BIOLOGY: PRE-MEDICAL SCIENCES, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2023-2024. 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 R	equirements		
English Composition			
See Academic Regul	ation 3.5 (http://catalog.okstate.edu/		
university-academic-	regulations/#english-composition)		
ENGL 1113	Composition I	3	
or ENGL 1313	Critical Analysis and Writing I		
ENGL 1213	Composition II	3	
or ENGL 1413	Critical Analysis and Writing II		
or ENGL 3323	Technical Writing		
American History & G	overnment		
HIST 1103	Survey of American History	3	
or HIST 1483	American History to 1865 (H)		
or HIST 1493	American History Since 1865 (DH)		
POLS 1113	American Government	3	
Analytical & Quantitative Thought (A)			
MATH 1813	Preparation for Calculus (A) (or higher) 1	3	
STAT 4013	Statistical Methods I (A) ¹	3	
or STAT 2013	Elementary Statistics (A)		
or STAT 3023	Statistical Reasoning for Medical Application	ons (A)	
Humanities (H)			
Courses designated	(H)	6	
Natural Sciences (N)			
Must include one La	boratory Science (L) course.		
PHYS 1114	College Physics I (LN) ¹	4	
or PHYS 2014	University Physics I (LN)		
PHYS 1214	College Physics II (LN) 1	4	
or PHYS 2114	University Physics II (LN)		
Social & Behavioral Sciences (S)			
Course designated (5)	3	
Additional General Ed	ucation		
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 3 3			
Natural & Mathematical Sciences CHEM 1314 Chemistry I (LN) 4 CHEM 1515 Chemistry II (LN) 5 Foreign Languages (See note 3.) 0 0-6 hours Upper-Division General Education 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. Core Courses: BIOL 1111 Introductory Biology (N) 4 BIOL 1111 and Introductory Biology (LN) 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 Laboratory 2 MICR 3033 Cell and Molecular Biology 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) Related Courses: BIOL 3204 Physiology 4 CHEM 3053 Organic Chemistry I 3 Choose two of the following: 6 BIOC 3653 Survey of Biochemistry BIOL 404 Histology BIOL 4134 Embryology BIOL 4253 Pharmacology BIOL 4263 Principles of Toxicology MICR 3223 Advanced Microbiology MICR 3253 Technical Writing HLTH 3113 Health Issues in Diverse Populations (D) HLTH 3103 Understanding HIV (DS)	Arts & Humanities		
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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): ENGL 3323 Technical Writing HLTH 3113 Health Issues in Diverse Populations (D) HLTH 3603 Understanding HIV (DS)	BIOL 4134	Embryology	
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): ENGL 3323 Technical Writing HLTH 3113 Health Issues in Diverse Populations (D) HLTH 3603 Understanding HIV (DS)	BIOL 4253	Pharmacology	
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): ENGL 3323 Technical Writing HLTH 3113 Health Issues in Diverse Populations (D) HLTH 3603 Understanding HIV (DS)	BIOL 4283	Endocrinology	
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): ENGL 3323 Technical Writing HLTH 3113 Health Issues in Diverse Populations (D) HLTH 3603 Understanding HIV (DS)	BIOL 4363	Principles of Toxicology	
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): ENGL 3323 Technical Writing HLTH 3113 Health Issues in Diverse Populations (D) HLTH 3603 Understanding HIV (DS)	MICR 3223	Advanced Microbiology	
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HLTH 3113 Health Issues in Diverse Populations (D) HLTH 3603 Understanding HIV (DS)			3
HLTH 3603 Understanding HIV (DS)	ENGL 3323	Technical Writing	
	HLTH 3113	Health Issues in Diverse Populations (D)	
HHP 4063 Neuroanatomy	HLTH 3603	Understanding HIV (DS)	
	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 (or MATH 1613).			
May need to include 6 hours of a foreign language (see note 3).			
May need to include 6 hours upper-division general education			

Total Hours

division hours.

Hours Subtotal

120

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

outside major department (see note 2.c.) and 4 additional upper-

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 54hour 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, 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 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; onefourth 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 2029.

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		
A&S 1111	A&S First Year Seminar	1
ENGL 1113	Composition I	3
MATH 1813	Preparation for Calculus (A)	3
CHEM 1314	Chemistry I (LN)	4
UNIV 2511	Introduction to Health Careers (Suggested)	1
General Education cou	ırse	3
Savina	Hours	15
Spring ENGL 1213	Commonition II	2
	Composition II	3
BIOL 1113 & BIOL 1111	Introductory Biology (N) and Introductory Biology Laboratory (LN)	4
CHEM 1515	Chemistry II (LN)	5
STAT 2013	Elementary Statistics (A)	3
or STAT 4013	or Statistical Methods I (A)	Ü
	Hours	15
Sophomore		
Fall		
BIOL 1604	Animal Biology	4
CHEM 3053	Organic Chemistry I	3
MICR 2123	Introduction to Microbiology	3
General Education cou	ırses	6
	Hours	16
Spring		
CHEM 3153	Organic Chemistry II	3
CHEM 3112	Organic Chemistry Laboratory	2
MICR 2132	Introduction to Microbiology Laboratory	2
General Education and	Elective courses	7
UNIV 2611	Health Portfolio and Self-Development (Suggested)	1
	Hours	15
Junior		
Fall		
BIOL 3204	Physiology	4
PHYS 1114	College Physics I (LN)	4
BIOC 3653	Survey of Biochemistry	3
MICR 3033	Cell and Molecular Biology	3
Elective courses (UNIV	/ 3511 suggested)	1
	Hours	15
Spring		
PHYS 1214	College Physics II (LN)	4
Major, College, and Ele	ctive courses	11
	Hours	15

	Total Hause	100
	Hours	13
Major and Elective	courses	6
BIOL 4133	Evolution	3
BIOL 3034	General Ecology	4
Spring		
	Hours	16
Major, College, and	d Elective courses	9
PBIO 1404	Plant Biology (LN)	4
BIOL 3023	General Genetics	3
Fall		
Senior		

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