Bachelor of Science in Biology - Biomedical Emphasis

Program Curriculum

120 credits

DSU General Education Requirements

All DSU General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements, but courses must be equivalent to DSU’s minimum General Education standards in American Institutions, English, and Mathematics.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<td></td>
<td><strong>English</strong></td>
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<tr>
<td></td>
<td><strong>Mathematics</strong></td>
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<td></td>
<td><strong>Life Sciences</strong></td>
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<td><strong>Physical Sciences</strong></td>
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<td><strong>Literature/Humanities</strong></td>
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<td><strong>Exploration</strong></td>
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<tr>
<td>BIOL 1610</td>
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<td>and Principles of Biology II Lab</td>
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<td>Evolution</td>
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**Mathematics & Physical Science Requirements**

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<td>and Principles of Chemistry II Lab</td>
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<td>Organic Chemistry I</td>
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<td>and Organic Chemistry I Lab</td>
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<td>CHEM 2320</td>
<td>Organic Chemistry II</td>
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<td>&amp; CHEM 2325</td>
<td>and Organic Chemistry II Lab</td>
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<td>CHEM 3510</td>
<td>Biochemistry I</td>
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<td>Calculus I (MA)</td>
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Complete one (1) of the following series of courses:

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<tr>
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<td>and College Physics II</td>
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<td>and College Physics II Lab</td>
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<td>or PHYS 2210</td>
<td>Physics/Scientists Engineers I (PS)</td>
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<td>&amp; PHYS 2215</td>
<td>and Physics/Scientists Engineers Lab (LAB)</td>
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<td>&amp; PHYS 2220</td>
<td>and Physics/Scientists Engineers Lab</td>
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<td>&amp; PHYS 2225</td>
<td>and Physics/Scientists Engineers I</td>
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**Additional Biology Requirements**
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<tr>
<td>BIOL 2320 &amp; BIOL 2325</td>
<td>Human Anatomy and Human Anatomy Lab</td>
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<td>BIOL 2420 &amp; BIOL 2425</td>
<td>Human Physiology and Human Physiology Lab</td>
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<tr>
<td>or BIOL 4500 &amp; BIOL 4505</td>
<td>Comparative Vertebrate Physiology and Comparative Vertebrate Physiology Lab</td>
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<tr>
<td>BIOL 3150 &amp; BIOL 3155</td>
<td>Biostatistics and the Scientific Method and Biostatistics and the Scientific Method Lab</td>
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<td>BIOL 3450 &amp; BIOL 3455</td>
<td>General Microbiology and General Microbiology Lab</td>
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<td>or BIOL 3550 &amp; BIOL 3555</td>
<td>Eukaryotic Cell Biology and Eukaryotic Cell Biology Lab</td>
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<tr>
<td>BIOL 4040</td>
<td>Medical Ecology</td>
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<tr>
<td>BIOL 4910 or BIOL 4920</td>
<td>Senior Seminar I or Senior Seminar II</td>
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**Social & Behavioral Sciences**

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<th>Course Title</th>
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<tr>
<td>PSY 3400</td>
<td>Psychology of Abnormal Behavior</td>
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<td>PSY 3460</td>
<td>Health Psychology</td>
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<tr>
<td>PSY 3710</td>
<td>Behavioral Neuroscience</td>
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**Biology Electives**

Complete 12 credits from the following or from any upper-division BIOL course listed above not already used to fulfill a requirement. At least 4 credits must have a BIOL prefix.

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<td>BIOL 3000R</td>
<td>Rural Health Scholars</td>
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<td>BIOL 3040 &amp; BIOL 3045</td>
<td>General Ecology and General Ecology Lab</td>
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<td>BIOL 3100</td>
<td>Bioethics</td>
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<td>BIOL 3110</td>
<td>Scientific Writing</td>
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<td>BIOL 3140 &amp; BIOL 3145</td>
<td>Comparative Vertebrate Anatomy and Comparative Vertebrate Anatomy Lab</td>
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<td>BIOL 3200 &amp; BIOL 3205</td>
<td>Invertebrate Zoology and Invertebrate Zoology Lab</td>
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<td>BIOL 3230R</td>
<td>Cadaver Practicum</td>
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<td>BIOL 3250</td>
<td>Cancer Biology</td>
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<td>BIOL 3360</td>
<td>Developmental Biology</td>
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<td>BIOL 4040</td>
<td>Medical Ecology</td>
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<tr>
<td>BIOL 4190 &amp; BIOL 4195</td>
<td>Mammalian Histology and Mammalian Histology Lab</td>
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<td>BIOL 4440</td>
<td>General Entomology</td>
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<tr>
<td>BIOL 4520 &amp; BIOL 4525</td>
<td>Psychobiology and Psychobiology Lab</td>
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<td>BIOL 4930R</td>
<td>Senior Thesis</td>
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<tr>
<td>PSY 3040</td>
<td>Psychology of Gender</td>
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<tr>
<td>PSY 3200</td>
<td>Development in Infancy &amp; Childhood</td>
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<tr>
<td>PSY 3220</td>
<td>Adolescence and Emerging Adulthood</td>
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<td>PSY 3230</td>
<td>Adult Development &amp; Aging</td>
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<tr>
<td>PSY 3400</td>
<td>Psychology of Abnormal Behavior</td>
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<tr>
<td>PSY 3410</td>
<td>Social Psychology</td>
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<tr>
<td>PSY 3420</td>
<td>Psy of Culture &amp; Diversity</td>
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<tr>
<td>PSY 3440</td>
<td>Child &amp; Family Mental Health</td>
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<tr>
<td>PSY 3450</td>
<td>Intro to Child Life Theory &amp; Practice</td>
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<tr>
<td>PSY 3460</td>
<td>Health Psychology</td>
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<td>PSY 3720</td>
<td>Psychopharmacology</td>
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<td>PSY 4130</td>
<td>Interpersonal Neuroscience</td>
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<tr>
<td>PSY 4140</td>
<td>Cognitive Neuroscience</td>
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</table>
### Bachelor of Science in Biology - Biomedical Emphasis

