



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

Course Subject and Title	Cr.	Min. Grade	*GE, UU or UM	**Sem. Offered	Prerequisite	Co Requisite
Semester One						
GE Objective 1: ENGL 1101 Writing and Rhetoric I	3	C-	GE	F, S, Su	Appropriate placement score	
GE Objective 3: Either MATH 1160 Applied Calculus OR MATH 1170 Calculus I	3-4	C-	GE	F, S, Su	MATH 1143 or 1147 or appropriate test score	
					MATH 1144 or 1147 or appropriate test score	
GE Objective 5: CHEM 1111 & 1111L Gen Chemistry I & Lab	5	C-	GE	F, S	MATH 1143 or 1147 or appropriate test score	
GE Objective 4:	3		GE	F, S, Su		
Free Electives	0-1					
Total	15					
Semester Two						
GE Objective 1: ENGL 1102 Writing and Rhetoric II	3	C-	GE	F, S, Su	ENGL 1101 or equivalent	
CHEM 1112 & 1112L General Chemistry II & Lab	4	C-		F, S	CHEM 1111 & 1111L & MATH 1143 or 1147 or equivalent	
GE Objective 5: BIOL 1101 & 1101L Biology I & Lab	4		GE			
Free Electives	4			F, S, Su	MATH 1108	
Total	15					
Semester Three						
GE Objective 2: COMM 1101 Principles of Speech	3		GE	F, S, S u		
Either PHYS 1111 & 1113 Gen Physics I & Lab OR PHYS 2211 & 2213 Engineering Physics I & Lab	4-5		GE	F F, S	MATH 1143 or 1147 or appropriate test score MATH 1175	MATH 1175
CHEM 3301 & CHEM 3303 Organic Chemistry I & Lab	4	C-	UM	F	CHEM 1112 & 1112L or permission of instructor	
GE Objective 4:	3		GE	F, S, Su		
Free Electives	0-1					
Total	15-16					
Semester Four						
GE Objective 7 or 8:	3		GE			
PHYS 1112 & PHYS 1114 General Physics II & Lab OR PHYS 2212 & PHYS 2214 Engineering Physics II & Lab	4-5			S F, S	PHYS 1111 & PHYS 1113 PHYS 2211 & PHYS 2213	
CHEM 3302 & CHEM 3304 Organic Chemistry II & Lab	4	C-	UM	S	CHEM 3301 & CHEM 3303	
CHEM 2232 & CHEM 2234 Qualitative Analysis & Lab	4			S	CHEM 1112 & Lab, MATH 1160 or MATH 1170	
Free Electives	0-1					
Total						
Semester Five						
Either BIOL 4432 Biochemistry OR CHEM/BIOL 4445 Biochemistry I	3		UM	F, S F	BIOL 1101 & 1101L and CHEM 3301 BIOL 1101 & 1101L and CHEM 3302	
CHEM 3341 Topics in Physical Chemistry OR CHEM 3351 Physical Chemistry	3		UM	F	CHEM 1112 & 1112L, MATH 1160 or 1170, PHYS 1112 or 2212 CHEM 1112 & 1112L, MATH 1175, PHYS 2212	
CHEM 2211 & CHEM 2213 Inorganic Chemistry I & Lab	4			F	CHEM 3301 or permission of instructor	
Upper Division CHEM elective	3		UM	F		
GE Objective 6:	3		GE	F, S, Su		
Total	16					
Semester Six						
Either CHEM 3342 Topics in Physical Chemistry OR CHEM 3352 Physical Chemistry	3		UM	S	CHEM 3341 or permission of instructor CHEM 3351	
Upper Division CHEM Elective	3		UM	S		
GE Objective 9:	3		GE	F, S, Su		
Free Electives	6					
Total	15					
Semester Seven						
CHEM 3391 Seminar	1		UM	R1	CHEM 3301, 3303 or permission of instructor	
Upper division CHEM Electives	2		UM			
GE Objective 6	3		GE			
Upper Division Free Electives	7		UU			
Free Electives	2					
Total	15					
Semester Eight						
Upper Division Free Electives	3		UU			
Free Electives	10					
Total	13					

*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.)

