Biology, BS

Bachelor of Science in Biology Degree Program Requirements

Complete Core Curriculum Listing at https://catalog.pvamu.edu/universitycorecurriculum/

Core Curriculum 42 Credit Hours		
Communication (Select Two)		6
Mathematics		3
MATH 2413	Calculus with Analytic Geometry I	
Life and Physical Sciences (Select Two)		6
Language, Philosophy, and Culture (Select One)		3
Creative Arts (Select One)		3
American History (Select Two)		6
Government/Political Science		6
POSC 2305	American Government	
POSC 2306	Texas Government	
Social and Behavioral Sciences (Select One)		3
Component Area Option One (Select One)		3
Component Area Option Two (Select One)		3
Foreign Language Requirements (One language)		**6**
Major Requirements [2, 3]		
BIOL 1501	General Biology	5
BIOL 1102	Biology Seminar	1
BIOL 1502	General Biology	5
BIOL 1103	Biology Seminar	1
BIOL 1411	Botany	4
BIOL 2416	Genetics	4
BIOL 3401	Human Physiology and Anatomy	4
BIOL 3402	Human Physiology and Anatomy	4
BIOL 3403	General Microbiology	4
BIOL 3307	Molecular Biology I	3
Major Electives		
Select 15 hours from the courses below:		15
BIOL 3404	Immunology	
BIOL 3405	Gross Anatomy	
BIOL 3406	Animal Histology	
BIOL 3308	Molecular Biology II	
BIOL 3412	Cell Biology	
BIOL 3413	Biological Engineering	
BIOL 4201	Medical Terminology	
BIOL 4301	Topics in Genomics	
BIOL 4401	Vertebrate Embryology	
BIOL 4402	Comparative Anatomy	
BIOL 4403	Practicum in Biology	
BIOL 4105	Research	
BIOL 4106	Research	
Support Requirements		
CHEM 1203	General Chemistry Lab	2
CHEM 1303	General Inorganic Chemistry I	3
CHEM 1204	General Inorganic Chemistry Laboratory II	2
CHEM 1304	General Inorganic Chemistry II	3

CHEM 2203	Organic Chemistry Lab I	2
CHEM 2303	General Organic Chemistry I	3
CHEM 2204	Organic Chemistry Lab II	2
CHEM 2304	General Organic Chemistry II	3
PHYS 1101	General Physics Lab I	1
or PHYS 2125	University Physics Lab I	
PHYS 1102	General Physics Lab II	1
or PHYS 2126	University Physics Lab II	
MATH 2413 (1 hour counts in the support area and 3 hours meets the core curriculum Math component requirement)		1
Biology majors are required four (4) hour credit physical activity courses (DANC, KINE, or HUPF).		4
Total Hours		**125**

1 Biology majors are required to take MATH 2413 or higher. Students may need to take Algebra or Pre-calculus before enrolling in Calculus. Other students may be prepared to start with Calculus I or higher math.

2 Electives in 15 SCH of upper division (advanced) Biology courses. A total of fifty (50) Biology SCH are required.

3 A minor is not required for the BS Biology. However, by completing CHEM 4303 and CHEM 4204, Biochemistry lecture and lab, a Biology major is eligible to complete the catalog requirements for a minor in chemistry.

Special Emphasis Programs

The following electives should be selected to prepare for the specialized fields listed.

Pre-medicine and Pre-dentistry

The minimum requirements for admission to medical or dental school include average scores on the Medical College Admission Test (MCAT) or Dental Admission Test (DAT) and the satisfactory completion of 90 semester hours of the pre-medical or pre-dental curriculum with average or better grades.

Candidates for admission are evaluated on the basis of their academic background, ability to succeed in professional school, integrity, psychological stability, motivation, judgment, and resourcefulness. The admissions committee will also evaluate the recommendations of the premedical advisory committee.

Students must apply to medical or dental school by June 1, one year in advance of their expected entrance. They are therefore advised to take the MCAT or DAT by the spring of their junior year.

MCAT Registration

Association of American Medical Colleges

Mcat@aamc.org or www.aamc.org/mcat (http://www.aamc.org/mcat)

DAT Registration

Association of American Dental Schools

MCAT Registration
American College
P.O. Box #414
Iowa City, IA 52240
(319) 337-1305

DAT Registration
Testing Program Div. of Educational Measurements
Council on Dental Education
American Dental Association
211 East Chicago Avenue
Chicago, IL 60611
(312) 440-2689

The Pre-Professional curriculum qualifies students to apply to schools of Medicine, Dentistry, Pharmacy, Podiatry, Optometry, and Graduate studies. The curriculum enables students to complete the MCAT, DAT, PCAT, OAT, and GRE preparatory course by the spring of their junior year. Students are encouraged to attend at least one summer session to ensure the completion of necessary courses prior to the summer of their junior year.

