The Bachelor of Science major in Biology is especially appropriate for students planning graduate study. It is an extended major designed to prepare students for careers in areas which require a higher degree of concentration in subject matter and advanced-level courses. The combination of required and elective courses needs to equal a minimum of 68 credit hours.

**Introductory Track**

- ___ BIOL 2051 General Biology: Organismal Diversity, 4 hrs
- ___ BIOL 2052 General Biology: Cell Structure and Function, 4 hrs
- ___ BIOL 3100 Evolution, Ecology & the Nature of Science, 3 hrs
- ___ BIOL 3140 Genetics, 4 hrs

**Required Chemistry**

- ___ CHEM 1110 General Chemistry I, 4 hrs
- ___ CHEM 1120 General Chemistry II, 4 hrs

**Required Advanced Chemistry**

- ___ CHEM 2210 Organic Chemistry I, 3 hrs
- ___ CHEM 2220 Organic Chemistry II, 3 hrs
- ___ CHEM 2230 Organic Chemistry Lab, 2 hrs

**Required Math**

- ___ MATH 1420 Calculus I, 4 hrs

**Required Physics**

- ___ PHYSICS 1511 General Physics I, 4 hrs
- ___ PHYSICS 1512 General Physics II, 4 hrs

**Required Biology**

- ___ BIOL 4157 Biostatistics, 3 hrs
- ___ BIOL 3190 Undergraduate Research, 2 hrs

**Major Elective Credits**

(19-20 hours to total 68)

- List of biology electives attached.
- ___ CHEM 4510 Biochemistry I, 3 hrs
- ___ MATH 1421 Calculus II, 4 hrs

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

**NOTES:**

- Must have a UNI cumulative and a UNI major/Plan GPA of 2.50 or higher, 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 and CHEM4510 Biochemistry do not count toward 4000 level biology elective requirement. At least 4 credits of 4000 level biology electives need to be taken at UNI.
- BIOL 3101 Anatomy & Physiology I counts as an university elective not as a biology major elective
- Cannot count more than a **combined 4 credits** to biology electives requirement.
  - BIOL 3185 Readings in Biology
  - BIOL 3190 Undergraduate Research
  - BIOL 4198 Independent Study
- If *CHEM 1130 General Chemistry I-II, 5 hrs, is taken, then 3 additional biology electives are required to reach a 68 credit major.
- Students invited to do Honors Research will complete 4 credit hours of BIOL 3190 Undergraduate Research and 1 credit hour of BIOL 3191 Senior Thesis. Students must declare the HONORS EMPHASIS in order for it to reflect on the degree.
BIOL 3100 Evolution, Ecology & Nature of Science (Fall/Spring) 3 hrs
BIOL 3102 Anatomy & Physiology II* (Fall/Spring), 4 hrs
BIOL 3106 Vertebrate Anatomy (Fall/Spring), 4 hrs
BIOL 3107 Environmental Physiology (Fall), 3 hrs
BIOL 3108 Vertebrate Histology (Even Springs), 4 hrs
BIOL 3112 Invertebrate Zoology (Spring), 4 hrs
BIOL 3118 Marine Biology (Fall), 3 hrs
BIOL 3120 Plant Diversity and Evolution (Spring), 4 hrs
BIOL 3140 Genetics (Spring/Fall), 4 hrs
BIOL 3147 Cancer and Emerging Infectious Diseases (Spring), 3 hrs
BIOL 3151 General Microbiology (Fall/Spring), 4 hrs
BIOL 3160 Field Zoology of Vertebrates (Spring), 4 hrs
BIOL 3170 Entomology (Even Falls), 3 hrs

