ZOOLEGY - 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 campuses 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

- Course is not required for students with 25 transfer credits, excluding College Credit Plus, or age 21+ at time of admission.

Diversity Domestic/Global (DIV/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

  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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>BSCI 10110</td>
<td>BIOLOGICAL DIVERSITY (ELR) (KBS) (KLAB)</td>
</tr>
<tr>
<td>BSCI 10120</td>
<td>BIOLOGICAL FOUNDATIONS (ELR) (KBS) (KLAB)</td>
</tr>
<tr>
<td>BSCI 30156</td>
<td>ELEMENTS OF GENETICS</td>
</tr>
<tr>
<td>BSCI 40163</td>
<td>EVOLUTION</td>
</tr>
<tr>
<td>BSCI 40600</td>
<td>WRITING IN THE BIOLOGICAL SCIENCES (WIC)</td>
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<tr>
<td>CHEM 10060</td>
<td>GENERAL CHEMISTRY I (KBS)</td>
</tr>
<tr>
<td>CHEM 10061</td>
<td>GENERAL CHEMISTRY II (KBS)</td>
</tr>
<tr>
<td>CHEM 10062</td>
<td>GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)</td>
</tr>
<tr>
<td>CHEM 10063</td>
<td>GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)</td>
</tr>
<tr>
<td>CHEM 20481 or CHEM 30481</td>
<td>BASIC ORGANIC CHEMISTRY I</td>
</tr>
<tr>
<td>CHEM 20482 or CHEM 30475 or CHEM 30482</td>
<td>BASIC ORGANIC CHEMISTRY II</td>
</tr>
<tr>
<td>MATH 12002</td>
<td>ANALYTIC GEOMETRY AND CALCULUS I (KMCR)</td>
</tr>
<tr>
<td>MATH 12003 or MATH 30011</td>
<td>ANALYTIC GEOMETRY AND CALCULUS II</td>
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<tr>
<td>BSCI 30140</td>
<td>CELL BIOLOGY</td>
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<tr>
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<tbody>
<tr>
<td>BSCI 30171</td>
<td>GENERAL MICROBIOLOGY</td>
</tr>
<tr>
<td>BSCI 30360</td>
<td>GENERAL ECOLOGY</td>
</tr>
<tr>
<td>BSCI 30518</td>
<td>VERTEBRATE ANATOMY</td>
</tr>
<tr>
<td>BSCI 30519</td>
<td>VERTEBRATE EMBRYOLOGY AND DEVELOPMENTAL ANATOMY</td>
</tr>
<tr>
<td>BSCI 30560</td>
<td>INVERTEBRATE ZOOLOGY</td>
</tr>
<tr>
<td>BSCI 30580</td>
<td>ENTOMOLOGY</td>
</tr>
<tr>
<td>BSCI 40430</td>
<td>ANIMAL PHYSIOLOGY</td>
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<tr>
<td>BSCI 40433</td>
<td>MAMMALIAN PHYSIOLOGY I</td>
</tr>
<tr>
<td>BSCI 40434</td>
<td>MAMMALIAN PHYSIOLOGY II</td>
</tr>
<tr>
<td>BSCI 40515</td>
<td>ANIMAL BEHAVIOR</td>
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<tr>
<td>BSCI 40556</td>
<td>VERTEBRATE ZOOLOGY</td>
</tr>
<tr>
<td>BSCI 40581</td>
<td>ANIMAL PARASITOLOGY</td>
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</tbody>
</table>

Biology, Chemistry, Physics Electives, choose from the following:

- 26-27

  Students should select their electives in consultation with an advisor.

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

Additional Requirements (courses do not count in major GPA)

- UC 10097 DESTINATION KENT STATE: FIRST YEAR EXPERIENCE

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

<table>
<thead>
<tr>
<th>Minimum Major GPA</th>
<th>Minimum Overall GPA</th>
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<tr>
<td>2.000</td>
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</table>

### 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.

- Minimum Elementary I and II of the same language
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:

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

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credits</th>
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<tbody>
<tr>
<td>! BSCI 10110</td>
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<tr>
<td>! CHEM 10060</td>
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<td>! CHEM 10062</td>
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<td>UC 10097</td>
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<table>
<thead>
<tr>
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<th>Credits</th>
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<tr>
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<td>! CHEM 10061</td>
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<thead>
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<th>Semester Three</th>
<th>Credit Hours</th>
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<tr>
<td>! BSCI 30156 ELEMENTS OF GENETICS</td>
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<tr>
<td>! CHEM 20481 BASIC ORGANIC CHEMISTRY I (KBS)</td>
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<td>! CHEM 20482 BASIC ORGANIC CHEMISTRY II (ELR) (KBS)</td>
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<td>! MATH 12003 ANALYTIC GEOMETRY AND CALCULUS I (KBS)</td>
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<th>Credit Hours</th>
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<tr>
<td>CHEM 20482 BASIC ORGANIC CHEMISTRY II (KBS)</td>
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<tr>
<td>CHEM 30475 BASIC ORGANIC CHEMISTRY LABORATORY I (ELR)</td>
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</tr>
<tr>
<td>CHEM 30482 BASIC ORGANIC CHEMISTRY II (KBS)</td>
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<td>! MATH 12003 ANALYTIC GEOMETRY AND CALCULUS II (KBS)</td>
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<td>Zoology Core Electives</td>
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<td>BSCI 40600 WRITING IN THE BIOLOGICAL SCIENCES (WIC)</td>
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<td>Foreign Language</td>
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<td>Biology, Chemistry, Physics Electives</td>
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<table>
<thead>
<tr>
<th>Semester Seven</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BSCI 40163 EVOLUTION</td>
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<td>General Electives</td>
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<td>General Electives</td>
<td>13</td>
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<tr>
<td><strong>Credit Hours</strong></td>
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Minimum Total Credit Hours: **120**