

# WELDING/1 (180 Hours)

Course No.: 77-95-50

## 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. ORIENTATION AND SAFETY (4 hrs)**

- \_\_\_\_\_ 1. Scope and purpose
- \_\_\_\_\_ 2. Overall course content
- \_\_\_\_\_ 3. Classroom policies and techniques
- \_\_\_\_\_ 4. Occupations available to welders
- \_\_\_\_\_ 5. Opportunities for females
- \_\_\_\_\_ 6. OSHA governance on trade
- \_\_\_\_\_ 7. EPA on industry development
- \_\_\_\_\_ 8. EPA standards for hazardous waste disposal
- \_\_\_\_\_ 9. MSDS in welding trade
- \_\_\_\_\_ 10. First aid and emergency procedures
- \_\_\_\_\_ 11. Providing a safe workplace
- \_\_\_\_\_ 12. Safety test

**B. RESOURCE MANAGEMENT (1 hr)**

- \_\_\_\_\_ 1. Definitions of related terms
- \_\_\_\_\_ 2. Resources of welding business
- \_\_\_\_\_ 3. Components of CPM & their impact
- \_\_\_\_\_ 4. Examples of effective management
- \_\_\_\_\_ 5. Benefits of effective resource management
- \_\_\_\_\_ 6. Economic/environment benefits/liabilities

**C. TRADE MATHEMATICS I (15 hrs)**

- \_\_\_\_\_ 1. Practical applications for math
- \_\_\_\_\_ 2. Problem-solving: Whole #s
- \_\_\_\_\_ 3. Problem-solving: Fraction problems
- \_\_\_\_\_ 4. Problem-solving: Decimals
- \_\_\_\_\_ 5. Changing fractions to decimals
- \_\_\_\_\_ 6. Changing decimals to fractions
- \_\_\_\_\_ 7. English & metric system: Measuring length
- \_\_\_\_\_ 8. English & metric system: Measuring weight
- \_\_\_\_\_ 9. English/metric: Measuring volume/capacity
- \_\_\_\_\_ 10. English/metric system: Measuring problems

**D. WELDING SYMBOLS AND CODES (5 hrs)**

- \_\_\_\_\_ 1. Identify/discuss welding symbols

- \_\_\_\_\_ 2. Reading a measuring tape

**E. WELDING METALLURGY (10 hrs)**

- \_\_\_\_\_ 1. Definitions of related terms
- \_\_\_\_\_ 2. Identify/describe welding metallurgy
- \_\_\_\_\_ 3. Forms of material identification

**F. TOOLS AND EQUIPMENT (15 hrs)**

- \_\_\_\_\_ 1. Hazards related to welding
- \_\_\_\_\_ 2. Proper use of safety apparel for welders
- \_\_\_\_\_ 3. Fire/safety procedures
- \_\_\_\_\_ 4. Define related terms
- \_\_\_\_\_ 5. Items used in welding
- \_\_\_\_\_ 6. Terms used in welding applications
- \_\_\_\_\_ 7. Discuss items related to gas/regulators
- \_\_\_\_\_ 8. Inspection and maintenance procedures

**G. SURFACE WELDS (25 hours)**

- \_\_\_\_\_ 1. Definitions of related terms
- \_\_\_\_\_ 2. Discuss/demonstrate welding tasks

**H. SHIELDED METAL ARC WELDING (SMAW) (40 hrs)**

- \_\_\_\_\_ 1. Definitions of related terms
- \_\_\_\_\_ 2. Discuss/demonstrate welding tasks

**I. OXYACETYLENE CUTTING (25 hrs)**

- \_\_\_\_\_ 1. Definitions of related terms
- \_\_\_\_\_ 2. Identify and discuss use of welding items
- \_\_\_\_\_ 3. Review/demonstrate welding tasks

**J. BRAZING (10 hrs)**

- \_\_\_\_\_ 1. Define brazing
- \_\_\_\_\_ 2. Identify related welding items
- \_\_\_\_\_ 3. Discuss/demonstrate welding tasks

**K. WELDING TUBING: ALL POSITIONS (25 hrs)**

- \_\_\_\_\_ 1. Discuss/demonstrate listed welding tasks

**L. EMPLOYABILITY SKILLS (5 hrs)**

- \_\_\_\_\_ 1. Employer requirements
- \_\_\_\_\_ 2. Locating potential employers
- \_\_\_\_\_ 3. Electronic social networking
- \_\_\_\_\_ 4. Sample résumés and cover letters
- \_\_\_\_\_ 5. Importance of correct job application
- \_\_\_\_\_ 6. Complete sample job application
- \_\_\_\_\_ 7. Enthusiasm on a job
- \_\_\_\_\_ 8. Appropriate appearance of a job
- \_\_\_\_\_ 9. Continuous upgrading job skills
- \_\_\_\_\_ 10. Customer service
- \_\_\_\_\_ 11. Appropriate interviewing techniques
- \_\_\_\_\_ 12. Informational materials and resources
- \_\_\_\_\_ 13. Sample follow-up letters
- \_\_\_\_\_ 14. Appropriate follow-up procedures