Biology, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2024-2025. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 120

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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### General Education Requirements

**English Composition**

See Academic Regulation 3.5 (http://catalog.okstate.edu/university-academic-regulations/#english-composition)

ENGL 1113  Composition I  3
or ENGL 1313  Critical Analysis and Writing I  3

Select one of the following:

ENGL 1213  Composition II  3
ENGL 1413  Critical Analysis and Writing II  3
ENGL 3323  Technical Writing  3

**American History & Government**

HIST 1103  Survey of American History  3
or HIST 1483  American History to 1865 (H)  3
or HIST 1493  American History Since 1865 (DH)  3

POLS 1113  American Government  3

**Analytical & Quantitative Thought (A)**

STAT 4013  Statistical Methods I (A)  3
or STAT 2013  Elementary Statistics (A)  3
or STAT 3023  Statistical Reasoning for Medical Applications (A)  3

MATH 1813  Preparation for Calculus (A) (or higher)  3

**Humanities (H)**

Courses designated (H)  6

### Natural Sciences (N)

Must include one Laboratory Science (L) course

PHYS 1114  College Physics I (LN)  4
or PHYS 2014  University Physics I (LN)  4

PHYS 1214  College Physics II (LN)  4
or PHYS 2114  University Physics II (LN)  4

### Social & Behavioral Sciences (S)

Course designated (S)  3

### Additional General Education

Courses designated (A), (H), (N), or (S)  6

### Hours Subtotal  41

### Diversity (D) & International Dimension (I)

May be completed in any part of the degree plan

Select at least one Diversity (D) course

Select at least one International Dimension (I) course

### College/Departmental Requirements

**First Year Seminar**

(Transfer students with 15 hours exempt)  1

**Arts & Humanities**

### Core Courses

BIOI 1113  Introductory Biology (N)  4
& BIOI 1111  and Introductory Biology Laboratory (LN)  4
or BIOI 1114  Introductory Biology (LN)  4

BIOI 1604  Animal Biology  4

BIOI 3023  General Genetics  3

BIOI 3034  General Ecology  4

BIOI 4133  Evolution  3

MICR 2123  Introduction to Microbiology  3

MICR 2132  Introduction to Microbiology Laboratory  2

MICR 3033  Cell and Molecular Biology  3

PBIO 1404  Plant Biology (LN)  4

Select 9 hours upper-division coursework from: BIOI, MICR, PBIO (excluding general education courses)  9

### Related Courses

Physiology, choose from:

BIOI 3204  Physiology (or)  4

PBIO 4463  Plant Physiology  3
& PBIO 4462  and Plant Physiology Laboratory  2

### Organic Chemistry, choose from:

CHEM 3013  Survey of Organic Chemistry  4
& CHEM 3012  and Survey of Organic Chemistry Laboratory  4

CHEM 3053  Organic Chemistry I  4
& CHEM 3112  and Organic Chemistry Laboratory  2
& CHEM 3153  and Organic Chemistry II  4

### Supplemental Courses

Select 9 hours upper-division coursework from at least 2 different prefixes from the following (no more than 3 hours of general education in the natural sciences):  9

ANSI 3543  Principles of Animal Nutrition  3

ENGL 3323  Technical Writing  3

HDFS 4813  Dying, Death and Bereavement  3

HLTH 3113  Health Issues in Diverse Populations (D)  3

HLTH 3603  Understanding HIV (DS)  3

HLTH 3723  Principles of Epidemiology  3

HHP 4063  Neuroanatomy  3

HIST 3323  History of Medicine (H)  3

PHIL 3733  Environmental Ethics (H)  3

PHIL 3833  Biomedical Ethics (H)  3

See note 2.a.

**Natural & Mathematical Sciences**

CHEM 1314  Chemistry I (LN)  4
CHEM 1515  Chemistry II (LN)  5

**Foreign Language**

See note 3  0

0-6 hours

**Upper-Division General Education**

Select 6 hours outside major department  6

See note 2.c.

### Hours Subtotal  13

**Major Requirements**

Minimum GPA 2.50 in Major Requirements OR minimum grade of “C” in each course.