Dental School Early Admission Programs

The University of Texas Dental School at San Antonio, the Texas A&M University School of Dentistry, and the University of Texas -Houston Dental school have established early admission agreements with Prairie View A&M University. Students may apply for early admission to these schools after completing the first year of the biology curriculum for majors with a 3.0 or higher GPA.

Applications may be obtained from the Pre-Dental advisor. The application deadline is October 1 of the student's sophomore year. The dental schools will evaluate each application and make the selections of students for interviews.

Pre-Veterinary Medicine

The Pre-veterinary medicine curriculum provides the prerequisites for admission to professional veterinary medicine schools. The curriculum also leads to a Bachelor of Science degree in biology. Students in the Pre-veterinary medicine program should apply to veterinary medical school at the beginning of their third year. Students should write to the Office of Admissions of the desired institution for information about specific admission requirements.

Most schools of veterinary medicine require the Graduate Record Examination (GRE), Veterinary Admission Test (VAT), or Medical College Admission Test (MCAT). It is the students' responsibility to determine which of these examinations is required by the institution to which they are seeking admission.

Optional Requirements in Addition to Biology Degree Requirements

A minor is not required for the BS Biology. However, by completing CHEM 4303 and CHEM 4204, Biochemistry lecture and lab, a Biology major is eligible to complete the catalog requirements for a minor in chemistry.

Chemistry		
CHEM 4303	Biochemistry	3
CHEM 4204	Biochemistry Laboratory	2
Total Hours		**5**

Pre-Veterinary medical students should contact the Pre-Veterinary faculty adviser in the Department of Biology.

Biology Teacher Preparation

Biology majors who plan to teach should follow the biology curriculum and the Teacher Certification Program in order to be eligible for certification as a teacher of biology, grades 7-12.

Student teaching is required of all students preparing to teach. Program prerequisites for student teaching should be completed before applying for student teaching. Additional information and the suggested curriculum for the Bachelor of Science degree with a Teacher Education option may be obtained from the biology teacher education faculty advisor in the biology department.

Bachelor of Science in Biology Degree Sequence

Core: https://catalog.pvamu.edu/universitycorecurriculum/

Freshman

Fall - Semester 1	**Hours**	**Spring - Semester 2**	**Hours**
BIOL 1102	1	BIOL 1103	1
BIOL 1501	5	BIOL 1502	5
Communication Core	3	Communication Core	3
CHEM 1303	3	CHEM 1304	3
CHEM 1203	2	CHEM 1204	2
Component Area Option One Core	3	HKIN, KINE or DANC Physical Activity Course	1
Total	**17**	**Total**	**15**

Total Hours: 32

Sophomore

Fall - Semester 1	**Hours**	**Spring - Semester 2**	**Hours**
BIOL 1411	4	BIOL 2416	4
CHEM 2303	3	CHEM 2304	3
CHEM 2203	2	CHEM 2204	2
Mathematics Core	4	American History Core	3
MATH 2413		Creative Arts Core	3
American History Core	3	HKIN, KINE or DANC Physical Activity Course	1
HKIN, KINE or DANC Physical Activity Course	1		
Total	**17**	**Total**	**16**

Total Hours: 33

Junior

Fall - Semester 1	Hours	Spring - Semester 2	Hours
BIOL 3401	4	BIOL 3402	4
BIOL 3307	3	BIOL 3403	4
Foreign Language I	3	Foreign Language II	3
PHYS 1101	1	PHYS 1102	1
Life and Physical Sciences Core	3	Life and Physical Sciences Core	3
Government/Political Science Core	3	Government/Political Science Core	3
POSC 2305		POSC 2306	
Total	**17**	**Total**	**18**

Total Hours: 35

Senior

Fall - Semester 1	Hours	Spring - Semester 2	Hours
Advanced BIOL Elective I	4	Advanced BIOL Elective III	4
Advanced BIOL Elective II	4	Advanced BIOL Elective IV	2
Component Area Option Two Core	3	Advanced BIOL Elective V	1
HKIN, KINE or DANC Physical Activity Course	1	Language, Philosophy, and Culture Core	3
		Social and Behavioral Sciences Core	3
Total	**12**	**Total**	**13**

Total Hours: 25

Name	Unit
Total Semester Credit Hours: 125	

Marketable Skills

Marketable skills, as defined by the Texas Higher Education Coordinating Board's 60x30TX Plan (http://www.60x30tx.com/), include interpersonal, cognitive, and applied skill areas, are valued by employers, and can be either primary or complementary to a major. Marketable skills are acquired by students through education, including curricular, co-curricular, and extracurricular activities.

BS Biology

Degree Skills

1. Research/Data analysis
2. Oral/Written communication
3. Technology

Co-curricular and Extracurricular Skills

1. Global/Intercultural fluency
2. Collaboration/Teamwork
3. Leadership