MASTER COURSE OUTLINE

Prepared By: Makoto Enokizono | Date: October 2004

COURSE TITLE

Oxy-Acetylene Welding for Auto Technicians

GENERAL COURSE INFORMATION

Dept.: WLD	Course Num: 101	(Formerly:)
CIP Code: 48.0508	Intent Code: 21	Program Code: 814
Credits: 2		
Total Contact Hrs Per Qtr.: 33		
Lecture Hrs: 11	Lab Hrs:22	Other Hrs: 33-99
Distribution Designation: General Elective (GE)		

COURSE DESCRIPTION (as it will appear in the catalog)

Fundamentals of oxy-acetylene welding and cutting. Lessons include carbon-steel welding and brazing, aluminum and cast-iron welding and cast-iron welding and oxy-acetylene, plasma arc cutting. Practical knowledge of safety in the use and handling of equipment and compressed gases will be stressed throughout the quarter.

PREREQUISITES

Enrollment in Automotive Technology

TEXTBOOK GUIDELINES

Text and materials as decided by Welding Faculty. (Example: Basic Oxy-Acetylene Welding, Cutting and Heating Practices, L-TEC, and handouts)

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.

1. Demonstrate how to properly set up and use an oxy-fuel gas-cutting torch.
2. Safely use an oxy-fuel cutting torch to make a variety of cuts.
3. Demonstrate an ability to set up and use a plasma-cutting torch.
4. Describe how to maintain the major components of oxy-fuel welding equipment.
5. Demonstrate how to set up, light, adjust, extinguish, and dissemble oxy fuel welding equipment safely.
6. Make a variety of welded joints in any position on thin gage carbon steel.
7. Demonstrate an ability to properly clean, assemble, and perform required practice joints.

INSTITUTIONAL OUTCOMES

COURSE CONTENT OUTLINE

1. Personal safety
2. Equipment safety
3. Metal classifications
4. Filler wire classifications
5. Metal preparation

6. Welding processes
    a. OFW
    b. SMAW
    c. GMAW
    d. GTAW
7. Oxy-Acetylene welding
8. Stringer beading
9. Fusion welding
10. 'T' joint, lap, butt
11. Aluminum welding running bead, butt joint
12. Brazing
13. Cutting free hand oxy-acetylene, oxy-propane, plasma arc
14. Cast iron

DEPARTMENTAL GUIDELINES *(optional)*

1. 50% Lab performance grade. Productive workmanship.

On a daily basis, this includes quality of work and quantity of work, also completion of each lesson in a timely manner.

2. 20% follow safety rules, house keeping
3. 30% Mid-term, final test and several quizzes.
4. Attendance: Attendance is the most important factor of your progress. If you are absent, the grade will be affected as follows:
    a. 10% of the total hours of absence will result in lowering your final grade one whole letter grade.
    b. 20% of the total hours of absence will result in lowering your final grade two whole letter grades.
    c. 30% of the total hours of absence will result in reverting to an incomplete.
    d. Make up work: Make up work is not permitted.
    e. Grading scale: The grading scale will be kept in percentages until the final letter grades are required at the end of the quarter. The grades will be calculated as follows:

93-100%	A
85-92%	B
77-84%	C
69-76%	D

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DIVISION CHAIR APPROVAL **DATE**