

Chemistry, B.S. Industrial Chemistry Concentration

2024-25 Catalog

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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		GC1Y 1000	Critical Thinking (student's choice) (pre-req to GC2Y 2000)	3	Core
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
MATH 1113*	Pre-Calculus (pre-req to MATH 1261)	4	Core	MATH 1261*	Calculus I (pre-req to MATH 1262)	4	Core + Field
Core Humanities	Humanities and Ethics (student's choice)	3	Core				
	Total Semester Hours:	15			Total Semester Hours:	14	
Summer: Summer is a good time to get ahead on courses. Several core courses are offered online over the summer terms.							

	 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.
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	Year Z							
	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 3510/3510L)	4	Major	CHEM 3362 CHEM 3362L	Organic Chemistry II & Lab (pre-reqs to CHEM 3600L)	4	Major	
MATH 1262	Calculus II (pre-req to PHYS 2212/2212L and CHEM 4211)	4		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	Core + Field	Lang 1002	World Language II (1002-level)	3	Foreign Lang	
Lang 1001	World Language I (1001-level)	3	Elective					
	Total Semester Hours: 16 Total Semester Hours: 15							
Summer:	CHEM 2255 - Industrial Chemistry So	ophomo	re Interns	ship (0 credit hou	urs)			
Notes:	GC2Y 2000 must be taken between 3	30-59 e	arned ho	urs				

Summer:	CHEM 2255 - Industrial Chemistry Sophomore Interns	ship (0 credit hours)
Notes:	GC2Y 2000 must be taken between 30-59 earned how	urs.

	Year 3							
Fall				Spring				
Course	Title	Hours	Area	Course	Title	Hours	Area	
CHEM 3920+	Chemistry Seminar I (pre-req to CHEM 4920)	1	Major	CHEM 3200++ CHEM 3200L++	Instrumental Analysis & Lab	4	Major	
CHEM 2800 CHEM 2800L	Quantitative Analysis & Lab (pre-reqs to CHEM 3200 & 3400)	4	Field	CHEM 3600L++	Structural Chemistry	2	Major	
CHEM 3010+ CHEM 3010L+	Inorganic Chemistry & Lab	4	, ,	CHEM 4212++ CHEM 4212L++	Physical Chemistry II & Lab	4	Major + Capstone	
CHEM 4211+	Physical Chemistry I (pre-req to CHEM 4212)	3	Major	CHEM 4455	Principles of Industrial Chemistry	3	Major + Capstone	
PHYS 3600L+	Advanced Skills Lab	3	Concentration	HIST 2111 or HIST 2112	The United States to 1877 or The United States Since 1877	3	Core	
	Total Semester Hours:	15		Total Semester	r Hours:	16		
Summer:	CHEM 4456 - Applied Industrial Chen	nistry In	ternship	(3 credit hours)			-	

CHEW 4436 - Applied Industrial Chemistry Internship (3 credit hours)

1	CHEM 3010L in fall of Year 3 may be substituted by CHEM 3510L in fall of Year 4. Either CHEM 3200L or CHEM 4212L in spring of Year 3 may be substituted by CHEM 4211L in fall of Year 3. Students must complete a world language course at the 1002 level or higher. Complete the WebCAPE exam to determine
	placement for first course. General electives can be in any discipline and any level (1000–4999).

	Year 4							
	Fall				Spring			
Course	Title	Hours	Area	Course	Title	Hours	Area	
CHEM 3711	Biochemistry	3	Major	CHEM 4920++	Chemistry Seminar II	1	Major	
CHEM or PHYS Course	Capstone course (see DegreeWorks for options)	3	Capstone	CHEM or PHYS Course	Capstone course (see DegreeWorks for options)	3	Capstone	
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	Gen Elective	Any general elective course	3	Elective	
Gen Elective	Any general elective course	3	Elective	Gen Elective	Any general elective course	3	Elective	
	Total Semester Hours:	15			Total Semester Hours:	13		
Notes:	Visit graduate schools or apply for jobs during this year. General electives can be in any discipline and any level (1000–4999).							

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	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
Capstone	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.