

M-CAM Equivalency Matrix - Industry Recognized Credentials

Program Area: Welding Credential: AWS Sense 1																
Modules	Bay Course Credits		Grand Rapids Course Credits		Kellogg Course Credits		Lake Michigan Course Credits		Lansing Course Credits		Macomb Course Credits		Mott Course Credits		Schoolcraft Course Credits	
1 - Occupational Orientation																
3 - Drawing/Welding Symbol Interpretation	NA	2			NA	0.17	WELD 104	2	WELD 105 WELD 110 WELD 125	10 credits for completion of modules 3, 4, 5 & 7			WELD164	4	WELD205	2
4 - Shielded Metal Arc Welding (SMAW)	NA	4	MN126	4	NA	9.76	WELD 102 WELD 104	3			NA	2	WELD 166	4	WELD113	3
5 - Gas Metal Arc Welding (GMAW)	NA	4	MN202	3	NA	2.80	WELD 103 WELD 201 WELD 203	6			NA	2	WELD 170	4	WELD115	3
6 - Flux Cored Arc Welding (FCAW)													WELD 174	4		
7 - Gas Tungsten Arc Welding (GTAW)	NA	4	MN203	3	NA	5.01	WELD 202 WELD 205	3					WELD 168	4	WELD119	3

Program Area: Production Credential: MSSC																
Modules	Bay Course Credits		Grand Rapids Course Credits		Kellogg Course Credits		Lake Michigan Course Credits		Lansing Course Credits		Macomb Course Credits		Mott Course Credits		Schoolcraft Course Credits	
1 - Safety			TE272	2	NA	1.63			METS102	2	ATTR1600	2				
									Also requires OSHA 10 Certification		Also requires CPR & OSHA 10 Certification					

Program Area: Machining Credential: NIMS															
Modules	Bay Course Credits	Grand Rapids Course Credits	Kellogg Course Credits		Lake Michigan Course Credits		Lansing Course Credits	Macomb Course Credits		Mott Course Credits		Schoolcraft Course Credits			
1 - Measurement, Materials, & Safety			NA	10.24				ATTR 1600 requires OSHA 10	2	MECH 246 & MECH 247	4	MFG 102	3		
2 - CNC Turning: Operations			NA	2.5	MACH 140	4		ATAP 1050	3						
3 - CNC Milling: Operations			NA	2.5	MACH 241	4									
4 - CNC Turning: Programming												MECH 260	4	MFG 203	3
5 - CNC Turning: Set Up & Operations														MFG 103	3
6 - CNC Milling: Programming															
7 - CNC Milling: Set Up & Operations															

M-CAM Equivalency Matrix - Industry Recognized Credentials

Program Area: Mechatronics & Multi-Skill Credential: PMMI															
Modules	Bay Course Credits		Grand Rapids Course Credits		Kellogg Course Credits		Lake Michigan Course Credits		Lansing Course Credits		Macomb Course Credits	Mott Course Credits		Schoolcraft Course Credits	
1 - Fluid Power	ELEC 285	4			NA	2.31	INMT 204 INMT 205 INMT 206	6	METS 125	4	15 Credits will be awarded if all 6 certifications are completed. Courses are the same as Siemens.	MECH 130	3	ELECT 145	4
2 - Industrial Electricity I	ELEC 130	4	EL 144	4	NA	7.17	ELEC 100 ELEC 106 ELEC 111	11				ELEC 133 ELEC 139	3 6	ELECT 137 ELECT 138 OSHA 111	5 5 2
3 - Programmable Logic Controllers (PLC)	ELEC 290	4	EL 164	2	NA	5.15	MANU 120 MANU 123	4				ELEC 139 ELEC 236	6 6	ELECT 251	4
4 - Mechanical Compoenents I			EL 162	2	NA	4.88	ENGY 200 ENGY 235	6	METS 110	4		MECH 120	2	ELECT 218	3
5 - Industrial Electricity II	ELEC 135	4			NA	6.73	ELEC 151 ELEC 152	8				ELEC 139 ELEC 151 ELEC 155	6 3 2	ELECT 139	3
6 - Motors and Motor Control	ELEC 180	4			NA	2.24	ELEC 151 ELEC 152	8				ELEC 155	2	ELECT 218	3

Program Area: Mechatronics & Multi-Skill Credential: Siemens												
Modules	Bay Course Credits	Grand Rapids Course Credits	Kellogg Course Credits	Lake Michigan Course Credits	Lansing Course Credits		Macomb Course Credits		Mott Course Credits		Schoolcraft Course Credits	
Level 1					ELTE 108	2	MECT 1211	1	ELEC 135	6	ELECT 131	3
					ELTA 120	2	MECT 1212	1	ELEC 139	6	ELECT 137	5
					METS 125	4	MECT 1213	1	ELEC 155	2	ELECT 138	5
					ELTE 131	4	MECT 1214	1	MECH 120	2	ELECT 145	4
					METS 110	4	MECT 1215	1	MECH 120	3	ELECT 251	4
					METS 145	3	MECT 1216	1				
							MECT 1310	3				
							MECT 1320	3				
							MECT 1211	3				

This workforce solution was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

The eight community colleges and M-CAM is an equal opportunity employer/program provider. Auxiliary aids and services are available upon request to individuals with disabilities. TTY users please call 1-877-878-8464 or visit www.michigan.gov/mdcr.

This work is licensed under a Creative Commons Attribution 4.0 International License. [HTTPS://creativecommons.org/licenses/by/4.0/](https://creativecommons.org/licenses/by/4.0/)

