

List of Certification Skills for

Precision Metal Manufacturing II

- Demonstrate standard/employability skills as required by business and industry
- Knows and practices skills related to health and safety in a work place.
- Familiar with “The Machinist Handbook” and the importance of this resource
- Safely operate a manual mill and lathe and knows the functions and features for each machine
- Use appropriate CNC terminology in CNC machining.
- Selects proper tooling, feeds and speeds for specific materials and operations
- Proficient in reading engineered blueprints using geometric dimensioning and tolerancing
- Able to determine the proper sequence of operations when machining a part
- Knows the difference between carbide and high-speed tooling and the proper uses for each one
- Knows general maintenance on manual and CNC machines
- Test coolant and mix coolant to manufacturer’s specifications
- Use various measuring tools such as: micrometers, calipers, height and bore gauges, telescoping and thread pitch gauges
- Familiar with CAD/CAM software and the difference between the two
- Safely operate a CNC machine and knows the methods of entering programs into the control
- Proper powering up and powering down of a CNC machine
- Manually jog and control a CNC mill and lathe
- Set zero on a CNC lathe and mill both manually and with probing features
- Load and alter tool/part offsets on a Haas control
- Know G and M coding and their functions
- Know the difference between absolute and incremental programming
- Manually program a Haas control on a lathe and mill
- Has qualified for the National Institute for Metalworking Skills (NIMS) exam by completing NIMS online practice tests
- Had earned six Haas certifications including: CNC lathe set-up (old control), CNC lathe set-up (new control), CNC programming, 3-Axis CNC milling (old control), 3-Axis CNC milling (new control), and CNC milling machine programming.