

BIOLOGY: PRE-MEDICAL SCIENCES, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2025-2026. 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

Code	Title	Hours
General Education Requirements		
<i>English Composition</i>		
See Academic Regulation 3.5 (http://catalog.okstate.edu/university-academic-regulations/#english-composition)		
ENGL 1113 or ENGL 1313	Composition I Critical Analysis and Writing I	3
ENGL 1213 or ENGL 1413 or ENGL 3323	Composition II Critical Analysis and Writing II Technical Writing	3
<i>American History & Government</i>		
HIST 1103 or HIST 1483 or HIST 1493	Survey of American History American History to 1865 (H) American History Since 1865 (DH)	3
POLS 1113	American Government	3
<i>Quantitative Thought & Logical Reasoning (Q)</i>		
MATH 1813	Preparation for Calculus (Q) (or higher) ¹	3
STAT 4013 or STAT 2013 or STAT 3023	Statistical Methods I (Q) ¹ Elementary Statistics (Q) Statistical Reasoning for Medical Applications (Q)	3
<i>Understanding Humanities-Human Heritage & Cultures (H)</i>		
Courses designated (H)		6
<i>Reasoning in the Natural Sciences (N)</i>		
Must include one Laboratory-Based Inquiry (L) course.		
PHYS 1114 or PHYS 2014	College Physics I (LN) ¹ University Physics I (LN)	4
PHYS 1214 or PHYS 2114	College Physics II (LN) ¹ University Physics II (LN)	4
<i>Exploring Society & Human Behavior (S)</i>		
Course designated (S)		3
<i>Diversity (D)</i>		
Courses designated (D)		3
<i>Global Cultural Competency (G)</i>		
Courses designated (G)		3
<i>Additional General Education</i>		
Additional general education credit hours may be required to meet the total 40-hour minimum of general education credit if courses carry more than one general education designation and can be used to meet multiple general education designation hour requirements above.		
Courses designated (Q), (H), (N), (S), (D), (G), or (F).		0

Hours Subtotal		41
College/Departmental Requirements		
UNIV 1111	First Year Seminar (or other first year seminar course)	1
<i>Arts & Humanities</i>		
(See note 2.a.)		3
<i>Natural & Mathematical Sciences</i>		
CHEM 1314	Chemistry I (LN)	4
CHEM 1515	Chemistry II (LN)	5
<i>Foreign Languages</i>		
(See note 3.)		0
0-6 hours		
<i>Upper-Division General Education</i>		
6 hours outside major department		
(See note 2.c.)		
Hours Subtotal		13
Major Requirements ²		
Minimum GPA 2.50 in Major Requirements OR minimum grade of "C" in each course.		
<i>Core Courses:</i>		
BIOL 1113 & BIOL 1111 or BIOL 1114	Introductory Biology (N) and Introductory Biology Laboratory (LN) Introductory Biology (LN)	4
BIOL 1604	Animal Biology	4
BIOL 3023	General Genetics ²	3
BIOL 3034	General Ecology	4
BIOL 4133	Evolution ²	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
6 hours upper-division coursework from BIOL, MICR, PBIO (excluding general education courses)		6
<i>Related Courses:</i>		
BIOL 3204	Physiology	4
CHEM 3053	Organic Chemistry I	3
CHEM 3112	Organic Chemistry Laboratory	2
CHEM 3153	Organic Chemistry II	3
Choose two of the following:		6
BIOC 3653	Survey of Biochemistry	
BIOL 3233	Human Reproduction	
BIOL 4024	Histology	
BIOL 4073	Principles of Neuroscience	
BIOL 4104	General Parasitology	
BIOL 4134	Embryology	
BIOL 4253	Pharmacology	
BIOL 4273	Environmental Physiology	
BIOL 4283	Endocrinology	
BIOL 4293	Behavioral Neuroendocrinology	
BIOL 4333	Disease Ecology	
BIOL 4363	Principles of Toxicology	
<i>Supplemental Courses:</i>		
Select one course from the following:		3

ANSI 3543	Principles of Animal Nutrition
ENGL 3323	Technical Writing
HDFS 4813	Dying, Death and Bereavement
HLTH 3113	Health Issues in Diverse Populations (D)
HLTH 3603	Understanding HIV (DS)
HLTH 3723	Principles of Epidemiology
HHP 4063	Neuroanatomy
HIST 3913	History of Medicine (H)
PHIL 3833	Biomedical Ethics (H)
PSYC 3443	Psychopathology (S)
PSYC 3073	Neurobiological Psychology (N)
PSYC 4263	Affective Neuroscience
SOC 4153	Sociology of Health and Illness
Or from BIOC, CHEM, ENVR, GEOG, GEOL, MATH, PHYS, and STAT	
Hours Subtotal	57
Electives	
Select 9 hours	9
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 4 additional upper-division hours.	
Hours Subtotal	9
Total Hours	120

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College and Departmental Requirements that may be used to meet General Education Requirements.

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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 (Q), PHIL 3003 Symbolic

Logic (Q) 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, BIOC, 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.). Computer Science courses may not be used to satisfy this requirement. Currently Arabic and Mvskoke are not offered at the 2000-level at OSU.
 - 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.). Computer Science courses may not be used to satisfy this requirement.
 - 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 and 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 2031.

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.

Course	Title	Hours
Freshman		
Fall		
First Year Seminar		1
CHEM 1314	Chemistry I (LN)	4
MATH 1813	Preparation for Calculus (Q)	3
UNIV 2511	Introduction to Health Careers (Suggested)	1
General Education courses		6
Hours		15
Spring		
BIOL 1113 & BIOL 1111	Introductory Biology (N) and Introductory Biology Laboratory (LN)	4
CHEM 1515	Chemistry II (LN)	5
General Education courses		6
Hours		15
Sophomore		
Fall		
BIOL 1604	Animal Biology	4
CHEM 3053	Organic Chemistry I	3
MICR 2123 & MICR 2132	Introduction to Microbiology and Introduction to Microbiology Laboratory	5
UNIV 2611	Health Portfolio and Self-Development (Suggested)	1
General Education or Elective courses		2
Hours		15
Spring		
CHEM 3153 & CHEM 3112	Organic Chemistry II and Organic Chemistry Laboratory	5
PHYS 1114	College Physics I (LN)	4
General Education or Elective courses		6
Hours		15
Junior		
Fall		
BIOC 3653	Survey of Biochemistry	3
BIOL 3204	Physiology	4
PHYS 1214	College Physics II (LN)	4
Elective courses		4
Hours		15

Spring		
BIOL 3023	General Genetics	3
PBIO 1404	Plant Biology (LN)	4
UNIV 3511	Health Profession School Preparation (Suggested)	1
Major or Elective courses		7
Hours		15
Senior		
Fall		
BIOL 3034	General Ecology	4
BIOL 4133	Evolution	3
General Education, Major, or Supplemental courses		8
Hours		15
Spring		
General Education, Major, or Supplemental courses		15
Hours		15
Total Hours		120