

Cleveland State University
 Bachelor of Science in Chemistry
 American Chemical Society Certified Track

Curriculum Sheet (Effective Fall 2026)

First Year

Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
Inquiry Launch Elective	3		IL	Research & Professional Writing Elective	3		RPW
Finding Your Voice Elective	3		FYV	MTH 182 Calculus II	4	X	QFR
MTH 181 Calculus I	4	X	QFR	CHM 262/267 Gen. Chemistry II w/Lab	4	X	SI
CHM 261/266 General Chemistry w/ Lab	4	X	SI	Global Human Perspectives Elective	3		GHP
Semester Total	14			Semester Total	14		

Second Year

Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
American Civic Literacy Elective	3		ACL	Human Culture & Creativity Elective	3		HCC
CHM 331/336 Organic Chemistry I w/lab	4	X		CHM 332/337 Organic Chemistry II w/Lab	4	X	
CHM 281 Multivariable Calculus	4	X		PHY 242 or PHY 244	5	X	SI
PHY 241 or PHY 243	5	X	SI	CHM 301 Research Methods Chemistry	2	X	WAC
Semester Total	16			Semester Total	14		

Third Year

Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
CHM 321 Physical Chemistry I	3	X		CHM 322 Physical Chemistry II	3	X	
CHM 426 Physical Chemistry Lab I	3	X		CHM 427 Physical Chemistry II Lab	3	X	
CHM 311 Analytical Chemistry	3	X		CHM 412 Adv. Instrumental Analysis	3	X	
CHM 316 Analytical Chemistry Lab	2	X		CHM 416 Instrumental Analysis Lab	3	X	
CHM 411 Instrumental Analysis	3	X		CHM 431 Advanced Organic Chemistry	2	X	
				General Elective	3		
Semester Total	14			Semester Total	17		

Fourth Year

Fall Semester	Credits	Major	Core	Spring Semester	Credits	Major	Core
WAC/SPAC Elective	3		WAC	CPL Elective	3		CPL
Society & Human Behavior Elective	3		SHB	CHM 403 Biochemistry II	3	X	
CHM 402 Biochemistry I	3	X		CHM 446 Inorganic Chemistry Lab	2	X	
CHM 441 Inorganic Chemistry	3	X		CHM 472 Student Colloquium	1	X	
CHM 471 Faculty Colloquium	1	X		CHM 489 Senior Research	3	X	
CHM 462 Polymer Chemistry	3	X		CHM Elective (300/400 Level)	3	X	
Semester Total	16			Semester Total	15		

Degree Total hours: 120 hours

Core Curriculum Key:	
IL = Inquiry Launch (one course)	QFR = Quantitative & Formal Reasoning (one course)
FYV = Finding Your Voice (one course, C or better required)	RPW = Research & Professional Writing (one course, C or better required)
SHB = Society & Human Behavior (one course)	HCC = Human Culture & Creativity (one course)
SI = Scientific Inquiry (two courses, one lab credit)	WAC/SPAC = Writing/Speaking Across the Curriculum Req (2 courses, one in the major)
GHP = Global Human Perspectives (one course)	ACL = American Civic Literacy (one course)
** Inquiry Launch requirement is waived for transfer students.	CPS = Complexities of a Pluralistic Society (one course)
	DDL = Data & Digital Literacy (one course, can be satisfied by a second QFR course)

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***** 3 credit hours short of 120 hours, but all requirements (core and major) are mapped ***
 Added a general elective to get to 120 credit hours**

Cleveland State University
College of Arts and Sciences
Bachelor of Science in Chemistry
(Pre-Professional Track)

First Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
ASC 101 Intro to University Life	1		Intro	ENG 102 College Writing II	3		W/C
ENG 101 College Writing I	3		W/C	MTH 181 Calculus I	4	X	M/QL
STA 147 Statistics	3	X	M/QL	CHM 262/267 General Chemistry w/ Lab	4	X	NS
CHM 261/262 General Chemistry w/ Lab	4	X	NS	BIO 202/203 Introductory Biology II/Lab	4	X	NS
BIO 200/201 Introductory Biology I/Lab	4	X	NS				
<i>Semester Total</i>	15			<i>Semester Total</i>	15		

Second Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
CHM 331/336 Organic Chemistry I/Lab	4	X		CHM 332/337 Organic Chemistry II/Lab	4	X	
PHY 221 College Physics I	5	X		PHY 222 College Physics II	5	X	
Arts & Humanities Elective**	3	X	A&H	CHM 301 Research Methods in Chemistry	2	X	WAC
General Elective*	3			Social Science Elective**	3		SS
<i>Semester Total</i>	15			<i>Semester Total</i>	14		

