ATTACHMENT D
To The
Articulation Agreement Dated December 6, 2016
By and Between
Cuyahoga Community College
And
For the Nidec Minster Sponsored Employees
To
Associate of Applied Science in Manufacturing Industrial Engineering Technology (AAS MIET)

Nidec Minster Apprenticeship					Tri-C Manufacturing & Industrial Engineering Tech		
COURSE TITLE	**Hrs**	**Cr**	**BkCr**		**Course for Block Credits**	**Cr**	
Mathematics for Technicians	32	0.85			Not Applicable		
CNC Milling Machines	64	1.71					
CNC Turning Centers	64	1.71	3.41		MET 1400 CNC Programming and Operation	3	
Interpretation of GD&T: ASME Y14.5 2009	32	0.85					
Dimensional Metrology 1	20	0.53					
Dimensional Metrology 2	20	0.53					
Blueprint Reading 1	17.5	0.47	2.387		MET 2041 CAD II & GD&T	3	
Electronic Drives	32	0.85					
Electronics & Electronic Troubleshooting 1	32	0.85					
Electronics & Electronic Troubleshooting 2	32	0.85					
Electronics & Electronic Troubleshooting 3	32	0.85					
Electronics & Electronic Troubleshooting 4	18	0.48	3.89		PHYS 1210 College Physics I	4	
Introduction to Lathes and Mills	32	0.85					
Engine Lathes	64	1.71					
Vertical Milling Machines	32	0.85	3.413		MET 1300 Engineering Materials and Metallurgy	3	
Programmable Logic Controls 1	32	0.85					
Programmable Logic Controls 2	17	0.45	1.31		MET 1120 Computer Applications and Programming	2	
Programmable Logic Controls 3	32	0.85					
Programmable Logic Controls 4	32	0.85					
Programmable Logic Controls 5	17.5	0.47					
CAD/CAM 1	32	0.85	3.03		MET 2000 CAD/CAM Processes	3	
Machine Operator Class #1	64	1.71					
Machine Operator Class #2	64	1.71					
Machine Operator Class #3	64	1.71	5.12		MET 1240 Machine Tools and Manufacturing Process	3	
Machine Tool Building Modules *	76.5	2.04	4.00		MET 2500 Fundamentals of Products Development or	3	Either one of the two would map to MET 2500
Machining Capstone 1 *	32	0.85					
Machining Capstone 2 *	32	0.85					
Machining Capstone 3 *	32	0.85	2.56		MET 2500 Fundamentals of Products Development		

Mechanical Drives 1 ‡	36	0.96					Take three ou of the five MET electives
Mechanical Drives 2 ‡	52	1.39					
Mechanical Drives 3 ‡	54	1.44					
Mechanical Drives 4 ‡	10.5	0.28	4.07		MET XXXX Elective or	3	
Pumps ‡	60	1.6					
Pneumatic Sys 1 ‡	30	0.8					
Pneumatic Sys 2 and 3 ‡	32	0.85					
Pneumatic Troubleshooting ‡	17.5	0.47	3.72		MET XXXX Elective or	3	
Hydraulic 1: Basic ‡	36	0.96					
Hydraulic 2: Intermediate ‡	36	0.96					
Hydraulic 3: Advanced ‡	24	0.64					
Hydraulic 4: Electro-Fluid Power Systems ‡	36	0.96					
Hydraulic Troubleshooting ‡	21.5	0.57	4.09		MET XXXX Elective or	3	
Industrial Electricity 1 ‡	32	0.85					
Industrial Electricity 2 ‡	32	0.85					
Industrial Electricity 3 ‡	32	0.85					
Industrial Electricity 4 ‡	32	0.85					
Industrial Electricity 5 ‡	32	0.85					
Industrial Electricity 6 ‡	17.5	0.47	4.733		MET XXXX Elective or		
Precision Grinding ‡	32	0.85					
Facilitated OJT (Area Specific Training) ‡	64	1.71					
Central Lubrication ‡	24	0.64	3.20		MET XXXX Elective		
					Articulated Total	33	
					Online Classes		
*Either one of the two would map to MET 2500					ENG 1010 College Composition I	3	
‡ Take three out of the five MET electives					MATH 1530 College Algebra	4	
					MET 1100 Technology Orientation	2	
					MET 1230 Drawing & AutoCAD	3	
					MATH 1540 Trigonometry	3	
					MET 2422 Fundamentals of Engineering Economics	3	
					ENG 1020 College Composition II	3	
					DEGR - Arts & Hum	3	
					HLTH 1230 Standard First Aid and Personal Safety	0	Waived
					PHYS 1220 College Physics II 4	0	Substituted by Soc/Beh Science
					DEGR - Soc & Beh Sci	3	
					Tri-C Online Total	27	
					A.A.S. Degree Total	60	