

\_\_\_\_\_SOUTH SEATTLE COMMUNITY COLLEGE\_\_\_\_\_

Technical Education Division

### COURSE OUTLINE

Revision: S. Ford May 2008

DEPARTMENT:	Auto Body Repair
CURRICULUM:	Automotive Collision Technology
COURSE TITLE:	Welding and Cutting
COURSE NUMBER:	ABR 113
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	6 weeks
CREDIT HOURS:	10
LECTURE HOURS:	50
LAB HOURS:	100
CLASS SIZE:	20
PREREQUISITES:	None

#### COURSE DESCRIPTION:

This module instructs the student in the differences between various metal joining processes, selection of the correct heat joining for various jobs. The advantages of using MIG welding, personal and shop safety, along with vehicle protection measures. They will also have an understanding of welding wires, shielding gases, tuning the welder and be able to visually inspect and destructively test the weld. Instruction in safety, environmental awareness, human relations and work ethics are taught as an integral part of this course of study.

ABR 113 Welding and Cutting  
May 2008

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Technology - Select and use appropriate technological tools to complete various welds.
2. Critical Thinking and Problem Solving - Think critically and evaluate information to select correct welding joining process for repair.
3. Personal Responsibility - Manage personal health and safety when working with various metals.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Demonstrate knowledge of metal joining methods and identify where each method is suitable in automotive sheet metal repair.
2. Use correct safety practices for welding to avoid causing injury to personnel or damage to property or vehicles.
3. Demonstrate knowledge and skills in plastic repair, and welding.
4. Properly set up a MIG welder for welding automotive sheet metal.
5. Run a test weld and tune the welder for the welds being made.
6. Assemble and complete a butt joint with backing in various welding positions.
7. Complete a plug weld, be able to visually inspect and destructively test the welds.
8. Demonstrate knowledge and use of STRSW welding.

TOPICAL OUTLINE:

APPROX. HOURS

I. Heat joining processes	15
II. Safety Practices	10
III. Plastic repair and Welding	25
IV. The MIG welder/STRSW	15
V. Tuning the welder	20
VI. Butt joint with backing	25
VII. Fillet weld lap joint	20
VIII. Plug weld	<u>20</u>
Total	150

REVISED BY: Steve Ford

ABR 113 CO

DATE: May 2008