

WELDING/3 (180 Hours)

Course No.: 77-95-70

COMPETENCY CHECKLIST

Student Name _____

Teacher Name _____ School Site _____

Start Date _____ Completion Date _____ Certificate Date _____

Teacher Signature _____ Student Signature _____

(Signatures verify completion of course competencies)

A. INTRODUCTION AND SAFETY (5 hrs)

- _____ 1. Scope and purpose of the course
- _____ 2. Overall course content
- _____ 3. Classroom policies and techniques
- _____ 4. Occupations in manufacturing for welders
- _____ 5. Opportunities for women in the welding field
- _____ 6. Cal-OSHA laws governing welders
- _____ 7. EPA legislation that affects welding industry
- _____ 8. Proper removal of hazardous waste
- _____ 9. MSDS applied to the welding industry
- _____ 10. Class/workplace emergency procedures
- _____ 11. Responsibilities for a safe workplace
- _____ 12. Safety test with 100% accuracy

B. TRADE MATHEMATICS III (15 hrs)

- _____ 1. Define basic geometric terms/properties
- _____ 2. Parallel lines/ types & parts of triangles
- _____ 3. Demonstrate applied math as indicated

C. GROOVE WELDS (50 hrs)

- _____ 1. Define groove welding
- _____ 2. Types of groove welding
- _____ 3. Corner butt groove weld/V-butts
- _____ 4. Demonstrate listed types of groove welds
- _____ 5. Perform listed types of groove welds

D. AIR CARBON ARC PROCESS (50 hrs)

- _____ 1. Air carbon arc cutting equipment
- _____ 2. Safety measures for air carbon arc cutting
- _____ 3. Demo arc cutting techniques

E. COMBINATION WELDING (10 hrs)

- _____ 1. Welding equipment and its use
- _____ 2. Demonstrate use of welding equipment

F. FABRICATION (5 hrs)

- _____ 1. Define terms related to fabrication
- _____ 2. Fabrication application

G. ROBOTICS (5 hrs)

- _____ 1. Define robotics
- _____ 2. Robotics as aspect of welding
- _____ 3. Robotics in electronics/ mechanics/software
- _____ 4. Identify structural parts of a robot
- _____ 5. Different power sources of a robot

H. CITY OF LA DEPARTMENTAL EXAM (40 hrs)

- _____ 1. Identify/discuss testing, bends, & inspections
- _____ 2. Application/procedure of City welding exams
- _____ 3. Pass AWS D1-1 exam w/score of 70% or better
- _____ 4. Pass AWS D1-3 exam w/score of 70% or better
- _____ 5. City codes to AWS D1-1/structural steel
- _____ 6. City welding codes to AWS D1-3
- _____ 7. Pass practical welding exam to AWS guidelines