

CURRICULUM GUIDE
Biomedical Sciences, B.S. (Pre-Veterinary Concentration)
2021-2022

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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)
	^o 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)
	Gen Ed. 5B (Soc. & Behav. Sci.) (ANS 200 recommended)	3			BIO 315	Genetics (4)
	TOTAL	15	TOTAL	14-16	BIO 319	Zoology (4)
Sophomore Year	BIO 319	3	BIO 320 (ACCT)	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)
	^o PHY 131 or PHY 201 (fulfills Gen. Ed. 4)	5	CHE 362L	1	BIO 348	Vertebrate Physiology (3)
	^o STA 215 or STA 270 (fulfills Gen. Ed. 2) (STA 270 recommended)	3-4	Gen. Ed. 1C (CMS 100 or 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 or	Feeds and Feeding (4) (fall only)
Junior Year	BIO 331	3	BIO 315	4	*AGR 421	Animal Nutrition (3) (spring only)
	CHE 430 or 431	3	BIO 348	3	*CHE 362	Organic Chemistry II (3)
	PHI 383 or 383W	3	INF 104	3	*CHE 362L	Organic Chemistry Lab II (1)
	† Restricted Elective	3-4	Gen. Ed. 5A (History)	3	*CHE 430 or	Biochemistry of Macromolecules (3)
	Free Elective	3	♣ Free Elective	0-3	*CHE 431	Metabolic Biochemistry (3)
					*MAT 120 (or higher)	Trigonometry (3) (or higher (3-5))
	TOTAL	15-16	TOTAL	13-16	† PLUS 9 (NINE) HOURS selected from the following (restricted elective):	
Senior Year	AGR 321 (fall only) or		AGR 421 (spring only) or		BIO 342	Comparative Vertebrate Anatomy (4) (F)
	† Restricted Elective	3-4	† Restricted Elective	3-4	BIO 514	Evolution (3)
	Gen. Ed. 3A (Arts)	3	BIO 495	1	BIO 527	Immunology (3)
	Gen. Ed. 6 (Diversity)	3	† Restricted Elective	3-4	BIO 528	Virology (3)
	Free Elective	4	Gen Ed. 3B (Humanities)	3	BIO 531	Principles of Molecular Biology I (4)
	♣ Free Elective	0-3	Gen Ed. 6 (Diversity)	3	BIO 533	Bioinformatics: Principles and Applications (3) (fall only)
	TOTAL	13-17	TOTAL	13-16	BIO 535	Pathogenic Microbiology (4)
TOTAL HOURS TO DEGREE COMPLETION				120	BIO 546	Histology (4) (S)
					BIO 547	Comparative Vertebrate Embryology (4) (spring only)
					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)
					*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)	
					^o CHE 111	General Chemistry I (3)
					*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)
					INF 104	Computer Literacy with Software Apps. (3)
					PHI 383 or	Health & Biomedical Ethics (3)
					PHI 383W	Health & Biomedical Ethics (writing intensive) (3)
					* PHY 131 or	College Physics I (5)
					* PHY 201	University Physics I (5)
					^o STA 215 or	Intro. to Statistical Reasoning (3)
					* STA 270	Applied Statistics I (4)
					Bracketed items must be taken concurrently.	
					FREE ELECTIVES (12-16)	

* **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. All baccalaureate degree seeking students who enter the University are required to successfully complete one writing intensive course following completion of the ENG 102, ENG 105, or HON 102/103. Writing intensive courses are designated with the suffix "W" following the course prefix and number (e.g. HUM 300W).

Applied Critical & Creative Thinking (ACCT) Requirement: Biology majors will fulfill ACCT with one of the following: BIO 320, 349, 598, HON 420 with a thesis topic approved by the Biology department, a program-approved leadership experience, or a program-approved study abroad experience. (Credit hours are incorporated into program requirements.)

^o Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.