



Evolution and Biodiversity 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.*

Recommended for students interested in the history and diversity of life, including careers in systematics biology. Students should select courses with a view toward achieving competence in a variety of areas and depth in a subset of more narrowly defined fields.

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)

EBIO 3520-4 Plant Systematics
EBIO 3500-4 Plant Kingdom
GEOL 3720-3 Evolution of Life: The Geological Record

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.)

Analysis of Biological Sequences (MCDB 4540-3)
Microbial Diversity and the Biosphere (MCDB 4350-3)
Paleontology of Lower Vertebrates (GEOL 4470-4)
Paleontology of Higher Vertebrates (GEOL 4480-4)
Critical Thinking Courses (EBIO 4800-3)
 Ecological Genetics
 Evolution in Action
 Evolutionary Developmental Biology
 Principles of Plant Morphology
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.