SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: WELDING

CODE NO: N/A SEMESTER: N/A

PROGRAM: H.D.E. APPRENTICE - ADVANCED

AUTHOR: DENNIS SOCCHIA

DATE: 1991-04-02 PREVIOUS OUTLINE DATED: 1991-01-07

APPROVED: $So-72^{\wedge\wedge\wedge\wedge}$

Dean, School of Technical Trades

COURSE NAME: WELDING CODE NO. N/A

TOTAL CREDIT HOURS:

PREREQUISITE(S):

I. PHILOSOPHY/GOALS:

To provide students with a basic level of skill in dealing with common arc welding equipment, practices and procedures. Secondly, it will introduce a variety of techniques for position welding using the F3 and F4 electrodes.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

- 1. Perform arc welding operations in a safe, well organized manner.
- 2. Produce fillet and groove welds having sufficient quality to pass a typical visual and/or destructive test.
- 3. Develop an appreciation for the time and cost factors involved with welding in the 'out-of-flat' position.

III.TOPICS TO BE COVERED:

- 1. Program Introduction and Orientation
- 2. Course Outline, Guidelines and Grading
- 3. Welder Safety
- 4. Electrode and Amperage Selection
- 5. Flat Welding Exercises using E6011, E7018, E7024
 - single pass fillets
 - multi pass fillets
 - square groove welds c/w backing
- 6. Horizontal Welding Exercises using E6011, E7014, E7018
 - multi pass fillets
 - multi pass groove c/w backing
- 7. Practical Test #1
- 8. Vertical [Down] Welding Exercises using E6011, E6012
 - multi pass fillets on plate
 - single pass fillets on gage metal
- 9. Vertical [Up] Welding Exercises using E6011, E7018
 - pad exercise
 - multi pass fillets
- 10. Practical Test #2

Note: Performance objectives and/or course topics may not always be achieved or covered to the ideal depth owing to circumstances beyond our control (i.e. holidays, weather, sickness, equipment failure, etc.)

COURSE NAME: WELDING (HDE APPRENTICES) CODE NO.

<u>IV. LEARNING ACTIVITIES</u> REQUIRED RESOURCES (Optional)

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V. EVALUATION METHODS: (INCLUDES ASSIGNMENTS, ATTENDANCE REQUIREMENTS ETC.)

VI. REQUIRED STUDENT RESOURCES

C.S.A. APPROVED SAFETY WORK BOOTS C.S.A. APPROVED SAFETY (IMPACT) GLASSES WORK WEAR

NOTEBOOK, PAPER, PEN

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY BOOK SECTION:

N/A

VIII. SPECIAL NOTES

- * Student evaluations concerning the 'final mark' are further affected by the conditions set forth in the printed handout, 'Guidelines for Related Welding'.

 BE SURE TO OBTAIN A COPY FROM YOUR INSTRUCTOR.
- Special Guidelines for Safety and Class Attendance are included in the above handout.