

COURSE OUTLINE

Revised By: B. Hughes July, 2007

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| DEPARTMENT: | Automotive Technology |
| CURRICULUM: | Automotive Technology |
| COURSE TITLE: | Automotive Welding |
| COURSE NUMBER: | AUT 132 |
| TYPE OF COURSE: | Vocational Preparatory |
| COURSE LENGTH: | Normally 2 weeks |
| CREDIT HOURS: | 3 |
| LECTURE HOURS: | 10 hours |
| LAB HOURS: | 40 hours |
| CLASS SIZE: | 20 maximum |
| PREREQUISITES: | MVM 100 (Introduction to Automotive Technology I), MVM 102 (Introduction to Automotive Technology II), basic math skills, and 9 th grade or higher reading level (as evidence by appropriate placement test scores), and/or instructor permission. |

COURSE DESCRIPTION:

Contents include: safety in welding, be able to demonstrate proficiency in: oxy-acetylene welding, oxy-acetylene brazing, oxy-acetylene cutting as well as MIG welding. Determine which type of welding process is to be used when joining various types of metals in different situations. Instruction in safety, environmental awareness, human relations and leadership are taught as an integral part of this unit.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Critical Thinking – Use problem solving skills to diagnose and repair welding problems. (SLO 4.1)
2. Technology - Proper use and care of welding tools and equipment. (SLO 5.1)

PROGRAM OUTCOMES:

1. Locate sources, make parts write-ups, calculate costs and explain repair or service. (SLO 2.1, 2.2 & 7.1)
2. Handle customer needs, complaints, questions and special challenges. (SLO 3.1 & 3.2)
3. Access and apply manufacturer's specifications in repair and replacement. (SLO 7.1)
4. Work safely and responsibly within all shop safety and environmental guidelines and standards. (SLO 6.4 & 6.5)
5. Compute costs, time and measurements. (SLO 2.1, 2.2 & 7.1)
6. Work with accuracy, dependability, proficiency and in a timely manner, when servicing equipment. (SLO 6.3 & 6.4)

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Explain and demonstrate safety as it applies to the welding industry.
2. Explain the function and importance of different types of welding.
3. Demonstrate proficiency in Oxy-Acetylene welding.
4. Demonstrate proficiency in Oxy-Acetylene brazing.
5. Demonstrate proficiency in Oxy-Acetylene cutting.
6. Demonstrate proficiency in MIG welding

TOPICAL OUTLINE:

APPROX. HOURS

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| I. Safety and MSDS | 5 |
| II. Oxy-Acetylene welding | 15 |
| III. Oxy-Acetylene brazing | 10 |
| IV. Oxy-Acetylene cutting | 5 |
| V. MIG welding | <u>15</u> |
| Total | 50 |