BIOLOGICAL SCIENCES MAJOR

Students must also complete the Undergraduate Registration Requirement (https://catalogs.northwestern.edu/undergraduate/requirements-policies/undergraduate-registration-requirement) and the degree requirements of their home school.

### Course Title

**Program Courses (10 units):**

8 core courses (6.02 units):

- **BIOL_SCI 215-0** Genetics and Molecular Biology
- **BIOL_SCI 217-0** Physiology
- **BIOL_SCI 219-0** Cell Biology
- **BIOL_SCI 220-0** Genetics and Molecular Processes Laboratory (0.34 units)
- **BIOL_SCI 221-0** Cellular Processes Laboratory (0.34 units)
- **BIOL_SCI 222-0** Investigative Laboratory (0.34 units)
- **BIOL_SCI 301-0** Principles of Biochemistry
- **BIOL_SCI 341-0** Population Genetics
  or **BIOL_SCI 342-0** Evolutionary Processes

1 300-level BIOL SCI elective

3 courses from one of the concentration areas:

- Biochemistry and Biophysics (p. 1)
- Cell Biology and Physiology (p. 1)
- Genetics and Genomics (p. 1)
- Molecular and Developmental Neurobiology (p. 1)
- Plant Biology (p. 1)

### Related Courses

- **CHEM 132-0** General Chemistry 2
  or **CHEM 152-0** Accelerated General Chemistry 2
  or **CHEM 172-0** Advanced General Physical Chemistry
- **CHEM 210-1** Organic Chemistry
  & **CHEM 210-2** and Organic Chemistry
  or **CHEM 212-1** and Organic Chemistry
  & **CHEM 212-2** and Organic Chemistry
- **MATH 214-0** Single Variable Calculus III
  or **MATH 224-0** Integral Calculus of One-Variable Functions

1 statistics course - **STAT 202-0** recommended

### Concentration Courses

#### Biochemistry and Biophysics

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIOL_SCI 323-0</td>
<td>Bioinformatics: Sequence and Structure Analysis</td>
</tr>
<tr>
<td>BIOL_SCI 361-0</td>
<td>Protein Structure and Function</td>
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<tr>
<td>BIOL_SCI 363-0</td>
<td>Biophysics</td>
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#### Cell Biology and Physiology

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<tr>
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<tbody>
<tr>
<td>BIOL_SCI 315-0</td>
<td>Advanced Cell Biology</td>
</tr>
<tr>
<td>BIOL_SCI 325-0</td>
<td>Animal Physiology</td>
</tr>
</tbody>
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1 course chosen from:

- **BIOL_SCI 327-0** Biology of Aging
  or **BIOL_SCI 328-0** Microbiology
  or **BIOL_SCI 344-0** Anatomy of Vertebrates
  or **BIOL_SCI 355-0** Immunobiology
  or **BIOL_SCI 356-0** Endocrinology
  or **BIOL_SCI 358-0** Advanced Physiology Laboratory

#### Genetics and Genomics

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<tr>
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<tbody>
<tr>
<td>BIOL_SCI 390-0</td>
<td>Advanced Molecular Biology</td>
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</tbody>
</table>

2 courses chosen from:

- **BIOL_SCI 378-0** Functional Genomics
- **BIOL_SCI 392-0** Developmental Genetics Laboratory
- **BIOL_SCI 393-0** Genetic Analysis
- **BIOL_SCI 395-0** Molecular Genetics

1 At least 1 must be **BIOL_SCI 378-0** Functional Genomics or **BIOL_SCI 393-0** Genetic Analysis

#### Molecular and Developmental Neurobiology

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<tr>
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<tbody>
<tr>
<td>BIOL_SCI 302-0</td>
<td>Fundamentals of Neurobiology</td>
</tr>
<tr>
<td>BIOL_SCI 303-0</td>
<td>Molecular Neurobiology</td>
</tr>
</tbody>
</table>

1 course chosen from:

- **BIOL_SCI 305-0** Neurobiology Laboratory
  or **BIOL_SCI 307-0** Brian Structure, Function, and Evolution
  or **BIOL_SCI 326-0** Neurobiology of Learning and Memory

#### Plant Biology

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIOL_SCI 330-0</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL_SCI 349-0</td>
<td>Plant Community Ecology</td>
</tr>
</tbody>
</table>

1 course chosen from:

- **BIOL_SCI 336-0** Spring Flora
  or **BIOL_SCI 339-0** Critical Flora in Ecology and Conservation
  or **BIOL_SCI 346-0** Field Ecology
  or **BIOL_SCI 350-0** Plant Evolution and Diversity Lab

### Honors in Biological Sciences

Majors with strong academic records and an interest in pursuing honors must register for **BIOL_SCI 397-0** Senior Thesis Colloquium in Winter Quarter of Senior Year.

Seniors may be recommended to the college for graduation with honors if they have completed at least 2 quarters of **BIOL_SCI 397-0** Senior Thesis Colloquium.
Thesis Colloquium, BIOL_SCI 398-0 Tutorial in Biology or BIOL_SCI 399-0 Independent Research, have written an approved honors thesis based on their independent study, and have sufficiently high grades.

For more information consult the biological sciences website and see the Honors in the Major (https://catalogs.northwestern.edu/undergraduate/arts-sciences/#academicoptionstext).