

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	Prerequisite	Co-Requisite
<b>Semester One</b>						
GE Objective 1: ENGL 1101 Writing and Rhetoric I	3	D-	GE			
MACH 0110: Machine Tool Lab I (early 8 weeks)	3	D-		F,S		MACH 0111
MACH 0111: Machine Tool Theory I (early 8 weeks)	2	D-		F,S		MACH 0110
MACH 0112: Machine Math I (early 8 weeks)	3	D-		F,S		
MACH 0120: Machine Tool Lab II (late 8 weeks)	3	D-		F,S		MACH 0121
MACH 0121 Machine Tool Theory II (late 8 weeks)	2	D-		F,S		MACH 0120
MACH 0123: Blueprint Reading (late 8 weeks)	1	D-		F,S		
<b>Total</b>	<b>17</b>					
<b>Semester Two</b>						
GE Objective 3: Recommend TGE 1140	3	D-	GE			
MACH 0115: Applied Machining Geometry (early 8 weeks)	2	D-		F,S	MACH 0112	
MACH 0221: CAD and CAM Theory I (early 8 weeks)	3	D-		F,S		MACH 0220
MACH 0131: CNC Mill Setup (early 8 weeks)	2	D-		F,S	MACH 0120	
MACH 0145: Geometric Dimension/Tolerancing I (early 8 weeks)	1	D-		F,S	MACH 0123	
MACH 0135: Applied Machining Trigonometry (late 8 weeks)	2	D-		F,S	MACH 0115	
MACH 0141: CNC Lathe Setup (late 8 weeks)	2	D-		F,S	MACH 0110	
MACH 0220: CAD and CAM Applications I (late 8 weeks)	3	D-		F,S		MACH 0221
MACH 0245: Geometric Dimension/Tolerancing II (late 8 weeks)	1	D-		F,S	MACH 0145	
<b>Total</b>	<b>19</b>					
<b>Summer Semester Three</b>						
MACH 0261: CNC Introduction to Theory	2	D-		F,S,Su		MACH 0265
MACH 0265: Introduction to CNC Machine Practice	4	D-		F,S,Su		MACH 0261
MACH 0225: Interpreting Technical Data	1	D-		Su		
<b>Total</b>	<b>7</b>					
<b>Semester Four</b>						
GE Objective 2: COMM 1101 Fundamentals of Oral Communication	3	D-	GE			
TGE 0158: Employment Strategies	2	D-		D		
MACH 0270: CNC Machining Practice I (early 8 weeks)	4	D-		F,S		MACH 0271
MACH 0271: CNC Programming Theory I (early 8 weeks)	2	D-		F,S		MACH 0270
MACH 0272: CNC Math I (early 8 weeks)	3	D-		F,S	MACH 0135	
MACH 0275: CAD and CAM Theory II (late 8 weeks)	2	D-		F,S	MACH 0220, MACH 0221	
MACH 0280: CAD and CAM Applications II (late 8 weeks)	4	D-		F,S	MACH 0220	MACH 0275
<b>Total</b>	<b>20</b>					
<b>Semester Five</b>						
GE Objectives 5: CHEM, GEOL, or PHYS (theory & lab)	4	D-	GE			
GE Objective 6: Select from options	3	D-	GE			
MACH 0281: CNC Programming Theory II (early 8 weeks)	1	D-		F,S	MACH 0271	MACH 0290
MACH 0290: CNC Machining Practice II (early 8 weeks)	3	D-		F,S	MACH 0270	MACH 0281
MACH 0285: CAD and CAM Theory III (late 8 weeks)	2	D-		F,S	MACH 0275	MACH 0291
MACH 0291: CAD and CAM Applications III (late 8 weeks)	4	D-		F,S	MACH 0280	MACH 0285
<b>Total</b>	<b>17</b>					

\*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.)

