



- EBIO Upper Division Requirements:**
- EBIO Upper Division Lab (see degree audit for options)
  - EBIO 4000-level course at CU Boulder
  - Additional EBIO 4000-level course to reach a total of 6 credits 4000-level EBIO
- EBIO Electives**
- Additional EBIO courses or Approved out of department electives (see pages 2-3) are needed to reach the required 38 credits of EBIO (18 credits upper division)

## EBIO Ancillary Options

Students are required to complete 3 of the following ancillaries from any of the categories below. If there is a lab associated with the course, the lab is required.

### Math

- MATH 1212 (Data and Models)
- MATH 1150 (Precalculus)
- MATH 1310 (Calculus 1)/Math 1300/APPM 1350.
- MATH 2300 (Calculus 2) or APPM 1360
- MATH 2380 (Math for the Environment)

### Chemistry

- CHEM 1021 (Intro Chem)
- CHEM 1011 (Environmental Chem 1)
- CHEM 1113 & 1114 (Gen. Chem. 1) or 1400 & 1401
- CHEM 1133 & 1134 (General Chemistry 2)
- CHEM 3151/ATOC 3500 (Air Chem.&Pollution)
- CHEM 4141 (Environ. Water & Soil Chemistry)

### Physics

- PHYS 1010 (Physics for Everyday Life)
- PHYS 2010 (General Physics 1)/PHYS 1110
- PHYS 2020 (General Physics 2)/PHYS 1120&1140
- PHYS 3070/ENVS 3070 (Energy & The Environ.)

### Geology

- GEOL 1010 & 1030 OR 1012 & 1030 (Exploring Earth & Lab)
- GEOL 1020 (Dodos, Dinos, & Deinococcus)
- GEOL 1150 (Water, Energy & Environment)

### (Geology, continued)

- GEOL 1170 (Our Deadly Planet)
- GEOL 1180 (Our Microbial Planet)

### Geography

- GEOG 1001 (Environ. Sys.: Climate & Vegetation)
- GEOG 1011 (Environ. Sys.: Landscapes & Water)
- GEOG 2271 (Introduction to the Arctic Environment)

### Geography- GIS

- GEOG 4103 (Intro to GIS)
- GEOG 4203 (GIS: Modeling Applications)
- GEOG 4303 (GIS Programming for Spatial Analysis)
- GEOG 4603 (GIS for Social and Natural Sciences)

### Atmospheric and Oceanic Sciences

- ATOC 1060 (El Nino, Ozone, and Climate)
- ATOC 3070 (Intro to Oceanography)
- ATOC 4200 (Biogeochemical Oceanography)
- CHEM 3151/ATOC 3500 (Air Chem. & Pollution)

### Computer Science

- CSCI 1200 (The art of comp. thinking & program.)
- CSCI 1300 (CSCI 1: Starting Computing)

## Outside of EBIO Optional Electives

A maximum of 12 credit hours may be applied to the major.

Any course taken from this list will count towards your EBIO GPA.

Please check to make sure you have the prerequisites needed to be successful in the course.

### Anthropology

- ANTH 3000-Primate Behavior
- ANTH 3005- Dogs, Wolves and Human Evolution
- ANTH 3010- The Human Animal
- ANTH 4020- Explorations in Anthropology - "Ecology & Adapt. Yellowstone"
- ANTH 4060- Nutrition and Anthropology
- ANTH 4110- Human Evolutionary Biology
- ANTH 4120- Advanced Physical ANTH.
- ANTH 4170- Primate Evolutionary Biology

### Civil Engineering (CVEN)

- CVEN 3434- Intro to Applied Ecology
- CVEN 4484- Environmental Microbiology

### Biochemistry

- BCHM 4400- Core Concepts in PChem for Biochemists
- BCHM 4611- Survey of Biochemistry
- BCHM 2700 or 4700- Foundations of Biochemistry
- BCHM 4720- Metabolic Pathways & Human Disease
- BCHM 4740- Biochem of Gene Transmission, expression, & Regulation
- BCHM 4761- Biochemistry Lab

### Economics

- ECON 3535- Natural Resource Economics
- ECON 3545- Environmental Economics

## Education

- EDUC 5315- Secondary Science Ed

## Environmental Studies

- ENVS 2100- Permaculture
- ENVS 3600- Principles of Climate
- ENVS 4100- Special Topics in ENVS - "Ecology & Adapt. Yellowstone"
- ENVS 4100- Special Topics in ENVS - "Dogs, Wolves, Human Evolution"
- ENVS 4160- Intro to Biogeochemistry
- ENVS 4185- Geomicrobiology
- ENVS 4201- Biometeorology
- ENVS 4795- Field Methods in Zoology & Botany