BIOL 4105 Wildlife Ecology & Mngmt (Odd Falls), 4 hrs
BIOL 4108 Biodiversity Conservation Policy & Regs (Even Falls), 3 hrs
BIOL 4114 Comparative Animal Physiology# (Even Falls), 4 hrs
BIOL 4116 Neurobiology (Spring), 3 hrs
BIOL 4121 Plant Biotechnology (Odd Falls), 4 hrs
BIOL 4122 Plant Physiology (Spring), 4 hrs
BIOL 4127 Bioinformatics Applications for Biology, (Even Springs), 3 hrs
BIOL 4128 Cell Biology# (Spring), 4 hrs
BIOL 4129 Genomics & Proteomics (Even Falls), 3 hrs
BIOL 4137 Vertebrate Physiology# (Odd Falls), 4 hrs
BIOL 4142 Evolutionary Biology (Spring), 3 hrs
BIOL 4144 Virology (Even Springs), 4 hrs
BIOL 4146 Developmental Biology of Animals (Fall/Spring), 4 hrs
BIOL 4150 Immunology (Fall/Spring), 4 hrs
BIOL 4152 Microbial Molecular Bio (Odd Springs), 4 hrs
BIOL 4153 Recombinant DNA Tech (Even Falls), 4 hrs
BIOL 4154 Aquatic Ecology (Fall), 3 hrs
BIOL 4157 Biostatistics (Fall), 3 hrs
BIOL 4164 Mammalogy (Fall), 4 hrs
BIOL 4166 Plant Systematics (Fall), 4 hrs
BIOL 4167 Conservation Biology (Spring), 3 hrs
BIOL 4168 Ecology (Fall), 4 hrs
BIOL 4172 Developmental Plant Anatomy (Fall), 4 hrs
BIOL 4176 Microscopy Methods in Biology, 3 hrs
BIOL 4180 Restoration Ecology (Spring), 4 hrs
BIOL 4198 Independent Study****

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Research Associated Credits
BIOL 3185 Readings in Biology, 1-3 hrs
BIOL 3189 Seminar, 1 hr
BIOL 3190 Undergraduate Research Biology, 1-3 hrs***

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

Full course details at: uni.edu/catalog

NOTES:
1. Prerequisite for 3000 level courses include completion of: BIOL 2052, BIOL 2051, CHEM 1110 and CHEM 1120. All with a with C- or higher

2. Prerequisite for 4000 level courses include junior standing and completion of
   a. Two semester sequence of General Biology and General Chemistry (listed above)
   b. BIOL3100 Evolution, Ecology and Nature of Science and BIOL3140 Genetics. All with a with C- or higher
   c. Courses with # have additional prerequisites. Check course catalog for complete details.

3. * BIOL 3101 A & P I counts as university elective credit. A student must take BIOL 3101 Anatomy and Physiology I OR BIOL 3106 Vertebrate Anatomy and BIOL 3102 Anatomy and Physiology II at UNI for BIOL 3102 to be counted as biology elective credit for the major or minor.

4. ***Undergraduate Research in Biology -- Students must contact faculty members to inquire about available research opportunities

5. The official degree requirements and policies and procedures can be found at: www.uni.edu/catalog

6. Students pursuing a biology major or minor must earn a C- or better in all coursework required for their major and must have a UNI Major/Plan GPA and UNI Cumulative GPA of 2.5 or better at the time of graduation
Bachelor of Science: Biology

Possible Plan of Study

<table>
<thead>
<tr>
<th>Year 1-Freshman Year</th>
<th>Year 1-Freshman Year</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>MATH1140 Precalculus (university elective)*</td>
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<tr>
<td>Liberal Arts Core</td>
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<tr>
<td>*Based on ALEKS score</td>
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<td>TOTAL HOURS = 15</td>
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<th>Year 2-Sophomore Year</th>
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<tr>
<td>BIOL3140 Genetics</td>
<td>4</td>
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<tr>
<td>CHEM2210 Organic Chemistry I</td>
<td>3</td>
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<td>CHEM2230 Organic Chemistry Lab</td>
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<tr>
<td>Liberal Arts Core</td>
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<tr>
<td>Liberal Arts Core</td>
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<td>University Electives</td>
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<td>TOTAL HOURS = 16</td>
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<th>Year 3-Junior Year</th>
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<tr>
<td>BIOL4157 Biostatistics</td>
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<tr>
<td>PHYSICS 1511 General Physics I</td>
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<tr>
<td>BIOL3190 Undergraduate Research</td>
<td>1</td>
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<td>Liberal Arts Core</td>
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<td>University Electives</td>
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<td>TOTAL HOURS = 15</td>
<td>TOTAL HOURS = 16</td>
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<tr>
<th>Year 4-Senior Year</th>
<th>Year 4-Senior Year</th>
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<tbody>
<tr>
<td>Biology Major Elective 4000 Level</td>
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<tr>
<td>Biology Major Elective 3000 or 4000 Level</td>
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<tr>
<td>Biology Major Elective 3000 or 4000 level</td>
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<tr>
<td>Liberal Arts Core</td>
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<tr>
<td>University Electives</td>
<td>3</td>
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<tr>
<td>TOTAL HOURS = 17</td>
<td>TOTAL HOURS = 16</td>
</tr>
</tbody>
</table>

1. This is a tentative long-term plan that is not meant to replace your official advisement report found on myUNIverse.
2. Biology majors must have UNI cumulative & UNI major/plan 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.