SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: WELDING

CODE NO.: N/A SEMESTER: N/A

PROGRAM: HEAVY EQUIPMENT DIESEL - PHASE 1

AUTHOR: D. SOCCHIA

DATE: Feb 95 PREVIOUS OUTLINE DATED: Sept 93

APPROVED: / (_ Cj^ff^^ Sji^• 0^ 19 ^

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WELDING **N/A**

COURSE NAME **CODE NO.**

TOTAL CREDITS : N/A

PREREQUISITE(S): Successful completion of the 'Common Core' level of in school training or its equivalent.

L PHILOSOPHY/GOALS: To expand upon the knowledge base and practical skills developed in the 'Common Core' level of training

IL STUDENT PERFORMANCE OBJECTIVES (OUTCOMES):

Upon successful completion of this course the student will:

1) **Demonstrate a working knowledge of the construction, operating principles, set-up and minor servicing requirements for the oxyacetylene fusion and braze welding process along with their respective equipment.**
2) **Demonstrate a working knowledge of the construction, operating principles, set-up and minor servicing requirements for the gas metal arc welding process and its related equipment.**

ni. TOPICS TO BE COVERED:

1) **Course Introduction and**
2) **Welder Safety (Oxyacetylene)**
3) **Construction of Oxyacetylene Fusion and Braze Welding Equipment**
4) **Principles of Operation for Oxyacetylene Fusion and Braze Welding Equipment.**
5) **Fundamentals of the Oxyacetylene Fusion and Braze Welding Process.**
6) **Correct Set-up and Safe Operation of Oxyacetylene Fusion and Braze Welding Equipment.**
7) **Perform Oxyacetylene Fusion Welding on a Variety of Standard Joint Configurations.**
8) **Describe, Identify and Correct Common Fusion Weld Faults and Discontinuities.**
9) **Perform Oxyacetylene Braze Welding on a variety of Standard Joint Configurations.**
10) **Describe, Identify and Correct Common Braze Welding Faults and Discontinuities.**
11) **Welder Safety (Arc)**
12) **Construction of Gas Metal Arc Welding Equipment.**
13) **Fundamentals of the Gas Metal Arc Welding Process.**
14) **Principles of Operation for Gas Metal Arc Welding Equipment.**
15) **Correct Set-up and Safe Operation of Gas Metal Arc Welding Equipment.**
16) **Perform Gas Metal Arc Welding Operations on a Variety of Standard Joint Configurations.**
17) **Perform Minor Repairs to Gas Metal Arc Welding Equipment.**

WELDING **N / A**

COURSE NAME **CODE NO.**

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

General Assessment	Final Mark	
A = 85 -100%		
B = 75- 84%	Shop Assignments	60%
C = 60- 74%	Theory Tests	40%
D = 50- 59%		
F = 0- 49%	Attendance (see'Notes')	

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 Shop (Welding) Assignments *plus* the successful challenge of a written theory test compatible with 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 automotive / heavy equipment OR OTHER SIMILAR WORK *plus* the successful challenge of a written theory test compatible with the level of knowledge provided to apprentices taking this course of study.

VI. REQUIRED STUDENT RESOURCES

Work Boots (CSA Approved - steel toe and high cut)
Safety Glasses (CSA Approved - impact resistant)
Proper Work Clothes (for use in a welding environment)
Pen, Paper and Binder.

Vn. SPECIAL NOTES

Students with special needs (eg. physical limitations, visual impairments, hearing impairments, learning disabilities) 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 attendance is mandatory and will be recorded on a hour by hour basis using the 'Sault College Record of Attendance Form'.