### BIOLOGY: PRE-MEDICAL SCIENCES, BS

Requirements for Students Matriculating in or before Academic Year 2019-2020. Learn more about University Academic Regulation 3.1 ([http://catalog.okstate.edu/university-academic-regulations/#matriculation](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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</thead>
<tbody>
<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
<td></td>
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<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
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<tr>
<td>or ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
<td></td>
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<tr>
<td>or ENGL 3323</td>
<td>Technical Writing</td>
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<tr>
<td>HIST 1103</td>
<td>Survey of American History</td>
<td>3</td>
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<tr>
<td>or HIST 1483</td>
<td>American History to 1865 (H)</td>
<td></td>
</tr>
<tr>
<td>or HIST 1493</td>
<td>American History Since 1865 (DH)</td>
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<tr>
<td>POLS 1113</td>
<td>American Government</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1613</td>
<td>Trigonometry (A) (or higher)</td>
<td>3</td>
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<tr>
<td>STAT 4013</td>
<td>Statistical Methods I (A)</td>
<td>3</td>
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<tr>
<td>or STAT 2013</td>
<td>Elementary Statistics (A)</td>
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**General Education Requirements**

**English Composition**

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

**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)

**Analytical & Quantitative Thought (A)**

- MATH 1613 Trigonometry (A) (or higher) (3)
  - or MATH 2014 University Physics I (LN) (4)

**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)

**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.

- At least one Diversity (D) course
- At least one International Dimension (I) course

**College/Departmental Requirements**

- **First Year Seminar**  
  (Transfer students with 15 hours exempt) (1)
- **Arts & Humanities**  
  (See note 2.a.) (3)
- **Natural & Mathematical Sciences**

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1114</td>
<td>Introductory Biology (LN)</td>
<td>4</td>
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<tr>
<td>BIOL 1604</td>
<td>Animal Biology</td>
<td>4</td>
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<tr>
<td>BIOL 3023</td>
<td>General Genetics</td>
<td>3</td>
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<tr>
<td>BIOL 3034</td>
<td>General Ecology</td>
<td>4</td>
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<tr>
<td>BIOL 4133</td>
<td>Evolution</td>
<td>3</td>
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<tr>
<td>MICR 2123</td>
<td>Introduction to Microbiology</td>
<td>3</td>
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<td>MICR 2132</td>
<td>Introduction to Microbiology Laboratory</td>
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<tr>
<td>MICR 3033</td>
<td>Cell and Molecular Biology</td>
<td>3</td>
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<tr>
<td>PBIO 1404</td>
<td>Plant Biology (LN)</td>
<td>4</td>
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<tr>
<td>CHEM 3024</td>
<td>Physiology</td>
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<tr>
<td>CHEM 3053</td>
<td>Organic Chemistry I</td>
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<td>CHEM 3112</td>
<td>Organic Chemistry Laboratory</td>
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<tr>
<td>CHEM 3153</td>
<td>Organic Chemistry II</td>
<td>3</td>
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Choose two of the following: (6)

- BIOC 3653 Survey of Biochemistry
- BIOL 3233 Human Reproduction
- BIOL 4024 Histology
- BIOL 4104 General Parasitology
- BIOL 4134 Embryology
- BIOL 4253 Pharmacology
- BIOL 4283 Endocrinology
- BIOL 4363 Principles of Toxicology
- MICR 3223 Advanced Microbiology
- MICR 3253 Immunology
- MICR 4423 Antibiotics and Antibiotic Resistance

**Supplemental Courses:**

3 hours upper-division coursework from the following (no more than 3 hours of general education in the natural sciences):

- BIOC
- CHEM
- ENGL 3323 Technical Writing
- ENVR
- GEOG
- GEOL
- MATH
- PBIO (except PBIO 3253, PBIO 3263)
- PHIL 3833 Biomedical Ethics (H)
**Biology: Pre-Medical Sciences, BS**

**PHYS**
- PSYC 3443 Abnormal Psychology (S)
- PSYC 3073 Neurobiological Psychology (N)
- PSYC 4263 Affective Neuroscience
- SOC 4153 Sociology of Health and Illness
- STAT

**Electives**
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 4 additional upper-division hours.

**Foreign Language Proficiency**
- 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.). Computer Science courses may not be used to satisfy this requirement. Currently Arabic and Mvskoke are not offered at the 2000-level at OSU.

**Exclusions**
- Courses with ATHL or LEIS prefixes and leisure activity courses may not be used for degree credit.
- Computer Science courses may not be used to satisfy this requirement.
- 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 (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.). Computer Science courses may not be used to satisfy this requirement.

**Teacher Certification**
Students can satisfy the requirements for secondary schools teaching certification while earning a B.A. or B.S. in the College of Arts & Sciences. Those interested should see their Arts and Sciences advisor and the OSU Professional Education Unit in room 325 Willard.
**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 2025.