

CURRICULUM GUIDE
Biomedical Sciences, B.S. (Pre-Veterinary Concentration)
2023-2024

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The schedule below is an **EXAMPLE** of how you can arrange your class schedule.
 Please consult your advisor for specific changes that may need to be made.

	Fall Semester		Spring Semester		Course Number	Course Name
Freshman Year	SCO 100B	1	BIO 112	4	GENERAL EDUCATION & UNIVERSITY REQUIREMENTS (37)	
	BIO 111	4	CHE 112	3	SCO 100B	Student Success Seminar for Biology (1)
	^c CHE 111 (fulfills Gen. Ed. 4)	3	CHE 112L	1	CORE COURSE REQUIREMENTS (28)	
	CHE 111L	1	MAT 120 or higher	3-5	BIO 111	Cell and Molecular Biology (4)
	Gen. Ed. 1A (ENG 101)	3	Gen. Ed. 1B (ENG 102)	3	BIO 112	Ecology and Evolution (4)
Sophomore Year	Gen Ed. 5B (Soc. & Behav. Sci.) (ANS 200 recommended)	3			BIO 315	Genetics (4)
	TOTAL	15	TOTAL	14-16	BIO 319	Zoology (4)
	BIO 319	3	BIO 320	4	BIO 320	Principles of Microbiology (4)
	CHE 361	3	BIO 332	1	BIO 331	Cell Biology (3)
	CHE 361L	1	CHE 362	3	BIO 332	Careers in Biomedical Sciences (1)
Junior Year	^c PHY 131 <u>or</u> PHY 201 (fulfills Gen. Ed. 4)	5	CHE 362L	1	BIO 348	Vertebrate Physiology (3)
	^c STA 215 <u>or</u> STA 270 (fulfills Gen. Ed. 2) (STA 270 recommended)	3-4	Gen. Ed. 1C (CMS 100 <u>or</u> 210)	3	BIO 495	Evolution Theory and Application (1)
			Free Elective	3	PRE-VETERINARY CONCENTRATION REQUIREMENTS (22-25)	
	TOTAL	15-16	TOTAL	15	AGR 321 <u>or</u>	Feeds and Feeding (4) (fall only)
					*AGR 421	Animal Nutrition (3) (spring only)
Senior Year	AGR 321 (fall only) <u>or</u>		AGR 421 (spring only) <u>or</u>		*CHE 362	Organic Chemistry II (3)
	† Restricted Elective	3-4	† Restricted Elective	3-4	*CHE 362L	Organic Chemistry Lab II (1)
	Gen. Ed. 3A (Arts)	3	BIO 315	4	*CHE 430 <u>or</u>	Biochemistry of Macromolecules (3)
	Gen. Ed. 6 (Diversity)	3	BIO 348	3	*CHE 431	Metabolic Biochemistry (3)
	Free Elective	4	INF 104	3	*MAT 120 (or higher)	Trigonometry (3) (or higher (3-5))
Senior Year	♣ Free Elective	0-3	Gen Ed. 5A (History)	3	† PLUS 9 (NINE) HOURS selected from the following (restricted elective):	
	TOTAL	15-16	♣ Free Elective	0-3	BIO 342	Comparative Vertebrate Anatomy (4) (F)
					BIO 514	Evolution (3)
					BIO 527	Immunology (3)
					BIO 528	Virology (3)
Senior Year					BIO 531	Principles of Molecular Biology I (4)
					BIO 533	Bioinformatics: Principles and Applications (3) (fall only)
					BIO 535	Pathogenic Microbiology (4)
					BIO 546	Histology (4) (S)
					BIO 547	Comparative Vertebrate Embryology (4) (spring only)
Senior Year					BIO 549	Neurobiology (4)
					BIO 550	Animal Behavior (4)
					BIO 552	Hormones and Behavior (3)
					BIO 598	Special Problems (1-6)
					*CHE 430	Biochemistry of Macromolecules (3)
Senior Year					*CHE 431	Metabolic Biochemistry (3)
					*CHE 432	Biochemistry Laboratory (1)
					§ Cannot be used for credit in both concentration requirement and restricted electives categories above.	
					SUPPORTING COURSE REQUIREMENTS (17-18)	
					† ^c CHE 111	General Chemistry I (3)
Senior Year					*CHE 111L	General Chemistry Lab I (1)
					*CHE 112	General Chemistry II (3)
					*CHE 112L	General Chemistry Lab II (1)
					*CHE 361	Organic Chemistry I (3)
					*CHE 361L	Organic Chemistry Lab I (1)
Senior Year					INF 104	Computer Literacy with Software Apps. (3)
					PHI 383	Health & Biomedical Ethics (3)
					*PHY 131 <u>or</u>	College Physics I (5)
					*PHY 201	University Physics I (5)
					*STA 215 <u>or</u>	Intro. to Statistical Reasoning (3)
Senior Year					*STA 270	Applied Statistics I (4)
					Bracketed items must be taken concurrently.	
					FREE ELECTIVES (12-16)	
					¶ Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.	
TOTAL HOURS TO DEGREE COMPLETION					120	

* **PREREQUISITES:** Consult with your advisor and/or the University catalog regarding prerequisites for upper division BIO courses. AGR 321; CHE 111/111L, 112/112L, 361/361L, 362/362L, 366, 430, and/or 366; MAT 112, 114 or higher; PHY 131 and/or 201.
 ♣ Due to variable course hour choices for MAT requirement and concentration requirements, marked free electives may also be variable. Consult with your advisor to ensure you have a minimum of 120 total credit hours for graduation.

Upper division courses: All students are required to have a minimum of 42 hrs. upper division (300-level or above) courses distributed throughout Major/Supporting/Gen Ed/Free Electives categories.

Refer to the University Catalog at <http://www.catalogs.eku.edu/> regarding University and General Education Requirements.