BS with a Major in Biological Sciences—Evolution, Ecology, and Environmental Biology Concentration

Degree Requirements
To earn a Bachelor of Science in Liberal Arts and Sciences degree from UIC, students must complete university, college, and departmental degree requirements. The Department of Biological Sciences degree requirements are outlined below. Students should consult the College of Liberal Arts and Sciences section for additional degree requirements and college academic policies.

### Summary of Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Required Prerequisite and Collateral Courses</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Major Requirements</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>General Education and Electives to reach minimum Total Hours</td>
<td>52</td>
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<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td>120</td>
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</tbody>
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### General Education

See General Education and Writing-in-the-Discipline in the College of Liberal Arts and Sciences section for information on meeting these requirements. Students should consult the course lists below and their advisors to determine which courses are counted toward the General Education and Writing-in-the-Discipline requirements.

### Required Prerequisite and Collateral Courses

#### Required Courses

Select one of the following math courses:
- **MATH 170** Calculus for the Life Sciences
- **MATH 180** Calculus I
- **STAT 130** Introduction to Statistics for the Life Sciences

Select one of the following sequences in physics:
- **PHYS 131** Introductory Physics for Life Sciences I
- **PHYS 132** Introductory Physics for Life Sciences II

**OR**
- **PHYS 141** General Physics I (Mechanics)
- **PHYS 142** General Physics II (Electricity and Magnetism)

Select one of the following sequences in general chemistry:
- **CHEM 116** Honors and Majors General and Analytical Chemistry I
- **CHEM 118** Honors and Majors General and Analytical Chemistry II

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### Required Courses

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOS 110</td>
<td>Biology of Cells and Organisms</td>
<td>4</td>
</tr>
<tr>
<td>BIOS 120</td>
<td>Biology of Populations and Communities</td>
<td>4</td>
</tr>
<tr>
<td>BIOS 220</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 222</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 230</td>
<td>Evolution and Ecology</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition to required courses, students must complete one concentration chosen from General Biology; Molecular, Cellular, and Organismal Biology; or Evolution, Ecology, and Environmental Biology.

#### Concentration in Evolution, Ecology, and Environmental Biology

Required core courses:
- **BIOS 331** General Ecology Laboratory

Select at least 6 semester hours in experimental techniques and data analyses from the following:
- **BIOS 310** Genetics Laboratory
- **BIOS 336** Animal Behavior Laboratory
- **BIOS 351** Microbiology Laboratory
- **BIOS 399** Independent Research
- **BIOS 420** Genomics
- **BIOS 430** Evolution
- **BIOS 480** Introduction to Modern Biostatistics with R

Select three of the following courses in ecology and environment:

### Major Requirements

Of the 40 semester hours for the major, no more than 11 hours may be at the 100 level. At least 9 hours must be from courses designated as Experimental Techniques and Data Analyses. A minimum of 9 hours should be at the 300 and/or 400 level. No more than 5 hours of BIOS independent study and research may be counted toward the major.
BIOS 236  Animal Behavior  
BIOS 340  Environmental Physiology  
BIOS 350  General Microbiology  
BIOS 365  Human Ecological Systems  
BIOS 427  Ecosystem Ecology  
BIOS 431  Plant and Animal Interactions  
BIOS 437  Topics in Tropical Ecology  
BIOS 455  Introduction to Landscape Ecology  
BIOS 490  Topics Biological Sciences  

Select one of the following courses in evolution and genomics:  
BIOS 305  Plant Evolutionary Ecology  
BIOS 420  Genomics  
BIOS 430  Evolution  
BIOS 446  Evolution and Human Disease  
BIOS 450  Advanced Microbiology  
BIOS 490  Topics Biological Sciences  

Additional hours of BIOS elective courses to bring the total to 40 semester hours. 

Total Hours 40

a This course is approved for the Analyzing the Natural World General Education category.  
b BIOS 310, BIOS 312, BIOS 321, BIOS 323, BIOS 332, BIOS 333, BIOS 336, BIOS 351, BIOS 399, BIOS 420, BIOS 443, and BIOS 480 fulfill the Writing-in-the-Discipline requirement.  
c BIOS 420 and BIOS 430 appear in both the Evolution and Genomics and Experimental Techniques and Data Analyses lists. They may be used to satisfy either requirement, but not both.  
d BIOS 490 can only be used once to meet the Ecology/Environment or the Evolution/Genomics category with consent of advisor.  
e BIOS 399 can only be counted once to fulfill Experimental Techniques and Data Analyses credit requirements.

Recommended Plan of Study

**Course** | **Title** | **Hours**
--- | --- | ---
**First Year** |  |
**Fall Semester** |  |
ENGL 160 | Academic Writing I: Writing in Academic and Public Contexts | 3
MATH 180 | Calculus I  
or MATH 170  
or STAT 130 | 4
Select one of the following:  
CHEM 116 | Honors and Majors General and Analytical Chemistry I  
& CHEM 123 | and Foundations of Chemical Inquiry I  
General Education Requirement course | 3
**Hours** | 15
**Spring Semester** |  |
ENGL 161 | Academic Writing II: Writing for Inquiry and Research | 3
Select one of the following:  
CHEM 118 | Honors and Majors General and Analytical Chemistry II  
CHEM 124 | Chemical Dynamics  
& CHEM 125 | and Foundations of Chemical Inquiry II  
General Education Requirement course | 3
**Total Hours** | 120

a MATH 170, MATH 180, or STAT 130, individually, will satisfy the Quantitative Reasoning requirement with a grade of C or better.  
b The Analyzing the Natural World and the two additional General Education course requirements can be satisfied with four courses chosen from PHYS 131/PHYS 132, PHYS 141, PHYS 142, BIOS 110, BIOS 120 and/or CHEM 122/CHEM 123 and CHEM 124/CHEM 125.  
c To complete the degree, students must take 23 additional hours, including 9 hours in experimental techniques and data analyses and...
the biological sciences selectives/electives to meet concentration requirements (21–23 hours for EEEB). At least 9 of these 23 hours must be taken at the 300 to 400 level (excluding BIOS 391).