Machining

Youth Apprenticeship

MACHINING

Machining youth apprentices assist with basic machine operations, processes, and tools. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One or two years

REQUIRED COMPETENCIES

Youth apprentices must become proficient in both general employability and occupation-specific competencies. All of these, and examples of how each can be demonstrated, are found in the following pages. **Year 1**: A total of 16 occupational competencies must be learned for this occupation. (All 7 Manufacturing Fundamentals competencies with no substitution, plus a minimum of 9 Machining competencies.) **Year 2**: A total of 13 Machining competencies using a minimum of one different Machining process than learned in Year 1. Employers may substitute out one Machining competency per year and should write in the competency they are adding. Where necessary, skills can be simulated. Youth apprentices must be evaluated on these competencies at least two times each year of their apprenticeship.

Note: Students who completed a previous Manufacturing YA program do not need to repeat the Manufacturing Fundamentals Competencies.

Manufacturing Fundamentals Competencies	Machining Competencies
1. Focus on customer needs 2. Use various instruments 3. Operate tools and equipment safely 4. Practice quality assurance principles 5. Follow personal safety requirements 6. Maintain a safe work environment 7. Demonstrate professional role to be used in an emergency	1. Read machining technical drawings and work orders 2. Interpret machining symbols and procedures 3. Perform safety checks 4. Operate machining equipment 5. Monitor machining product and process specifications 6. Process production documents 7. Follow shutdown machining process 8. Use hand tools 9. Monitor equipment for correct operation 10. Identify set up 11. Select tools and materials 12. Support set up 13. Verify set up 14. Perform start up

REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

The following Registered Apprenticeship is available in this area:

- Machine Repair
- Machinist
- Maintenance Technician
- Tool and Die Maker

POST-SECONDARY PATHWAY OPPORTUNITIES

There are several post-secondary pathway opportunities in this area. The following is an example.

- Precision Machining Technology Technical Diploma

Machining

Youth Apprenticeship

ON-THE-JOB LEARNING PERFORMANCE STANDARDS GUIDE

YOUTH APPRENTICE INFORMATION

Youth Apprentice Name
YA Coordinator
YA Consortium
School District

SIGNATURES

The On-the-Job Learning Performance Standards Guide includes a list of competencies youth apprentices learn through mentoring and training at the worksite.

Instructions for the Worksite Employers/Mentors and School-Based or YA coordinators: This document should be reviewed with the employer/mentor, school-based or YA coordinator on a regular basis with the youth apprentice to record progress and plan future steps to ensure completion of the required competencies. Mentors, school-based/YA coordinator, and the apprentice sign below.

Employer/Mentor

1st Evaluation (Required)	2nd Evaluation (Required)
Employer/Mentor Signature	Employer/Mentor Signature
Employer/Mentor	Employer/Mentor
Business/Company	Business/Company
Date Signed	Date Signed

3rd Evaluation (Optional)	4th Evaluation (Optional)
Employer/Mentor Signature	Employer/Mentor Signature
Employer/Mentor	Employer/Mentor
Business/Company	Business/Company
Date Signed	Date Signed

School-Based and/or YA Coordinator

1st Evaluation (Required) **2nd Evaluation (Required)**

School-Based and/or YA Coordinator Signature	School-Based and/or YA Coordinator Signature
School-Based and/or YA Coordinator	School-Based and/or YA Coordinator
School District or Organization	School District or Organization
Date Signed	Date Signed

3rd Evaluation (Optional) **4th Evaluation (Optional)**

School-Based and/or YA Coordinator Signature	School-Based and/or YA Coordinator Signature
School-Based and/or YA Coordinator	School-Based and/or YA Coordinator
School District or Organization	School District or Organization
Date Signed	Date Signed

Youth Apprentice

1st Evaluation (Required) **2nd Evaluation (Required)**

Youth Apprentice Signature	Youth Apprentice Signature
Youth Apprentice	Youth Apprentice
School District / High School	School District / High School
Date Signed	Date Signed

3rd Evaluation (Optional) **4th Evaluation (Optional)**

Youth Apprentice Signature	Youth Apprentice Signature
Youth Apprentice	Youth Apprentice
School District / High School	School District / High School
Date Signed	Date Signed

EMPLOYABILITY SKILLS (TO BE COMPLETED BY YA EMPLOYER/MENTOR)

All youth apprentices must demonstrate the key employability skills listed below in order to complete the YA program. They do so by earning at least a "Meets Expectation" rating in each. **At least two evaluations are required each year of a youth apprenticeship.** More columns are included below for those who choose to conduct more frequent reviews.

