

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: MATH 1170 Calculus I	4	C-	GE	F, S, Su	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 5 : BIOL 1101 & 1101L General Biology I & Lab	4	C-	GE	F, S, Su	MATH 1108 or appropriate test score	
Total	16					
Semester Two						
GE Objective 1: ENGL 1102 Writing and Rhetoric II	3	C-	GE	F, S, Su	ENGL 1101 or equivalent	
MATH 1175: Calculus II	4	C-		F, S, Su	MATH 1175 C-	
CHEM 1112 & 1112L General Chemistry II & Lab	4	C-		F, S	CHEM 1111 & 1111L and MATH 1143 or MATH 1147	
BIOL 1102 & BIOL 1102 L General Biology II & Lab	4	C-		F, S	BIOL 1101 & Lab	
Total	15					
Semester Three						
BIOL 2233/L Principles of Microbiology & Lab***	4				BIOL 1101, BIOL 1102, CHEM 1112	
PHYS 1111 & 1113 General Physics I & Lab***	4	C-		F, S	MATH 1143 or 1147 or appropriate test score	MATH 1175
CHEM 3301 & CHEM 3303 Organic Chemistry I & Lab	4	C-	UM	F, S	CHEM 1112 & 1112L or permission of instructor	
GE Objective 2: COMM 1101 Principles of Speech	3	C-	GE	F, S, Su		
Total	15					
Semester Four						
BIOL 3358 Genetics	3	C-	UM	F, S	BIOL 2235 or BIOL 2206	
PHYS 1112 & PHYS 1114 General Physics II & Lab***	4	C-		F	PHYS 1111 & PHYS 1113	
CHEM 3302 & CHEM 3304 Organic Chemistry II & Lab	4	C-		S	CHEM 3301 & CHEM 3303	
CHEM 2232 & CHEM 2234 Qualitative Analysis & Lab	4	C-		S	CHEM 1112 & Lab, MATH 1160 or 1170	CHEM 2234 or permission
Total	15					
Semester Five						
BIOL/CHEM 4445 Biochemistry I	3		UM	F	BIOL 1101 & CHEM 3302	
CHEM 3341 Topics in Physical Chemistry***	3	C-	UM	F	CHEM 1112 & 1112 L, PHYS 1112 or 2211, MATH 1160 or 1175	
BIOL electives from approved list	4	C-		F, S	See catalog	
CHEM elective from approved list	4	C-		F, S	See catalog	
GE Objective 6:	3		GE	F, S, Su		
Total	17					
Semester Six						
BIOL/CHEM 4447 Biochemistry II	3	C-			BIOL /CHEM 4445	
CHEM 3342 Topics in Physical Chemistry***	3	C-	UM	S	CHEM 3341 Topics in Physical Chemistry	
BIOL 4437/CHEM 4438 Experimental Biochemistry	1	C-	UM	S	BIOL 4432 or CHEM 4445	
BIOL electives from approved list	4	C-	UM	F,S	See catalog	
GE Objective 4:	3		GE	F,S		
Total	14					
Semester Seven						
BIOL 4444 & BIOL 4444L Cell & Molecular Biology & Lab	4	C-	UM	F	BIOL 3358 & CHEM 3302	
CHEM electives from approved list	4	C-		F, S	See catalog	
GE Objective 6	3		GE	F, S, Su		
GE Objective 7 or 8:	3		GE	F, S, Su		
Total	14					
Semester Eight						
BIOL/CHEM 4498 Seminar in Biochemistry	1	C-	UM	F, S	CHEM 4481, CHEM 4482, CHEM 4485, Senior standing or permission of instructor	
BIOL or CHEM elective from approved list	4	C-		F, S	See catalog	
Free electives	3					
GE Objective 9:	3		GE			
GE Objective 4:	3		GE	F, S, Su		
Total	14					

*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	77	1. Written English (6 cr. min) ENGL 1101	3
CORE Requirements	45	ENGL 1102	3
BIOL 1101 & 1101L General Biology I & Lab (Counted in GE Objective 5)		2. Oral Communication (3 cr. min) COMM 1101	3
BIOL 1102 & BIOL 1102 L General Biology II & Lab	4	3. Mathematics (3 cr. min) MATH 1170	4
BIOL 2233 & BIOL 2233L Principles of Microbiology & Lab*	4	4. Humanities, Fine Arts, Foreign Lang. (2 courses; 2 categories; 6 cr. min)	
BIOL 3358 Genetics	3		
BIOL 4437/CHEM 4438 Experimental Biochemistry	1		
BIOL 4444 & BIOL 4444L Cell & Molecular Biology & Lab	4	5. Natural Sciences (2 lectures-different course prefixes, 1 lab; 7 cr. min)	
BIOL/CHEM 4445 Biochemistry I	3	BIOL 1101 & 1101L General Biology I & Lab	4
BIOL/CHEM 4447 Biochemistry II	3	CHEM 1111 & 1111L General Chemistry I & Lab	5
BIOL/CHEM 4498 Seminar in Biochemistry	1		
CHEM 1111/L General Chemistry I & Lab (Counted in GE Objective 5)		6. Behavioral and Social Science (2 courses-different prefixes; 6 cr. min)	
CHEM 1112/L General Chemistry II & Lab	4		
CHEM 2232 & CHEM 2234 Qualitative Analysis & Lab	4		
CHEM 3301 & CHEM 3303 Organic Chemistry I & Lab	4	One Course from EITHER Objective 7 OR 8 (1 course; 3 cr. min)	
CHEM 3302 & CHEM 3304 Organic Chemistry II & Lab	4	7. Critical Thinking	
CHEM 3341 Topics in Physical Chemistry*	3	8. Information Literacy	
CHEM 3342 Topics in Physical Chemistry*	3	9. Cultural Diversity (1 course; 3 cr. min)	
BIOL/CHEM Approved Electives	20		
Approved BIOL Electives (See list of Upper Division courses in catalog)	8	General Education Elective to reach 36 cr. min. (if necessary)	
Approved CHEM Electives (see list in catalog)	8		
Approved BIOL, CHEM, MATH, or PSCI Electives (see catalog)	4		
MATH requirements	12	Total GE	40
MATH 1170 Calculus (Counted in GE Objective 3)		Undergraduate Catalog and GE Objectives by Catalog Year	
MATH 1175: Calculus II	4	http://coursecat.isu.edu/undergraduate/programs/	
PHYS 1111 & 1113 General Physics I & Lab*	4		
PHYS 1112 & PHYS 1114 General Physics II & Lab*	4	MAP Credit Summary	CR
		Major	77
		General Education	40
		Upper Division Free Electives to reach 36 credits	0
		Free Electives to reach 120 credits	3
		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	
All major courses must be passed with a C- or better.		Department:	
***Alternative choices:		OAA or COT:	
-BIOL 2206 and 2207 can be taken instead of BIOL 2233/L		Registrar:	
-CHEM 3351 and 3352 can be taken instead of CHEM 3341 and 3342		Complete College American Momentum Year	
-PHYS 2211, 2212, 2213, and 2214 may be taken instead of PHYS 1111, 1112, 1113, 1114		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	