

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 Elective¹

At least 3 elective credits must come from an approved field course in biology (this is in addition to the core field course, EFB 202). These credits may be obtained through an elective course at our Cranberry Lake Biological Station, an approved internship (EFB 420) or field trip course (EFB 500). Approved field courses from other institutions can also fulfill this 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 allowable courses below may vary slightly from year to year.

EFB 385	Comparative Vertebrate Anatomy (4 cr.)	S
EFB 427	Plant Developmental Biology (3 cr.)	F
EFB 462	Animal Physiology: Environmental and Ecological (3 cr.)	F
EFB 530	Plant Physiology (3 cr.)	S
EFB 570	Insect Physiology (3 cr.)	S
BIO 447	Immunology (3 cr.)	F
BIO 503	Developmental Biology (3 cr.)	S

C. Organismal Diversity¹

To encourage breadth in organism-level biology, **students enrolled prior to Fall, 2011 must complete at least one course from three of the four groups listed below if. Students who enrolled Fall, 2011 or later must complete a 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 440	Mycology (3 cr.)	F
EFB 441	Field Plant Pathology (3 cr.)	CLBS
EFB 442	<u>Field Mycology (3 cr.)</u>	CLBS
EFB 443	Plant Virology (3 cr.)	S

2. Diversity of Plants

EFB 326	Diversity of Plants (3 cr.)	S
EFB 336	Dendrology (3 cr.)	F
EFB 327	<u>Adirondack Flora (3 cr.)</u>	CLBS
EFB 446	Ecology of Mosses (3 cr.)	S
EFB 535	Flowering Plants: Diversity, Evolution, and Systematics (3 cr.)	F

3. Diversity of Invertebrate Animals

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

4. Diversity of Vertebrate Animals

EFB 479	Field Ornithology (3 cr.)	CLBS
EFB 482	Ornithology (4 cr.)	S
EFB 483	Mammal Diversity (4 cr.)	S
EFB 485	Herpetology (3 cr.)	F
EFB 486	Ichthyology (3 cr.)	S
EFB 488	<u>Ecology of Adirondack Fishes (3 cr.)</u>	CLBS
EFB 384	<u>Field Herpetology (3 cr.)</u>	CLBS

¹Note that some courses at CLBS (underlined) meet **both** requirement A and a diversity requirement.