1	***Working to Meet Expectations:*** Needs improvement; requires much assistance and supervision; rarely displays this behavior
2	***Meets Expectations:*** Meets entry-level criteria; requires some supervision; often displays this behavior
3	***Exceeds Expectations:*** Exceeds entry-level criteria; requires minimal supervision; consistently displays this behavior

Employability Skills	**Evaluation**			
Competency and Rating Criteria	**Initial**	**Mid Year 1**	**Mid Year 2**	**Final**
1. Develops positive work relationships with others. *Examples of qualities and habits that the employee might exhibit include:* • Interacts with others with respect and in a non-judgmental manner • Responds to others in an appropriate and non-offensive manner • Helps co-workers and peers accomplish tasks or goals • Applies problem-solving strategies to improve relations with others • When managing others, shows traits such as compassion, listening, coaching, team development, and appreciation	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**
2. Communicates effectively with others *Examples of qualities and habits that the employee might exhibit include . . .* • Adjusts the communication approach for the target audience, purpose, and situation to maximize impact • Organizes messages/information in a logical and helpful manner • Speaks clearly and writes legibly • Models behaviors to show active listening • Applies what was read to actual practice • Asks appropriate questions for clarity	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**
3. Collaborates with others *Examples of qualities and habits that the employee might exhibit include . . .* • Works effectively in teams with people of diverse backgrounds regardless of sex, race, ethnicity, nationality, sexuality, religion, political views, and abilities • Shares responsibility for collaborative work and decision making • Uses the problem-solving process to work through differences of opinion in a constructive manner to achieve a reasonable compromise • Avoids contributing to an unproductive group conflict Shares information and carries out responsibilities in a timely manner	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**

Employability Skills	Evaluation			
Competency and Rating Criteria	**Initial**	**Mid Year 1**	**Mid Year 2**	**Final**
4. Maintains composure under pressure *Examples of qualities and habits that the employee might exhibit include . . .* • Uses critical thinking to determine the best options or outcomes when faced with a challenging situation • Carries out assigned duties while under pressure • Acts in a respectful, professional, and non-offensive manner while under pressure • Applies stress management techniques to cope under pressure	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
5. Demonstrates integrity *Examples of qualities and habits that the employee might exhibit include . . .* • Carries out responsibilities in an ethical, legal and confidential manner • Responds to situations in a timely manner • Takes personal responsibility to correct problems • Models behaviors that demonstrate self-discipline, reliability, and dependability	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
6. Performs quality work *Examples of qualities and habits that the employee might exhibit include . . .* • Carries out written and verbal directions accurately • Completes work efficiently and effectively • Performs calculations accurately • Conserves resources, supplies, and materials to minimize costs and environmental impact • Uses equipment, technology, and work strategies to improve workflow • Applies problem-solving strategies to improve productivity • Adheres to worksite regulations and practices • Maintains an organized work area	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
7. Provides quality goods or services (internal and external) *Examples of qualities and habits that the employee might exhibit include . . .* • Shows support for the organizational goals and principles by own personal actions • Displays a respectful and professional image to customers • Displays an enthusiastic attitude and desire to take care of customer needs • Seeks out ways to increase customer satisfaction • Produces goods to workplace specifications	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
8. Shows initiative and self-direction *Examples of qualities and habits that the employee might exhibit include . . .* • Prioritizes and carries out responsibilities without being told • Responds with enthusiasm and flexibility to handle tasks that need immediate attention • Reflects on any unsatisfactory outcome as an opportunity to learn • Improves personal performance by doing something different or differently • Analyzes how own actions impact the overall organization • Supports own action with sound reasoning and principles • Balances personal activities to minimize interference with work responsibilities	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3

