



TRANSFER GUIDE - ASSOCIATE DEGREE PROGRAMS

NTC Program: ELECTROMECHANICAL

MSUM Program: Operations Management: Technical Management BS

Minimum GPA for admission: 2.0

Initial effective date:

General Education Courses

NTC			MSUM		
Course No.	Course Title	Credits	Course No.	Course Title/Field	Credits
10-804-195	College Algebra with Apps (3 cr.) <u>OR</u>	3 or 4	MATH 127	College Algebra	0-3
10-804-118	Intermediate Algebra with Apps (4 cr.)			NA	
10-806-154	General Physics 1	4	PHYS 160/160L	College Physics I with Lab	4
10-806-144	College Physics 2	3		NA	
10-801-196	Oral/Interpersonal Communication	3	COMM 100	Speech Communication	3
10-801-195	Written Communication <u>OR</u>	3		Goal Area 1B	3
10-801-136	English Composition 1		ENGL 101	English Composition I	
10-809-172	Intro to Diversity <u>OR</u>	3		Goal Area 7	3
10-809-196	Intro to Sociology		SOC 110	Intro to Sociology	
10-809-198	Intro to Psychology <u>OR</u>	3	PSY 113	General Psychology	3
10-809-199	Psychology of Human Relations		PSY 220	Social Behavior	
10-890-165	College 101	1			
Total general education credits earned:		23-24		Total general education credits accepted:	16-19
Total transferable general education credits:		16-19			

Occupational Courses

Course No.	Course Title	Credits	Course No.	Course Title	Credits
10-660-118	Electrical Fabrication	1			
10-612-120	Fluid Power Systems 1: Fundamentals	1			
10-612-121	Fluid Power Systems 2: Fundamentals of Pneumatics	1			
10-620-172	Industry Workplace Safety	1			
10-660-123	Industrial Ele Tech 1- Direct Current Ele Characteristics	1			
10-660-124	Industrial Ele Tech 2- Alternating Current Ele Characteristics	1			
10-620-171	AutoCAD for Technicians <u>OR</u>	1			
10-664-101	AutoCAD Electrical				
10-606-133	Solidworks 1	1			
10-660-121	Intro to Microcontrollers	1			
10-620-151	Machine Control 1: Ladder Logic Fund	1			
10-620-152	Machine Control 2: Motor & Actuator Control	1			
10-620-153	Machine Control 3: Sensors & Machine Safety	1			
10-620-157	Mechanical Systems 1: Basic Machine Comp	1			
10-620-158	Mechanical Systems 2: Power Trans Systems	1			
10-620-159	Industrial Motors 1: Electric Motors	1			
10-660-125	Industrial Ele Tech 3- Electronic Circuits and Devices	1			
10-660-126	Industrial Ele Tech 4- Electrical Systems	1			
10-660-127	Industrial Ele Tech 5- Advanced Electrical Characteristics	1			
10-660-128	Industrial Ele Tech 6- Advanced Digital Concepts	1			
				Technical credits are accepted in transfer as a block. Additional credits will be accepted as unrestricted elective credits.	30+8

10-420-101	Intro to Machine Shop	2		
10-620-154	Robot App 1: Fundamentals of Robotic Control	1		
10-620-155	Robot App 2: Robotic System Comp & Software	1		
10-620-160	Industrial Motors 2: DC/AC Var Speed Motor Dr	1		
10-620-161	Servo Sys 1: Fundamentals of Industrial Control Systems	1		
10-620-162	Servo Sys 2: Motion Control Systems	1		
10-620-173	Electromechanical Troubleshooting	1		
10-620-164	PLC 1: PLC Fundamentals And Bit Based Instruction	1		
10-620-165	PLC 2: Timers, Counters, And Program Control	1		
10-620-166	PLC 3: Data, Math, Sequencer And Shift Instructions	1		
10-620-167	PLC 4: Advanced Instructions & Programming	1		
10-442-101	Intro to Welding	1		
10-620-163	Servo Systems 3: Advanced Position Control & Integration	1		
10-620-145	Electromechanical Projects	3		
10-620-168	PLC 5: Industrial Networking	1		
10-620-169	PLC 6: PLC, PAC And PC Automation Integration	1		
	Total occupational course credits earned:	38	Total occupational course credits accepted:	38
	Total credits required for graduation:	61-62		
	Total transferable credits:	54-57	Total credits accepted at MSUM:	54-57

Courses needed to complete degree at MSUM:

Course No.	Course Title	Credits
	MnTC/ Gen Ed Goal Area (LASC) *	21-24
ACCT 230	Principles of Accounting I	3
OM 470	Purchasing & Sourcing Management	3
MGMT 260	Principles of Management	3
OM 380	Methods Improvement	3
OM 393	Occupational Safety & Health	3
OM 483	Cost Analysis	3
OM 395	Computer Applications for Technologists	3
OM 469	Internship	3
OM 482	Quality Management	3
OM 485	Production Inventory Management	3
PMGT 385	Process Leadership	3
PMGT 300	Project Management and Scheduling	3
	Electives (Consult MSUM Advisor)	6
MATH 127	College Algebra	0-3
MATH 234	Introduction to Probability & Statistics	3
ECON 202	Principles of Economics I: Micro	3
	*These courses are required, but may also count toward LASC	
Total credits needed at MSUM to complete degree:		63-66

Disclaimer: Students planning to transfer should contact NTC's Transfer Specialist and transfer personnel at MSUM for the most current transfer information.

UPDATED 8/3/2023