### Core Courses

BIOI 1113  Introductory Biology (N)  4
& BIOI 1111  and Introductory Biology Laboratory (LN)  4
or BIOI 1114  Introductory Biology (LN)  4

BIOI 1604  Animal Biology  4

BIOI 3023  General Genetics  3

BIOI 3034  General Ecology  4

BIOI 4133  Evolution  3

MICR 2123  Introduction to Microbiology  3

MICR 2132  Introduction to Microbiology Laboratory  2

MICR 3033  Cell and Molecular Biology  3

PBIO 1404  Plant Biology (LN)  4

Select 9 hours upper-division coursework from: BIOI, MICR, PBIO (excluding general education courses)  9

### Related Courses

Physiology, choose from:

BIOI 3204  Physiology (or)  4

PBIO 4463  Plant Physiology  3
& PBIO 4462  and Plant Physiology Laboratory  2

### Organic Chemistry, choose from:

CHEM 3013  Survey of Organic Chemistry  4
& CHEM 3012  and Survey of Organic Chemistry Laboratory  4

CHEM 3053  Organic Chemistry I  4
& CHEM 3112  and Organic Chemistry Laboratory  2
& CHEM 3153  and Organic Chemistry II  4

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ENGL 3323  Technical Writing  3

HDFS 4813  Dying, Death and Bereavement  3

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HLTH 3603  Understanding HIV (DS)  3

HLTH 3723  Principles of Epidemiology  3

HHP 4063  Neuroanatomy  3

HIST 3323  History of Medicine (H)  3

PHIL 3733  Environmental Ethics (H)  3

PHIL 3833  Biomedical Ethics (H)  3
PHIL 4713 Philosophy of Science (H)
PHIL 4733 Philosophy of Biology (H)
POLS 4363 Environmental Law And Policy
PSYC 3073 Neurobiological Psychology (N)
PSYC 3443 Psychopathology (S)
PSYC 4263 Affective Neuroscience
SOC 4153 Sociology of Health and Illness
SOC 4433 Environmental Sociology (S)
SOC 4453 Environmental Inequality (S)

Or from BIOL, CHEM, ENTO, ENVIR, GEOG, GEOL, HORT, MATH, NREM, PHYS, PLINT, PLP, SOIL, and STAT

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<tr>
<th>Hours Subtotal</th>
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<tr>
<th>Electives</th>
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Select 9 hours

MATH 1513 required for students who do not place directly into MATH 1813.

May need to include 6 hours of a foreign language (see note 3).

May need to include 6 hours upper-division general education outside major department (see note 2.c.) and 7 additional upper-division hours.

<table>
<thead>
<tr>
<th>Hours Subtotal</th>
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<tr>
<th>Total Hours</th>
<th>120</th>
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1 College and Departmental Requirements that may be used to meet General Education Requirements.

2 With approval from the advisor and department head and a minimum GPA of 3.0, a maximum of 30 hours from an accredited doctoral health program may be substituted for electives or major requirements other than BIOL 3023 General Genetics and BIOL 4133 Evolution.

### Other Requirements

- See the College of Arts and Sciences Requirements.
- Minimum GPA 2.00 in all BIOL courses.
- **Upper-Division Credit:** Total hours must include at least 40 hours in courses numbered 3000 or above.

### College of Arts and Sciences Requirements

1. **Hours in One Department:** For B.A. and B.S. degrees, no more than 54 hours in one department may be required to meet degree requirements. Courses used to satisfy the General Education English Composition, U.S. History, American Government, and Mathematics or Statistics requirements will not count toward the 54-hour maximum required from one department.

2. **A&S College/Departmental Requirements**

   a. Arts and Humanities are defined as any course carrying an (H) designation or courses from AMST, ART, DANC, ENGL (except ENGL 3323 Technical Writing) HIST, MUSI, PHIL (except PHIL 1313 Logic and Critical Thinking (A), PHIL 3003 Symbolic Logic (A) and PHIL 4003 Mathematical Logic and Computability), REL, TH, and foreign languages.

   b. Natural and Mathematical Sciences are defined as any course from the following prefixes: ASTR, BIOL, BIOL, CHEM, CS (except CS 4883 Social Issues in Computing), GEOL, MATH, MICR, PBIO, PHYS, and STAT; or courses from other departments that carry an (A) or (N) general education designation.

   c. Six upper-division hours are required from General Education or any CAS courses outside the student’s major department (http://catalog.okstate.edu/college-arts-sciences-major-departments/). This requirement may be satisfied by courses also used to satisfy any part of a student’s degree program (i.e., in General Education, College Departmental Requirements, Major Requirements or Electives).

   d. Non-Western Studies Requirement for B.A. and B.F.A.; One course in Non-Western Studies (N.W.). This requirement may be satisfied by courses also used to satisfy any part of a student’s degree program (i.e., in General Education, College Departmental Requirements, Major Requirements or Electives).

   e. The College of Arts & Sciences requires a minimum 2.0 GPA in all major requirements and a minimum 2.0 GPA in all major-prefix courses applied to the degree.

