

CHEMISTRY
Bachelor of Arts
(B.A.) 2016-2017

Requirements for Major: At least 32 credit hours in the department, including:

CH 151 Fundamentals of Chemistry I
CH 152 Fundamentals of Chemistry II
CH 340 Organic Chemistry I
CH 341 Organic Chemistry II
CH 342 Organic Chemistry Laboratory I
CH 343 Organic Chemistry Laboratory II
CH 390 Undergraduate Chemical Research
CH 391 Chemistry Seminar

Two courses selected from:

CH 320 Analytical Chemistry
CH 350 Biochemistry I
CH 352 Biochemistry II
CH 360 Descriptive Inorganic Chemistry
CH 380 Fundamentals of Physical Chemistry <u>or</u> CH 381 Physical Chemistry I

Two courses selected from:

CH 321 Analytical Chemistry Laboratory (1)
CH 345 Inorganic Chemistry Laboratory (2)
CH 346 Instrumental Analysis (2)
CH 347 Physical Chemistry Concepts Lab (1)
CH 351 Biochemistry Laboratory I (2)
CH 353 Biochemistry Laboratory II (2)

Two correlated courses:

PS 261 College Physics I (General Education course) & PS 262 College Physics II <u>or</u> PS 281 General Physics I (General Education course) & PS 282 General Physics II

Notes

Research (CH 390) must be initiated at least one semester prior to the semester of graduation
A written report of research or internship is required of all majors
All majors shall present a portfolio of results obtained with departmental instrumentation prior to the semester of graduation
Courses that must be taken to meet the standards for licensure in Kansas are CH 151, 152, 320, 321, 340, 342, 343, 350, 351, 390, and 391. In addition, students must fulfill the professional education course requirements of the Education Department

General Education Distribution Requirements (BA):

Humanities (15) (GEHU/GECPA) (Max 6 hours/ discipline)	Course Number	Social Sciences (15) (GESS) (Max 6 hours/ discipline)	Course Number	Natural Sciences/ Mathematics (12) (GENS) (Max 8 Hours or 2 Courses/Discipline)	Course Number
Fine Arts (3)		Soc. Science 1 (3)		PS 261 or 281 (3 or 5)	
Humanities 2 (3)		Soc. Science 2 (3)		Nat. Science 2 (3-5)	
Humanities 3 (3)		Soc. Science 3 (3)		Nat. Science 3 (3-5)	
Humanities 4 (3)		Soc. Science 4 (3)		Nat. Science 4 (3-5)	
Humanities 5 (3)		Soc. Science 5 (3)			

Core University/BA-Specific Requirements:

WU 101 (3)* C or Better		Total Hours (124)	
EN 101 (3) C or Better		Hours Outside Major (84)	
EN 300 (3) C or Better		Upper Division (300 and above) (45)	
MA 112 or MA 116 (3)** C or Better		Hours Within Arts and Sciences (99)	
>= 2.0 Overall Cumulative GPA		>= C Grade All Major and Correlated Courses	
FL 102 (4)			

**Students transferring with 24 or more credit hours completed at an accredited post-secondary institution (after graduating from High School) with a GPA of 2.0 or higher are exempt from this requirement*

***May be waived if the student successfully places into a higher-level mathematics course with an ACT score of 25 or higher and then successfully completes that course with a grade of C or higher or if a student presents an ACT score in mathematics of at least 28 (SAT of at least 640).*

Sample 4-Year Schedule for Chemistry Major Bachelor of Arts 124 Hours

Curriculum for students starting 2016-2017 Academic Year
Students starting in different academic years should contact their advisor.

Freshman			
Fall Semester		Spring Semester	
CH 151 – Fundamentals of Chemistry I	5	CH 152 – Fundamentals of Chemistry II	5
MA 116 – College Algebra	3	MA 117 - Trigonometry	3
EN 101 – English Composition	3	Soc. Sci. General Education	3
WU 101 – Washburn Experience	3	Humanities General Education	3
		Elective	3
TOTAL	14	TOTAL	17
Sophomore			
Fall Semester		Spring Semester	
CH 340 – Organic Chemistry I	3	CH 341 – Organic Chemistry II	3
CH 342 – Organic Chemistry I Lab	2	CH 343 – Organic Chemistry II Lab	2
PS 261 – College Physics I	5	PS 262 – College Physics II	5
Soc. Sci. General Education	3	Humanities General Education	3
Humanities General Education	3	Upper Division Elective	3
TOTAL	16		16
Junior			
Fall Semester		Spring Semester	
CH 320 – Analytical Chemistry*	3	CH 390 – Chemistry Research	1
CH 321 – Analytical Chemistry Lab**	1	CH 346 – Instrumental Analysis**	2
CH 350 – Biochemistry I*	3	EN 300 – Advanced Composition	3
Upper Division Elective	3	Soc. Sci. General Education	3
Natural Sciences General Education	3	Humanities General Education	3
Upper Division Elective	3	Upper Division Elective	3
TOTAL	16	TOTAL	15
Senior			
Fall Semester		Spring Semester	
FL 101 – Foreign Language I	4	FL 102 – Foreign Language II	4
Natural Sciences General Education	3	CH 391 – Chemistry Seminar	1
Humanities General Education	3	Natural Sciences General Education	3
Soc. Sci. General Education	3	Soc. Sci. General Education – Upper Division	3
Upper Division Elective	3	Upper Division Elective	3
TOTAL	16		14

*Many options: must take at least two

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Required research completed prior to the semester of graduation

Presentation of portfolio of instrumentation results prior to the semester of graduation