Biological Sciences Education

Department Information

• Department Location:
  Katherine Kilbourne Burgum Family Life, 4-H Center
• Department Phone:
  701-231-7921
• Department Web Site:
  www.ndsu.edu/education/
• Credential Offered:
  B.S.; B.A.
• Plan Of Study Sample:
  bulletin.ndsu.edu/programs-study/undergraduate/biological-sciences-education/#planofstudytext

Major Requirements

Major: Biological Sciences Education

Degree Type: B.A. or B.S.
Minimum Degree Credits to Graduate: 122

University Degree Requirements

1. Satisfactory completion of all requirements of the curriculum in which one is enrolled.
2. Earn a minimum total of 120 credits in approved coursework. Some academic programs exceed this minimum.
3. Satisfactory completion of the general education requirements as specified by the university.
4. A minimum institutional GPA of 2.00 based on work taken at NDSU.
5. At least 36 credits presented for graduation must be in courses number 300 or higher.
6. Transfer Students: Must earn a minimum of 60 credits from a baccalaureate-degree granting or professional institution.
   a. Of these 60, at least 36 must be NDSU residence credits as defined in #7.
   b. Within the 36 resident credits, a minimum of 15 must be in courses numbered 300 or higher and 15 credits in the major field of study.
7. At least 36 credits must be NDSU resident credits. Residence credits include credits registered and paid for at NDSU.

For complete information, please refer to the Degree and Graduation Requirements (http://bulletin.ndsu.edu/past-bulletin-archive/2019-20/academic-policies/undergraduate-policies/degree-and-graduation) section of this Bulletin.

University General Education Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 110</td>
<td>College Composition I</td>
<td>12</td>
</tr>
<tr>
<td>ENGL 120</td>
<td>College Composition II</td>
<td></td>
</tr>
<tr>
<td>COMM 110</td>
<td>Fundamentals of Public Speaking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upper Division Writing †</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quantitative Reasoning (R) †</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Science and Technology (S) †</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Humanities and Fine Arts (A) †</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Social and Behavioral Sciences (B) †</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Wellness (W) †</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Cultural Diversity (D) †</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Global Perspectives (G) †</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 39

* May be satisfied by completing courses in another General Education category.
† General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review major requirements to determine if specific courses can also satisfy these general education categories.
A list of university approved general education courses and administrative policies are available here (http://bulletin.ndsu.edu/past-bulletin-archive/2019-20/academic-policies/undergraduate-policies/general-education/#genedcoursestext).

### Major Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Biological Sciences Education Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>BIOL 189</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ENGL 324</td>
<td>Writing in the Sciences (May satisfy general education category C)</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 105</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 105L</td>
<td>and Physical Geology Lab (May satisfy general education category G)</td>
<td></td>
</tr>
<tr>
<td>MATH 146</td>
<td>Applied Calculus I (May satisfy general education category R)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Teaching Specialty Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>BIOC 260</td>
<td>Elements of Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 124</td>
<td>Environmental Science</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 124L</td>
<td>and Environmental Science Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL 150</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 150L</td>
<td>and General Biology I Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL 151</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 151L</td>
<td>and General Biology II Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL 220</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 220L</td>
<td>and Human Anatomy and Physiology I Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL 221</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 221L</td>
<td>and Human Anatomy and Physiology II Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL 252</td>
<td>Plant and Animal Diversity</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 315</td>
<td>Genetics</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 315L</td>
<td>and Genetics Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL 364</td>
<td>General Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 359</td>
<td>Evolution</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 491</td>
<td>Seminar (Capstone)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Botany, Biology, Zoology Elective</strong></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>300-400 Level Elective</td>
<td></td>
</tr>
<tr>
<td>BIOL 370</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 121</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 121L</td>
<td>and General Chemistry I Laboratory</td>
<td></td>
</tr>
<tr>
<td>CHEM 122</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 122L</td>
<td>and General Chemistry II Laboratory</td>
<td></td>
</tr>
<tr>
<td>CHEM 240</td>
<td>Survey of Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 106</td>
<td>The Earth Through Time</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 106L</td>
<td>and The Earth Through Time Lab</td>
<td></td>
</tr>
<tr>
<td>PHYS 211</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 211L</td>
<td>and College Physics I Laboratory</td>
<td></td>
</tr>
<tr>
<td>PHYS 212</td>
<td>College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 212L</td>
<td>and College Physics II Laboratory</td>
<td></td>
</tr>
<tr>
<td>STAT 330</td>
<td>Introductory Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Professional Education Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>EDUC 321</td>
<td>Introduction to Teaching</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 322</td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 451</td>
<td>Instructional Planning, Methods and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 481</td>
<td>Classroom Practice Methods of Teaching I: (Science)</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 485</td>
<td>Student Teaching Seminar</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 486</td>
<td>Classroom Management for Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 487</td>
<td>Student Teaching</td>
<td>9</td>
</tr>
<tr>
<td>EDUC 488</td>
<td>Applied Student Teaching</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 489</td>
<td>Teaching Students of Diverse Backgrounds</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td>114</td>
</tr>
</tbody>
</table>
BIOL 189 is only required for first-time, first-year students—A first-time, first-year student is defined as a student who has not yet completed a college course as a college student. Students that are not first-time, first-year students that either transfer into the university or change their major are not required to take BIOL 189.

**Degree Requirements and Notes**

- Courses taken P/F may not be used to satisfy any requirements.
- GPA of 2.75 or better in the teaching specialty is required for placement in student teaching and exit from the program.
- A grade of ‘C’ or better is required in all Professional Education Requirement courses.
- A GPA of 2.75 or better in professional education as well as passing the appropriate Praxis II exam are required to exit the program.
- See School of Education (https://www.ndsu.edu/education) for admission requirements.