2024-2025 Major Requirements		CR	GENERAL EDUCATION OBJECTIVES Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9		36 cr. min
MAJOR REQUIREMENTS		46-48	1. Written English (6 cr. min) ENGL 1101		3
BIOL 1101 & 1101L Biology I & Lab (Counted in GE Objective 5)			ENGL 1102		3
Either BIOL 4432 Biochemistry OR CHEM/BIOL 4445 Biochemistry I		3	2. Oral Communication (3 cr. min) COMM 1101		3
CHEM 1111 & 1111L General Chemistry I & Lab (Counted in GE Objective 5)			3. Mathematics (3 cr. Min) MATH 1160 or MATH 1170		3-4
CHEM 1112 & 1112L General Chemistry II & Lab		4	4. Humanities, Fine Arts, Foreign Lang. (2 courses; 2 categories; 6 cr. min)		
CHEM 2211 & CHEM 2213 Inorganic Chemistry I & Lab		4			
CHEM 2232 & CHEM 2234 Qualitative Analysis & Lab		4			
CHEM 3301 & CHEM 3303 Organic Chemistry I & Lab		4	5. Natural Sciences (2 lectures-different course prefixes, 1 lab; 7 cr. min)		
CHEM 3302 & CHEM 3304 Organic Chemistry II & Lab		4	CHEM 1111 & CHEM 1111L		5
CHEM 3341 Topics in Physical Chemistry I		6	BIOL 1101 and 1101L		4
AND CHEM 3342 Topics in Physical Chemistry II					
OR CHEM 3351 Physical Chemistry I			6. Behavioral and Social Science (2 courses-different prefixes; 6 cr. min)		
AND CHEM 3352 Physical Chemistry II					
CHEM 3391 Seminar		1			
Upper Division CHEM Electives		8	One Course from EITHER Objective 7 OR 8 (1course; 3 cr. min)		
MATH 1160 App Calculus OR 1170 Calc I (Counted in GE Objective 3)			7. Critical Thinking		
Physics Requirement		8 - 10	8. Information Literacy		
PHYS 1111 & PHYS 1113 General Physics I & Lab		8			
AND PHYS 1112 & PHYS 1114 General Physics II & Lab			9. Cultural Diversity (1 course; 3 cr. min)		
OR PHYS 2211 & PHYS 2214 Engineering Physics I & Lab		10			
AND PHYS 2212 & PHYS 2214 Engineering Physics II & Lab			General Education Elective to reach 36 cr. min. (if necessary)		
			Total GE 39-40		
			Undergraduate Catalog and GE Objectives by Catalog Year		
			http://coursecat.isu.edu/undergraduate/programs/		
			MAP Credit Summary		CR
			Major		46-48
			General Education		39-40
			Upper Division Free Electives to reach 36 credits		10
			Free Electives to reach 120 credits		22-25
			TOTAL		120
			Graduation Requirement Minimum Credit Checklist		Confirmed
			Minimum 36 cr. General Education Objectives (15 cr. AAS)		x
			Minimum 15 cr. Upper Division in Major (0 cr. Associate)		x
			Minimum 36 cr. Upper Division Overall (0 cr. Associate)		x
			Minimum of 120 cr. Total (60 cr. Associate)		x
			MAP Completion Status (for internal use only)		
Advising Notes			Date		
Please consult catalog and faculty advisor for appropriate CHEM			Department:		
electives.			OAA or COT:		
Courses in chemistry, which are prerequisites for another course, must be passed with a C- or better			Registrar:		
			Complete College American Momentum Year		
			Math and English course in first year-Specific GE MATH course identified		
			9 credits in the Major area in first year		
			15 credits each semester (or 30 in academic year)		
			Milestone courses		