

BACHELOR OF SCIENCE IN ENVIRONMENTAL BIOLOGY

The curriculum for the [bachelor of science degree in environmental biology](#) is built around a core of required courses that provides a general education, a background in the principles of biological and physical science, and an orientation to natural resources and other environmental concerns.

From this common foundation, the large number of elective credits allows each student to develop a unique plan of study, with the help of an assigned advisor who is expert in the student's general area of interest. In keeping with the hands-on, field orientation of our curriculum, students also must complete six credit hours of field experience.

Required Courses

APM 105	Survey Of Calc & Appl I	4
APM 210	Intro/Probability&Stats	3
EFB 101	Gen Bio I:Organismal Bio&Ecol	3
EFB 102	General Biology I Laboratory	1
EFB 103	Gen Bio II:Cell Bio & Genetics	3
EFB 104	General Biology II Laboratory	1
EFB 120	The Global Envirnmnt & Society	3
EFB 132	Orientation Seminar:EFB	1
EFB 202	Ecol Monitor&Bio Assessmnt	3
EFB 210	Diversity of Life I	3
EFB 211	Diversity of Life II	3
EFB 307	Principles Of Genetics	3
EFB 308	Prin Of Genetics Lab	1
EFB 311	Principles of Evolution	3
EFB 320	General Ecology	4
EFB 325	Cell Biology	3
EWP 190	Writing And The Envrnment	3
EWP 290	Research Writing & Humanities	3
FCH 150	General Chemistry I	3

FCH 151	General Chemistry I Lab	1
FCH 152	General Chemistry II	3
FCH 153	General Chemistry II Lab	1
FCH 210	Elements Of Organic Chem	4
FOR 110	Environmental Physics	3
EPH 103	Fundamentals of Physics II	3
AND		
EPH 104	Fundamentals of Physics II Lab	1
OR		
FCH 223	Organic Chemistry II	3
AND		
FCH 224	Organic Chemistry Lab II	1
OR		
APM 106	Survey Of Calc & Appl II	4

Electives

Course	Codes*	Credits
General Education Course in one of the following categories: US History & Civic Engagement, The Arts, World History and Global Awareness, World Languages	G	3
General Education Course in Diversity, Equity, Inclusion and Social Justice	G	3
Directed Electives		25
Open Electives		28

Directed Electives: UPPER DIVISION BIOLOGY-Environmental Biology

To ensure that ENB undergraduates obtain both strength and breadth of knowledge, **25 elective credit** hours in biology must be obtained through courses designed for juniors or seniors (i.e., courses numbered 300 or higher). Among them must be courses that satisfy requirements A-C (below).

A. Field Experience Elective

At least 3 elective credits must come from an approved field biology course (in addition to the core field course, EFB 202). These credits may be obtained through an elective course

at [Cranberry Lake Biological Station](#); an approved field course from another accredited institution; an approved internship (EFB 420) or independent research project (EFB498); or a field trip course (EFB 500).

Some courses at CLBS meet both field experience requirement and an organismal diversity requirement.

B. Structure and Function

At least 3 credit hours must be in the subject area of organism-level physiology, anatomy, or development. The list of available courses below may vary slightly from year to year.

- EFB 385 Comparative Vertebrate Anatomy (4 cr.) S
- EFB 427 Plant Anatomy and Development (3 cr.) F
- EFB 429 Plant Physiology (3 cr.) S
- EFB 462 Animal Physiology: Environmental and Ecological (4 cr.) F
- BIO 316 Anatomy & Physiology for Biology Majors (4 cr.) F,S (Not BIO 216)
- BIO 355 General Physiology (3 cr.) F
- BIO 447 Immunology (3 cr.) F
- BIO 503 Developmental Biology (3 cr.) S

C. Organismal Diversity

To encourage breadth in organism-level biology, students must complete at least one course from two of the four groups. (A course from each of the groups is strongly recommended).

1. Diversity of Microorganisms

- EFB 303 Introductory Environmental Microbiology (4 cr.) F
- EFB 340 Forest and Shade Tree Pathology (3 cr.) S
- EFB 342 Fungal Diversity and Ecology (3cr.) CLBS
- EFB 350 Microbial Consortia (3 cr.) S
- EFB 440 Mycology (3 cr.) F

2. Diversity of Plants

- EFB 326 Plant Evolution, Diversification and Conservation (3 cr.) S
- EFB 327 Adirondack Flora (3 cr.) CLBS
- EFB 336 Dendrology (3 cr.) F
- EFB 435 Flowering Plants: Diversity, Evolution, and Systematics (3 cr.) F
- EFB 446 Ecology of Mosses (3 cr.) S
- EFB 496 Flora of Central NY (3 cr.) **Maymester**
- EFB 496 Wetland Plants & Communities of Adirondacks (3 cr.) **CLBS**

3. Diversity of Invertebrate Animals

- EFB 351 Forest Entomology (3 cr.) F, odd years
- EFB 352 Entomology (3 cr.) F, even years
- EFB 355 Invertebrate Zoology (4 cr.) S
- EFB 453 Parasitology (3 cr.) F
- EFB 554 Aquatic Entomology (3 cr.) F
- EFB 566 Systematic Entomology (3 cr.) S, even years

4. Diversity of Vertebrate Animals

- EFB 388 Ecology of Adirondack Fishes (3 cr.) CLBS
- EFB 479 Field Ornithology (3 cr.) CLBS
- EFB 482 Ornithology (4 cr.) S
- EFB 483 Mammal Diversity (4 cr.) F
- EFB 485 Herpetology (3 cr.) S
- EFB 486 Ichthyology (3 cr.) F

Total Minimum Credits For Degree: 126

