

BIOLOGY: ECOLOGY & EVOLUTIONARY BIOLOGY, BA

Ecology and evolutionary biology are among the most exciting and challenging fields in biology today. The Concentration in Ecology and Evolutionary Biology provides intensive training in both areas, along with essential background in the statistical and mathematical methods essential for understanding Ecological and Evolutionary research and field practices.

The minimum total course units (<https://www.college.upenn.edu/credits-needed-major>) for graduation in this major is 36. Double majors may entail more course units.

With permission from the Undergraduate Chair, two course units away or LPS courses may count toward the Biology major. This limit does not apply to Study Abroad.

For more information: <http://www.bio.upenn.edu/undergraduate/concentrations/ecology-and-evolutionary-biology>

For information about the General Education requirements, please visit the College of Arts & Sciences Curriculum (<https://www.college.upenn.edu/curriculum>) page.

Code	Title	Course Units
College General Education Requirements and Free Electives		
Foundational Approaches + Sectors ¹ + Free Electives		18.5
Major Requirements		
<i>Introductory Biology</i>		
Select one of the following tracks:		3
Track 1:		
BIOL 121	Introduction to Biology - The Molecular Biology of Life	
BIOL 123	Introductory Molecular Biology Laboratory	
BIOL 124	Introductory Organismal Biology Lab	
BIOL 215 or BIOL 231	Vertebrate Physiology The Evolution of Animal Behavior	
Track 2:		
BIOL 101	Introduction to Biology A	
BIOL 102	Introduction to Biology B	
<i>Chemistry Requirement</i>		
Select 2 course units of Chemistry		2
<i>Physics Requirement</i>		
Select one of the following:		1.5
PHYS 101	General Physics: Mechanics, Heat and Sound	
PHYS 102	General Physics: Electromagnetism, Optics, and Modern Physics	
PHYS 150	Principles of Physics I: Mechanics and Wave Motion	
PHYS 151	Principles of Physics II: Electromagnetism and Radiation	
<i>Calculus/Statistics Requirement</i>		
MATH 104	Calculus, Part I	1

MATH 114	Calculus, Part II	1
or MATH 115	Calculus, Part II with Probability and Matrices	
Select one of the following:		1
BIOL 446	Statistics for Biologists	
STAT 102	Introductory Business Statistics	
STAT 111	Introductory Statistics	
<i>Intermediate Biology</i>		
BIOL 221	Molecular Biology and Genetics	1
BIOL 230	Evolutionary Biology	1
BIOL 240	Ecology: From individuals to ecosystems	1
<i>Ecology & Evolutionary Biology Electives</i>		
Select 4 course units of Ecology & Evolutionary Biology electives		4
<i>Research Requirement</i>		
BIOL 399	Independent Study	1
Thesis		
SURB ²		
Total Course Units		36

¹ You may count no more than one course toward both a Major and a Sector requirement. For Exceptions, check the Policy Statement (<http://www.college.upenn.edu/sectors-policy>).

² Students are required to present their research at the annual Symposium on Undergraduate Research in Biology (SURB) poster session, held at the end of the Spring Term.

Honors

Applicants must have a minimum GPA of 3.25 in the Major and the Thesis must be approved by the departmental honors committee.

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2018 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.