Employability Skills	Evaluation			
Competency and Rating Criteria	**Initial**	**Mid Year 1**	**Mid Year 2**	**Final**
9. Adapts to change *Examples of qualities and habits that the employee might exhibit include . . .* Shows flexibility and willingness to learn new skills for various job roles • Uses problem-solving and critical-thinking skills to cope with changing circumstances • Modifies own work behavior based on feedback, unsatisfactory outcomes, efficiency, and effectiveness • Displays a "can do" attitude	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
10. Demonstrates safety and security regulations and practices *Examples of qualities and habits that the employee might exhibit include . . .* • Follows personal safety requirements • Maintains a safe work environment • Demonstrates professional role in an emergency • Follows security procedures • Maintains confidentiality	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
11. Applies job-related technology, information, and media *Examples of qualities and habits that the employee might exhibit include . . .* • Applies technology effectively in the workplace • Assesses and evaluates information on the job • Assesses training manuals, website, and other media related to the job	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
12. Fulfills training or certification requirements for employment *Examples of this requirement may include . . .* • Participation in required career-related training and/or educational programs • Passing certification tests to qualify for licensure and/or certification • Participation in company training or orientation	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
13. Sets personal goals for improvement *Examples of this requirement may include . . .* • Setting goals that are specific and measurable • Setting work-related goals that align with the organization's mission • Identifying strategies to reach goals • Reflecting on goal progress to regularly evaluate and modify goals	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3

OCCUPATIONAL COMPETENCIES
(TO BE COMPLETED BY YA EMPLOYER/MENTOR)

Youth apprentices must earn a rating of at least "MEETS EXPECTATIONS" in each competency by the conclusion of the apprenticeship. **Year 1**: A total of 16 competencies. (All 7 Manufacturing Fundamentals competencies with no substitution, plus a minimum of 9 Machining competencies.) **Year 2**: A total of 13 Machining competencies using a minimum of one different machining process than learned in Year 1. Employers may substitute one of the Machining competencies per year with another occupationally appropriate skill and should write in the competency they are adding. Where necessary, skills can be simulated. **Youth must be evaluated on these competencies at least two times each year of their apprenticeship.** More columns are included below for those who choose to conduct more frequent reviews.

Note: Students who completed a previous Manufacturing YA program do not need to repeat the Manufacturing Fundamentals Competencies.

MANUFACTURING FUNDAMENTALS – Complete all competencies
(TO BE COMPLETED BY YA EMPLOYER/MENTOR)

Occupational Competencies	Rating			
Competency and Rating Criteria	Evaluation Minimum Rating of 2 for EACH Check Rating			
	Initial	Mid Year 1	Mid Year 2	Final
1. Focus on customer needs • identify internal and external customers impacted by the production process • satisfy internal and external customer expectations • collaborate with team • assist work site professional to keep internal and/or external customers informed of project progress and decisions that may affect them • define the impact of the Voice of the Customer • determine the impact of your work to the internal and external customer	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3

Occupational Competencies	Rating			
Competency and Rating Criteria	Evaluation Minimum Rating of 2 for EACH Check Rating			
	Initial	Mid Year 1	Mid Year 2	Final
2. Use various instruments • consider the degree of precision required by the part feature • choose correct measuring instrument for task • verify equipment is available for use and in working order • verify equipment preventative maintenance and/or calibration • inspect tools and work area for safety considerations • clean and adjust measuring instrument prior to use • use gauges, calipers, and micrometer instruments • use semi-precision and precision layout tools • use digital gauges, checking fixtures • use digital scales, thermometers • confirm measurement accuracy • record measurement correctly including unit of measurement at proper interval • calibrate, clean, and store measuring instruments properly • convert standard to metric – metric to standard measurement units •	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
3. Operate tools and equipment safely • operate only tool/equipment that he/she is trained on • choose correct tool/equipment for the task • follow tool check list • verify tool/equipment is available for use and in working order • verify tool/equipment is current for preventative maintenance and/or calibration • wear appropriate Personal Protective Equipment (PPE) • inspect tool/equipment and work area for safety considerations • prepare tool/equipment for safe operation • operate tool/equipment safely with guarding devices • monitor tool/equipment for safe operation while operating • compare tool/equipment performance regularly to optimal equipment operations • follow facility procedures for clean-up and shut down after use • perform required preventative maintenance procedures • report abnormal tool/equipment conditions • properly shut down and label any tool/equipment that is not operating as expected • follow Lock Out/Tag Out procedures as applicable • document use and maintenance	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3

