

Advance Buffalo – CNC Machinist Skill Levels

Level I – Machine Operator

- Under 100% supervision - Can perform basic machine operations

Process

- Basic understanding of tooling & machining
- Read & interpret Blueprints
- Manual machine operation
- Able to load machine
- Able to make off-sets
- Shop protocol
- Physical Labor required

Machines

- Basic understanding of Manual & CNC Lathes, Mills, Grinders

Tools/Technology

- Ability to use measuring devices (i.e. calipers, gauges, micrometers, inspection tools)
- SPC knowledge
- Understand Tool changes
- Knowledge of offset equipment

Level II

- Must be an experienced Operator;
- Experience using Lathe, Mill

Process

- Able to run multiple machines
- Perform basic set-ups; troubleshoot;
- Should be able to check own work using inspection equipment
- Understand manufacturing terminology
- Understand L call-up; read and edit; L tool wear
- Perform machine maintenance
- Able to build parts from scratch

Machines

- Operational understanding of various controllers such as Fanuc, Siemens, Heidenhain,
- Ability to operate a 4 axis machine tool

Tools/Technology

- Understand variation, parts –run charts, parts, machine
- Understanding G code, and Advance G/M code basics and the purpose
- Understand tool geometry & selection
- Understand speed/feed technology
- Change tools and make tool offsets
- Should understand conversational programming basics
- CAD/CAM – basic understanding

Level III

- Advanced applications exp.

Process

- Able to perform set-ups for other machine tools;
- Verify conformance of finished work piece to specifications, using measuring instruments
- Workholding/Fixturing
- Ability to prove out 1st article programming

Machines

- Swiss machining; Multi- Axis

Tools/Technology

- CAD/CAM
- Advanced programming
- 3-D model programming
- Qualified inspector – using micrometers, height gauges and gauge blocks
- Troubleshooting
- Advance Tool Selection, i.e. special tooling

Level IV

- Full autonomy; capable of lead role; ability to perform all the other levels

Process

- Senior Technician
- Interface with Engineering Dept
- Able to provide estimate to customer
- Documentation and tech transfer
- Software error proofing

Machines

- 8 Axis Lathes, Vertical Lathes, Twin Spindle, Vertical Mills, EDM, 5 Axis Mills

Tools/Technology

- Master programmer
- Master CAD/CAM and set-up machinist
- Applications experience

Key success factors

- 5S Training
- Safety awareness
- Drug free
- Verbal communication
- Team player, helping to meet dept & company goals and objectives.

Key success factors

- Enhanced Level I
- Work independently
- Mentor Level I
- Convert between English/Metric
- Must be aware of and comply with related ISO 9002 procedures.

Key success factors

- Enhanced Level I -II
- Lead person, Trainer of Jr. Associates
- Monitor work of Level I-II
- Team Leader

Key success factors

- Engineering Technician (Manufacturing)
- Supervision of other staff/department

Education/Experience

- GED/HS
- Mechanically inclined
- Basic industrial exp
- Certificate from BOCES, Community college

Education/Experience

- 3 -5 years experience or 2 yr degree + 1 yr exp
- Strong Math background

Education/Experience

- 5 yrs+ exp
- OR 2yr degree + 2 yrs exp
- 1-3 yrs exp programming

Education/Experience

- 10 yrs exp OR 4 yr degree
- 3 yrs programming

Machinist Additional Checklist of Skills

- Soft skills incorporated in all levels
- Reliable
- Problem solving abilities
- Detail oriented
- Being able to work with others
- Time management skills
- Speaks up for themselves in a positive way
- Multi-task
- Communication skills
- Self sufficient- independent
- Self confident
- Team worker
- Open and honest