

**CURRICULUM GUIDE**  
**Chemistry, B.S. (Pre-Health Concentration including Pre-Dental, Pre-Medical, Pre-Optometry, and Pre-Physician Assistant)**

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.

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>	
	° BIO 111 (fulfills Gen. Ed. 4)	4	CHE 112	3	SCO 100C Student Success Seminar for Chemistry (1)	
	CHE 111	3	CHE 112L	3	<b>CORE COURSE REQUIREMENTS (26)</b>	
	CHE 111L	1	Gen. Ed. 1B (ENG 102)	1	[CHE 111 General Chemistry I (3)	
	§ ° 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	Gen. Ed. 3A (Arts)	3	[CHE 112 General Chemistry II (3)	
	<b>TOTAL</b>	<b>16</b>	<b>TOTAL</b>	<b>17</b>	[CHE 112L General Chemistry Lab II (1)	
					CHE 250 Descriptive Inorganic Chemistry (2)	
					[CHE 325 Analytical Chemistry (3)	
					[CHE 325L Analytical Chemistry Lab (2)	
<b>Sophomore Year</b>	BIO 307	3	CHE 325	3	[CHE 361 Organic Chemistry I (3)	
	CHE 250	2	CHE 325L	2	[CHE 361L Organic Chemistry Lab I (1)	
	CHE 361	3	CHE 362	3	[CHE 362 Organic Chemistry II (3)	
	CHE 361L	1	CHE 362L	1	[CHE 362L Organic Chemistry Lab II (1)	
	° PHY 131 or ‡ 201 (fulfills Gen. Ed. 4)	5	PHY 132 or ‡ 202	5	CHE 430 Biochemistry of Macromolecules (3)	
	<b>TOTAL</b>	<b>14</b>	<b>TOTAL</b>	<b>14</b>	Bracketed items must be taken concurrently.	
					<b>PREHEALTH CONCENTRATION REQUIREMENTS (27)</b>	
					CHE 385W Chemical Literature (writing intensive) (3)	
					[CHE 425 Instrumental Analysis (3)	
					[CHE 425L Instrumental Analysis Lab (1)	
<b>Junior Year</b>	BIO 331	3	BIO 348	3	CHE 431 Metabolic Biochemistry (3)	
	CHE 385W	3	CHE 431	1	CHE 432 Biochemistry Laboratory (1)	
	CHE 411 (ACCT), 495A/B (ACCT), or 501L	1	CHE 432	3	CHE 450 Inorganic Chemistry (3)	
	CHE 425	3	400/500-level CHE/FOR elective	2	CHE 485 Chemistry Seminar (1)	
	CHE 425L	1	Gen. Ed. 3B (Humanities)	3	CHE 502 Polymers and Particles (1)	
	CHE 430	3	Gen. Ed. 6 (Diversity)	3	CHE 570 Biophysical Chemistry (4)	
	<b>TOTAL</b>	<b>14</b>	<b>TOTAL</b>	<b>15</b>	† 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)	
<b>Senior Year</b>	CHE 450	3	CHE 485	1	CHE 501L Chemtopics Lab (1)	
	CHE 502	1	400/500-level CHE/FOR elective	3	<b>PLUS SIX (6) HOURS 400 or 500-level CHE or FOR electives</b>	
	° PSY 200 (fulfills Gen. Ed. 5B)	3	PHI 383	3	<b>PRE-HEALTH CONCENTRATION SUPPORTING COURSE REQUIREMENTS (28)</b>	
	SOC 131	3	Gen. Ed. 5A (History)	3	° BIO 111 Cell and Molecular Biology (4)	
	CHE 570	4	Gen. Ed. 6 (Diversity)	3	BIO 112 Ecology and Evolution (4)	
			Free Elective	3	BIO 307 Human Anatomy & Physiology (3)	
	<b>TOTAL</b>	<b>14</b>	<b>TOTAL</b>	<b>16</b>	BIO 331 Cell Biology (3)	
					BIO 348 Vertebrate Physiology (3)	
					§ ° MAT 234 Calculus I (4)	
					PHI 383 or PHI 383W Health and Biomedical Ethics (3) (writing intensive)	
<b>TOTAL HOURS TO DEGREE COMPLETION 120</b>					° PHY 131 or ‡ PHY 201 University Physics I (5)	

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

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