Third Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
CHM 310 Survey Analytical Chemistry	2	X		BIO 310/311 Genetics & Recitation	4	X	
CHM 315 Survey Analytical Chemistry Lab	2	X		CHM 320 Survey of Physical Chemistry	3	X	
CHM 402 Biochemistry I	3	X		CHM 403 Biochemistry II	3	X	
BIO 308/309 Cell Biology/Lab	4	X		Social Science Elective**	3		SS
Arts & Humanities Elective **	3		A&H	General Elective (WAC)*	3		WAC
<i>Semester Total</i>	14			<i>Semester Total</i>	16		

Fourth Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
CHM 471 Faculty Colloquium	1	X		CHM 472 Student Colloquium	1	X	CAP
BIO 416/417 Microbiology/Lab	5	X		CHM/BIO Elective (300/400 level)	3	X	
CHM/BIO Elective (300/400 level)	3	X		CHM/BIO Elective (300/400 level)	3	X	
BIO 302/303 Animal Biology/Lab	4	X		Social Diversity Elective (US)	3		DIV-US
CHM/BIO Elective (300/400 level)	3	X		Writing Across the Curriculum Elective	3		WAC
				Social Diversity Elective (AA)	3		DIV-AA
Apply for Spring graduation by the middle of this term							
<i>Semester Total</i>	16			<i>Semester Total</i>	16		
Credit Total: 121 (minimum 120 required for degree)							

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study. This plan assumes college-level readiness in both mathematics and English and that Foreign Language Deficiency requirements have been met.

Gen Ed Key:	
INTRO = Introduction to University Life Requirement (one course)	SS = Social Sciences Requirement (2 courses from different departments**)
W/C = Writing/Composition Requirement (2 courses; C or better required)	A&H = Arts & Humanities Requirement (2 courses from different departments**)
M/QL = Mathematics/Quantitative Literacy Requirement (2 courses)	DIV = Social Diversity Requirement (one US Diversity & one African American Exp.)
NS = Natural Science (2 courses, one of which must have a lab)	WAC/SPAC = Writing/Speaking Across the Curriculum (3 courses, one in major)
	CAP = Capstone Requirement

* General Electives ensure that a student accumulates the minimum 120 required credit hours for graduation. Of these 120 credit hours, a minimum of 36 credit hours must be upper division (300 or 400-level courses).

** Of the SS and A&H courses, one must be focused on Africa, Latin America, Asia, or the Middle East

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Cleveland State University
College of Arts and Sciences
Bachelor of Science in Chemistry

(Pre-Professional Track with Concentration in Pharmaceutical Science)

First Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
ASC 101 Intro to University Life	1		Intro	ENG 102 College Writing II	3		W/C
ENG 101 College Writing I	3		W/C	MTH 181 Calculus I	4	X	M/QL
STA 147 Statistics	3	X	M/QL	CHM 262/267 General Chemistry w/ Lab	4	X	NS
CHM 261/262 General Chemistry w/ Lab	4	X	NS	BIO 202/203 Introductory Biology II/Lab	4	X	NS
BIO 200/201 Introductory Biology I/Lab	4	X	NS				
<i>Semester Total</i>	15			<i>Semester Total</i>	15		

Second Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
CHM 331/336 Organic Chemistry I/Lab	4	X		CHM 332/337 Organic Chemistry II/Lab	4	X	
PHY 221 College Physics I	5	X		PHY 222 College Physics II	5	X	
Arts & Humanities Elective**	3	X	A&H	General Elective (WAC)*	3		WAC
Social Diversity Elective (US)	3		DIV-US	Social Science Elective**	3		SS
<i>Semester Total</i>	15			<i>Semester Total</i>	15		

Third Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
CHM 341 Pharmacology I	3	X		CHM 342 Pharmacology II	3	X	
CHM 351 Medicinal Chemistry I	3	X		CHM 352 Medicinal Chemistry II	3	X	
CHM 310 Survey Analytical Chemistry	2	X		BIO 310/311 Genetics and Recitation	4	X	
CHM 315 Survey Analytical Chemistry Lab	2	X		CHM 403 Biochemistry II	3	X	
CHM 402 Biochemistry I	3	X					
Social Science Elective**	3		SS				
<i>Semester Total</i>	16			<i>Semester Total</i>	13		

