

Bachelor of Science in Biology

Biology—B.S.

Ecology, Evolution, and Organismal Biology subplan

This academic subplan within the B.S. Biology major focuses on the integration of biological systems at the whole organism level, and on how living organisms exist in populations, species, and communities within their environment. Core classes such as genetics, physiology, ecology, and evolutionary biology are combined with courses such as biochemistry, statistics, and systematics or organismal diversity to provide a strong foundation in biology. Students choose electives from a diverse set of classes that allow them to focus on areas of interest.

Undergraduate Admission

Admission to KU

All students applying for admission must send high school and college transcripts to the Office of Admissions. Unless they are college transfer students with at least 24 hours of credit, prospective students must send ACT or SAT scores to the Office of Admissions. Prospective first-year students should be aware that KU has qualified admission requirements that all new first-year students must meet to be admitted. Consult the Office of Admissions (<http://admissions.ku.edu>) for application deadlines and specific admission requirements.

Visit the International Support Services (<http://www.iss.ku.edu>) for information about international admissions.

Students considering transferring to KU may see how their college-level course work will transfer on the Office of Admissions (<http://credittransfer.ku.edu>) website.

Admission to the College of Liberal Arts and Sciences

Admission to the College is a different process from admission to a major field. Some CLAS departments have admission requirements. See individual department/program sections for departmental admission requirements.

First- and Second-Year Preparation

Because biology study requires preparation in other sciences, students should begin meeting major requirements in the first year. It is particularly important to take CHEM 130 and CHEM 135 in the first year and, for several majors, to take CHEM 330, CHEM 331, CHEM 335, and CHEM 336 in the second year. Ideally, most majors should also take BIOL 150 and BIOL 152 during the first year, as well as BIOL 105.

Majors and Concentrations

Bachelor's degree requirements in biology are modified as necessary. Current requirements are available in the UBP office and online (<http://www.kuub.ku.edu>). Major programs are offered in biochemistry, biology, human biology, and microbiology. Students may choose to concentrate in a range of specialties in the biological sciences, such as botany, cellular biology, developmental biology, environmental biology, ecology,

entomology, genetics, marine biology, molecular biology, neurobiology, paleontology, physiology, systematics, or zoology (invertebrate or vertebrate).

Requirements for the B.S. Degree in Biology

General Education Requirements

In addition to degree and major requirements for all plans and subplans, all students must complete the KU Core.

Ecology, Evolution, and Organismal Biology

Code	Title	Hours
General Science Requirements		
Majors must complete the following general science requirements that serve as foundational courses for this major.		
Biology Orientation Seminar. Satisfied by:		
BIOL 105	Biology Orientation Seminar	1
Chemistry I. Satisfied by one of the following:		
CHEM 130	General Chemistry I	5
CHEM 190 & CHEM 191	Foundations of Chemistry I, Honors and Foundations of Chemistry I Laboratory, Honors	
Chemistry II. Satisfied by one of the following:		
CHEM 135	General Chemistry II	5
CHEM 195 & CHEM 196	Foundations of Chemistry II, Honors and Foundations of Chemistry II Laboratory, Honors	
Organic Chemistry I. Satisfied by one of the following:		
CHEM 310	Fundamentals of Organic Chemistry	3
CHEM 330	Organic Chemistry I	
CHEM 380	Organic Chemistry I, Honors	
Introductory Biochemistry. Satisfied by:		
BIOL 600	Introductory Biochemistry, Lectures	3
Calculus. Satisfied by one of the following:		
MATH 115 & MATH 116	Calculus I and Calculus II	4-6
MATH 125	Calculus I	
MATH 145	Calculus I, Honors	
Physics I. Satisfied by one of the following:		
PHSX 114	College Physics I	4-5
PHSX 211 & PHSX 216	General Physics I and General Physics I Laboratory	
PHSX 213	General Physics I Honors	
Physics II. Satisfied by one of the following:		
PHSX 115	College Physics II	4
PHSX 212 & PHSX 236	General Physics II and General Physics II Laboratory	
PHSX 214	General Physics II Honors	

Ecology, Evolution, and Organismal Biology Requirements

Satisfied by completing 30 hours from courses below. These additional science courses are included in the Ecology, Evolution, and Organismal Biology major hours and GPA calculations.

