**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)*
- BIOL3300 Human Physiology *(spring)*
- BIOL4110 Ornithology *(spring)*
- BIOL4320 Developmental Biology *(spring)*
- BIOL4450 Behavioral Ecology *(not offered in 23-24)*
- BIOL4540 Neuroscience *(fall)*

☐ 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
### 2023-2024 BIOLOGY ELECTIVES

Biology Electives are 3 credits each unless otherwise noted.

#### Fall 2023
- Introduction to Physiology (BIOL3030)
- Cell Biology (BIOL3040)
- Genetics (BIOL3050) – 4 cr
- Foundations of Microbiology (BIOL3090)
- Experimental Methods in Organismal Biology (BIOL3140)
- Evolution and Development (BIOL4050)
- Virology (BIOL4090)
- Inflammation and Disease (BIOL4120)
- Ecology in a Changing Climate (BIOL4130)
- Introduction to Bioinformatics (BIOL4200)
- Human Anatomy with Lab (BIOL4260) – 4 cr
- Biological Chemistry (BIOL4350)
- Vaccination and Immunity (BIOL4440)
- Neuroscience (BIOL4540)
- Introduction to Genomics (BIOL3150) – 4 cr
- Human Physiology (BIOL3300)
- Human Physiology Lab (BIOL3310)
- Deep Sea Biology (BIOL4030)
- Ornithology (BIOL4110)
- Microbiology (BIOL4140)
- Population Genetics (BIOL4250)
- Metabolic Regulation and Human Disease (BIOL4290)
- Developmental Biology (BIOL4320)
- Biological Chemistry (BIOL4350)
- Molecular Biology (BIOL4400)
- Cancer Biology (BIOL4510)
- Principles of Immunology (BIOL4570)

#### Spring 2024
- Cell Biology (BIOL3040)
- Genetics (BIOL3050) – 4 cr
- Introduction to Genomics (BIOL3150) – 4 cr
- Human Physiology (BIOL3300)
- Human Physiology lab (BIOL3310)
- Deep Sea Biology (BIOL4030)
- Ornithology (BIOL4110)
- Microbiology (BIOL4140)
- Population Genetics (BIOL4250)
- Metabolic Regulation and Human Disease (BIOL4290)
- Developmental Biology (BIOL4320)
- Biological Chemistry (BIOL4350)
- Molecular Biology (BIOL4400)
- Cancer Biology (BIOL4510)
- Principles of Immunology (BIOL4570)

### BIOLOGY ELECTIVES OFFERED IN OTHER DEPARTMENTS

#### Fall 2023
- Biochemistry I (CHEM 4461)

#### Spring 2024
- Biochemistry II (CHEM4462)
- Synthetic Biology (CHEM5513)

### ADVANCED EXPERIENCE COURSES

#### Fall 2023
- **Seminars (3 credits)**
  - Nobel Winning Res in Medicine or Physio (BIOL5010) — 2 cr
  - Topics in Developmental Biology (BIOL5040) (2 cr)
  - Environmental Disruptors of Development (BIOL5130)
  - Glycobiology and Human Disease (BIOL5200) — 2 cr
  - Cancer as a Metabolic Disease (BIOL5420)
  - Biology of the Nucleus (BIOL5700)

- **Advanced Labs (3 credits)**
  - Research in Evolutionary Genomics (BIOL4802)
  - Research in Molecular Biology Lab (BIOL4830)
  - Investigations in Cellular Re-Programming (BIOL4890)
  - Advanced Lab in Cell Imaging (BIOL5450) — 2 cr

- Undergraduate Research for credit (BIOL4960 or BIOL4963) 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](#), with permission from the Biology Department. Undergraduate research for credit can take place on or off campus, and requires the permission of the supervising faculty member.

#### Spring 2024
- **Seminars (3 credits)**
  - Nobel Winning Res in Medicine or Physio (BIOL5010) — 2 cr
  - Recombinant DNA Technology (BIOL5060)
  - Microbial Community Ecology (BIOL5071) — 2 cr
  - Microbiome and Human Disease (BIOL5100) — 2 cr
  - Seminar in Cellular Dynamics (BIOL5180) — 2 cr
  - Movement in Biology (BIOL5220) — 2 cr
  - Immunity and Infectious Disease (BIOL5230)
  - Topics in Nutrition and Metabolism (BIOS5250)
  - Vertebrate 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)
- History of Med. & Public Health/African American Diaspora (AADS4485)
- History of Scientific Illustration (ARTH4316)
- Environmental Economics (ECON2278)
- Paleobiology (EESC3330)
- Science Writing (ENGL2420)
- Environmental Law & Policy (ENVS2256)
- Sustainable Agriculture (ENVS3315)
- Wildlife and Society (ENVS3354)
- Forensic Science I (FOR5318)
- Animals (HIST4222)
- Science and Religion in American History (HIST4891)
- The Ethics of Global Public Health & the Common Good (PHCG3223)
- The Nature of Science (PHIL4512)
- Metaphysics (PHIL5529)
- Philosophy of Science (PHIL5593)
- Introduction to Psychopathology (PSYC2234)
- Behavioral Neuroscience (PSYC2285)
- Psychophysiology of Stress (PSYC3329)
- Understanding Autism Spectrum Disorder (PSYC3339)
- Cognitive Neuroscience: Exploring Mind & Brain (PSYC3371)
- Developmental Neuroscience (PSYC3376)
- Neurobiology of Eating & Eating Disorders (PSYC3388)
- Consumption, Health, & the Environment (SOCY3322)
- Environmental Sociology I (SOCY3562)
- HIV, AIDS & Ethics (THEO5498)

For a list of CORE courses offered Fall 2023, please visit the [website](#).