Occupational Competencies	Rating			
Competency and Rating Criteria	Evaluation Minimum Rating of 2 for EACH Check Rating			
	Initial	Mid Year 1	Mid Year 2	Final
4. Practice quality assurance principles • inspect materials/piece/product at all stages of production • identify quality or condition of materials/piece/product • monitor materials, processes, equipment, tools, and products throughout the production process • inspect final product/piece to ensure it meets specifications • identify and segregate materials and/or product that do not meet specification • communicate with work site professional if materials/product do not meet requirements • document all quality checks • participate in root-cause analysis of process/product • take ownership of work • collaborate with work site professional on corrective action	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
5. Follow personal safety requirements (safety) • participate in required safety training • follow all worksite guidelines for personal safety • apply principles of proper body mechanics • report exposures, injuries, near misses, or accidents, personal or to others immediately • locate key information on safety data sheets (SDS) • handle and dispose of any hazardous materials appropriately • operate equipment that he/she is trained on • adhere to equipment safety standards • visually inspect equipment before operation • wear required personal protective equipment (PPE) at all times • follow company emergency action plan • identify hazardous conditions and restricted areas in the workplace • avoid pinch points • be aware of surroundings	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3

Occupational Competencies	Rating			
Competency and Rating Criteria	**Evaluation Minimum Rating of 2 for EACH Check Rating**			
	Initial	**Mid Year 1**	**Mid Year 2**	**Final**
6. Maintain a safe work environment (safety) • comply with posted safety warnings and symbols • identify unsafe conditions and/or work habits • report unsafe conditions and/or work habits • help maintain a clean and safe working environment free of debris and obstacles • maintain clean, organized work area • use hazardous materials according to company procedure • report any indications of insects or pests, if necessary • follow appropriate Lock out – tag out procedures • adhere to Occupational Safety and Health Administration (OSHA) safety guidelines • follow rules for operating equipment (Powered Industrial Vehicle-PIV) • identify applicable Emergency Stops	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
7. Demonstrate professional role to be used in an emergency (safety) • participate in emergency safety simulations and drills • describe company's policy and procedures for work site incidents, accidents, electrical, fire, tornado, bomb threats, robbery, hostage situations, and other emergency situations • identify the closest fire alarms and emergency exits • identify the fire extinguishers • identify appropriate alarms and procedures for using alarms • contact emergency personnel in the event of an emergency • contribute to emergency incident documentation	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
Comments:				

YEAR 2 OCCUPATIONAL COMPETENCIES
(TO BE COMPLETED BY YA EMPLOYER/MENTOR)

Select the Machining Process and circle the applicable year:

- ☐ Manual Machining (Drilling, Lathe, Grinding) completed during year: Year One or Two
- ☐ Mill/Lathe Combination completed during year: Year One or Two'
- ☐ CNC completed during year: Year One or Two
- ☐ Other: ☐ Year One or ☐ Year Two

1	***Working to Meet Expectations:*** Needs improvement; requires much assistance and supervision; rarely displays this behavior
2	***Meets Expectations:*** Meets entry-level criteria; requires some supervision; often displays this behavior
3	***Exceeds Expectations:*** Exceeds entry-level criteria; requires minimal supervision; consistently displays this behavior

Occupational Competencies	**Rating**			
Competency and Rating Criteria	**Evaluation Minimum Rating of 2 for EACH Check Rating**			
	Initial	**Mid Year 1**	**Mid Year 2**	**Final**
1. Read machining technical drawings and work orders • review technical drawing • gather reference materials • determine type of print and views • determine material specifications • determine critical dimensions and tolerances • analyze supplementary data • determine machining instructions and specifications • interpret machining symbols and procedure	**Year 1 Rating**			
	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**
	Year 2 Rating			
	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**
2. Interpret machining symbols and procedures • interpret technical drawings accurately for machining tasks • use appropriate terminology • identify lines, views, symbols, and representations on the drawings • interpret dimensions, tolerances, and scale on the drawings • interpret threads, tapers, and shop notes on the drawings • interpret the machining plan from a technical drawing	**Year 1 Rating**			
	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**
	Year 2 Rating			
	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**	☐ **1** ☐ **2** ☐ **3**