Principles of Molecular & Cellular Biology. Satisfied by one of the following:	4
BIOL 150 Principles of Molecular and Cellular Biology	
BIOL 151 Principles of Molecular and Cellular Biology, Honors	
Principles of Organismal Biology. Satisfied by one of the following:	4
BIOL 152 Principles of Organismal Biology	
BIOL 153 Principles of Organismal Biology, Honors	
Principles of Genetics. Satisfied by one of the following:	4
BIOL 350 Principles of Genetics	
BIOL 360 Principles of Genetics, Honors	
Physiology of Organisms. Satisfied by one of the following:	3
BIOL 501 Physiological Adaptations of Plants to Extreme Environments	
BIOL 544 Comparative Animal Physiology	
Evolutionary Biology. Satisfied by:	
BIOL 412 Evolutionary Biology	4
Principles of Ecology. Satisfied by one of the following:	3
BIOL 414 Principles of Ecology	
History & Diversity of Organisms / Systematics. Satisfied by one of the following:	3
BIOL 413 History and Diversity of Organisms	
BIOL 428 Introduction to Systematics	
Introduction to Biostatistics. Satisfied by:	
BIOL 570 Introduction to Biostatistics	4
Senior Seminar in EEOB. Satisfied by:	
BIOL 599 Senior Seminar: _____ (in EEOB. Must be taken in senior year.)	1
Ecology, Evolution, and Organismal Biology Required Electives, Laboratory, and Seminar	
Satisfied by completing 18 hours of BIOL courses numbered 400 or higher, including at least 4 hrs of lab credit and 2 hrs of seminar/topics course (BIOL 419, BIOL 420, BIOL 499, BIOL 701). No more than 5 hrs of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied to the elective requirement, with no more than 2 hrs of BIOL 424 being applied to the laboratory requirement. The Undergraduate Biology Program must approve exceptions to these elective requirements.	12
Laboratory. Satisfied by completing at least 4 hrs of laboratory courses. No more than 2 hrs of BIOL 424 can count toward lab requirement.	4
Seminar. Satisfied by completing at least 2 hours of the following seminar or topics course:	2
BIOL 419 Topics in: _____	
BIOL 420 Seminar: _____	
BIOL 499 Introduction to Honors Research	
BIOL 701 Topics in: _____	

Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours

Satisfied by 48 hours of major courses.

Major Hours in Residence

Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours

Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA

Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F's and repeated courses. See the Semester/Cumulative GPA Calculator (<http://clas.ku.edu/undergrad/tools/gpa>).

Departmental Honors

Undergraduate majors are eligible to graduate with honors in biology if they fulfill the following requirements:

1. Complete all course work required for the appropriate degree in biology.
2. Achieve a minimum grade-point average of 3.25 overall and 3.5 in the major.
3. Complete BIOL 499 Introduction to Honors Research with a grade of B or higher.
4. Complete BIOL 699 Biology Honors Research Colloquium with a grade of B or higher.
5. Complete an independent research project under the supervision of a faculty member in an area appropriate to the degree sought.
6. Submit an honors thesis to the honors committee once the research is complete and present the results of the completed research at the honors research symposium.

Students majoring in Human Biology with Anthropology, Applied Behavioral Science, Psychology, or Speech-Language-Hearing concentrations will follow the honors requirements for their respective concentration department.

Specific guidelines and intent forms are available in the Undergraduate Biology Program office and online (<http://www.kuub.ku.edu>). Candidates must declare their intent to graduate with honors at least 2 semesters before graduation.

Study Abroad

Consult an advisor at least 4 months before undertaking study abroad. Consult the Office of Study Abroad (<http://www.studyabroad.ku.edu>), 108 Lippincott Hall, for information about study in one of the many countries (e.g., Scotland, Australia, Switzerland) with special arrangements with KU.