

Course Objectives/Course Outline
Spokane Community College

Course Title: Unibody and Frame Alignment and Repair

Prefix and Course Number: ABF 243

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Perform advanced MIG welding techniques
- Spot weld
- Cut for salvage purpose
- Use a disc sander
- Remove dents using a variety of techniques
- Use fillers

Course Outline:

- I. Safety Procedures
 - A. Personal Safety
 - B. Health Protection
- II. Advanced MIG Welding Applications
 - A. MIB
 1. Equipment
 2. Operation Methods
 3. Welding Positions
 4. Galvanized Welding
 5. Testing the Weld
 6. Weld Defects
- III. Advanced Miscellaneous Welding Applications
 - A. Spot Welding
 1. Resistance Welding
 2. Welding Inspections
 3. Stud Welding
 - B. Oxyacetylene Welding
 1. Equipment
 2. Flame and Adjustments
 3. Cutting for Salvage Purposes
- IV. Advanced Metal Straightening Techniques
 - A. Rolled Buckles
 - B. Flat Low-metal Straightening Techniques
 - C. Disc Sander Use
 1. Buffing
 2. Cross Cut

- V. Advanced Metal Working Techniques
 - A. Dents
 - 1. With Spoons
 - 2. With Dollies
 - 3. Hammer-On-Dolly
 - 4. Hammer-Off-Dolly
 - 5. Unlocking with Hammer and Dolly
 - 6. Picking
 - 7. Pulling
 - B. Shrinking
 - 1. Basic Principles
 - 2. With Gas Torch
 - 3. Gouges
 - 4. Kinking
 - C. Working Aluminum
 - 1. On-dolly Hammer
 - 2. Off-dolly Hammer
 - 3. Picking
 - 4. Spring Hammering
 - 5. Filing
 - 6. Grinding
 - 7. Heat Shrinking
- VI. Advanced Minor Body Repair
 - A. Surface Preparation
 - B. Mixing Fillers
 - C. Fillers and Hardeners
 - D. Applying Fillers
 - E. Shaping Fillers