# MOHAWK VALLEY COMMUNITY COLLEGE

UTICA-ROME, NEW YORK

## COURSE OUTLINE

I.CATALOG DESCRIPTION:

MT174 Electric Arc Welding Procedures C-2, P-6, Cr-4

This course provides proficiency in oxy-acetylene welding procedures, including the theory and use of electric arc welding. Topics include welding ferrous and nonferrous metals in all positions, and the theory of pipe design and cutting. Welding supply fee required.

IIICOURSE OBJECTIVES:

This course has been designed to follow shielded ARC welding and will provide the student with continued practice in the fundamentals of S.M.A.W. in all positions, as well as provide the student with the fundamentals of SMAW ARC Welding. This will include an understanding of the theory of SMAW shielding and knowledge of different gases that are used for this. Instruction will be provided in welding ferrous and non-ferrous metals in all positions using (stick) process. Also, this course will include the theory of pipe and design.

Student Learning Outcomes:

1. Students will be able to explain the fundamentals of S.M.A.W. in all positions.
2. Students will be able to explain the fundamentals of gas arc welding.
3. Students will be able to explain how to weld ferrous and non-ferrous metals in all positions using (TIG) process.
4. Students will be able to discuss the theory of

pipe and designs.

IV.DETAILED COURSE OUTLINE:

### Reading

Week Assignment Information & Task Detail

1 Chapter 8

Equipment SMAW (Study and Discussion)

(pg. 91-107) Quiz

2 Chapter 9

Selecting Electrodes (Study and Discussion)

(pg. 109-120) Quiz

3 Chapter 10 (Study and Discussion)

Striking an Arc

(Pg.121-126)

4 Chapter 11

Depositing a Continuous Bead (Study and Discussion)

(pg. 127-135) Test

5 Chapter 12 (Study and Discussion)

Flat position

(pg. 137-150)

6 Chapter 13 (Study and Discussion)

Horizontal position

(pg. 151-156) Quiz

7 Chapter 14 (Study and Discussion)

Vertical position

8 Real Life Experience (Discussion and Laboratory 1)

9 Real Life Experience (Discussion and Laboratory 2)

10 Chapter 26 (Study and Discussion)

Welding Repair

11 American Welding Society (Discussion and Laboratory 3)

12 Welding Journal (Discussion and Laboratory 4)

13 SMAW Article (Discussion and Essay)

14 Codes D1.1 AWS (Discussion and Laboratory)

Review and Final Exam

# **COURSE NAME:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **DATE FACULTY NAME CHANGE INPUT MEASUREMENT ASSESSMENT ACTION**

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