

Bachelor of Science in Mechanical Engineering

STARK STATE COLLEGE					
Curriculum for Associate of Science in Pre-Engineering - Mechanical Engineering (4054)			Courses Accepted for Transfer at the University of Mount Union		
Stark State College			University of Mount Union		
Course	Fall 1	Credits	Course	Credits	
SSC101	Student Success Seminar	1	FYS 100	First Year Seminar	1
ENG124	College Composition	3	WRT 199	General Elective	3
MTH135	Pre-Calculus	5	MTH 140	Precalculus	5
CHM141	Principles of Chemistry I	5	CHE 110N	Foundations in Chemistry	5
Spring 1		14			
MTH223	Calculus I	4	MTH 141	Calculus I	4
CHM142	Principles of Chemistry II	5	CHE 120N	Concepts in Chemistry	5
PHL122	Ethics	3	PHL 270	Ethics	3
SOC225	Cultural Diversity	3	SOC 200	Contemporary Social Issues	3
		15			
Summer 1					
MTH224	Calculus II	4	MTH 142	Calculus II	4
		4			
Fall 2					
PHY221	Physics I	5	PHY 101N	General Physics I	5
MTH225	Calculus III	4	MTH 241	Calculus III	4
MET124	Statics & Strength of Materials	4	EGE 210 ¹	Statics and Dynamics	4
BUS221	Microeconomics	3	ECN 200S	Microeconomics	3
		16			
Spring 2					
HIS122	U.S. History II from 1877	3	HST 199	U.S. History II from 1877	3
MET221	Adv. Strength of Materials	2	EGE 240 ¹	Mechanics of Materials	2
MET123	Material Science	3	EGE 230	Material Science	3
CST121	Modeling and Simulation	3	EGE 110 ²	Introduction to Engineering Profession	3
DET125	Basic AutoCAD	3	EGE 120 ²	Introduction to Engineering Design	3
			EGE 130 ²	Computer-Aided Design	3
Take EGE 220 at Mount Union in the Spring as a Transient student if accepted to Mount Union for Fall.					
		14			
Additional Courses needed prior to Mount Union					
	Thermal Science	2	EGE 220	Thermofluids I	4
	Fluid Mechanics I	2			
MTH227	Differential Equations	3	MTH 335	Differential Equations	3
MET223	Dynamics	2	EGE 210 ¹	Statics and Dynamics	2
PHY222	Physics II	5	PHY 102	General Physics II	5
		14			

Notes:

(1) MET124+MET221+MET223 (total of 8 credits) = EGE210 +EGE 240 (total of 8 credits)

(2) CST121+DET125 (total of 6 credits) = EGE110 + EGE120 + EGE130 (total of 6 credits)

Revised:

3/21/2022

UNIVERSITY OF MOUNT UNION					
Courses to be completed at the University of Mount Union					
BACHELOR OF SCIENCE - MECHANICAL ENGINEERING					
Course	Fall 3	Credits		Spring 3	Credits
MGT495	Project Management	2	XXX 102	World Language 102	4
EME 310	Kinem. & Dynam. of Machinery	4	MTH322	Linear Algebra	4
EME 320	Thermo. and Fluid Mech. II	4	EGE310	Product Design & Dev.	4
XXX 101	World Language 101	4	EGE320G	Global Engg. (IC Explor. - Global)	4
PHY 230V	Electronics (IC Explor. - V&R)	4	EME330	Design of Machine Elem.	4
		18			20
Fall 4			Spring 4		
EME 350	Manufacturing Science	2	EME490	ME Capstone Design II	4
EME410	Control of Dynamic Systems	4	EME XXX	ME Tech Elective	2
EME420	Mechanical Vibrations	4	CAP400	IC Capstone	4
EME430	Heat Transfer	4	MTH306	Prob. & Stats. for Engg. and Sci.	2
EME480	ME Capstone Design I	2			
XXX XXX	Any V or G IC Exploration	4			
		20			14

Summary	
Mechanical Engineering Major	58
Math Proficiency	0
World Language Proficiency (addt.credits)	8
XXX XXX "V" or "G" Exploration	4
XXX XXX IC Capstone	4
University of Mount Union Coursework	72
AT STARK (Or prior to Mount Union)	63-77
Degree Total	135-149

University of Mount Union Transfer Notes:
<i>Total minimum number of hours needed to graduate is 128.</i>
<i>Math Proficiency is met with AS from Stark State</i>
<i>Student must complete a minimum of 48 hours at UMU, of which a minimum of 16 in the major and 6 in the minor are required.</i>
<i>A minor is required at UMU.</i>
<i>World language proficiency can be met with a proficiency exam OR by taking a 200 level course in SPN or CHN at Stark State. If students tested proficient, or successfully passed these courses, no courses would be needed at UMU. If not, the student would need to take one or two world language courses.</i>
<i>MTH 322 + MTH 335 = MTH 333 Differential Equations and Linear Algebra requirement.</i>