

CHEMISTRY
Bachelor of Arts
Secondary Education
(B.A.)

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

CH 151 Fundamentals of Chemistry I; 5 credit hours	Offered:	Fall
CH 152 Fundamentals of Chemistry II; 5 credit hours		Spring
CH 340 Organic Chemistry I; 3 credit hours		Fall
CH 341 Organic Chemistry II; 3 credit hours		Spring
CH 342 Organic Chemistry Laboratory I; 2 credit hours		Fall
CH 343 Organic Chemistry Laboratory II; 2 credit hours		Spring
CH 390 Undergraduate Chemical Research; 2 credit hours		Fall/Spring
CH 391 Chemistry Seminar; 1 credit hour		Spring

Two courses selected from:

CH 320 Analytical Chemistry; 3 credit hours	Offered:	Fall
CH 350 Biochemistry I; 3 credit hours		Fall
CH 352 Biochemistry II; 3 credit hours		Spring
CH 360 Descriptive Inorganic Chemistry; 3 credit hours		Fall-Odd Year
CH 380 Fundamentals of Physical Chemistry <u>or</u> CH 381 Physical Chemistry I; 3 credit hours;		Fall Odd Year

Two courses selected from:

CH 321 Analytical Chemistry Laboratory; 1 credit hour	Offered:	Fall
CH 345 Inorganic Chemistry Laboratory; 2 credit hours		Fall-Even Year
CH 346 Instrumental Analysis; 2 credit hours		Spring-Odd Year
CH 347 Physical Chemistry Concepts Lab; 1 credit hour		Spring-Even Year
CH 351 Biochemistry Laboratory I; 2 credit hours		Fall
CH 353 Biochemistry Laboratory II; 2 credit hours		Spring

Required correlated courses:

PS 261 College Physics I (General Education course) & PS 262 College Physics II; 5 credit hrs	PS261 Fall/PS262Spring
PS 281 General Physics I (General Education course) & PS 282 General Physics II; 5 credit hrs	PS281 Spring/PS282Fall
ED 155 Teaching Learning and Leadership; 3 credit hours	
ED 285 Educational Psychology; 3 credit hours	
ED 165: Ed. 1- Examining Teaching as a Profession; 3 credit hours	
ED 275: Ed. 2- Exploring Teaching as a Profession; 3 credit hours	
ED 295: Ed. 3- Experiencing Teaching as a Profession; 3 credit hours	
ED 395: Ed. 4- Extending Teaching as a Profession; 3 credit hours	
ED 302 Teaching Exceptional Learners; 3 credit hours	
ED 345: Curriculum and Assessment; 3 credit hours	
ED 352 Methods of Teaching Science in Sec. School or ED 350 General Secondary Methods; 3 credit hours	
ED 410 Secondary Student Teaching; (12 credit hours)	

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
	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).*

Please direct questions to:

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<http://www.washburn.edu/chemistry>

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Sample 4-Year Schedule for Chemistry Secondary Ed Specialization Major Bachelor of Arts 140 Hours

Sample curriculum for students starting in an even numbered academic year. Individual four-year degree plans are developed for each student upon consultation with an academic 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	Soc. Sci. General Education	3
EN 101 – First Year Writing	3	CM 101 – Computer Competency and Internet	3
WU 101 – Washburn Experience	3	CN 150 – Public Speaking	3
Soc. Sci. General Education	3	Natural Science General Education	3
TOTAL	17	TOTAL	17
Summer Session			
Humanities General Education	3		
TOTAL	3		
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
AR/MU/TH General Education	3	Humanities General Education	3
Natural Science General Education	4	FL 102 – Foreign Language II	4
FL 101 – Foreign Language I	4	ED 155 Teaching, Learning Leadership	3
		ED165: Ed. 1: Examining Teaching as a Profession	3
TOTAL	16		16
Summer Session			
ED 285 Educational Psychology	3		
ED 275: Ed 2: Exploring Teaching as a Profession	3		
TOTAL	6		
Junior			
Fall Semester		Spring Semester	
EN 300 – Advanced College Writing	3	CH 390 – Chemistry Research	1
CH 320 – Analytical Chemistry	3	CH 391 – Chemistry Seminar	1
CH 321 – Analytical Chemistry Lab	1	PS 261 – College Physics II	5
ED 295 Ed. 3- Experiencing Teaching as a Profession	3	ED 302- Teaching Exceptional Learners	3
PS 261 – College Physics I	5	ED 352 – Methods of Teaching Science	3
		Soc Sci General Education	3
TOTAL	15	TOTAL	16

Summer Session			
Soc Sci General Education	3		
TOTAL	3		
Senior			
Fall Semester		Spring Semester	
CH 350 – Biochemistry I	3	ED 400 – Understanding Schools	2
CH 351 – Biochemistry I Lab	2	ED 405 – Classroom Management	1
ED 385 – Foundations of Education	3	ED 410 – Secondary Student Teaching	12
ED 402 – Teaching Struggling Learners	2		
Soc Sci General Education	3		
Humanities General Education	3		
TOTAL	16		15

Required research completed prior to the semester of graduation.

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