Welding Technology

Welding Technology Certificate of Achievement

The Welding Technology program is a Certificate of Achievement program designed to prepare students for a career in welding. Program performance standards for certification will be in accordance with those set forth by the National Center for Construction and Research (NCCER), the American Welding Society (AWS), and the American Society of Mechanical Engineers (ASME). Career opportunities for certified welders exist in oil production and maintenance, agriculture, fabrication, manufacturing and construction. Laboratory work is completed in a modern and well equipped welding shop.

On completion of the Welding Technology program, the student will be able to:

- identify hazards and perform safe welding and shop practices including proper PPE;
- identify and explain material safety data sheets and storing and handling cylinders safely;
- explain and perform oxyfuel, plasma arc and air carbon arc cutting;
- understand codes governing welding;
- understand welder qualification tests including weld imperfections and their causes and nondestructive and destructive testing;
- understand and execute safe SMAW practices;
- identify tools for weld cleaning;
- identify factors that affect electrode selection;
- explain AWS and ASME filler metal classification systems and identify different types of filler metals;
- select proper electrodes for a specific welding task;
- make stringer, weave and overlapping beads;
- perform fillet welds in horizontal, vertical and overhead positions;
- identify and explain groove welds;
- identify and explain groove welds with backing;
- setup and operate SMAW equipment for making V-groove welds;
- perform SMAW for V-groove welds with backing in the Flat (1G), Horizontal (2G), Vertical (3G), and Overhead (4G) positions;
- read welding symbols on drawings, specifications, and welding procedure specifications;
- identify and explain a welding detail drawings;
- identify and explain dimensioning;
- create and understand a bill of materials;
- understand the classification and demonstrate field identification methods for base metals;
- identify forms and shapes of structural metals;
- explain metallurgical consideration for welding materials;
- demonstrate preheating metals, maintaining interpass temperature and post-weld heat treatment.

Course #	*Title*	*Units*
Required Core Courses		
IMT 060	Industrial Core	3
WT 070	Introduction to Certified Welding	2.5
WT 071	Beginning SMAW	3
WT 072	Advanced SMAW	3
WT 073	Introduction to Metallurgy and Weld Symbols	1.5
WT 074	GMAW and FCAW:Plate	3
WT 075	SMAW Pipe Welding	2
WT 076	Welding Certification Preparation	0.5
	Total	**18.5**

Click here to see the recommended course sequence for the Welding Technology Certificate Pathway.

For Gainful Employment information please visit:
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