

CURRICULUM GUIDE
Chemistry, B.S. (Biochemistry Concentration)
2021-2022

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

Course Number	Course Name
GENERAL EDUCATION & UNIVERSITY REQUIREMENTS (37)	
SCO 100C	Student Success Seminar for Chemistry (1)
CORE COURSE REQUIREMENTS (26)	
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.	
BIOCHEMISTRY CONCENTRATION REQUIREMENTS (27)	
CHE 385W	Chemical Literature (writing intensive) (3)
CHE 425	Instrumental Analysis (3) (fall only)
CHE 425L	Instrumental Analysis Lab (1) (fall only)
CHE 431	Metabolic Biochemistry (3)
CHE 432	Biochemistry Laboratory (1)
CHE 450	Inorganic Chemistry (3)
CHE 485	Chemistry Seminar (1)
CHE 502	Polymers and Particles (1)
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 SIX (6) HOURS selected from either 400 or 500-level CHE or FOR electives.	
BIOCHEMISTRY-CONCENTRATION SUPPORTING COURSE REQUIREMENTS (25)	
⁶ BIO 111	Cell and Molecular Biology (4)
⁶ BIO 112	Ecology and Evolution (4)
BIO 315	Genetics (4)
⁶ BIO 531	Principles of Molecular Biology I (4)
§ ⁶ MAT 234	Calculus I (4)
MAT 244	Calculus II (4)
⁶ PHY 131 or	University Physics I (5)
‡ PHY 201	College Physics I (5)
PHY 132 or	University Physics II (5)
‡ PHY 202	College Physics II (5)
‡ Calculus based Physics (PHY 201 and 202) is recommended by the ACS and ASBMB.	
FREE ELECTIVES (5)	

* PREREQUISITES: Consult with your advisor and/or the University catalog regarding prerequisites for upper division CHE courses: BIO 320, 331, MAT 122 (see § below); PHY 131 and/or 201.

§ 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.

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 CHE411, 495A, 495B, 515/515L, or CED 499 (Credit hours are incorporated into program requirements.)

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