## Geography

- GEOG 3351- Biogeography
- GEOG 3412 - Conservation Practice
- GEOG 3511- Intro to Hydrology
- GEOG 3601- Principles of Climate
- GEOG 4093- Remote Sensing-Environment
- GEOG 4201- Biometeorology
- GEOG 4203- GIS-Modeling Applications
- GEOG 4311- Watershed Biogeochemistry
- GEOG 4371- Forest Geography
- GEOG 4401- Soils Geography
- GEOG 4411- Methods of Soil Analysis
- GEOG 4501- Water Resource Manage. in the West

## Geology

- GEOL 3040- Global Change
- GEOL 3410- Paleobiology
- GEOL 3720- Evolution of Life: The Geological Record
- GEOL 4160- Introduction to Biogeochemistry
- GEOL 4185- Geomicrobiology
- GEOL 4474- Vertebrate Paleontology

## Landscape Architecture

- LAND 3103- Planting Design and Ecology

## Museum Studies

- MUSM 4473- Museum Field Methods in Botany
- MUSM 4494-Field Research: Basic Methods and New technologies
- MUSM 4795- Field Methods in Zoology & Botany
- MUSM 4915- Museum Practicum in Zoology
- MUSM 5061- Intro to Scientific Illustration

## IPHY

- IPHY 1111- Analysis of Human Movement with Smart-phone technology envs
- IPHY 2420- Nutrition, Health and Performance
- IPHY 3400- Nutrition for IPHY majors
- IPHY 3060- Cell Physiology
- IPHY 3410- Intro to Human Anatomy
- IPHY 3415- Human Anatomy Lab
- IPHY 3430- Intro to Human Physiology
- IPHY 3435- Physiology Lab
- IPHY 3450- Comp. Animal Physiology
- IPHY 3460- Comp. Vertebrate Anatomy
- IPHY 3490- Epidemiology
- IPHY 4200- Physiological Genetics
- IPHY 4440- Endocrinology
- IPHY 4470- Bio of Human Reproduction
- IPHY 4480- Comparative Reproduction
- IPHY 4600- Immunology
- IPHY 4720- Neurophysiology

## Neuroscience

- NRSC 4032- Neurobiology of Learning and Memory
- NRSC 4052- Behavioral NRSC (PSYC 4052)
- NRSC 4062- Neurobiology of Stress
- NRSC 4092- Behavioral Neuroendocrinology
- NRSC 4132-Neuropharmacology

## MCDB

- MCDB 1150/1151- Intro to MCDB & Lab
- MCDB 2150/2151- Prin. of Genetics & Lab
- MCDB 3135- Molecular Biology
- MCDB 3140- Cell Biology Lab
- MCDB 3145- Cellular Biology
- MCDB 3150- Biology of the Cancer Cell
- MCDB 3160- Emerging Infectious Diseases
- MCDB 3330- Evolution and Creationism.
- MCDB 3350- Fert/Ster/Mammal Devel.
- MCDB 3650- The Brain from Molecules to Behaviors
- MCDB 3651- Brain: Dysfunction to disease
- MCDB 3990- Intro to Systems Biology
- MCDB 4100- Special Topics
- MCDB 4185- Geomicrobiology
- MCDB 4310- Microbial Genetics & Physiology
- MCDB 4314- Algorithms for Molecular Bio.
- MCDB 4330- Bacterial Disease Mech.
- MCDB 4350- Microbial Diversity & the Biosphere
- MCDB 4425- Cell Stress Resp. & Human Diseases
- MCDB 4426- Cell Signaling & Develop. Reg.

**(MCDB Continued)**

- MCDB 4444- Cellular Basis of Disease
- MCDB 4471- Mech. of Gene Reg. in Eukaryotes
- MCDB 4501- Struc. Methods for Biological Macromolecules
- MCDB 4520- Bioinformatics & Genomics
- MCDB 4615- Biology of Stem Cells
- MCDB 4621- Genome Databases
- MCDB 4650- Developmental Biology
- MCDB 4750- Animal Virology
- MCDB 4777- Molecular Neurobiology

- MCDB 4790- Experimental Embryology
- MCDB 4810- The Biology & Biophysics of the Membrane

**Philosophy**

- Phil 3160- Bioethics
- Phil 3140- Environmental Ethics

**Psychology**

- PSYC 3102- Behavioral Genetics
- PSYC 3112- Behavioral Genetics 2
- PSYC 4052- Behavioral NRSC (NRSC 4052)