

# CURRICULUM GUIDE

## Biomedical Sciences, B.S. (Pre-Medical 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
<b>Freshman Year</b>	SCO 100B	1	BIO 112	4	<b>GENERAL EDUCATION &amp; UNIVERSITY REQUIREMENTS (37)</b>	
	BIO 111	4	CHE 112	3	SCO 100B	Student Success Seminar for Biology (1)
	<sup>6</sup> CHE 111 (fulfills Gen. Ed. 4)	3	CHE 112L	1	<b>CORE COURSE REQUIREMENTS (28)</b>	
	CHE 111L	1	PSY 200	3	BIO 111	Cell and Molecular Biology (4)
	MAT 120 or higher (MAT 234 recommended)	3-5 (4)	<sup>6</sup> SOC 131 or HON 312 (fulfills Gen. Ed. 5B)	3	BIO 112	Ecology and Evolution (4)
	Gen. Ed. 1a (ENG 101)	3	Gen. Ed. 1B (ENG 102)	3	BIO 315	Genetics (4)
	<b>TOTAL</b>	<b>15-17</b>	<b>TOTAL</b>	<b>17</b>	BIO 319	Zoology (4)
<b>Sophomore Year</b>	BIO 319	4	BIO 332	1	BIO 320	Principles of Microbiology (4)
	CHE 361	3	BIO 320	4	BIO 331	Cell Biology (3)
	CHE 361L	1	CHE 362	3	BIO 332	Careers in Biomedical Sciences (1)
	<sup>6</sup> PHY 131 or PHY 201 (fulfills Gen. Ed. 4)	5	CHE 362L	1	BIO 348	Vertebrate Physiology (3)
	Gen. Ed. 1C (CMS 100 or 210)	3	PHY 132 or PHY 202	5	BIO 495	Evolution Theory and Application (1)
			♣ Free Elective	0-3	<b>PRE-MEDICAL RESEARCH CONCENTRATION REQUIREMENTS (24-28)</b>	
	<b>TOTAL</b>	<b>16</b>	<b>TOTAL</b>	<b>14-17</b>	*CHE 362	Organic Chemistry II (3)
<b>Junior Year</b>	BIO 331	3	BIO 315	4	*CHE 362L	Organic Chemistry Lab II (1)
	CHE 430	3	BIO 348	3	*CHE 430	Biochemistry of Macromolecules (3)
	<sup>6</sup> STA 215 or STA 270 (fulfills Gen. Ed. 2) (STA 270 recommended)	3-4	CHE 431	3	*CHE 431	Metabolic Biochemistry (3)
	PHI 383	3	INF 104	3	*MAT 120 (or higher)	Trigonometry (3) (or higher (3-5))
			Gen Ed. 3B (Humanities)	3	*PHY 132 or	College Physics II (5)
					*PHY 202	University Physics II (5)
	<b>TOTAL</b>	<b>12-13</b>	<b>TOTAL</b>	<b>16</b>	† PLUS 6 (SIX) HOURS selected from the following (restricted elective):	
<b>Senior Year</b>	PSY 280 or 308	3	BIO 495	1	BIO 342	Comparative Vertebrate Anatomy (4)
	†Restricted Elective	3-4	†Restricted Elective	3-4	BIO 527	Immunology (3)
	Gen Ed. 3A (Arts)	3	Gen. Ed. 5A (History)	3	BIO 528	Virology (3)
	Gen. Ed. 6 (Diversity)	3	Gen. Ed. 6 (Diversity)	3	BIO 531	Principles of Molecular Biology I (3)
	♣ Free Elective	0-3	Free Elective	3	BIO 535	Pathogenic Microbiology (4)
			♣ Free Elective	0-2	BIO 546	Histology (4)
	<b>TOTAL</b>	<b>12-16</b>	<b>TOTAL</b>	<b>13-16</b>	BIO 547	Comparative Vert. Embryology (4)
<b>TOTAL HOURS TO DEGREE COMPLETION</b>				<b>120</b>	BIO 549	Neurobiology (3)
					BIO 598	Special Problems (1-6)
					*CHE 432	Biochemistry Laboratory (1)
					<b>SUPPORTING COURSE REQUIREMENTS (23-24)</b>	
					<sup>6</sup> 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	Health & Biomedical Ethics (3)
					<sup>6</sup> *PHY 131 or	College Physics I (5)
					<sup>6</sup> *PHY 201	University Physics I (5)
					<sup>6</sup> STA 215 or	Intro. to Statistical Reasoning (3)
					*STA 270	Applied Statistics I (4)
					PSY 200	Introduction to Psychology (3)
					PSY 280 or	Lifespan Developmental Psych. (3)
					PSY 308	Abnormal Psychology (3)
					<sup>6</sup> SOC 131 or	Introductory Sociology (3)
					<sup>6</sup> HON 312	Honors Seminar in the Social and Behavioral Sciences: _____ (3)
					Bracketed items must be taken concurrently.	
					<b>FREE ELECTIVES (3-8)</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.

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