

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is only one strategy. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Electives, and university requirements (see pg. 2) are based on Catalog Year.

Course Subject and Title	cr.	Min. Grade	*GE, UU or UM	**Sem. Offered	Prerequisites, (Corequisite)	Scheduling Notes
Years 1-2 (Same as BS Degree)						
CHEM 1111 / 1111L General Chemistry I & Lab	5	C-	GE 5	F	MATH 1143 or 1147	usually taken... Fall 1
CHEM 1112 / 1112L General Chemistry II & Lab	4	C-		S	CHEM 1111/1111L	Spring 1
CHEM 3301 / 3303 Organic Chemistry I & Lab	4	C-	UM	F	CHEM 1112/1112L	Fall 2
CHEM 3302 / 3303 Organic Chemistry II & Lab	4	C-	UM	S	CHEM 3301/3303	Spring 2
CHEM 2232 / 2234 Quantitative Analysis & Lab	4	C-		S	CHEM 1112/ 1112L	Spring 2
MATH 1170	4	C-	GE 3	F, S	MATH 1144 or 1147	Fall 1
MATH 1175	4	C-		F, S	MATH 1170	Spring 1
PHYS 2211 / 2213	5	C-		F	MATH 1175 (corequisite)	Fall 2
PHYS 2212 / 2214	5	C-		S	PHYS 2211, PHYS 2213	Spring 2
BIOL 1101 / 1101L Biology I & Lab	4	C-	GE 5	F, S	MATH 1108	
3 Gen Ed Courses, Objectives 1, 1, & 2	9		GE			
2 Gen Ed Courses, Ed Objectives 4, 6, 7, 8, or 9	6		GE			
Free Electives	8					
Total	66					

Semester Five (Fall of Junior Year)						
CHEM 2211 / 2213 Inorganic Chemistry I & Lab	4	C-		F	CHEM 3301 and CHEM 3303 or permission	
CHEM 3331 Instrumental Analysis	2	C-	UM	F	CHEM 2232 and CHEM 2234 or permission	
CHEM 3351 / 4451 Physical Chemistry I & Lab	4	C-	UM	F	CHEM 1112, 1112L, MATH 1175, and PHYS 2212 or permission	
Gen Ed Objective 4/6/7/8/9	3		GE			
Total	13					

Semester Six (Spring of Junior Year)						
CHEM 3334 Instrumental Analysis Lab	2	C-	UM	S	CHEM 2232, CHEM 2234, CHEM 3331 or permission	
CHEM 3352 / 4452 Physical Chemistry II & Lab	4	C-	UM	S	CHEM 3351, CHEM 4451	
CHEM 4485 Senior Research	2	C-	UM	F, S		
Gen Ed Objective 4/6/7/8/9	3		GE			
Free Electives	3					
CHEM 4421 or CHEM 5521: Topics in Laboratory Safety	1		UM			
Total	15					

Semester Seven (Fall of Senior Year)						
CHEM 4445 or 5545 Biochemistry I	3	C-	UM	F	BIOL 1101 & CHEM 3302	
CHEM 4465/4466 or 5565/5566 Synthetic Methods & Lab	4		UM	F	CHEM 2211, CHEM 3302, and CHEM 3304	offered variable years
CHEM 4485 Senior Research	4			F, S		
Gen Ed Objective 4/6/7/8/9	3		GE			
CHEM 6671 Advanced Organic Chemistry	3	B-		F	CHEM 3302	
OR CHEM 6630 Advanced Analytical Chemistry					CHEM 3334 or permission	
Total	17 [†]				[†] 12 undergraduate credits required for full time status	

Semester Eight (Spring of Senior Year)						
CHEM 4407 or 5507 Inorganic Chemistry II	2	C-	UM	S	CHEM 2211; CHEM 3342 or 3352 or permission	alternating years
CHEM 4447 or 5547 Biochemistry II	3		UM	S	CHEM 4445	
CHEM 4491 Seminar	1		UM	F, S	CHEM 4481 or 4482 or 4485 or permission	
Gen Ed Objective 4/6/7/8/9	3		GE			
Free Undergraduate Electives	3					
CHEM 6655 Advanced Physical Chemistry	3	B-		S	CHEM 3352 or permission	
OR CHEM 6609 Advanced Inorganic Chemistry					CHEM 4407 or CHEM 5507 or permission	
Total	15 [†]				[†] 12 undergraduate credits required for full time status	

Semester Nine (Fall of Graduate Year)						
CHEM 6630 Advanced Analytical Chemistry	3	B-		F	CHEM 3334 or permission	
OR CHEM 6671 Advanced Organic Chemistry					CHEM 3302	
CHEM 6635 Masters Research	6	B-		F, S	CHEM 4485 or permission	
CHEM 6601 Seminar	1	B-		F		
Total	10					

Semester Ten (Spring of Graduate Year)						
CHEM 6609 Advanced Inorganic Chemistry	3	B-		S	CHEM 4407 or CHEM 5507 or permission	
OR CHEM 6655 Advanced Physical Chemistry					CHEM 3352 or permission	
CHEM 6635 Masters Research	6	B-		F, S	CHEM 4485 or permission	
CHEM 6601 Seminar	1	B-		F		
Total	10					

*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major

**See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)

OR 66XX Lectures are offered in alternating years

[†]To retain financial aid eligibility, students may need to take additional electives to reach 12 undergraduate credits.

