CHEMISTRY
Bachelor of Science
(B.S.)

Not certified by the American Chemical Society; typically serves as a second major for students with a first major in another science or mathematics

Requirements for Major: At least 38 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 320 Analytical Chemistry; 3 credit hours	Fall
	CH 321 Analytical Chemistry Laboratory; 1 credit hour	Fall
	CH 340 Organic Chemistry I; 3 credit hours	Fall
	CH 341 Organic Chemistry II; 2 credit hours	Spring
	CH 342 Organic Chemistry I Lab; 2 credit hours	Fall
	CH 343 Organic Chemistry Laboratory II; 2 credit hours	Spring
	Two (or more) courses, for at least total of three credit hours, chosen from:	
	○ CH 345 Inorganic Chemistry Laboratory; 2 credit hours	Spring-Odd Year
	○ CH 346 Instrumental Analysis; 2 credit hours	Spring-Odd Year
	○ CH 347 Physical Chemistry Concepts Lab; 1credit hour	Spring-Even Year
	○ CH 351 Biochemistry Laboratory I; 2 credit hours	Fall
	Two (or more) courses, chosen from:	
	○ CH 350 Biochemistry I; 3 credit hours	Fall
	○ CH 352 Biochemistry II (CH 350 Biochemistry I is pre-requisite); 3 credit hrs;	Spring-Odd Year
	○ CH 360 Descriptive Inorganic Chemistry; 3 credit hours	Fall-Odd Year
	○ CH 382 Physical Chemistry II; 3 credit hours	Spring-Even Year
	○ CH 386 Inorganic Chemistry; 3 credit hours	Spring-Odd Year
	CH 380 Fundamentals of Physical Chemistry ***or*** CH 381 Physical Chemistry I; 3 credit hrs.	Fall-Odd Year
	CH 390 Undergraduate Chemical Research; 2 credit hours	Fall/Spring
	CH 391 Chemistry Seminar; 1 credit hour	Spring

Two correlated courses:

	PS 261 College Physics I (General Education course) & PS 262 College Physics II; 5 credit hours; ***or*** PS261 Fall/PS262 Spring PS 281 General Physics I (General Education course) & PS 282 General Physics II; 5 credit hours; ***or*** PS281 Spring/PS282Fall

Required concentration – 30 credit hours:

	The B.S. degree also requires a 30-hour concentration to be chosen from the Natural Sciences (Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy, or Computer Information Science). This concentration must be in departments other than the major and must have at least 20 hours in one department.

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
	An oral presentation of CH 390 research results is required of all BS majors

General Education Distribution Requirements (BS):

Humanities (9) (GEHU/GECPA) (Max 6 hours/ discipline)	**Course Number**		**Social Sciences (9) (GESS) (Max 6 hours/ discipline)**	**Course Number**		**Natural Sciences/ Mathematics (9) (GENS) (Max 8 Hours or 2 Courses/Discipline)**	
Fine Arts (3)			Soc. Science 1 (3)			PS 261/281 (5)	
Humanities 2 (3)			Soc. Science 2 (3)			Natural Science 2 (3-5)	
Humanities 3 (3)			Soc. Science 3 (3)			Natural Science 3 (3-5)	

Core University/BS-Specific Requirements:

WU 101 (3)* C or Better		Natural Science Minor (30 – 20 in one Discipline)	
EN 101 (3) C or Better		Hours Outside Major (76)	
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		>= 2.0 Major Cumulative GPA	
		Total Hours (124)	

**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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Rev. 11-2021

Sample 4-Year Schedule for Chemistry Major
(Non-ACS Certified) Bachelor of Science

120 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	MA 117 - Trigonometry	3
EN 101 – First Year Writing	3	Humanities General Education	3
WU 101 – Washburn Experience	3	Natural Sciences General Education	3
TOTAL	**14**	**TOTAL**	**14**
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
MA 151 – Calculus I	5	PS 281 – General Physics I	5
Soc. Sci. General Education	3	Natural Sciences Minor	3
Natural Sciences Minor	3	Humanities General Education	3
TOTAL	**16**		**16**
Junior			
Fall Semester		**Spring Semester**	
CH 320 – Analytical Chemistry	3	CH 346 – Instrumental Analysis**	2
CH 321 – Analytical Chemistry Lab	1	CH 386 – Inorganic Chemistry*	3
PS 282 – General Physics II	5	CH 390 – Chemistry Research	1
CH 350 – Biochemistry I*	3	EN 300 – Advanced College Writing	3
CH 351 – Biochemistry I Lab**	2	Natural Sciences Minor	3
Natural Sciences Minor	3	Soc. Sci. General Education -Upper Division	3
TOTAL	**17**	**TOTAL**	**15**
Senior			
Fall Semester		**Spring Semester**	
CH 381 – Physical Chemistry I	3	CH 391 – Chemistry Seminar	1
Natural Sciences Minor	3	Soc. Sci. General Education -Upper Division	3
Natural Sciences Minor	3	Natural Sciences Minor	3
Upper Division Elective	3	Upper Division Elective	3
Humanities General Education	3	Upper Division Elective	3
TOTAL	**15**		**13**

*Many options: must have two or more

**Many options: must have two or more (minimum of 3 hours)

Oral Presentation of CH 390 research results

Required research completed prior to the semester of graduation.

Rev. 11-2021