

# WELDING - ONE-YEAR CERTIFICATE OF COMPLETION (CC1)

## Description

The Welding One-Year Certificate of Completion emphasizes shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, flux-cored arc welding, oxyacetylene welding and cutting, and basic fabrication.

## Program Learning Outcomes

Upon successful completion of the certificate, students will be able to:

1. Model industry safety standards in a welding/fabrication environment.
2. Summarize test standards and information in order to pass the American Welding Society Advanced Welder practical knowledge qualification written test.
3. Perform the specific skills needed to pass American Welding Society Advanced Welder performance qualification tests.
4. Apply inspection, testing, and acceptance criteria at the American Welding Society Advanced Welder level.

## Entrance Requirements

### Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of MTH 060 Beginning Algebra or minimum placement Math Level 10
- College-level computer skills

## Additional Costs (Beyond Standard Tuition/Fees and Textbooks)

### Material Costs

Required:

- Personal protective equipment and tools: approximately \$250

### Enrollment Fees

- Fees on specific MFG courses: \$600

## Course Requirements

Course	Title	Credits
<b>Core Courses</b>		
MFG 100	Manufacturing Technology Orientation	1
MFG 103	Welding Technology I	4
MFG 104	Blueprint Reading for Welders	4
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	Manufacturing Design and Drafting Techniques Mechanical Drawing Techniques	4
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
MFG 271	SMAW	4

MFG 272	GMAW	4
MFG 281	GTAW	4
MFG 282	FCAW	4

### Other Required Courses

Choose one course from the following:		3-4
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 115	Introduction to Intercultural Communication	
COMM 218Z	Interpersonal Communication	
COMM 219	Small Group Communication	
MTH 102	Applied Technical Mathematics (or choose from the foundational skills requirements list)	4
WR 121Z	Composition I	4

### Total Credits

58-59

## Advising Notes

Manufacturing Technology courses are structured to enable students to meet benchmarks through the completion of labs and hands-on projects.

Upon starting their program, students review their desired certificate or degree outcome with their advisor. Students should continue to meet with their advisors on a continuous basis to ensure they remain on track for degree completion.

This certificate is designed for students to directly enter the manufacturing workforce. Transferability of course credits to other public, or private, institutions' degree programs is dependent on those institutions' policies.

## Performance Standards

- Academic Requirements:
  - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
  - All courses in the program must be completed with a grade of C or higher.

## Sample Plan

### First Year

First Term		Credits
MFG 100	Manufacturing Technology Orientation	1
MFG 103	Welding Technology I	4
MFG 104	Blueprint Reading for Welders	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	Manufacturing Design and Drafting Techniques or Mechanical Drawing Techniques	4
<b>Credits</b>		<b>17</b>

### Second Term

MFG 105	Welding Technology II	4
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3

MTH 102	Applied Technical Mathematics	4
<b>Credits</b>		<b>14</b>
<b>Third Term</b>		
MFG 107	Welding Technology III	4
MFG 271	SMAW	4
MFG 272	GMAW	4
MFG 282	FCAW	4
<b>Credits</b>		<b>16</b>
<b>Fourth Term</b>		
Choose one course from the following:		3-4
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 115	Introduction to Intercultural Communication	
COMM 218Z	Interpersonal Communication	
COMM 219	Small Group Communication	
MFG 281	GTAW	4
WR 121Z	Composition I	4
<b>Credits</b>		<b>11-12</b>
<b>Total Credits</b>		<b>58-59</b>