3. **Foreign Language Proficiency**

   a. The foreign language requirement for the B.A. may be satisfied by 9 hours college credit in the same language, which must include 3 hours at the 2000-level, or equivalent proficiency (e.g., passing an advanced standing examination; TOEFL exam; presenting a high school transcript which demonstrates the high school was primarily conducted in a language other than English; etc.).

   b. The foreign language requirement for the B.S., B.M. and B.F.A. may be satisfied by presenting a high school transcript which demonstrates two years of study of a single foreign language (passing grades at second-year level of study). It may also be satisfied by 6 hours college credit in the same language, which must include language courses 1713 and 1813, or equivalent proficiency (e.g., passing an advanced standing examination; TOEFL exam; presenting a high school transcript which demonstrates the high school was primarily conducted in a language other than English; etc.).

   c. In addition to a. and b., students pursuing teacher certification must meet novice-high foreign language proficiency by presenting a high school transcript which demonstrates two years of study of a single foreign language with no grade below B. Or, students may complete 3 hours college credit in a single language with no grade below C (or pass an advanced standing examination, College Level Examination Program (CLEP) exam, or Oral Proficiency Interview developed by the American Council on the Teaching of Foreign Languages, equivalent to 3 hours of college credit.) Or, students may meet the requirement by transfer of documentation of meeting the foreign language competency from one of the teacher education programs in the State of Oklahoma approved by the Oklahoma State Regents for Higher Education.

4. **Exclusions.** Courses with ATHL or LEIS prefixes and leisure activity courses may not be used for degree credit.

### Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
• Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.

• Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.

• Degrees that follow this plan must be completed by the end of Summer 2030.

Example Plan of Study
Finish in Four Plan of Study

The plan below is an example of how students can successfully complete degree requirements in four years. This suggested class schedule plan may be used as a guide and can be adjusted based on individual needs. Students are required to meet with an academic advisor prior to enrollment each semester to plan their class schedule, and students are ultimately responsible for completing all degree requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>Freshman</td>
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<td>Fall</td>
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<tr>
<td>First Year Seminar</td>
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<tr>
<td>BIOL 1113 &amp; BIOL 1111</td>
<td>Introductory Biology (N) and Introductory Biology Laboratory (LN)</td>
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<td>MATH 1813</td>
<td>Preparation for Calculus (A)</td>
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<td>General Education courses</td>
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<tr>
<td>Hours</td>
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<tr>
<td>Spring</td>
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<tr>
<td>BIOL 1604</td>
<td>Animal Biology</td>
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<tr>
<td>CHEM 1314</td>
<td>Chemistry I (LN)</td>
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<tr>
<td>General Education courses</td>
<td>7</td>
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<tr>
<td>Hours</td>
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<tr>
<td>Sophomore</td>
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<td>Fall</td>
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<tr>
<td>CHEM 1515</td>
<td>Chemistry II (LN)</td>
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<tr>
<td>MICR 2123 &amp; MICR 2132</td>
<td>Introduction to Microbiology and Introduction to Microbiology Laboratory</td>
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<tr>
<td>General Education courses</td>
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<tr>
<td>Hours</td>
<td>15</td>
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<td>BIOL 3034</td>
<td>General Ecology</td>
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<td>PBIO 1404</td>
<td>Plant Biology (LN)</td>
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<td>MICR 3033</td>
<td>Cell and Molecular Biology</td>
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<td>Hours</td>
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<tr>
<td>Junior</td>
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<td>Fall</td>
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<tr>
<td>CHEM 3053 or CHEM 3013 and CHEM 3012</td>
<td>Organic Chemistry I or Survey of Organic Chemistry and Survey of Organic Chemistry Laboratory</td>
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<tr>
<td>PHYS 1114</td>
<td>College Physics I (LN)</td>
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<td>Major or Elective courses</td>
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<td>Hours</td>
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<td>Spring</td>
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<tr>
<td>BIOL 3204 or PBIO 4462 and PBIO 4463</td>
<td>Physiology or Plant Physiology Laboratory and Plant Physiology</td>
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<tr>
<td>PHYS 1214 or CHEM 3153 and CHEM 3112</td>
<td>College Physics II (LN) or Organic Chemistry II and Organic Chemistry Laboratory</td>
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General Education or Supplemental courses

| Hours | 15 |
| Senior | |
| Fall | |
| BIOL 3023 | General Genetics | 3 |
| PHYS 1214 | College Physics II (LN) (if taking CHEM 3153 and CHEM 3112) | 4 |
| General Education, Major, or Supplemental courses | 8 |
| Hours | 15 |
| Spring | |
| BIOL 4133 | Evolution | 3 |
| General Education, Major, or Supplemental courses | 12 |
| Hours | 15 |
| Total Hours | 120 |

1 Speak with academic advisor about saving General Education electives and Humanities (H) for Upper-division courses with International (I) and Diversity (D) dimensions.