Chemistry Accelerated BS/MS

2025-2026 Major Courses		GENERAL EDUCATION OBJECTIVES		
Undergraduate Major Requirements/Recommendations	cr.	Satisfy Objectives 1, 2, 3, 4, 5, 6, (7 or 8), and 9		cr.
CHEM 1111 & CHEM 1111L: General Chemistry I & L	(5)	1. Written English (6 cr.)	ENGL 1101	3
CHEM 1112 & CHEM 1112L: General Chemistry II & Lab	4		ENGL 1102	3
CHEM 2211 & CHEM 2213: Inorganic Chemistry I & Lab	4	2. Spoken English (3 cr.)	COMM 1101 or BIOL 1104	3
CHEM 2232 & CHEM 2234: Quantitative Analysis & Lab	4	3. Mathematics (3 cr.)	MATH 1170	4
CHEM 3301 & CHEM 3303: Organic Chemistry I & Lab	4	4. Humanities, Fine Arts, Foreign Lang. (2 courses in 2 categories, 6 cr)		
CHEM 3302 & CHEM 3304: Organic Chemistry II & Lab	4			3
CHEM 3331 & CHEM 3334: Instrumental Analysis & Lab	4			3
CHEM 3351 & CHEM 4451: Physical Chemistry I & Lab	4	5. Natural Sciences (7 cr.)	CHEM 1111 / 1111L	5
CHEM 3352 & CHEM 4452: Physical Chemistry II & Lab	4		PHYS 2211 / 2213	5
CHEM 4465 & CHEM 4466: Synthetic Methods & Lab (recommended)	4	6. Behavioral and Social Science (2 courses in different prefixes, 6 cr)		
CHEM 4407: Inorganic Chemistry II (recommended)	2			3
CHEM 4421 or CHEM 5521: Topics in Laboratory Safety (recommended)	1			3
CHEM/BIOL 4445: Biochemistry I	3	One Course from EITHER Objective 7 OR 8 (1 course)		
CHEM/BIOL 4447: Biochemistry II (recommended)	3	7. Critical Thinking	Recommended: CS 1111	3
CHEM 4485: Senior Research	6	8. Information Literacy		
CHEM 4491: Seminar	1	9. Cultural Diversity (1 course)		
MATH 1170: Calculus I	(4)			3
MATH 1175: Calculus II	4	General Education Total		
PHYS 2211 & PHYS 2213: Engineering Physics I & L	(5)			
PHYS 2212 & PHYS 2214 Engineering Physics II & Lab	5			
BIOL 1101 & BIOL 1101L Biology I and Lab	4			
Undergraduate Major Subtotal (excluding General Education)	65	Undergraduate Credit Summary (including recommendations)		
		cr.		

Undergraduate Major Subtotal (excluding General Education)		65	Undergraduate Credit Summary (including recommendations)		cr.
			Major		65
Other Recommended Electives			General Education		41
MATH 2275: Calculus III		3	Upper Division Free Electives to reach 36 credits		0
MATH 2240: Linear Algebra		3	Free electives to reach 120 credits		14
MATH 3360: Differential Equations		3	Undergraduate Total		120

Suggested Courses Eligible for Dual 44XX/55XX-level Credit	
CHEM 5500: Practicum in Physical Science	2
CHEM 5521: Topics in Laboratory Safety	1
CHEM 5507: Inorganic Chemistry II	2
CHEM 5533: Environmental Chemistry	2
CHEM 5537: Environmental Chemistry Laboratory	1
CHEM 5538: Experimental Biochemistry	1
CHEM 5545: Biochemistry I	3
CHEM 5547: Biochemistry II	3
CHEM 5565: Synthetic Methods	2
CHEM 5566: Synthetic Methods Lab	2
CHEM 5570: Bioorganic Chemistry	3
CHEM 5599: Experimental Course	1-6
Maximum Total for Dual UG/Grad Credit	6

66XX Master of Science Requirements/Recommendations			
CHEM 6630: Advanced Analytical Chemistry	3	Overall Master of Science Credit Summary	
CHEM 6671: Advanced Organic Chemistry	3	Dual UG/Grad 44XX/55XX-level credits	6
CHEM 6655: Advanced Physical Chemistry	3	CHEM 66XX lecture courses	12
CHEM 6609: Advances Inorganic Chemistry	3	CHEM 6635: Masters Research	10
CHEM 6635: Masters Research	10	CHEM 6691: Seminar	2
CHEM 6601: Seminar	2	Overall Graduate Total	
		30	