

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY
SAULT STE. MARIE, ON

COURSE OUTLINE

WELDING

COURSE TITLE:

CODE NO: HED850 SEMESTER: N/A

PROGRAM: H.D.E. APPRENTICE - PHASE II (ADVANCED)

AUTHOR: DENNIS SOCCHIA

DATE: Aug 94 PREVIOUS OUTLINE DATED: Apr 94

APPROVED: 
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WELDING

HDE850

COURSE NAME

CODE NO

TOTAL CREDITS

PREREQUISITE(S): Successful completion of both the 'Common Core' (Basic) and 'Phaser' (Intermediate) Level of in-school apprenticeship training.

L PHILOSOPHY / GOALS: To provide students with a basic level of skill in dealing with common arc welding equipment, safe work practices and procedures. Secondly, it should introduce a variety of techniques for 'out of position' welding using the F2, F3 and F4 electrodes

IL STUDENT PERFORMANCE OBJECTIVES (OUTCOMES):

Upon successful completion of this course the student will:

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

m. TOPICS TO RECOVERED.

Approximate Time
Frames

- | | |
|--|-------|
| 1) Course Introduction and Orientation | |
| 2) Course Outline, Guidelines and Grading | |
| 3) Welder Safety | 3 hrs |
| 4) Electrode Selection and Amperage Setting | |
| 5) Flat and Horizontal Welding Exercises using E6011, E7018 and E7024 on 16ga, 1/8 and 3/16 material. (*** Shop Assignment ***) | 6 hrs |
| 6) Electrode Selection and Amperage Setting | |
| 7) Vertical Up and Vertical Down Welding Exercises using E6011, E6013 and E7018 on 16ga, 1/8 and 3/16 material. (*** Shop Assignment ***) | 6 hrs |
| 8) Electrode Selection and Amperage / Voltage Setting | |
| 9) Welding Exercises using the Gas Metal Arc/ Flux Cored Arc Process 3/16 and 3/8 material. (*** Shop Assignment ***) | 6 hrs |

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

| General Assessment | Final Mark* |
|---------------------------|--|
| A = 85-100% | Shop Assignments - |
| B = 75- 84% | Attendance (**See Attached) |
| C = 60- 74% | Ongoing Safety Evaluation (**See Attached) |
| D = 50- 59% | |
| F= 0- 49% | Total = 100% r |

V. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the Instructor. Credit for prior learning will be given upon successful completion of the following:

1. The successful challenge of all three HED 850 'Shop (Welding) Assignments' plus the successful challenge of a written arc welding safety test compatible to the level of knowledge provided to apprentices taking this course of study. *
- OR —
2. Written proof of at least five (5) years of competent trade experience involving the actual welding of structural steel, heavy equipment OR OTHER SIMILAR WORK.

VI. REQUIRED STUDENT RESOURCES:

C.S.A. Approved (High Cut) Safety Work Boots
C.S.A. Approved Safety (Impact Resistant) Glasses
Work Wear
Notebook, Paper, Pen or Pencil

VII. SPECIAL NOTES:

Students with special needs (eg. physical limitations, visual impairments, hearing impairments, learning disabilities etc...) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.

* 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 attendance and ongoing safety evaluations are included in the above paper.