**BIOLOGICAL SCIENCES - ECOLOGY AND EVOLUTIONARY BIOLOGY - PH.D.**

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

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

**Environmental science teachers, postsecondary**
- 3.7% about as fast as the average
- 7,600 number of jobs
- $84,740 potential earnings

**Natural sciences managers**
- 4.8% about as fast as the average
- 71,400 number of jobs
- $137,940 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

**Admission Terms**
- Fall

*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 Ph.D. degree in Biological Sciences—Ecology and Evolutionary Biology provides opportunities to study in areas such as animal behavior, entomology, limnology, microbial ecology, ornithology, systems ecology, systematic and evolutionary biology, environmental physiology, vertebrate ecology and population and community ecology. Although courses of study are tailored to students’ interests and needs, the program for all students normally includes training in population, community, ecosystems and evolutionary ecology and statistical theory. Because of the interdisciplinary nature of ecology, students are encouraged to take courses in geology, mathematics, chemistry and other disciplines.

**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 70104</td>
<td>BIOLOGICAL STATISTICS</td>
<td>4</td>
</tr>
<tr>
<td>BSCI 70184</td>
<td>RESPONSIBLE CONDUCT IN RESEARCH AND</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TEACHING-BIOLOGICAL SCIENCES</td>
<td>2</td>
</tr>
<tr>
<td>BSCI 70191</td>
<td>SEMINAR IN BIOLOGY (repeated each semester</td>
<td></td>
</tr>
<tr>
<td></td>
<td>until candidacy)</td>
<td>3-6</td>
</tr>
<tr>
<td>BSCI 70370</td>
<td>ECOLOGICAL AND EVOLUTIONARY GENETICS</td>
<td>2</td>
</tr>
<tr>
<td>BSCI 70371</td>
<td>EVOLUTIONARY BIOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>BSCI 70372</td>
<td>COMMUNITIES AND ECOSYSTEMS</td>
<td>2</td>
</tr>
<tr>
<td>BSCI 70373</td>
<td>POPULATION AND COMMUNITY ECOLOGY</td>
<td>2</td>
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<tr>
<td>Additional Electives</td>
<td>9-13</td>
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</table>

**Student Seminar Presentation**

**Culminating Requirement**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BSCI 80199</td>
<td>DISSERTATION I</td>
<td>30</td>
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</tbody>
</table>

**Minimum Total Credit Hours for Post-Baccalaureate Students**

| Minimum Total Credit Hours for Post-Baccalaureate Students | 90 |

**Minimum Total Credit Hours for Post-Master's Students**

| Minimum Total Credit Hours for Post-Master's Students | 60 |

1 Students are required to take BSCI 70184 their first semester (or the following fall semester for those starting their studies in the spring semester).

2 Students are required to present at least one departmental seminar about their work.

3 Each doctoral candidate, upon admission to candidacy, must register for BSCI 80199 for a total of 30 credit hours. It is expected that a doctoral candidate will continuously register for Dissertation I, and thereafter BSCI 80299, each semester, until all requirements for the degree have been met. It is expected that candidates will present the results of their research in a defense open to students and faculty, at which the dissertation will be presented and defended before the dissertation committee, with not more than one negative vote, in order to be recommended to the Department of Biological Sciences and the College of Arts and Sciences for degree conferral.

**Graduation Requirement**

Students entering the program with a bachelor’s degree must complete a minimum 20 credit hours of graduate courses beyond BSCI 80198 toward their degree. Students entering the program with a master’s degree should consult with their guidance committee to determine how many courses are required.
Candidacy for the Degree
After completing the required coursework, students complete the doctoral program by being admitted to candidacy, by proposing a research project to the faculty, and by completing and defending that research with a written dissertation before a faculty committee.

Candidacy Exams: The student is admitted to doctoral candidacy following successful completion of both written and oral candidacy examinations. These exams are based on prior coursework and coursework taken in this graduate program as determined by the student's academic Guidance Committee, which must consist of at least three eligible faculty members. The advisor(s) and a majority of members of the Guidance Committee must be members of the appropriate graduate program. This committee is responsible for determining the student's academic curriculum and for administering the candidacy exams. Following successful completion of candidacy exams, the student registers for dissertation - BSCI 80199 for two semesters and, thereafter, for BSCI 80299 continually until complete.

Prospectus: Following completion of the candidacy exam, the doctoral student must successfully prepare, present and defend a formal prospectus of the research project before his or her dissertation committee.

Dissertation and Final Defense: The doctoral candidate must complete a dissertation. It is expected that the candidate will present the results of her or his research in a defense open to students and faculty, at which the dissertation will be presented an defended before the dissertation committee, with not more than one negative vote, in order to be recommended to the department and College of Arts and Sciences for degree conferral.