

Dakota County Technical College

WELD 1240: Gas Metal Arc Welding II

A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: *.*

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Students will receive instruction in equipment operation and technique, and will have opportunity to practice skill development with the Gas Metal Arc Welding Short Circuiting, Spray Arc transfer and pulse spray metal transfer on mild steel and aluminum, plate and sheet. Flat, horizontal, and vertical welding position will be emphasized. The goal is to be able to perform welds in the flat, horizontal and vertical position to an industry acceptable level of quality for entry-level employment. Practice to achieve the required skill level is conducted by supervised instruction. Prerequisites: Gas Metal Arc Welding I, Welding Safety and Theory I, and must be taken at same time as Welding Safety and Theory II

B. COURSE EFFECTIVE DATES: 08/27/2012 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)

1. Demonstrate and follow all safety practices
2. Visual inspection of welds and cuts per applicable code or standard
3. Perform all work orders in accordance with shop standards
4. Perform structural shape cutting
5. Perform structural shape forming
6. GMAW equipment setup and advanced operation
7. Set and use the correct amperage (wire feed speed/stick out),
8. Set the correct voltage
9. Master travel and work angles control
10. Master travel speed control
11. Master electrode manipulation control
12. Perform proper arc striking, restart, and crater fill techniques
13. Flat Position Surfacing Welds with spray metal transfers on aluminum
14. 1F single pass weld using spray arc metal transfer on aluminum
15. 1G single pass weld using spray arc metal transfer on aluminum
16. 2F single pass weld using spray arc metal transfer on aluminum
17. 2G single pass weld using spray arc metal transfer on aluminum
18. Vertical Position Surfacing Welds with short circuiting metal transfers on steel
19. 3F down single pass weld using short circuit metal transfer on sheet steel
20. 3G down single pass weld using short circuit metal transfer on sheet steel
21. 3F up single pass weld using short circuit metal transfer on plate steel
22. 3G up multi-pass weld using short circuit metal transfer on plate steel
23. Properly set-up welder for Pulsed-Spray metal transfer
24. Perform fillet welds with pulsed spray metal transfer
25. Perform groove welds with pulsed spray metal transfer

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted