



Health Sciences Track

Ecology & Evolutionary Biology
University of Colorado at Boulder

**** Note: Tracks are intended to be advisory only, not required for graduation.
Students are encouraged to seek faculty input to formulate a final selection of courses.*

Designed for students with an interest in being admitted to a professional school in the health sciences upon graduation (e.g., Medical School, Dental School, Veterinary School, Nursing, Physical Therapy, Physician's Assistant, Child Health Associate, etc.).

EBIO Majors Fundamentals Sequence

EBIO 2050-4 Environmental Biology w/lab (or EBIO 1220/1240)
EBIO 2060-4 Cellular and Integrative Physiology w/lab (or EBIO 1210/1230)
EBIO 2070-4 Genetics: Molecules to Population w/recitation
EBIO 2080-4 Evolutionary Biology w/recitation

Area Requirement (at least one course from 2 of the 3 lists)

Environmental Biology: EBIO 3140-3 Plant Ecology, EBIO 3155-3 Population and Community Ecology, EBIO 3240-4 Animal Behavior, EBIO 4040-3 Conservation Biology, EBIO 4170-3 Ecosystem Ecology

Integrative Physiology: EBIO 3430-5 Human Physiology, EBIO 3530-5 Essentials of Plant Physiology, EBIO 3700-5 Comparative Animal Physiology

Evolution/Genetics: EBIO 3500-4 Plant Kingdom, EBIO 3520-4 Plant Systematics, EBIO 3720-5 Comparative Vertebrate Anatomy, EBIO 4650-4 Invertebrate Zoology

Ancillary Sciences and Mathematics

One year of college chemistry. Recommended: CHEM 1111-5 and CHEM 1131-5.
Also Acceptable: CHEM 1111-5 and CHEM 1071-4, or CHEM 1151-6 and CHEM 1171-6. CHEM 1211-3 and CHEN 1221-2 can substitute for CHEM 1111.

One year of college physics. Recommended: PHYS 2010-5 and PHYS 2020-5 (non-calculus based). Also acceptable: PHYS 1110-4 and PHYS 1120-4 and PHYS 1140-1 (calculus based).

One semester of college calculus. Recommended: MATH 1310-5 (computer applications). Also acceptable: MATH 1300-5 or APPM 1350-4. Math modules cannot be substituted.

Principles courses (select one sequence)

MCDB 3120-3 and 3140-2 Cell Biology w/lab AND EBIO 3700-5 Comparative Animal Physiology

OR

MCDB 3120-3 and 3140-2 Cell Biology w/lab AND EBIO 3430-5 Human Physiology (note that EBIO 3420-5 Human Anatomy is a prerequisite for Human Physiology)

Organic Chemistry sequence (CHEM 3311-4, 3321-1, 3331-4, 3341-1) is highly recommended. Note that these courses do not count toward the 38 hours required in the EBIO major.

List of Recommended Advanced Courses

Remember that the College of Arts and Sciences will subtract any hours in excess of the 45 allowed in any one department from the 120 that you need to graduate, i.e. if you have 50 hours of courses with an EBIO prefix you will need 125 hours to graduate. (Only 12 credit hours of courses taken from other departments may be applied to the EBIO major.)

Introduction to Neurobiology (EBIO 3090-3)

Microbiology (EBIO 3400-4)

Human Anatomy (EBIO 3420-5)

Biology of Human Reproduction (EBIO 3450-4)

Embryology (EBIO 3650-3), Developmental Biology lab (EBIO 3660-2)

Comparative Vertebrate Anatomy (EBIO 3720-5)

Biology of the Cancer Cell (MCDB 3150-3)

Human Molecular Genetics (MCDB 4410-3)

General Biochemistry I (CHEM 4711-3)

General Biochemistry II (CHEM 4731-3)

Mammalian Endocrinology (EBIO 4440-3)

Vertebrate Histology (EBIO 4700-5)

Critical Thinking Courses (EBIO 4800-3)

Biochemical Adaptations

Oxidative Stress and Human Health

Developmental Neurobiology

Respiratory Physiology

Environmental Physiology

Independent Research/Honors Research

For a total of 38 EBIO hours of which 18 must be upper division and 6 of the upper division must be at the 4000 level.

These 6 hours must be courses with EBIO prefix only and taken on the Boulder campus. Cannot be satisfied with EBIO 4010 or study abroad. No more than three credit hours of independent study/research will count. Up to two Critical Thinking courses in EBIO can be counted.