

**CURRICULUM GUIDE**  
**Chemistry, B.S. (Pre-Pharmacy Concentration)**  
**2022-2023**

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

Department of Chemistry  
 521 Lancaster Ave.  
 4126 New Science Bldg.  
 Richmond, KY 40475  
 859-622-1456

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.

Students in Pre-Professional programs are encouraged to see the Pre-Professional program advisor in Science 1234, for help with scheduling.

	Fall Semester		Spring Semester		Course Number	Course Name
<b>Freshman Year</b>	SCO 100C	1	BIO 112	4	<b>GENERAL EDUCATION &amp; UNIVERSITY REQUIREMENTS (37)</b>	
	<sup>¶</sup> BIO 111 (fulfills Gen. Ed. 4)	4	CHE 112	3	SCO 100C	Student Success Seminar for Chemistry (1)
	CHE 111	3	CHE 112L	1	<b>CORE COURSE REQUIREMENTS (26)</b>	
	CHE 111L	1	Gen. Ed. 1B (ENG 102)	3	CHE 111	General Chemistry I (3)
	<sup>§</sup> MAT 234 (fulfills Gen. Ed. 2)	4	Gen. Ed. 1C (Oral Comm.)	3	CHE 111L	General Chemistry Lab I (1)
	Gen. Ed. 1A (ENG 101)	3			CHE 112	General Chemistry II (3)
	<b>TOTAL</b>	<b>16</b>	<b>TOTAL</b>	<b>14</b>	CHE 112L	General Chemistry Lab II (1)
<b>Sophomore Year</b>	BIO 307	3	BIO 308	3	CHE 250	Descriptive Inorganic Chemistry (2)
	CHE 250	2	CHE 362	3	CHE 325	Analytical Chemistry (3)
	CHE 361	1	CHE 362L	1	CHE 325L	Analytical Chemistry Lab (2)
	CHE 361L	3	PHY 132 <sup>or</sup> ‡ 202	5	CHE 361	Organic Chemistry I (3)
	<sup>¶</sup> PHY 131 <sup>or</sup> ‡ 201 (fulfills Gen. Ed. 4)	5	STA 270	4	CHE 361L	Organic Chemistry Lab I (1)
					CHE 362	Organic Chemistry II (3)
	<b>TOTAL</b>	<b>14</b>	<b>TOTAL</b>	<b>16</b>	CHE 362L	Organic Chemistry Lab II (1)
<b>Junior Year</b>	CHE 385W	3	BIO 273 <sup>or</sup> 320	4	CHE 430	Biochemistry of Macromolecules (3)
	CHE 425 (fall only)	3	CHE 349, 349A-N, 495A (ACCT) <sup>or</sup> 495B (ACCT)	3		
	CHE 425L (fall only)	1		3		
	CHE 430	3	CHE 325	3		
	CHE 570	4	CHE 325L	2		
	ECO 230	3	CHE 431	3		
	<b>TOTAL</b>	<b>17</b>	<b>TOTAL</b>	<b>16</b>		
<b>Senior Year</b>	CHE 450	3	PHI 383	3		
	CHE 485	1	Gen. Ed. 3B (Humanities)	3		
	<sup>¶</sup> PSY 200 (fulfills Gen. Ed. 5B)	3	Gen. Ed. 5A (History)	3		
	Gen. Ed. 3A (Arts)	3	Gen. Ed. 6 (Diversity)	3		
	Gen. Ed. 6 (Diversity)	3	Free Elective	2		
<b>TOTAL</b>	<b>13</b>	<b>TOTAL</b>	<b>14</b>			
<b>TOTAL HOURS TO DEGREE COMPLETION</b>				<b>120</b>		

\* **PREREQUISITES:** Consult with your advisor and/or the University catalog regarding prerequisites for upper division CHE courses. BIO 378, MAT 122 (see § below); PHY 131 and/or 201.

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

**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:** Chemistry majors will fulfill ACCT with CHE 411, 495A, 495B, 515/515L, or CED 499. (Credit hours are incorporated into program requirements.)

<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)
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>PRE-PHARMACY CONCENTRATION REQUIREMENTS (22)</b>	
CHE 385W	Chemical Literature (writing intensive) (3)
CHE 425	Instrumental Analysis (3)
CHE 425L	Instrumental Analysis Lab (1)
CHE 431	Metabolic Biochemistry (3)
CHE 432	Biochemistry Laboratory (1)
CHE 450	Inorganic Chemistry (3)
CHE 485	Chemistry Seminar (1)
CHE 570	Biophysical Chemistry (4)
PLUS THREE (3) HOURS selected from a combination of the following:	
CHE 349	Applied Learning in Chemistry (0.5-8)
CHE 349A-N	Cooperative Study: Chemistry (0.5-8)
CHE 495A	Independent Chemical Research (1)
CHE 495B	Chemistry Lab. Independent Res. (1-3)
<b>PRE-PHARMACY CONCENTRATION SUPPORTING COURSE REQUIREMENTS (33)</b>	
<sup>¶</sup> BIO 111	Cell and Molecular Biology (4)
BIO 112	Ecology and Evolution (4)
BIO 307	Human Anatomy & Physiology I (3)
BIO 273 <sup>or</sup> BIO 320	Clinical Microbiology (4)
BIO 308	Principles of Microbiology (4)
BIO 308	Human Anatomy & Physiology II (3)
ECO 230	Principles of Microeconomics (3)
<sup>¶</sup> MAT 234	Calculus I (4)
PHI 383	Health and Biomedical Ethics (3)
<sup>¶</sup> PHY 131 <sup>or</sup> ‡ PHY 201	College Physics I (5)
‡ PHY 201	University Physics I (5)
PHY 132 <sup>or</sup> ‡ PHY 202	College Physics II (5)
‡ PHY 202	University Physics II (5)
<sup>¶</sup> PSY 200	Introduction to Psychology (3)
STA 270	Applied Statistics (4)
‡	Calculus based Physics (PHY 201 and 202) is recommended by the ACS and ASBMB.
<b>FREE ELECTIVES (2)</b>	

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