

ZOOLOGY - B.S.

College of Arts and Sciences
Department of Biological Sciences
www.kent.edu/biology

Examples of Possible Careers*

Biological science teachers, postsecondary

- 9.3% much faster than the average
- 64,700 number of jobs
- \$85,600 potential earnings

Biological technicians

- 4.9% about as fast as the average
- 87,500 number of jobs
- \$46,340 potential earnings

Natural sciences managers

- 4.8% about as fast as the average
- 71,400 number of jobs
- \$137,940 potential earnings

Zoologists and wildlife biologists

- 3.9% about as fast as the average
- 21,000 number of jobs
- \$66,350 potential earnings

Contact Information

- Program Coordinator: **Edgar Kooijman** | ekooijma@kent.edu | 330-672-8568
- Speak with an Advisor
- Chat with an Admissions Counselor

Fully Offered

- **Delivery:**
 - In person
- **Location:**
 - Kent Campus

*Note

Source of occupation titles and labor data is from the U.S. Bureau of Labor Statistics'

Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

Description

The Bachelor of Science degree in Zoology offers a modern and integrative study of animals. Students learn about individual animals, as well as populations of animals across all levels of biological organization, from genes to ecosystems. The program also focuses on animal behavior and physiology, as well as how animals evolve, contribute to biodiversity and interact with each other and their environment.

Students may seek employment immediately after graduation or continue their education in graduate or professional programs. Those entering the workforce may go on to work for national or local parks, zoos/aquaria, museums, animal research facilities, wildlife rehabilitation centers, veterinarian offices or humane societies. The Department of Biological Sciences has several mechanisms to help students prepare for their future careers.

Admission Requirements

The university affirmatively strives to provide educational opportunities and access to students with varied backgrounds, those with special talents and adult students who graduated from high school three or more years ago.

First-Year Students on the Kent Campus: First-year admission policy on the Kent Campus is selective. Admission decisions are based upon cumulative grade point average, strength of high school college preparatory curriculum and grade trends. Students not admissible to the Kent Campus may be administratively referred to one of the seven regional campus to begin their college coursework. For more information, visit the admissions website for first-year students.

First-Year Students on the Regional Campuses: First-year admission to Kent State's campuses at Ashtabula, East Liverpool, Geauga, Salem, Stark, Trumbull and Tuscarawas, as well as the Twinsburg Academic Center, is open to anyone with a high school diploma or its equivalent. Check with a regional campus admissions office to determine application requirements, as they may differ among campuses.

International Students: All international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning a minimum 525 TOEFL score (71 on the Internet-based version), minimum 75 MELAB score, minimum 6.0 IELTS score, minimum 48 PTE score or minimum 100 DET score; or by completing the ESL level 112 Intensive Program. For more information, visit the admissions website for international students.

Transfer Students: For more information, visit the admissions website for transfer students.

Former Students: Former Kent State students or graduates who have not attended another college or university since Kent State may complete the reenrollment or reinstatement form on the University Registrar's website.

Program Learning Outcomes

Graduates of this program will be able to:

1. Demonstrate an understanding of fundamental biological principles as outlined in specific courses.
2. Acquire fundamental skills necessary for laboratory and field investigations.
3. Demonstrate an understanding of proper experimental design, analysis of biological data and communication of research results.
4. Demonstrate a greater knowledge and appreciation of the role that biology plays in societal issues, such as those related to the environment, biodiversity, ethics, human health and disease.

University Requirements

All students in a bachelor's degree program at Kent State University must complete the following university requirements for graduation.

NOTE: University requirements may be fulfilled in this program by specific course requirements. Please see Program Requirements for details.

Destination Kent State: First Year Experience	1
Course is not required for students with 25 transfer credits, excluding College Credit Plus, or age 21+ at time of admission.	
Diversity Domestic/Global (DIVD/DIVG)	2 courses
Students must successfully complete one domestic and one global course, of which one must be from the Kent Core.	
Experiential Learning Requirement (ELR)	varies
Students must successfully complete one course or approved experience.	
Kent Core (see table below)	36-37
Writing-Intensive Course (WIC)	1 course
Students must earn a minimum C grade in the course.	
Upper-Division Requirement	39
Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate.	
Total Credit Hour Requirement	120

