Bachelor of Arts: Biology – Ecology, Evolution and Organismal Biology Emphasis (84G)

2017 -2018
58 hours

The Ecology, Evolution and Organismal Biology emphasis provides education for students interested in a career with private and governmental organizations conducting endangered species recovery, ecological restoration, biological surveys, toxicity evaluations, environmental impact analyses, field research, museum or herbarium curation, or who wish to work in zoos, nature centers, museums, or botanical gardens. This emphasis also provides suitable background for students wishing to pursue graduate degrees in animal behavior, botany, conservation biology, ecology, environmental toxicology, evolutionary biology, systematics, population biology, and zoology.

Introductory Track
____ BIOL2051 Gen Bio: Organismal Diversity, 4 hrs
____ BIOL2052 Gen Bio: Cell Structure & Function, 4 hrs
____ BIOL3100 Evolution, Ecology & the Nature of Science, 3 hrs
____ BIOL3140 Genetics, 4 hrs

Required Chemistry*
____ CHEM1110 General Chemistry I, 4 hrs
____ CHEM1120 General Chemistry II, 4 hrs

Required Chemistry Options  (choose one option)
1. ___ CHEM2040 Applied Organic & Biochem, 4 hrs
   OR
2. ___ CHEM2210 Organic Chemistry I, 3 hrs
   ____ CHEM2230 Organic Chemistry Lab, 2 hrs

Required Math  (choose one option)
1. ___ MATH1120 Math for the Biological Sciences, 3 hrs  AND ___ MATH1130 Trigonometry, 2 hrs
   OR
2. ___ MATH1140 Precalculus, 4 hrs
   OR
3. ___ MATH1420 Calculus I, 4 hrs

Required Earth Science OR Physics  (choose one course)
1. ___ EARTHSCI1300 Introduction to Geology, 4 hrs
   OR
2. ___ PHYSICS1511 General Physics I, 4 hrs

Major Electives  (21-23 hrs to equal 58 credit major)
____ BIOL3106 Vertebrate Anatomy (Fall/Spring), 4 hrs
____ BIOL3107 Environmental Physiology (Fall), 3 hrs
____ BIOL3112 Invertebrate Zoology (Spring), 4 hrs
____ BIOL3118 Marine Biology (Fall), 3 hrs
____ BIOL3120 Plant Diversity & Evolution (Spring), 4 hrs
____ BIOL3160 Field Zoology of Vertebrates (Spring), 4 hrs
____ BIOL3170 Entomology (Even Falls), 3 hrs
____ BIOL3174 Field Biology: 1-3 hrs
____ BIOL3185 Readings in Biology, 1-3 hrs
____ BIOL3190 UG Research in Biology, 1-3 hrs
____ BIOL4105 Wildlife Ecology & Management (Odd Falls), 4 hrs
____ BIOL4108 Biodiversity Conservation Policy (Even Falls), 3 hrs
____ BIOL4114 Comparative Animal Physiology (Even Falls), 4 hrs
____ BIOL4122 Plant Physiology (Spring), 4 hrs
____ BIOL4137 Vertebrate Physiology (Odd Falls), 4 hrs
____ BIOL4142 Evolutionary Biology (Spring), 3 hrs
____ BIOL4146 Developmental Biology of Animals (Fall/Spring), 4 hrs
____ BIOL4154 Aquatic Ecology (Fall), 3 hrs
____ BIOL4157 Biostatistics (Fall), 3 hrs
____ BIOL4164 Mammalogy (Fall), 4 hrs
____ BIOL4166 Plant Systematics (Fall), 4 hrs
____ BIOL4167 Conservation Biology (Spring), 3 hrs
____ BIOL4168 Ecology (Fall), 4 hrs
____ BIOL4172 Developmental Plant Anatomy (Fall), 4 hrs
____ BIOL4180 Restoration Ecology (Spring), 4 hrs
____ BIOL4198 Independent Study, 1-3 hrs
____ EARTHSCI3328 Fossils & Evolution, 4 hrs
   OR
____ GEOG3310 Geographical Info Systems, 3 hrs
   OR
____ GEOG4220 Geography of Soils, 3 hrs

Science courses at Iowa Lakeside Laboratory satisfy elective requirements. Check with your advisor for specific information

NOTES:
- Biology majors must have both a UNI cumulative and a UNI major/PLAN GPA minimum of 2.50, with a grade of C- (1.67) or higher in all courses that are applied to the major.
- A minimum of 7 credits of 4000 biology electives required. BIOL4198 Independent Study does not count toward 4000 biology elective requirement.
- At least 4 credits of biology electives at the 4000 level need to be taken at UNI.
- Cannot count more than a combined 4 credits from, BIOL3185 Readings in Biology, BIOL3190 Undergraduate Research, BIOL 4198 Independent Study to the biology major.
- If "CHEM 1130 General Chemistry I-II, 5 hrs, is taken, then 3 additional biology electives are required to reach a 58 credit major.
- Honors Research requires completion of 4 credit hours of BIOL 3190 UG Research and 1 credit hour of BIOL 3191 Senior Thesis.
## Possible Plan of Study

### Year 1 - Freshman Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL2051 Gen Bio: Organismal Diversity</td>
<td>4</td>
</tr>
<tr>
<td>CHEM1110 General Chemistry I*</td>
<td>4</td>
</tr>
<tr>
<td>Math course for major 4-5 credits*</td>
<td>4</td>
</tr>
<tr>
<td>[Calculus/Precalc/Math for Bio Sciences &amp; Trig]</td>
<td></td>
</tr>
<tr>
<td>Liberal Arts Core</td>
<td>3</td>
</tr>
<tr>
<td>*Based on ALEKS score</td>
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**TOTAL HOURS = 15**

### Year 2 - Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>BIOL3100 Evolution, Ecology &amp; Nature of Science</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Chemistry Course (4-5 hrs)</td>
<td>4</td>
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<tr>
<td>Liberal Arts Core</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts Core</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts Core</td>
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</table>

**TOTAL HOURS = 16**

### Year 3 - Junior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
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<tr>
<td>Intro to Geology OR General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>Biology Major Elective 3000 or 4000 level</td>
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</tr>
<tr>
<td>Liberal Arts Core</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts Core</td>
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</tbody>
</table>

**TOTAL HOURS = 14**

### Year 4 - Senior Year

<table>
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<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Biology Major Elective 4000 level</td>
<td>4</td>
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<tr>
<td>Liberal Arts Core</td>
<td>3</td>
</tr>
<tr>
<td>University Electives</td>
<td>9</td>
</tr>
</tbody>
</table>

**TOTAL HOURS = 16**

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1. This is a tentative long-term plan that is not meant to replace your official advisement requirements found on myUNIverse.
2. UNI Biology majors must have an UNI cumulative and UNI major GPA of 2.5 or higher, with a grade of C- (1.67) or higher in major courses.
3. University Policies & Procedures can be found online: www.uni.edu/catalog
4. After earning 85+ credits meet with your Record Analyst, Diana Harwood, in 115 Gilchrist Hall to discuss graduation.