BIOLOGY - M.S.

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

Examples of Possible Careers*

Biological scientists, all other
- 2.2% slower than the average
- 44,700 number of jobs
- $85,290 potential earnings

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

Secondary school teachers, except special and career/technical education
- 3.8% about as fast as the average
- 1,050,800 number of jobs
- $62,870 potential earnings

Contact Information
- Program Coordinator: Heather Caldwell | bscigrad@kent.edu | 330-672-3636
- Chat with an Admissions Counselor

Fully Offered
- Delivery: In person
- Location: Kent Campus

Applications to the M.S. in Biology are not being accepted at this time.

*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
Applications to the M.S. in Biology are not being accepted at this time.

The Master of Science degree in Biology provides an advanced degree for students who have an undergraduate degree in biology or a related life science. The program is offered for working biologists in various professions including educators teaching science at the secondary level.

Admission Requirements
- Bachelor's degree from an accredited college or university
- Minimum 2.750 undergraduate GPA on a 4.000 point scale
- Official transcript(s)
- Goal statement
- Three letters of recommendation
- GRE scores
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning one of the following:
  - Minimum 587 TOEFL PBT score (paper-based version)
  - Minimum 94 TOEFL IBT score (Internet-based version)
  - Minimum 82 MELAB score
  - Minimum 7.0 IELTS score
  - Minimum 65 PTE score
  - Minimum 120 Duolingo English Test score

For more information about graduate admissions, please visit the Graduate Studies admission website. For more information on international admission, visit the Office of Global Education’s admission website.

Program Learning Outcomes

Graduates of this program will be able to:

1. Understand advanced biological concepts beyond the scope of the typical undergraduate degree, and increase the depth of their knowledge through coursework and hands-on experiences.
2. Apply scientific principles and appreciate work outside of their particular field.
3. Effectively communicate about science with colleagues as well as those outside of the student's area of expertise.
4. Develop the necessary laboratory skills that will allow testing of hypotheses.

Program Requirements

Major Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BSCI 60199</td>
<td>THESIS I</td>
<td>6</td>
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<tr>
<td>BSCI 50158</td>
<td>MOLECULAR BIOLOGY</td>
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<tr>
<td>BSCI 50142</td>
<td>BIOENERGETICS</td>
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<tr>
<td>BSCI 50143</td>
<td>EUKARYOTIC CELL BIOLOGY</td>
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<tr>
<td>&amp; BSCI 60144</td>
<td>and SELECTED READINGS IN EUKARYOTIC CELL BIOLOGY</td>
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<td>BSCI 50174</td>
<td>IMMUNOLOGY</td>
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<td>BSCI 50432</td>
<td>ENDOCRINOLOGY</td>
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<tr>
<td>BSCI 50163</td>
<td>EVOLUTION</td>
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<tr>
<td>BSCI 50363</td>
<td>MICROBIAL ECOLOGY</td>
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<td>BSCI 50364</td>
<td>LIMNOLOGY</td>
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<tr>
<td>BSCI 50368</td>
<td>WETLAND ECOLOGY AND MANAGEMENT</td>
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<tr>
<td>BSCI 50374</td>
<td>CONSERVATION BIOLOGY</td>
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Students interested in cell-/molecular-/biomedical-/biotechnology-related areas are encouraged to choose from the following:

- BSCI 50158 MOLECULAR BIOLOGY
- BSCI 50142 BIOENERGETICS
- BSCI 50143 EUKARYOTIC CELL BIOLOGY
- & BSCI 60144 and SELECTED READINGS IN EUKARYOTIC CELL BIOLOGY
- BSCI 50174 IMMUNOLOGY
- BSCI 50432 ENDOCRINOLOGY
- BSCI 50433 MAMMALIAN PHYSIOLOGY I
- BSCI 50434 MAMMALIAN PHYSIOLOGY II

Students interested in ecology are encouraged to choose from the following:

- BSCI 50163 EVOLUTION
- BSCI 50363 MICROBIAL ECOLOGY
- BSCI 50364 LIMNOLOGY
- BSCI 50368 WETLAND ECOLOGY AND MANAGEMENT
- BSCI 50374 CONSERVATION BIOLOGY
BSCI 50556  VERTEBRATE ZOOLOGY
BSCI 60371  EVOLUTIONARY BIOLOGY

Teachers holding or pursuing K-12 licensure are encouraged to choose from the following:

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BSCI 50163</td>
<td>EVOLUTION</td>
</tr>
<tr>
<td>BSCI 60196</td>
<td>INDIVIDUAL INVESTIGATION</td>
</tr>
<tr>
<td>BSCI 60080</td>
<td>EXPERIMENTAL METHODS IN BIOLOGY</td>
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</table>

Minimum Total Credit Hours: 32

1 After completing 6 credit hours of BSCI 60199, students must register continually for BSCI 60299 until the degree is earned.

Graduation Requirements

Teachers holding or pursuing K-12 licensure must complete a minimum of 18 credit hours of biological sciences courses toward the degree. Students holding a bachelor’s degree without K-12 licensure must complete a minimum of 23 hours of biological science courses toward the degree.

BSCI 50104 may not be used to fulfill degree requirements. Maximum 4 credit hours may be earned through workshops in the sciences and science education.

The Department of Biological Sciences frequently offers special topics classes in specialized areas of interest, which can count towards the degree when part of the approved program of study. Coursework in other fields within the natural and physical sciences may be used to meet credit hour requirements when part of the approved program of study.