BIOMEDICAL SCIENCES, BACHELOR OF SCIENCE WITH A CONCENTRATION IN PRE-VETERINARY (B.S.)

The Biomedical Sciences degree program is a rigorous program designed to prepare students for careers in biomedical research and a wide variety of biomedical professional programs. The Biomedical Sciences degree can be tailored to prepare students for graduate or professional schools, including but not limited to medical, dental, physician associates, optometry, and veterinary medicine. This degree will prepare students interested in pursuing a broad range of careers, including biotechnology, industrial microbiology, or pharmaceutical sales. The biomedical sciences degree provides students with a curriculum that develops strong creative and critical thinking skills while also providing them with the required and recommended courses for admission to graduate and professional schools.

Admission Requirements

All students must be admitted to the University by the EKU Admissions Office and declare their major as Biomedical Sciences (BMS). For admission to the BMS program, a high school graduate must meet the following three criteria:

1. A Math ACT score of 23 (or equivalent SAT) or a “C” or better in MAT 112A Algebra: Polynomials/MAT 112B Algebra: Functions & Matrices or MAT 114 College Algebra
2. An English ACT score of 20 (or equivalent SAT), or a “C” or better in ENG 101 Reading, Writing, and Rhetoric
3. A High School GPA of a 3.0.

Individuals who are transfer students or wish to change their major must have attained a minimum GPA of 3.00 overall on a minimum of 24 hours attempted. Entering freshmen and transfer students who do not meet the minimum requirements are encouraged to enroll in the Biology BS Degree program with a General Biology Concentration until qualified to transfer into the program.

Progression Policy

The Biomedical Sciences degree program limits the number of major core, concentration, and supporting courses which may be repeated. Students are allowed only one repeat per major course and a total of not more than two repeats in all major courses combined. In addition, a supporting course may be repeated only once.

To remain in the Biomedical Sciences degree program, a student must maintain an EKU GPA and overall GPA of 3.0 with a grade of “C”/2.0 or better in each of the supporting and major courses of the curriculum. Students who fail to maintain a 3.0 GPA will be removed from the BMS program and placed in the Biology B.S. program, General Biology Concentration.

Program Requirements

CIP Code: 26.0102

Major

Code	Title	Hours
University Graduation Requirements		
General Education (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/)		36
Foundations of Learning		
GSD 101	Foundations of Learning	3
Upper division courses (42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)		
Major Requirements		
Core Courses		
BIO 111	Cell and Molecular Biology	4
BIO 112	Ecology and Evolution	4
BIO 315	Genetics	4
BIO 319	General Zoology	4
BIO 320	Principles of Microbiology	4
BIO 331	Cell Biology	3
BIO 332	Careers in Biomedical Sciences	1
BIO 348	Vertebrate Physiology	3
BIO 495	Evolutionary Application and Theory	1
Concentrations		
Students must select at least one of the following Concentrations: [1]		
Biomedical Research		
Pre-Medical		
Pre-Dental		
Pre-Physician Associate		
Pre-Optometry		
Pre-Veterinary		22-28
Supporting Course Requirements		
All Concentrations:		
CHE 111 & 111L	General Chemistry and General Chemistry Lab I (Element 4) [G]	
CHE 112 & 112L	General Chemistry II and General Chemistry Lab	4
CHE 361 & 361L	Organic Chemistry I and Organic Chemistry Lab I	4
INF 104	Computer Literacy with Software Applications	3
PHI 383	Health & Biomedical Ethics	3
PHY 131	College Physics I (Element 4) [G]	
or PHY 201	University Physics I	
Choose from one of the following:		
STA 215	Introduction to Statistical Reasoning (Element 2) [G]	
STA 270	Applied Statistics (Element 2) [G,2]	
Free Electives		
Choose from 13-19 hours of free electives		13-19
Total Hours		**120**

[1] Courses used for one concentration may not count toward another concentration.

[2] STA 270 Applied Statistics may be required for admission to Physician Associate or other professional programs.

G Course also satisfies a General Education element. Hours are included within the 36 hr. General Education requirement above.

Concentration

Code	Title	Hours
Concentration Courses		
AGR 321	Feeds and Feeding	3-4
or AGR 421	Animal Nutrient Metabolism	
CHE 362 & 362L	Organic Chemistry II and Organic Chemistry Lab II	4
CHE 430	Biochemistry of Macromolecules	3
or CHE 431	Metabolic Biochemistry	
MAT 120	Trigonometry (or higher)	3
Choose from 9-14 hours of the following:		9-14
BIO 342	Comparative Vertebrate Anatomy	
BIO 514	Evolution	
BIO 528	Virology	
BIO 531	Principles of Molecular Biology	
BIO 533	Bioinformatics: Principles and Applications	
BIO 535	Pathogenic Microbiology	
BIO 546	Histology	
BIO 547	Comparative Vertebrate Embryology	
BIO 550	Animal Behavior	
BIO 598	Special Problems	
CHE 430	Biochemistry of Macromolecules	
CHE 431	Metabolic Biochemistry	
CHE 432	Biochemistry Laboratory	
Total Hours		**22-28**