

# OXY-ACETYLENE CUTTING/WELDING

Pierce County Careers Connection

Dual Credit Articulation Agreement

---

Upon completion of high school courses equivalent to the following competencies:

- Setup Oxyacetylene Cutting/Welding Equipment  
Given acetylene cylinder, hoses, regulator, oxygen cylinder, hoses and regulator; combination tank wrench, key wrench, and torch assembly:
  - Set up oxyacetylene cutting/welding equipment.
  - The oxygen and acetylene cylinders must be secure, vented, and free from contamination or leaks.
  - Each regulator must be attached to its respective cylinder, free from leaks, and backed off so that no oxygen or acetylene goes to the torch assembly when cylinders are first opened.
  - The key wrench must remain on the acetylene cylinder valve while in use.
  - The oxygen cylinder valve must be opened fully.
  - The acetylene cylinder valve must be opened  $\frac{1}{4}$  to  $\frac{1}{2}$  turn.
  - The hoses must be attached to their respective torch fittings, unobstructed, and free from leaks.
- Burn Material Using Hand Held Torch  
Given a striker, metal cutting equipment, protective clothing/equipment, oxyacetylene cutting tips, welder's standard tool kit, work order, and work piece:
  - Burn material using hand held torch.
  - Drag lines must be vertical and not pronounced.
  - Cut must be sharp and clean and within specified dimensions and angles.
- Burn Material Using Mechanized Torch  
Given a catch box, mechanized tractor, metal cutting equipment, cutting tips, protective clothing/equipment, socket wrenches, striker, welder's standard tool kit, work orders, and work pieces:
  - Burn material using mechanized torch.
  - Drag lines must be vertical and not pronounced.
  - Cut must be sharp and clean and within specified dimensions and angles.
- Pre-heat Carbon Steel for Welding  
Given oxyacetylene welding equipment, heating tips, protective attire, and work orders:
  - Pre-heat carbon steel for welding.
  - The material must be preheated to the specified temperature throughout its mass.
- Make Fillet Weld Using Oxyacetylene Process  
Given oxyacetylene welding equipment, tips, protective clothing, weld gauge, welding rods, wire brush, work orders, and workpieces:
  - Make fillet weld using oxyacetylene process.
  - The weld must be deposited with complete fusion and must be free from slag, overlapping, cracking and porosity.
  - It must be at least 25% greater in width than depth, must be without undercutting, and must possess the specified convexity/concavity.
- Make Full Penetration Weld Using Oxyacetylene Process  
Given oxyacetylene welding equipment, tips, protective clothing welding rods, wire brush, work orders, and workpieces:
  - Make full penetration weld using oxyacetylene process.
  - Each pass must be deposited with complete fusion and must be free from slag, cracking and porosity.
  - The root pass must provide full penetration without burning away the root face.

---

A student earning a "B" grade or better may earn college credit at one of the following colleges:

<u>College</u>	<u>Course</u>	<u>Credits</u>
Bates Technical College	WELD 104	3
Clover Park Technical College	WLD 110 & WLD 112 CIP Code: 48.0508	7