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.

In order to complete program, students must satisfactorily complete welding, welding laboratory, and general education courses.

Program Learning Outcomes

Upon successful completion of the program, 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
- Successful completion of or current enrollment in MFG 100 Manufacturing Technology Orientation
- College-level computer skills

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

Material Costs

Required:

- Welding personal protective equipment and tools: approximately $250

Enrollment Fees

- Fees on specific MFG courses: $600

Course Requirements

Course	Title	Credits
Core Courses		
MFG 100	Manufacturing Technology Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 110	Manufacturing Processes I	4
MFG 119	Manufacturing Design and Drafting Techniques	4
or MFG 119M	Mechanical Drawing Techniques	
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
MFG 271	SMAW I	3
MFG 272	GMAW I	3
MFG 281	GTAW I	3
MFG 282	FCAW I	3
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		**53-54**

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than other programs.

Upon starting their program, students review their desired degree outcome with their advisor, and a coursework sequence is identified. This is particularly important if developmental work is needed.

The program is designed for students planning to enter the manufacturing workforce upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Before starting any manufacturing technology program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Most of the skills development courses in this program require two hours a week in the welding lab for each credit. This usually means students will need to schedule 24 hours or more each week in the lab. The welding lab is staffed Monday through Thursday from 9 am to 8 pm (40 hours a week).

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 101	Blueprint Reading	3
MFG 103	Welding Technology I	4

MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	Manufacturing Design and Drafting Techniques or Mechanical Drawing Techniques	4
	Credits	**16**
Second Term		
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
	Credits	**14**
Third Term		
MFG 271	SMAW I	3
MFG 272	GMAW I	3
MFG 281	GTAW I	3
MFG 282	FCAW I	3
MTH 102	Applied Technical Mathematics (or choose from the foundational skills math list)	4
	Credits	**16**
Fourth Term		
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	
WR 121Z	Composition I	4
	Credits	**7-8**
	Total Credits	**53-54**