

LANSING COMMUNITY COLLEGE

Computer, Engineering/Manufacturing Industrial Technologies

Curriculum Code: 0186
(Effective Fall 2018 –
Summer 2023)

Welding Technology A.A.S. Pathway

Welding is many processes of fusion, adhesion and cutting to fabricate or repair products used in manufacturing, research and application. A welding technician could also qualify for welding inspection where welding codes are applied. A welder is a skilled craftsperson with a basic knowledge of metals, applied mathematics, blueprint reading, good eyesight, self-discipline and a respect for safety. A welder also needs to work well with his/her hands and have good manual coordination. Many hours of practice and proper training in the basics of MIG, TIG, shielded metal arc, brazing and oxy-fuel cutting and plasma cutting are necessary. Welders can be found in tool and die industries, automakers, construction, oil refineries, pipelines and pressure vessels, aircraft industries and many more metal-related industries. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

For More Information

Contact the Center for Manufacturing Excellence at the West Campus Building, 5708 Cornerstone Drive, Lansing MI 48917, Room M103, telephone number (517) 483-1104 or by email at manufacturing@lcc.edu.

Semester I	Course Title	Prerequisites	Credit/Billing Hours
Program of Study Requirements			
<i>Students who have already completed DCTM 102, ELTE 102, HVAC 102, or METS 102 with a grade of 2.0 or higher may substitute one of these courses for WELD 102. Any of these courses may also be used to fulfill the prerequisite for METS 140 and ELTE 108/109</i>			
METM 108	Machine Tool Operations	Reading Level 3 and Writing Level 4 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 6
METS 140	Rigging	Minimum 2.0 in (METS 102 or DCTM 102 or ELTE 102 or HVAC 102 or WELD 102 or concurrently) and Reading Level 3 and Writing Level 2 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	3 / 4.5
WELD 102	Industrial/Construction Safety	Reading Level 3 and Writing Level 2	2 / 3
WELD 103	Combination Welding	Reading Level 3 and Writing Level 2	4 / 6
WELD 110	Gas Metal ARC Welding	Reading Level 3 and Writing Level 2	4 / 6
Credits			17 / 25.5

Semester II	Course Title	Prerequisites	Credit/Billing Hours
Science Core Area - <i>Select 1</i>			
METM 190	Metallurgy and Heat Treatment	Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 6
Program of Study Requirements			
WELD 105	Advanced ARC Welding	Minimum 2.0 in WELD 103 and Reading Level 3 and Writing Level 2	4 / 6
WELD 111	Gas Tungsten ARC Welding	Minimum 2.0 in (WELD 103 or AUTO 100 or AUTB 114) and Reading Level 3 and Writing Level 2	4 / 6
WELD 125	Structural Blpt Reading/ Weld	Reading Level 3 and Writing Level 2 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	2 / 2
Credits			14 / 20
Semester III	Course Title	Prerequisites	Credit/Billing Hours
Writing Core Area - <i>Select 1</i>			
ENGL 124	Technical Writing	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	3 / 3
Math Core Area - <i>Select 1</i>			
MATH 115	Technical Math II	(Minimum 2.0 in MATH 114 within 2 years or Math Level 5 within 2 years) and Reading Level 5	4 / 4
Program of Study Requirements			
WELD 201	Tool and Die Welding	Minimum 2.0 in (METM 190 and WELD 105 and WELD 111) and Reading Level 3 and Writing Level 2	3 / 4.5
WELD 220	Structural Fab & Inspection	Minimum 2.5 in (WELD 105 and WELD 110 and WELD 125) and Reading Level 3 and Writing Level 2 and Math Level 4	4 / 6

Electives - <i>Select 1</i>			
ELTE 108 <i>(1st 8 weeks)</i>	Practical Electricity I	Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or WELD 102 or concurrently) and Reading Level 3 and Writing Level 2 and (Math Level 3 or minimum 2.0 in MATH 105 or MATH 106)	2 / 3
ELTE 109 <i>(2nd 8 weeks)</i>	Practical Electricity II	Minimum 2.0 in ((ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or WELD 102 or concurrently) and (ELTE 108 or concurrently)) and Reading Level 3 and Writing Level 2 and (Math Level 3 or minimum 2.0 in MATH 105 or MATH 106)	2 / 3
METM 100	Manufacturing Processes	Reading Level 3 and Writing Level 4	3 / 4.5
WELD 115	Robotic MIG Welding	Minimum 2.0 in WELD 110 and Reading Level 3 and Writing Level 2 and Math Level 3	3 / 4
WELD 250	Welding Internship	Department Approval	3 / 3
Credits			16-17 / 20.5-22

Semester IV	Course Title	Prerequisites	Credit/Billing Hours
Communication Core Area - <i>Select 1</i>			
COMM 110	Oral Comm in the Workplace	Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)	3 / 3
Global Perspectives and Diversity Core Area - <i>Select 1</i>			
MGMT 234	Diversity in the Workplace	Reading Level 5 and Writing Level 6	3 / 3
Program of Study Requirements			
WELD 205	Pipe Welding	Minimum 2.5 in WELD 105 and Reading Level 3 and Writing Level 2	4 / 6
Electives - <i>Select 1</i> <i>Courses may not be duplicated.</i>			
METM 100	Manufacturing Processes	Reading Level 3 and Writing Level 4	3 / 4.5
WELD 115	Robotic MIG Welding	Minimum 2.0 in WELD 110 and Reading Level 3 and Writing Level 2 and Math Level 3	3 / 4
WELD 250	Welding Internship	Department Approval	3 / 3
Credits			13 / 15-16.5
Total Credits			60-61 / 81-84