

CURRICULUM GUIDE
Biomedical Sciences, B.S. (Pre-Veterinary Concentration)
2022-2023

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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
Freshman Year	SCO 100B	BIO 112
	BIO 111	CHE 112
	⁶ CHE 111 (fulfills Gen. Ed. 4)	CHE 112L
	CHE 111L	MAT 120 or higher
	Gen. Ed. 1A (ENG 101)	Gen. Ed. 1B (ENG 102)
	Gen Ed. 5B (Soc. & Behav. Sci.) (ANS 200 recommended)	
	TOTAL	TOTAL
Sophomore Year	BIO 319	BIO 320 (ACCT)
	CHE 361	BIO 332
	CHE 361L	CHE 362
	⁶ PHY 131 or PHY 201 (fulfills Gen. Ed. 4)	CHE 362L
	⁶ STA 215 or STA 270 (fulfills Gen. Ed. 2) (STA 270 recommended)	Gen. Ed. 1C (CMS 100 or 210)
		Free Elective
	TOTAL	TOTAL
Junior Year	BIO 331	BIO 315
	CHE 430 or 431	BIO 348
	PHI 383 or 383W	INF 104
	† Restricted Elective	Gen. Ed. 5A (History)
	Free Elective	♣ Free Elective
	TOTAL	TOTAL
Senior Year	AGR 321 (fall only) or † Restricted Elective	AGR 421 (spring only) or † Restricted Elective
	Gen. Ed. 3A (Arts)	BIO 495
	Gen. Ed. 6 (Diversity)	† Restricted Elective
	Free Elective	Gen. Ed. 3B (Humanities)
	♣ Free Elective	Gen. Ed. 6 (Diversity)
	TOTAL	TOTAL
TOTAL HOURS TO DEGREE COMPLETION		120

Course Number	Course Name
GENERAL EDUCATION & UNIVERSITY REQUIREMENTS (37)	
SCO 100B	Student Success Seminar for Biology (1)
CORE COURSE REQUIREMENTS (28)	
BIO 111	Cell and Molecular Biology (4)
BIO 112	Ecology and Evolution (4)
BIO 315	Genetics (4)
BIO 319	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	Evolution Theory and Application (1)
PRE-VETERINARY CONCENTRATION REQUIREMENTS (22-25)	
AGR 321 or *AGR 421	Feeds and Feeding (4) (fall only) Animal Nutrition (3) (spring only)
*CHE 362	Organic Chemistry II (3)
*CHE 362L	Organic Chemistry Lab II (1)
*CHE 430 or *CHE 431	Biochemistry of Macromolecules (3) Metabolic Biochemistry (3)
*MAT 120 (or higher)	Trigonometry (3) (or higher (3-5))
† PLUS 9 (NINE) HOURS selected from the following (restricted elective):	
BIO 342	Comparative Vertebrate Anatomy (4) (F)
BIO 514	Evolution (3)
BIO 527	Immunology (3)
BIO 528	Virology (3)
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)
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)	
⁶ 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 PHI 383W	Health & Biomedical Ethics (3) Health & Biomedical Ethics (writing intensive) (3)
*PHY 131 or *PHY 201	College Physics I (5) University Physics I (5)
*STA 215 or *STA 270	Intro. to Statistical Reasoning (3) Applied Statistics I (4)
Bracketed items must be taken concurrently.	
FREE ELECTIVES (12-16)	

⁶ Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.

* **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.)