<table>
<thead>
<tr>
<th>PSY 4145</th>
<th>Cognitive Neuroscience of Attention</th>
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<tbody>
<tr>
<td>PSY 4150</td>
<td>Sensation &amp; Perception</td>
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<tr>
<td>PSY 4440</td>
<td>Addiction</td>
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<tr>
<td>CHEM 3510</td>
<td>Biochemistry I</td>
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<td>and Biochemistry I Lab</td>
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<tr>
<td>CHEM 3520</td>
<td>Biochemistry II</td>
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<tr>
<td>&amp; CHEM 3525</td>
<td>and Biochemistry II Lab</td>
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### Graduation Requirements
1. Complete a minimum of 120 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits (3000 and above).
3. Complete at least 30 upper-division credits at DSU for institutional residency.
4. Cumulative GPA 2.0 or higher.
5. Grade C or higher required (not C-) in each Program Requirement, Core Discipline Requirement, and Biology Elective Requirement course.
6. Maximum 6 total credits of BIOL 4810R, BIOL 4820R, BIOL 4830R, and/or BIOL 4930R may be used toward Biology requirements.

### Graduation Plan

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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<td><strong>1st Year</strong></td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>BIOL 1610 &amp; BIOL 1615</td>
<td>Principles of Biology I (LS) and Principles of Biology I Lab (LAB) (meets General Education (Life Sciences and Lab Science) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext))</td>
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<tr>
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<td>Principles of Chemistry I (PS) and Principles of Chemistry I Lab (LAB) (meets General Education (Physical Sciences) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext))</td>
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<td>ENGL 1010</td>
<td>Introduction to Writing (EN)</td>
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<td>SSC 1010</td>
<td>Trailblazer Connections</td>
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<tr>
<td>BIOL 1620 &amp; BIOL 1625</td>
<td>Principles of Biology II and Principles of Biology II Lab</td>
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<td>Principles of Chemistry II and Principles of Chemistry II Lab</td>
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<td>Calculus I (MA) (meets General Education (Mathematics) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext))</td>
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<td>BIOL 3030</td>
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<td>Organic Chemistry I and Organic Chemistry I Lab</td>
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<td>College Physics I (PS) (meets General Education (Exploration) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)) or Physics/Scientists Engineers I (PS) and Physics/Scientists Engineers Lab (LAB)</td>
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<td>Organic Chemistry II and Organic Chemistry II Lab</td>
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<td>ENGL 2010</td>
<td>Interm Writing Selected Topics: (EN)</td>
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Bachelor of Science in Biology - Biomedical Emphasis

<table>
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<th>Course Code</th>
<th>Course Title and Notes</th>
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<tr>
<td>PSY 1010</td>
<td>General Psychology (SS, GC) (meets General Education (Social &amp; Behavioral Sciences)) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)</td>
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### 3rd Year

#### Fall Semester

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<td>Biostatistics and the Scientific Method</td>
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<td>and Biostatistics and the Scientific Method Lab</td>
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<td>BIOL 3450</td>
<td>General Microbiology</td>
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<td>&amp; BIOL 3455</td>
<td>or Eukaryotic Cell Biology and Eukaryotic Cell Biology Lab</td>
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<td>or BIOL 3550 &amp; BIOL 3555</td>
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<td>General Education (Fine Arts) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)</td>
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#### Spring Semester

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<tr>
<td>BIOL 2320</td>
<td>Human Anatomy</td>
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<td>and Human Anatomy Lab</td>
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<td>PHYS 2020</td>
<td>College Physics II</td>
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<td>&amp; PHYS 2025</td>
<td>or College Physics II and Physics/Scientists Engineers II Lab</td>
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<td>or PHYS 2020 &amp; PHYS 2225</td>
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<tr>
<td>PSY 3400</td>
<td>Psychology of Abnormal Behavior</td>
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<td></td>
<td>Biology Elective</td>
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### 4th Year

#### Fall Semester

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<tr>
<td>BIOL 2420</td>
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<td>&amp; BIOL 2425</td>
<td>or Comparative Vertebrate Physiology and Comparative Vertebrate Physiology Lab</td>
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<td>or BIOL 4500 &amp; BIOL 4505</td>
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<td>CHEM 3510</td>
<td>Biochemistry I</td>
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<td>Hours</td>
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#### Spring Semester

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<tr>
<td>BIOL 4920</td>
<td>Senior Seminar II</td>
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<td>PSY 3710</td>
<td>Behavioral Neuroscience</td>
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<td>BIOL Electives</td>
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<td>General Education Literature / Humanities (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)</td>
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Total Hours: 120