Kent Core Requirements

Kent Core Composition (KCMP)	6
Kent Core Mathematics and Critical Reasoning (KMCR)	3
Kent Core Humanities and Fine Arts (KHUM/KFA) (min one course each)	9
Kent Core Social Sciences (KSS) (must be from two disciplines)	6
Kent Core Basic Sciences (KBS/KLAB) (must include one laboratory)	6-7
Kent Core Additional (KADL)	6
Total Credit Hours:	36-37

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements (courses count in major GPA)		
BSCI 10110	BIOLOGICAL DIVERSITY (ELR) (KBS) (KLAB)	4
BSCI 10120	BIOLOGICAL FOUNDATIONS (ELR) (KBS) (KLAB)	4
BSCI 30156	ELEMENTS OF GENETICS	3
BSCI 40163	EVOLUTION	3
BSCI 40600	WRITING IN THE BIOLOGICAL SCIENCES (WIC) ¹	1
CHEM 10060	GENERAL CHEMISTRY I (KBS)	4
CHEM 10061	GENERAL CHEMISTRY II (KBS)	4
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
CHEM 20481	BASIC ORGANIC CHEMISTRY I	3-4
or CHEM 30481	ORGANIC CHEMISTRY I	
CHEM 20482	BASIC ORGANIC CHEMISTRY II	1-3
or CHEM 30475	ORGANIC CHEMISTRY LABORATORY I (ELR)	
or CHEM 30482	ORGANIC CHEMISTRY II	
MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II	3-5
or MATH 30011	BASIC PROBABILITY AND STATISTICS	
Zoology Core Electives, choose from the following:		11-12
BSCI 30140	CELL BIOLOGY	

BSCI 30171	GENERAL MICROBIOLOGY	
BSCI 30360	GENERAL ECOLOGY	
BSCI 30518	VERTEBRATE ANATOMY	
BSCI 30519	VERTEBRATE EMBRYOLOGY AND DEVELOPMENTAL ANATOMY	
BSCI 30560	INVERTEBRATE ZOOLOGY	
BSCI 30580	ENTOMOLOGY	
BSCI 40430	ANIMAL PHYSIOLOGY	
BSCI 40433	MAMMALIAN PHYSIOLOGY I	
BSCI 40434	MAMMALIAN PHYSIOLOGY II	
BSCI 40515	ANIMAL BEHAVIOR	
BSCI 40556	VERTEBRATE ZOOLOGY	
BSCI 40581	ANIMAL PARASITOLOGY	
Biology, Chemistry, Physics Electives, choose from the following: ²		26-27
Biology (BSCI) Electives ²		
CHEM 20482	BASIC ORGANIC CHEMISTRY II	
or CHEM 30482 ORGANIC CHEMISTRY II		
CHEM 30475	ORGANIC CHEMISTRY LABORATORY I (ELR)	
CHEM 30476	ORGANIC CHEMISTRY LABORATORY II	
PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	
& PHY 13021	and GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	
or PHY 23101 GENERAL UNIVERSITY PHYSICS I (KBS) (KLAB)		
PHY 13002	GENERAL COLLEGE PHYSICS II (KBS)	
& PHY 13022	and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	
or PHY 23102 GENERAL UNIVERSITY PHYSICS II (KBS) (KLAB)		

Additional Requirements (courses do not count in major GPA)		
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Foreign Language (see Foreign Language College Requirement below)		8
Kent Core Composition		6
Kent Core Humanities and Fine Arts (minimum one from each)		9
Kent Core Social Sciences (must be from two disciplines)		6
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		16
Minimum Total Credit Hours:		120

¹ A minimum C grade must be earned to fulfill the writing-intensive requirement.

² Students should select their electives in consultation with an advisor. To fulfill this elective list, students must select a minimum of one from the following courses: BSCI 30105, BSCI 40191, BSCI 40192, BSCI 40196, BSCI 40199. However, they may only select a maximum of 6 credit hours of any combination of these courses (with no more than 4 credit hours S/U graded). Enrollment in these course must be determined with a faculty advisor.

Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
2.000	2.000

Foreign Language College Requirement, B.S.

