

Chemistry, B.S. Biochemistry Concentration

2024–25 Catalog

This example plan is designed to provide a blueprint for students to complete their degrees within four years. It includes recommended sequences of courses. Individual plans will vary based on previously earned credit, such as Dual Enrollment and AP credit, as well as the student's academic goals. Students will work with an academic advisor to develop a more individualized plan to complete their degree.

This example four-year plan is applicable to students admitted during the 2024–25 academic year.

Total credits required: 120 credits

Required GPA for graduation: 2.0 (institutional)

Students must maintain a 2.0 GPA over the 44–59 hours used to satisfy Field of Study and major requirements.

Courses requiring a C or better are denoted with an asterisk (*). Courses only offered in the fall semester are denoted with a plus sign (+). Courses only offered in the spring semester are denoted with a double-plus sign (++)

Legend is available on the last page of this document.

Year 1							
Fall				Spring			
Course	Title	Hours	Area	Course	Title	Hours	Area
CHEM 0001	First-Year Academic Seminar	1					
ENGL 1101*	English Composition I (pre-req to ENGL 1102)	3	Core	ENGL 1102	English Composition II	3	Core
CHEM 1311+ CHEM 1311L+	Principles of Chemistry for Majors I & Lab (pre-reqs to CHEM 1312/1312L)	4	Field	CHEM 1312++ CHEM 1312L++	Principles of Chemistry for Majors II & Lab (pre-reqs to CHEM 2800 and 3010)	4	Field
BIOL 1108* BIOL 1108L*	Principles of Biology II & Lab	4	Conc	BIOL 1107* BIOL 1107L*	Principles of Biology I & Lab (pre-reqs to BIOL 2100)	4	Core
GC1Y 1000	Critical Thinking (student's choice) (pre-req to GC2Y 2000)	3	Core	MATH 1261*	Calculus I (pre-req to MATH 1262)	4	Core + Field
Total Semester Hours:		15		Total Semester Hours:		15	
Summer	Summer is a good time to get ahead on courses. Several core courses are offered online over the summer terms. Students who require MATH 1113: Pre-Calculus in the spring should consider taking MATH 1261 in the summer of Year 1.						
Notes:	ENGL 1101, ENGL 1102, MATH 1261 (or MATH 1113), and GC1Y 1000 must be completed by 30 earned hours. First-Year Academic Seminar is a graduation requirement and impacts a student's GPA; however, it does not count toward the minimum of 120 semester hours required for a degree.						

Year 2							
Fall				Spring			
Course	Title	Hours	Area	Course	Title	Hours	Area
CHEM 2920+	Chemistry Seminar	1	Major	GC2Y 2000	Global Perspectives (student's choice)	4	Core
CHEM 3361 CHEM 3361L	Organic Chemistry I & Lab (pre-reqs to CHEM 3362/3362L and 3510)	4	Major	CHEM 3362 CHEM 3362L	Organic Chemistry II & Lab (pre-reqs to CHEM 3600L and 3711/3711L)	4	Major
MATH 1262	Calculus II (pre-req to PHYS 2212/2212L)	4	Core + Field	PHYS 2212 PHYS 2212L	Principles of Physics II & Lab (pre-reqs to CHEM 4211)	4	Field
PHYS 2211 PHYS 2211L	Principles of Physics I (pre-reqs to PHYS 2212/2212L)	4	Field	BIOL 2100*	Genetics (pre-req to 3000-level BIOL courses)	4	Conc
Core Humanities	Humanities and Ethics (student's choice)	3	Core				
Total Semester Hours:		16		Total Semester Hours:		16	
Notes:	GC2Y 2000 must be taken between 30–59 earned hours. General electives can be in any discipline and any level (1000–4999).						

Year 3							
Fall				Spring			
Course	Title	Hours	Area	Course	Title	Hours	Area
CHEM 3711+ CHEM 3711L+	Biochemistry I & Lab (pre-req to CHEM 3712 and 4300)	4	Major + Conc	CHEM 3712++ CHEM 3712L++	Biochemistry II & Lab	4	Conc
CHEM 3920+	Chemistry Seminar I (pre-req to CHEM 4920)	1	Major	CHEM 4300	Advanced Biochemistry	3	Capstone
CHEM 2800 CHEM 2800L	Quantitative Analysis & Lab (pre-reqs to CHEM 3200)	4	Field	CHEM 3200++ CHEM 3200L++	Instrumental Analysis & Lab	4	Major
CHEM 3010+	Inorganic Chemistry	3	Major	CHEM 3600L++	Structural Chemistry	2	Major
Lang 1001	World Language I (1001-level)	3	Elective	Lang 1002	World Language II (1002-level)	3	Foreign Lang
Total Semester Hours:		15		Total Semester Hours:		16	
Notes:	Students must complete a world language course at the 1002 level or higher. Complete the WebCAPE exam to determine placement for first course. Students who need to take a language course at the 1001 level may exceed 120 total credit hours. CHEM 3200L in spring of Year 3 can be substituted by CHEM 4211L in spring of Year 4.						

Year 4							
Fall				Spring			
Course	Title	Hours	Area	Course	Title	Hours	Area
CHEM Course	Capstone course (see DegreeWorks for options)	3	Capstone	CHEM 4920++	Chemistry Seminar II	1	Major
CHEM 4211+	Physical Chemistry I	3	Major	CHEM 4212+ CHEM 4212L+	Physical Chemistry II & Lab	4	Major
CHEM 4999	Independent Study: Research (pre-req to CHEM 4920)	3	Major	BIOL Elective	Biology elective (see catalog for options)	3	Conc
BIOL Elective	Biology elective (see catalog for options)	3	Conc	HIST 2111 or HIST 2112	The United States to 1877 or The United States Since 1877	3	Core
Core Art	Fine Arts (student's choice)	3	Core	Core Social Science	Social Science (student's choice)	3	Core
POLS 1101	American Government	3	Core				
Total Semester Hours:		18		Total Semester Hours:		14	
Notes:	Visit graduate schools or apply for jobs during this year. CHEM 4212L in the spring can be substituted by CHEM 4211L in the fall.						

Legend	
Area	This section of the plan references the area of the curriculum the course fulfills.
Core	Core IMPACTS — coursework required for every student regardless of major, which includes the following areas: Institutional Priority (GC1Y 1000 and GC2Y 2000); M athematics and Quantitative Skills; P olitical Science and U.S. History; A rts, Humanities, and Ethics; C ommunicating in Writing; T echnology, Mathematics, and Sciences; and S ocial Sciences.
Field	Core Field of Study courses, part of each major's requirements. These courses prepare students for further study in their chosen major field. Field of Study courses are specific to each major program.
Major	Chemistry Major requirements
Conc	Biochemistry Concentration coursework
Capstone	Biochemistry capstone experience: A culmination of everything the student has learned in the program.
Elective	Course(s) a student selects. Hours are needed to meet overall graduation hours. Number of electives varies per major. Electives can be used towards GC Journeys, minors, or professional/graduate school pre-requisites, or to take courses of interest.