

**CURRICULUM GUIDE**  
**Chemistry, B.S. (Biochemistry 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	
<b>Freshman Year</b>	SCO 100C	1	BIO 112	4
	CHE 111	3	CHE 112	3
	CHE 111L	1	CHE 112L	1
	§ <sup>6</sup> MAT 234 (fulfills Gen. Ed. 2)	4	MAT 244	4
	<sup>6</sup> BIO 111 (fulfills Gen. Ed. 4)	4	Gen. Ed. 1B (ENG 102)	3
	Gen. Ed. 1A (ENG 101)	3	Gen. Ed. 1C (Oral Comm.)	3
	<b>TOTAL</b>	<b>16</b>	<b>TOTAL</b>	<b>18</b>
<b>Sophomore Year</b>	CHE 250 (fall only)	2	CHE 325	3
	CHE 361	3	CHE 325L	2
	CHE 361L	1	CHE 362	3
	BIO 315	4	CHE 362L	1
	<sup>6</sup> PHY 131 <i>or</i> ‡ 201 (fulfills Gen. Ed. 4)	5	PHY 132 <i>or</i> ‡ 202	5
	<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>14</b>
<b>Junior Year</b>	CHE 385	3	CHE 431 (spring only)	3
	CHE 425 (fall only)	3	CHE 432 (spring only)	1
	CHE 425L (fall only)	1	CHE 570	4
	CHE 430	3	Gen. Ed. 5A (History)	3
	Gen. Ed. 3B (Humanities)	3	‡CHE/FOR 400/500 Elective	3
	Free Elective (BIO 320 (4) <i>or</i> 331 (3) recommended)	3-4		
	<b>TOTAL</b>	<b>16-17</b>	<b>TOTAL</b>	<b>14</b>
<b>Senior Year</b>	CHE 450 (fall only)	3	CHE 485	1
	BIO 531	4	‡CHE 411, 495A/B, <i>or</i> 501L	1
	Gen. Ed. 3A (Arts)	3	‡400/500 CHE or FOR elective	2
	Gen. Ed. 6 (Diversity)	3	Gen. Ed. 5B (Soc. & Behav. Sci.)	3
	‡CHE/FOR 400/500 Elective	1	Gen. Ed. 6 (Diversity)	3
			Free Elective	2-3
	<b>TOTAL</b>	<b>14</b>	<b>TOTAL</b>	<b>12-13</b>
<b>TOTAL HOURS TO DEGREE COMPLETION</b>		<b>120</b>		

Course Number	Course Name
<b>GENERAL EDUCATION &amp; UNIVERSITY REQUIREMENTS (37)</b>	
SCO 100C	Student Success Seminar for Chemistry (1)
<b>CORE COURSE REQUIREMENTS (26)</b>	
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 250	Descriptive Inorganic Chemistry (2) (fall only)
CHE 325	Analytical Chemistry (3)
CHE 325L	Analytical Chemistry Lab (2)
CHE 361	Organic Chemistry I (3)
CHE 361L	Organic Chemistry Lab I (1)
CHE 362	Organic Chemistry II (3)
CHE 362L	Organic Chemistry Lab II (1)
CHE 430	Biochemistry of Macromolecules (3)
Bracketed items must be taken concurrently.	
<b>BIOCHEMISTRY CONCENTRATION REQUIREMENTS (26)</b>	
CHE 385	Chemical Literature (3)
CHE 425	Instrumental Analysis (3) (fall only)
CHE 425L	Instrumental Analysis Lab (1) (fall only)
CHE 431	Metabolic Biochemistry (3) (spring only)
CHE 432	Biochemistry Laboratory (1) (spring only)
CHE 450	Inorganic Chemistry (3) (fall only)
CHE 485	Chemistry Seminar (1)
CHE 502	Polymers and Particles (1) (fall only)
CHE 570	Biophysical Chemistry I (4)
† PLUS ONE (1) HOUR selected from the following:	
CHE 411	Practicum (1)
CHE 495A	Independent Chemical Research (1)
CHE 495B	Chemistry Lab Independent Res. (1-3)
CHE 501L	Chemtopics Lab (1)
‡ PLUS FIVE (5) HOURS selected from either 400 or 500-level CHE or FOR electives.	
<b>BIOCHEMISTRY-CONCENTRATION SUPPORTING COURSE REQUIREMENTS (25)</b>	
<sup>6</sup> BIO 111	Cell and Molecular Biology (4)
<sup>6</sup> BIO 112	Ecology and Evolution (4)
BIO 315	Genetics (4)
*BIO 531	Principles of Molecular Biology I (4)
§ <sup>6</sup> MAT 234	Calculus I (4)
MAT 244	Calculus II (4)
<sup>6</sup> PHY 131 <i>or</i>	University Physics I (5)
‡ <sup>6</sup> PHY 201	College Physics I (5)
PHY 132 <i>or</i>	University Physics II (5)
‡PHY 202	College Physics II (5)
‡ Calculus based Physics (PHY 201 and 202) is recommended by the ACS and ASBMB.	
<b>FREE ELECTIVES (6)</b>	

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

§ A preparatory course in mathematics (MAT 122) may be required before admission to MAT 234.

\*Only three (3) hours from either BIO 111 or BIO 112 can be used to fulfill Gen. Ed. 4.

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

**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