular Genetics Lab (BIOL4870)
- Advanced Lab in Cell Imaging (BIOL5450) — 2 credits

### Pre-Approved Biology BA Electives

*most courses listed below are not offered by the Biology department and offerings may change without notice*

- Microbiology for the Health Professions (BIOL2200)
- Microbiology for the Health Professions Lab (BIOL2210)
- Environmental Economics (ECON2278)
- Paleobiology (EESC3330)
- Environmental Law & Policy (ENVS2256)
- Sustainable Agriculture (ENVS3315)
- Human-Wildlife Conflicts and Co-existence (ENVS3365)
- Animals (HIST4222)
- Science and Religion in American History (HIST4891)
- Metaphysics (PHIL5529)
- Philosophy of Science (PHIL5593)
- Abnormal Psychology (PSYC2234)
- Behavioral Neuroscience (PSYC2285)
- Understanding Autism Spectrum Disorder (PSYC3339)
- Cognitive Neuroscience: Exploring Mind & Brain (PSYC3371)
- Developmental Neuroscience (PSYC3376)
- Neurobiology of Eating & Eating Disorders (PSYC3388)
- HIV, AIDS & Ethics (THEOS498)

For a list of CORE courses offered Spring 2023:
https://www.bc.edu/content/bc-web/schools/mcas/undergraduate/core-curriculum/core-requirements.html