



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
Semester One						
GE Objective 1: ENGL 1101 Writing and Rhetoric I OR ENGL 1102: Writing and Rhetoric II	3	D-	GE	F, S, Su	Appropriate placement score	
ESET 1100: Engineering Technology Orientation AND ESET 1100L: Introduction to an Industrial Environment Laboratory OR ESET 1162: Industrial Safety and Regulations	2	C-		F, S, D		
ESET 1118: Industrial Maintenance Mechanic I	2	C-				ESET 1118L
ESET 1118L: Industrial Maintenance Mechanic Lab I	1	C-		F, D		ESET 1118
ESET 1123: Mechanical Power Transmission I	2	C-		F, D		ESET 1123L
ESET 1123L: Mechanical Power Transmission Laboratory I	2	C-		F, D		ESET 1123
ESET 1140: Applied Technical Intermediate Algebra	5	C-		F, S, D	Minimum score of ALEKS 30 or equivalent	
Total	17					
Semester Two						
ESET 1119: Industrial Maintenance Mechanic II	2	C-		S, D	ESET 1118	ESET 1119L
ESET 1119L: Industrial Maintenance Mechanic Lab II	1	C-		S, D		ESET 1119
ESET 1121: Basic Electricity and Electronics	4	C-		F, S		ESET 1121L
ESET 1121L: Basic Electricity and Electronics Laboratory	3	C-		F, S		ESET 1121
ESET 1125: Introduction to Structural Welding	1	C-		S, D		
ESET 1126: Introduction to Mechanical Drafting and Computer Aided Design	1	C-		S, D		
ESET 1127: Mechanical Power Transmission II	2	C-		S, D	ESET 1123/L or instructor approval	ESET 1127L
ESET 1127L: Mechanical Power Transmission Laboratory II	2	C-		S, D		ESET 1127
TGE 1159: Internship Strategies	1	D-		D		
Total	17					
Semester Three						
GE Objective 2: COMM 1101 Fundamentals of Oral Communication (Recommended)	3	D-	GE	F, S		
GE Objective 3: MATH 1143 Precalculus I: Algebra OR MATH 1147 Precalculus OR MATH 1153 Statistical Reasoning OR MATH 1160 Survey of Calculus OR MATH 1170 Calculus I	3-5	D-	GE		Appropriate placement score	
GE Objective 5: CHEM 1100 Concepts of Chemistry OR PHYS 1101/L Elements of Physics and Laboratory	4	D-	GE	F, S	Appropriate placement score	
ESET 1117: Introduction to Industrial Thermal Systems AND ESET 1117L: Introduction to Industrial Thermal Systems Lab (Recommended) OR ESET 2220: Thermal Cycles and Heat Transfer	2-3	C-		F, D		ESET 1117 ESET 1117L
ESET 1122: Electrical Systems and Motor Control Theory	3	C-		F, S, D	ESET 1121/L or instructor approval	ESET 1122L
ESET 1122L: Electrical Systems and Motor Control Theory Laboratory	1	C-		F, S, D	ESET 1121/L or instructor approval	ESET 1122
Total	16-19					
Semester Four						
GE Objective 6: TGE 1257 Applied Ethics in Technology (Recommended)	3	D-	GE	D		
ESET 2244: Rotating Equipment and Millwright Maintenance	4	C-		S, D	ESET 1127 or instructor approval	ESET 2244L
ESET 2244L: Rotating Equipment and Millwright Maintenance Laboratory	3	C-		S, D	ESET 1127 or instructor approval	ESET 2244
ESET 2245: Industrial Thermal Systems	2	C-		F, D	ESET 1117 or 2220	ESET 2245L
ESET 2245L: Industrial Thermal Systems Lab	1	C-		F		ESET 2245
ESET 2246: Materials and Metallurgy	2	C-		F, D		
Total	15					
Semester Five						
ESET 2239: Pumps, Valves, and Fluid Flow	5	C-		F, D	ESET 1127/L, 1151/L, or 1130	ESET 2239L
ESET 2239L: Pumps, Valves, and Fluid Flow Laboratory	4	C-		F, D	ESET 1127/L, 1151/L, or 1130	ESET 2239
ESET 2242: Practical Process Measurements and Control	2	C-		F, D	ESET 1122 or instructor approval	
ESET 2243: Hydraulic and Pneumatic Power	2	C-		S, D		ESET 2243L
ESET 2243L: Hydraulic and Pneumatic Power Laboratory	2	C-		S, D		ESET 2243
Total	15					
*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.)						

