

Student Name _____ Instructor Name _____

High School or Vocational Center _____ Grade _____

COMPETENCY RECORD FOR ARTICULATION
Muskegon Community College
Welding Technology

Please check below each skill the student has mastered as described, with 80 percent accuracy, or with an A or B grade. The skills needed for articulation of each course are listed.

W 101
Basic Welding
3 Credit Hours

| Task | Satisfactory | Unsatisfactory |
|--|--------------|----------------|
| SAFETY IN THE WELDING SHOP | | |
| Apply school policies and procedures | | |
| Apply shop safety rules and procedures | | |
| Apply fire safety rules and procedures | | |
| Apply electrical safety rules and procedures | | |
| OXYACETYLENE (OAW) | | |
| Set up an oxyacetylene welding station | | |
| Light and adjust the torch to the correct flame(s) | | |
| Carry a puddle without filler rod | | |
| Carry a puddle along a joint to form an edge weld w/o rod | | |
| Carry a puddle with filler rod | | |
| Construct a butt joint with filler rod in the flat position | | |
| Construct a lap joint with filler rod in the flat position | | |
| Construct an inside corner with filler rod in the flat position | | |
| Braze a stringer bead with brazing rod and flux in the flat position | | |
| Braze a butt joint with brazing rod and flux in the flat position | | |
| Perform the operation of capillary action on the butt braze joint | | |
| GAS TUNGSTEN ARC WELDING (GTAW) | | |
| Set up the welding power source for the GTAW process | | |
| Determine the correct shielding gas pressure and set as required | | |
| Select and prepare the tungsten electrode for welding | | |

| Task | Satisfactory | Unsatisfactory |
|---|--------------|----------------|
| Assemble the GTAW torch | | |
| Establish and maintain the arc | | |
| Carry a puddle without rod on mild steel | | |
| Weld a stringer bead with rod in the flat position | | |
| Weld a butt joint with rod in the flat position | | |
| Weld a "T" joint with rod in the flat position | | |
| OXY-FUEL (FLAME) CUTTING (OFC) | | |
| Identify terms and components of an oxy-fuel cutting station | | |
| Determine correct pressures and tip size for the cutting operation | | |
| Set up the oxyacetylene station for the cutting operation | | |
| Light and adjust the torch to the correct flame adjustment for the type of base metal to be cut | | |
| Manually lay out and cut straight lines | | |
| Lay out and cut angles | | |
| Lay out and cut circles | | |
| Lay out and pierce holes | | |
| Lay out and cut patterns | | |
| Lay out and cut beams, angles, and channel iron | | |
| Lay out and cut pipe | | |
| Lay out and cut square and round solid bar stock | | |
| PLASMA ARC CUTTING (PAC) | | |
| Set the machine up for the cutting operation | | |
| Inspect/replace torch parts for the cutting operation | | |
| Straight cut 1/4" thick mild steel | | |
| Radius cut 1/4" thick mild steel | | |
| Pierce and cut a 3" diameter hole in 1/4" mild steel | | |
| Straight cut 16 gage mild steel | | |
| Straight cut 16 gage stainless steel | | |
| Straight cut 1/16" aluminum | | |
| Lay out and cut square and round solid bar stock | | |
| SHIELDED METAL ARC WELDING (STICK) | | |
| Explain the numbering system on the metallic electrode | | |
| Explain the applications of DCRP, DCEP and AC | | |

| Task | Satisfactory | Unsatisfactory |
|---|---------------------|-----------------------|
| Set-up the shielded metal arc welding machine | | |
| Adjust the amperage to match the type of electrode | | |
| Strike and maintain the arc | | |
| Weld straight stringer beads | | |
| Weld weave bead motions | | |
| Weld scratch and tap tacks | | |
| Perform the operation of restarts | | |
| Construct a butt joint in the flat position | | |
| Construct a lap joint in the flat position | | |
| Construct a tee joint (inside corner) in the flat position | | |
| Perform the operation of whip and pause (flip motion) | | |
| Pad a surface of 10-12 sq. in. | | |
| GAS METAL ARC WELDING (GMAW) | | |
| Set up the power source for the GMAW process | | |
| Set up the wire feeder for the GMAW process | | |
| Determine the proper shielding gas and flow specifications | | |
| Set the current CFH for the shielding gas | | |
| Weld a stringer bead with 100% penetration on mild steel | | |
| Weld a butt joint with 100% penetration on mild steel | | |
| Weld a "T" joint on mild steel | | |
| COGNATE TASKS | | |
| Read and interpret blueprints | | |
| Interpret fillet-welding symbols on drawings | | |
| Interpret groove-welding symbols on drawings | | |
| Identify specialty welding symbols (plug, slot, surfacing, flange, spot/projection, weld all around and field weld symbols) | | |
| Select the correct SMAW electrode for the application | | |
| Select the correct welding process to produce structurally sound and efficient welds | | |
| Operate power hand tools | | |
| Operate stationary power tools | | |
| Know the difference between a reactive and non-reactive shielding gas | | |

| Task | Satisfactory | Unsatisfactory |
|--|---------------------|-----------------------|
| Select the correct power source type for the welding process being used | | |
| Identify the parts of a typical weld | | |
| Evaluate welds to determine if they meet the criterion of a good, sound weld | | |

Instructor's Signature _____ Date _____