

WELD 128 Articulation Competencies

Basic Welding (3 Credits)

Theory, application and practice of arc and oxyacetylene welding and cutting.

Upon completion of this course, successful students will score 80% or better on the following competencies to receive WVC college credits.

Student Learning Outcomes:

CATEGORIES			
1. Problem Solving:	A. Critical Thinking	3. Social Interaction:	A. Collaboration
	B. Creative Thinking		B. Ethical Conduct
	C. Quantitative Reasoning		C. Professional Conduct
	D. Qualitative Reasoning		D. Cultural Diversity
2. Communication:	A. Oral Expression	4. Inquiry:	A. Information Literacy
	B. Written Expression		B. Research
	C. Artistic Expression		C. Documentation

Course Competencies Checklist:

- Safely function in metal shop environment. (1A, 2A,B, 3A,B,C, 4A,B,C)
- Use basic tooling such as: (1A,B,C,D, 2A, 3B, 4A,B,C)
 - Bench grinders
 - Hand grinders
 - Hand tooling
 - Band saws
 - Iron workers
 - Shears
 - Chop saws
- Identify common welding symbols and terminology. (4A,B,C)
- Use arc welders AC and DC. (2A, 3A,B,C,D, 4A,B,C)
- Use oxy/acc torches and cutters. (2A, 3A,B,C,D, 4A,B,C)
- Braze steel, brass and or copper. (1A,B,C,D, 2A, 4A,B,C)
- Use a plasma cutter. (2A, 3A,B,C,D, 4A,B,C)

Program Outcomes:

Upon completion of this program, successful students will have acquired the skills and abilities to:

- Demonstrate standard shop safety procedures
- Apply welding theory and knowledge of common terms used in the industry to oxy/fuel gas and electric arc welding processes
- Apply a variety of standard and exotic welding techniques.
- Operate various shop fabrication equipment
- Use torches and fuel gases to produce durable parts.
- Read, interpret and use shop drawings and specifications in the fabrication and making of durable goods.
- Use effective reading, thinking, mathematical and written communication skills in workplace environments.
- Employ problem solving skills
- Be prepared to take welder qualification test in accordance with Washington Association of Building Organization (WABO) utilizing the SMAW process.

Core Topics:

- Electric arc AC and DC
- Common symbols and terminology
- Use of common shielded electrodes (Ex. 7018, 6011, 6013, etc.)
- Gas brazing
- Gas welding
- Gas cutting
- Plasma cutting
- Safety
- Use of hand tools
- Use of fabrication tooling (benders, presses, saws, etc.)