



Welding Technology A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 0186

Effective: Fall 2025 – Summer 2030

Purpose of the Major

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 craftsman 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.

Milestone

In addition to the required General Education courses in Math and English, completion of WELD 103 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the courses.

Additional Information

If students have already completed DCTM 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Either of these courses will fulfill the prerequisite for METS 140 and ELTE 108 and ELTE 109.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Major Required Courses – *A minimum grade of 2.0 is required for General Education courses.*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 110 or	Communication in the Workplace	3 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3

Course Code	Course Title	Credit/ Billing Hours
COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ELTE 121 or MATH 115 or MATH 119 or MATH 120 or MATH 126	Electrical Mathematics Technical Mathematics Math – Applications for Living College Algebra Precalculus	5 / 6 4 / 4 4 / 4 4 / 4 5 / 5
ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131	Composition I Technical Writing Business Writing Honors Composition I	4 / 4 3 / 3 3 / 3 4 / 4
METM 108	Machine Tool Operations	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METS 140	Rigging	3 / 4.5
TECH 102	General Industry Safety	2 / 3
WELD 103	Combination Welding	4 / 6
WELD 105	Advanced ARC Welding	4 / 6
WELD 110	Gas Metal ARC Welding	4 / 6
WELD 111	Gas Tungsten ARC Welding	4 / 6
WELD 125	Structural Print Reading/Weld	2 / 2
WELD 201	Tool and Die Welding	3 / 4.5
WELD 205	Pipe Welding	4 / 6
WELD 220	Structural Fab & Inspection	4 / 6

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Students considering future transfer, choose MATH 119, MATH 120, or MATH 126.

Major Required Courses – Limited Choices Courses – *Select 2 courses*

Course Code	Course Title	Credit/ Billing Hours
ELTE 110	Practical Electricity	4 / 6
METM 100	Manufacturing Processes	3 / 4.5
WELD 115	Robotic MIG Welding	4 / 6
WELD 250	Welding Internship	3 / 3

Major Required Courses, Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences - *Select one course as recommended or select one from [LCC General Education Applied Degrees](#): Humanities and Fine Arts or Social Sciences or Applied Social Sciences. A minimum grade of 2.0 is required for each General Education course.*

Course Code	Course Title	Credit / Billing Hours
GEOG 200	World Regional Geography	4 / 4
MGMT 234	Diversity in the Workplace	3 / 3
SOCL 120	Introduction to Sociology	4 / 4

Note: Students considering future transfer, choose GEOG 200 or SOCL 120.

General Education - Applied Degree, Recommended Courses

- English Composition or Applied English
Major Required Courses will meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Major Required Courses will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Major Required Limited Choice Courses will meet this requirement.
- Mathematics or Applied Mathematics
Major Required Courses will meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Major Required Courses will meet this requirement.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 82.5 billing hours

Recommended Course Sequence

Semester I
ACAD 100
METM 108
METS 140
TECH 102
WELD 103 – Milestone course
WELD 110

Semester II
METM 190
WELD 105
WELD 111
WELD 125

Semester III
ELTE 121 or MATH 115 or MATH 119 or MATH 120 or MATH 126
ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
WELD 201
WELD 220
Limited Choice

Semester IV
COMM 110 or COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
WELD 205
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree titles, and make course changes as needed, without prior notice. The College also reserves the right to discontinue programs when warranted.