Alexandria Technical and Community College

WELD 1611: Flux Core Arc Welding & Advanced Processes

A. COURSE DESCRIPTION
   Credits: 3
   Lecture Hours/Week: *.*
   Lab Hours/Week: 6
   OJT Hours/Week: *.*
   Prerequisites:  
   This course requires the following prerequisite  
   WELD 1603 - Gas Metal Arc Welding I (Number of Years Valid: 5)
   Corequisites: None
   MnTC Goals: None
   In this course, learners are given an opportunity to practice skill development with the Flux Cored Arc Welding (FCAW) process, and are introduced to other variations on the GMAW process including Metal Core (MCAW), GMAW-P (pulse), and GMAW-Spray. Learners are also introduced to GMAW welding on aluminum. The primary emphasis is on learners conducting supervised practice. Prerequisite: WELD1603. Corequisite: WELD1609.

B. COURSE EFFECTIVE DATES:  01/12/2009 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Understand advanced welding processes and applications.
   2. Understand electrical theory.
   3. Identify flaw, GMAW-Spray, MCAW, and GMAW pulse equipment.
   4. Display proper selection of advanced welding processes.
   5. Apply FCAW to basic joints.
   6. Apply GMAW-Spray to basic joints.
   7. Apply MCAW to basic joints.
   8. Apply GMAW-Pulse to basic joints.
   9. Apply aluminum and stainless steel to basic joints.

D. LEARNING OUTCOMES (General)
   1. The learner will develop and demonstrate the skills required for producing FCAW welds to entry level industry standards.
   2. The learner will develop and demonstrate the skills required for producing GMAW-spray and MCAW welds to entry level industry standards.
   3. The learner will develop and demonstrate the skills required for producing GMAW-P welds to entry level industry standards.
   4. The learner will develop and demonstrate the skills required for producing aluminum GMAW welds to entry level industry standards.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus
G. SPECIAL INFORMATION

None noted