- Students pursuing the Bachelor of Science degree in the College of Arts and Sciences must complete 8 credit hours of foreign language.¹
- Minimum Elementary I and II of the same language

¹ All students with prior foreign language experience should take the foreign language placement test to determine the appropriate level at which to start. Some students may start beyond the Elementary I level and will complete the requirement with fewer credit hours and fewer courses. This may be accomplished by (1) passing a course beyond Elementary I through Intermediate II level; (2) receiving credit through one of the alternative credit programs offered by Kent State University; or (3) demonstrating language proficiency comparable to Elementary II of a foreign language. When students complete the requirement with fewer than 8 credit hours and two courses, they will complete remaining credit hours with general electives.

The following Biological Sciences (BSCI) courses may NOT be used in the elective category for majors or minors in the Department of Biological Sciences:

Code	Title	Credit Hours
BSCI 10001	HUMAN BIOLOGY (KBS)	3
BSCI 10002	LIFE ON PLANET EARTH (KBS)	3
BSCI 10003	LABORATORY EXPERIENCE IN BIOLOGY (KBS) (KLAB)	1
BSCI 10005	ANATOMY FOR VETERINARY TECHNICIANS	5
BSCI 11010	FOUNDATIONAL ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	3
BSCI 11020	FOUNDATIONAL ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	3
BSCI 16001	HORTICULTURAL BOTANY	3
BSCI 20019	BIOLOGICAL STRUCTURE AND FUNCTION	4
BSCI 20021	BASIC MICROBIOLOGY	3
BSCI 20022	BASIC MICROBIOLOGY LABORATORY	1
BSCI 21010	ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	4
BSCI 21020	ANATOMY AND PHYSIOLOGY II	4
BSCI 26002	ECOLOGICAL PRINCIPLES OF PEST MANAGEMENT	3
BSCI 26003	PLANT IDENTIFICATION AND SELECTION I	3
BSCI 26004	PLANT IDENTIFICATION AND SELECTION II	3
BSCI 30050	HUMAN GENETICS	3
BSCI 40020	BIOLOGY OF AGING	3

Roadmap

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One		Credits
!	BSCI 10110 BIOLOGICAL DIVERSITY (ELR) (KBS) (KLAB)	4
!	CHEM 10060 GENERAL CHEMISTRY I (KBS)	4
!	CHEM 10062 GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
	UC 10097 DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
	Kent Core Requirement	3
	Kent Core Requirement	3
Credit Hours		16
Semester Two		Credits
!	BSCI 10120 BIOLOGICAL FOUNDATIONS (ELR) (KBS) (KLAB)	4
!	CHEM 10061 GENERAL CHEMISTRY II (KBS)	4

!	CHEM 10063 GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
	Kent Core Requirement	3
	Kent Core Requirement	3
Credit Hours		15
Semester Three		Credits
!	BSCI 30156 ELEMENTS OF GENETICS	3
!	CHEM 20481 BASIC ORGANIC CHEMISTRY I or ORGANIC CHEMISTRY I	3-4
	CHEM 30481	
	CHEM 20482 BASIC ORGANIC CHEMISTRY II or ORGANIC CHEMISTRY LABORATORY I (ELR)	0-3
	CHEM 30475 or ORGANIC CHEMISTRY II	
	CHEM 30482	
!	MATH 12002 ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
	Kent Core Requirement	3
Credit Hours		15
Semester Four		Credits
	CHEM 20482 BASIC ORGANIC CHEMISTRY II or ORGANIC CHEMISTRY LABORATORY I (ELR)	0-3
	CHEM 30475 or ORGANIC CHEMISTRY II	
	CHEM 30482	
!	MATH 12003 ANALYTIC GEOMETRY AND CALCULUS II or BASIC PROBABILITY AND STATISTICS	3-5
	MATH 30011	
	Zoology Core Electives	7
	Kent Core Requirement	3
Credit Hours		13
Semester Five		Credits
	BSCI 40600 WRITING IN THE BIOLOGICAL SCIENCES (WIC)	1
	Foreign Language	4
	Biology, Chemistry, Physics Electives	7
	Zoology Core Electives	4
Credit Hours		16
Semester Six		Credits
	Foreign Language	4
	Biology, Chemistry, Physics Electives	9
	Kent Core Requirement	3
Credit Hours		16
Semester Seven		Credits
	BSCI 40163 EVOLUTION	3
	Biology, Chemistry, Physics Electives	7
	General Electives	3
Credit Hours		13
Semester Eight		Credits
	Biology, Chemistry, Physics Electives	3
	General Electives	13
Credit Hours		16
Minimum Total Credit Hours:		120