2022-2023 Major Requirements		CR	GENERAL EDUCATION OBJECTIVES Satisfy Objectives 1,2,3,5,6	16 cr. min
<b>MAJOR REQUIREMENTS</b>	<b>64</b>		1. Written English (3 cr. min) ENGL 1101	3
MACH 0110 Machine Tool Lab I	3			
MACH 0111 Machine Tool Theory I	2		2. Spoken English (3 cr. min) COMM 1101	3
MACH 0112 Machine Math I	3		3. Mathematics (3 cr. min) Recommend TGE 1140	3
MACH 0115 Applied Machining Geometry	2		4. Humanities, Fine Arts, Foreign Lang.	
MACH 0120 Machine Tool Lab II	3			
MACH 0121 Machine Tool Theory II	2			
MACH 0123 Blueprint Reading	1		5. Natural Sciences (1 lecture, 1 lab; 4 cr. min)	
MACH 0131 CNC Mill Setup	2		GEOL, CHEM, or PHYS with Lab	4
MACH 0135 Applied Machining Trigonometry	2			
MACH 0141 CNC Lathe Setup	2			
MACH 0145 Geometric Dimensioning and Tolerancing I	1		6. Behavioral and Social Science (1 courses; 3 cr. min)	
MACH 0220 CAD and CAM Applications I	3			3
MACH 0221 CAD and CAM Theory I	3			
MACH 0225 Interpreting Technical Data	1		One Course from EITHER Objective 7 OR 8	
MACH 0245 Geometric Dimensioning and Tolerancing II	1		7. Critical Thinking	
MACH 0261 CNC Introduction to Theory	2		8. Information Literacy	
MACH 0265 Introduction to CNC Machine Practice	4		9. Cultural Diversity	
MACH 0270 CNC Machining Practice I	4			
MACH 0271 CNC Programming Theory I	2		General Education Elective to reach 36 cr. min. (if necessary)	
MACH 0272 CNC Math I	3			
MACH 0275 CAD and CAM Theory II	2		<b>Total GE</b>	<b>16</b>
MACH 0280 CAD and CAM Applications II	4		Undergraduate Catalog and GE Objectives by <a href="http://coursecat.isu.edu/undergraduate/programs/">Catalog Year</a>	
MACH 0281 CNC Programming Theory II	1		<a href="http://coursecat.isu.edu/undergraduate/programs/">http://coursecat.isu.edu/undergraduate/programs/</a>	
MACH 0285 CAD and CAM Theory III	2			
MACH 0290 CNC Machining Practice II	3			
MACH 0291 CAD and CAM Applications III	4			
TGE 0158 Employment Strategies	2		<b>MAP Credit Summary</b>	<b>CR</b>
			Major	64
Physical Science Course (GEOL, CHEM, or PHYS) (Counted in GE OBJ 5)			General Education	16
COMM 1101: Fundamentals of Oral Communication (Counted in GE OBJ 2)			Upper Division Free Electives to reach 36 credits	
			Free Electives to reach 120 credits	
			<b>TOTAL</b>	<b>80</b>
			<b>Graduation Requirement Minimum Credit Checklist</b>	<b>Confirmed</b>
			Minimum 36 cr. General Education Objectives (15 cr. AAS)	<b>X</b>
			Minimum 15 cr. Upper Division in Major (0 cr. Associate)	
			Minimum 36 cr. Upper Division Overall (0 cr. Associate)	
			Minimum of 120 cr. Total (60 cr. Associate)	<b>X</b>
<b>Advising Notes</b>			<b>MAP Completion Status (for internal use only)</b>	
				<i>Date</i>
			CAA or COT:	MLH 06/2022
			<b>Complete College American Momentum Year</b>	
			<b>Math and English course in first year-Specific GE MATH course identified</b>	
			<b>9 credits in the Major area in first year</b>	
			<b>15 credits each semester (or 30 in academic year)</b>	
			<b>Milestone courses</b>	