Occupational Competencies	Rating			
Competency and Rating Criteria	**Evaluation Minimum Rating of 2 for EACH Check Rating**			
	Initial	**Mid Year 1**	**Mid Year 2**	**Final**
3. Perform safety checks • review machining procedure to be used • review safety requirements of equipment procedure • verify safety equipment needed for machining process • verify personal protective equipment (PPE) needed for machining process • inspect tools and work area for safety considerations • examine equipment labeling and safeguarding	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
4. Operate machining equipment • wear the required -personal -protective -equipment (PPE) • cycle equipment • operate equipment safely • operate equipment according to machine requirements • monitor equipment for correct operation while operating	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
5. Monitor machining product and process specifications • monitor piece/product machined for specification • monitor the machining and equipment for performance • adjust the process for quality and/or productivity • take corrective actions to resolve problems as they occur • replenish processing materials • test piece/product for function • label pieces/products for compliance or non-compliance • document quality control checks • grind pieces to specified tolerances • pieces show no sign of burn marks • pieces are smooth and free of burrs • notify work site professional of discrepancies	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
6. Process production documents • document processing data • verify fabrication and production documentation is completed	**Year 1 Rating**			
	☐ 1 ☐ 2	☐ 1 ☐ 2	☐ 1 ☐ 2	☐ 1 ☐ 2

Occupational Competencies	Rating			
Competency and Rating Criteria	**Evaluation Minimum Rating of 2 for EACH Check Rating**			
	Initial	**Mid Year 1**	**Mid Year 2**	**Final**
• documentation is legible • documentation is complete • documentation is in appropriate format • documentation is stored or forwarded as required • pieces are correctly stored or staged	☐ 3	☐ 3	☐ 3	☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
7. Follow shutdown machining process • review procedure to be used • stop production process • verify all equipment is shut down safely • identify any process or equipment maintenance concerns with the production run • take corrective action to report and correct maintenance concern	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
8. Use hand tools • cut metal stock with a hand hacksaw • cut threads with hand taps and dies • ream holes with hand reamer • tap holes using hand tools • deburr using hand tools • band material safely • verify piece(s) meet specification	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
9. Monitor equipment for correct operation • review equipment quality measures for trends and problems as required • compare current equipment performance to optimal equipment • report noted deviations from expected performance • ensure equipment is properly labeled • remove inoperative equipment from production • assist work site professional to investigate abnormal equipment • assist work site professional to follow up on repaired equipment	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
10. Identify set up • review applicable technical drawings, work orders, and/or procedures • plan sequencing, tools, and equipment • identify set up needed	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3

Occupational Competencies	Rating			
Competency and Rating Criteria	**Evaluation Minimum Rating of 2 for EACH Check Rating**			
	Initial	**Mid Year 1**	**Mid Year 2**	**Final**
• verify production schedule, deadlines, and timeframes with worksite professional				
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
11. Select tools and materials • select tools and machining equipment • select appropriate work holding devices for work piece and equipment • check raw materials needed against work order • verify raw material(s) meet specifications • gather all resources needed at the workstation • notify work site professional of discrepancies	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
12. Support set up • assemble tools and machining equipment • adjust tools and machining equipment • verify machining equipment is available for use and in working order • verify machining equipment is current for preventative maintenance and/or calibration • calculate needed control settings • check fluid, oil, air, pressure levels • set machining equipment parameters • install work holding devices so they are secure, aligned, and do not interfere with the machining • mount, dress, and balance selected grinding wheel for the operation • select appropriate lathe tool bit and holder for lathe process • sharpen lathe punches, drill bits, and chisels • stage lathe pieces and raw materials for machining • select correct blade or cut-off wheel • assure blade is properly sharp and in good condition • stage raw material for cut-off	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
13. Verify set up • verify set up meets machining requirements and product specifications	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3

Occupational Competencies	Rating			
Competency and Rating Criteria	**Evaluation Minimum Rating of 2 for EACH Check Rating**			
	Initial	**Mid Year 1**	**Mid Year 2**	**Final**
• examine first piece/product or production run for visual and/or dimensional specification • adjust ensure piece/product meets specification • verify repeatability of set up if applicable • document set up procedure for repeatability				
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
14. Perform start up • review start-up safety procedures • verify correct set up of equipment adjustments • inspect piece/product • document start up procedure	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
Competency Substitute (if you replaced a competency above, note the competency and rating)	**Year 1 Rating**			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
	Year 2 Rating			
	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
Comments:				

DWD is an equal opportunity employer and service provider. If you have a disability and need assistance with this information, please dial 7-1-1 for Wisconsin Relay Service. Please contact the Division of Employment and Training at 888-258-9966 and press 6 to request information in an alternate format, including translated to another language.

STATE OF WISCONSIN
DWD
Department of Workforce Development