2026-2027 Major Requirements	CR	GENERAL EDUCATION OBJECTIVES Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9		15 cr. min
MAJOR REQUIREMENTS	64-65	1. Written English	ENGL 1101 or ENGL 1102	3
ESET 1100: Engineering Technology Orientation AND ESET 1100L: Introduction to an Industrial Environment Laboratory OR ESET 1162: Industrial Safety and Regulations	2	2. Spoken English	COMM 1101 (Recommended)	3
		3. Mathematics	MATH 1143 or 1147 or 1153 or 1160 or 1170	3-5
ESET 1117: Introduction to Industrial Thermal Systems AND ESET 1117L: Introduction to Industrial Thermal Systems Lab (Recommended) OR ESET 2220: Thermal Cycles and Heat Transfer	2-3	4. Humanities, Fine Arts, Foreign Lang.		
		5. Natural Sciences		
ESET 1118: Industrial Maintenance Mechanic I	2	CHEM 1100 OR PHYS 1101/L		4
ESET 1118L: Industrial Maintenance Mechanic Lab I	1			
ESET 1119: Industrial Maintenance Mechanic II	2			
ESET 1119L: Industrial Maintenance Mechanic Lab II	1	6. Behavioral and Social Science		
ESET 1121: Basic Electricity and Electronics	4	TGE 1257 (Recommended)		3
ESET 1121L: Basic Electricity and Electronics Lab	3			
ESET 1122: Electrical Systems and Motor Control Theory	3	One Course from EITHER Objective 7 OR 8		
ESET 1122L: Electrical Systems and Motor Control Theory Laboratory	1	7. Critical Thinking		
		8. Information Literacy		
ESET 1123: Mechanical Power Transmission I	2	9. Cultural Diversity		
ESET 1123L: Mechanical Power Transmission Laboratory I	2			
ESET 1125: Introduction to Structural Welding	1	General Education Elective to reach 36 cr. min.		
ESET 1126: Introduction to Mechanical Drafting and Computer Aided Design	1			
		Total GE		16-18
ESET 1127: Mechanical Power Transmission II	2	Undergraduate Catalog and GE Objectives by Catalog Year		
ESET 1127L: Mechanical Power Transmission Laboratory II	2	http://coursecat.isu.edu/undergraduate/programs/		
ESET 1140: Applied Technical Intermediate Algebra	5			
ESET 2239: Pumps, Valves, and Fluid Flow	5			
ESET 2239L: Pumps, Valves, and Fluid Flow Laboratory	4			
ESET 2242: Practical Process Measurements and Control	2	MAP Credit Summary		CR
ESET 2243: Hydraulic and Pneumatic Power	2	Major		64-65
ESET 2243L: Hydraulic and Pneumatic Power Laboratory	2	General Education		16-18
ESET 2244: Rotating Equipment and Millwright Maintenance	4	Upper Division Free Electives to reach 36 credits		0
ESET 2244L: Rotating Equipment and Millwright Maintenance Laboratory	3	Free Electives to reach 120 credits		0
		TOTAL		80-83
ESET 2245: Industrial Thermal Systems	2			
ESET 2245L: Industrial Thermal Systems Lab	1			
ESET 2246: Materials and Metallurgy	2			
TGE 1159: Internship Strategies	1			
		Graduation Requirement Minimum Credit Checklist		Confirmed
ENGL 1101 OR ENGL 1102 (counted in GE Obj. 1)		Minimum 36 cr. General Education Objectives (15 cr. AAS)		X
MATH 1143 OR 1147 OR 1153 OR 1160 OR 1170 (counted in GE Obj. 3)		Minimum 15 cr. Upper Division in Major (0 cr. Associate)		X
CHEM 1100 OR PHYS 1101/L (counted in GE Obj. 5)		Minimum 36 cr. Upper Division Overall (0 cr. Associate)		X
		Minimum of 120 cr. Total (60 cr. Associate)		X
Advising Notes		MAP Completion Status (for internal use only)		
			Date	
		CAA or COT:	GR 06/17/2026	
		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		