

**CURRICULUM GUIDE**  
**Biomedical Sciences, B.S. (Pre-Physician Assistant Concentration)**  
**2019-2020**

Website: [www.biology.eku.edu](http://www.biology.eku.edu)  
 Email Contact: [biology@eku.edu](mailto:biology@eku.edu)

Department of Biological Sciences  
 521 Lancaster Ave.  
 3238 Science Building  
 Richmond, KY 40475  
 859-622-1531

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
<b>Freshman Year</b>	SCO 100B	BIO 112
	BIO 111	CHE 112
	<sup>6</sup> CHE 111 (fulfills Gen. Ed. 4)	CHE 112L
	CHE 111L	EMC 105 <i>or</i> HSA 200
	MAT 120 <i>or</i> higher	<sup>6</sup> PSY 200 <i>or</i> PSY 200W (fulfills Gen. Ed. 5B)
	Gen. Ed. 1A (ENG 101)	Gen. Ed. 1B (ENG 102)
	<b>TOTAL</b>	<b>TOTAL</b>
	15-17	15-17
<b>Sophomore Year</b>	BIO 307	BIO 308
	CHE 361	BIO 332
	CHE 361L	BIO 320 (ACCT)
	<sup>6</sup> PHY 131 <i>or</i> 201 (fulfills Gen. Ed. 4)	INF 104
	ANT 120 <i>or</i> SOC 131	PSY 280 <i>or</i> PSY 280W
	<b>TOTAL</b>	<b>TOTAL</b>
	15	14
<b>SUMMER</b>	<b>Note: While not required, it is strongly recommended that students complete THREE (3) HOURS of BIO 349: Applied Learning in Biology or 349A: Cooperative Study: Biology in lieu or a marked (☉) free elective.</b> (0-3)	
<b>Junior Year</b>	BIO 319	BIO 315
	BIO 331	BIO 348
	PHI 383 <i>or</i> PHI 383W	Gen. Ed. 1C (CMS 100 <i>or</i> 210)
	<sup>6</sup> STA 215 <i>or</i> STA 270 (fulfills Gen. Ed. 2) (STA 270 recommended)	Gen. Ed. 3B (Humanities)
	Free Elective	Gen. Ed. 5A (History)
	<b>TOTAL</b>	<b>TOTAL</b>
	16-17	16
<b>Senior Year</b>	†Restricted Elective	BIO 495
	Gen. Ed. 3A (Arts)	†Restricted Elective
	Gen. Ed. 6 (Diversity)	Gen Ed. 6 (Diversity)
	Free Elective	Free Elective
	Free Elective	<sup>6</sup> Free Elective
		Free Elective
<b>TOTAL</b>	<b>TOTAL</b>	
	16-17	13-17
<b>TOTAL HOURS TO DEGREE COMPLETION</b>		<b>120</b>

Course Number	Course Name
<b>GENERAL EDUCATION &amp; UNIVERSITY REQUIREMENTS (37)</b>	
SCO 100B	Student Success Seminar for Biology (1)
<b>CORE COURSE REQUIREMENTS (28)</b>	
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)
<b>PRE-PHYSICIAN ASSISTANT CONCENTRATION REQUIREMENTS (14-18)</b>	
BIO 307	Human Anatomy & Physiology I (3)
BIO 308	Human Anatomy & Physiology II (3)
EMC 105 <i>or</i> HSA 200	Survey of Medical Terminology (1)
HSA 200	Medical Terminology (3)
*MAT 120 (or higher)	Trigonometry (3) (or higher (3-5))
† PLUS 6 (SIX) HOURS selected from the following (restricted elective):	
BIO 527	Immunology (3)
BIO 528	Virology (3)
BIO 531	Principles of Molecular Biology I (4)
BIO 535	Pathogenic Microbiology (4)
BIO 546	Histology (4)
BIO 547	Comparative Vert. Embryology (4)
BIO 549	Neurobiology (3)
BIO 598	Special Problems (1-6)
[ <sup>6</sup> CHE 362	Organic Chemistry II (3)
] CHE 362L	Organic Chemistry II Laboratory (1)
*CHE 430	Biochemistry of Macromolecules (3)
*CHE 431	Metabolic Biochemistry (3)
*CHE 432	Biochemistry Laboratory (1)
<b>SUPPORTING COURSE REQUIREMENTS (23-24)</b>	
ANT 120 <i>or</i> SOC 131	Intro to Cultural Anthropology (3)
[ <sup>6</sup> CHE 111	Introductory Sociology (3)
] *CHE 111L	General Chemistry I (3)
[ * CHE 112	General Chemistry Lab I (1)
] * CHE 112L	General Chemistry II (3)
[ * CHE 361	General Chemistry Lab II (1)
] * CHE 361L	Organic Chemistry I (3)
INF 104	Organic Chemistry Lab I (1)
PHI 383 <i>or</i> PHI 383W	Computer Literacy with Software Apps. (3)
<sup>6</sup> * PHY 131 <i>or</i> <sup>6</sup> * PHY 201	Health & Biomedical Ethics (3)
<sup>6</sup> PSY 200 <i>or</i> <sup>6</sup> PSY 200W	Health & Biomedical Ethics (writing intensive) (3)
PSY 280 <i>or</i> PSY 280W	College Physics I (5)
	University Physics I (5)
	Introduction to Psychology (3)
	Introduction to Psychology (writing intensive) (3)
	Lifespan Developmental Psychology (3)
	Lifespan Developmental Psychology (writing intensive) (3)
<sup>6</sup> STA 215 <i>or</i> * STA 270	Intro. to Statistical Reasoning (3)
	Applied Statistics I (4)
Bracketed items must be taken concurrently.	
<b>FREE ELECTIVES (10-16)</b>	

\* **PREREQUISITES:** Consult with your advisor and/or the University catalog regarding prerequisites for upper division BIO courses. 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.)

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