Fourth Year

Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed
BIO 416/417 Microbiology/Lab	5	X		CHM 471 Faculty Colloquium	1	X	
CHM 455 Biotechnology Techniques	3	X		CHM 472 Student Colloquium	1	X	CAP
CHM 457 Pharmaceutical Analysis Lab	3	X	CAP	CHM/BIO Elective (300/400 level)^	3	X	
CHM/BIO Elective (300/400 level)^	3	X		CHM/BIO Elective (300/400 level)^	3	X	
General Elective (WAC)*	3		WAC	Social Diversity Elective (AA)	3		DIV-AA
				Arts & Humanities Elective**	3		A&H
Apply for Spring graduation by the middle of this term							
<i>Semester Total</i>	17			<i>Semester Total</i>	14		
Credit Total: 120 (minimum 120 required for degree)							

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^One of the CHM/BIO 300/400 level electives MUST also be an approved WAC course in order to satisfy the WAC-in-major requirement.

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Cleveland State University
College of Arts and Sciences
 Bachelor of Science in Chemistry
 CSUteach (license in Education)

First Year									
Fall Semester	Credits	Major	License	Gen Ed	Spring Semester	Credits	Major	License	Gen Ed
ASC 101: Intro to University Life	1			Intro					
ENG 101: College Writing I	3			W/C	ENG 102: College Writing II	3			W/C
CHM 261/266: General Chemistry I + Lab	4	x		NS	CHM 262/267: General Chemistry II + Lab	4	x		NS
PSY 221: Adolescent Psychology	3		x	SS	BIO 200/201: Introductory Biology I + Lab	4	x		NS
MTH 181: Calculus I	4	x		M/QL	MTH 182: Calculus II	4	x		M/QL
<i>Semester Total</i>	15				<i>Semester Total</i>	15			

Second Year									
Fall Semester	Credits	Major	License	Gen Ed	Spring Semester	Credits	Major	License	Gen Ed
EUT 201: Step 1: Inquiry Approaches to Teaching	1		x		EDB 242: Introduction to Education	3		x	DIV
CHM 331/336: Organic Chemistry I + Lab	4	x			CHM 332/337: Organic Chemistry II + Lab	4	x		
BIO 202/203: Introductory Biology II + Lab	4	x		NS	BIO 304/305: Population Biology & Ecology + Lab	4	x		
EVS 206: Intro to Environmental Science	3	x		NS	STA 147: Statistical Concepts & App	3	x		M/QL
Arts & Humanities Elective (**ALAAME)	3			A&H	EDC 200: Div in Edu Settings	3		x	DIV
African American Experience Elective	3			DIV					
<i>Semester Total</i>	18				<i>Semester Total</i>	17			

Third Year									
Fall Semester	Credits	Major	License	Gen Ed	Spring Semester	Credits	Major	License	Gen Ed
EDB 302: Psychological Foundations of Education	3		x	WAC	EUT 305: Classroom Interactions	3		x	
CHM 310/315: Survey of Analytical Chem + lab	4	x			PHY 201: Astronomy: Stars & Galaxies	3	x		NS
PHY 221: College Physics I	5	x		NS	PHY 222: College Physics II	5	x		NS
GEO 100/101: Intro to Geology + Lab	4	x		NS	ESE 400: Introduction to Education	3		x	WAC
CHM 404: Environmental Chemistry	3	x			Social Science Elective (**ALAAME)	3	x		SS
<i>Semester Total</i>	19				<i>Semester Total</i>	17			

Fourth Year									
Fall Semester	Credits	Major	License	Gen Ed	Spring Semester	Credits	Major	License	Gen Ed
EUT 417: Project Based Instruction in Science	3		x		EST 499: CSUteach STEM Apprentice Teaching II	6		x	
EST 399: CSUteach STEM Apprentice Teaching I	1		x		EUT 210: Perspectives on Science & Math	3		x	A&H/WAC
EUT 311: Research Methods	3		x	WAC	EDL 305: Content Area Literacy	3		x	
CHM 402: Biochemistry	3	x							
PHY 470: Environmental Physics	3	x							
CHM 320: Survey of Physical Chemistry	3	x							
CHM 472: Student Colloquium	1	x		CAP/WAC					
Apply for Spring graduation by the middle of this term									
<i>Semester Total</i>	17				<i>Semester Total</i>	12			
Degree Total: 130									

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