



Production Operations

Youth Apprenticeship

PRODUCTION OPERATIONS

Production Operation youth apprentices gain skills related to the procedures and tools associated with manufacturing operations. Foundation tools, data analysis and troubleshooting are integrated. Apprentices must adhere to industry safety and security standards.

Length of Apprenticeship: One Year

COMPETENCIES

Production Operations youth apprentices must complete **a total of 16** competencies. All **7** Manufacturing Fundamentals Competencies must be complete. No substitutions to this list. **Eight** of the 9 Production Operations competencies listed below must be complete. Employers can substitute up to **1** competency with another occupationally appropriate skill. Substitutions must be added to the competency list for assessment. Note that where necessary, skills can be simulated.

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

Manufacturing Fundamentals Competencies	Production Operations Competencies
<ol style="list-style-type: none">1. Focus on customer needs2. Use various instruments3. Operate tools and equipment safely4. Practice quality assurance principles5. Follow personal safety requirements6. Maintain a safe work environment7. Demonstrate professional role to be used in an emergency	<ol style="list-style-type: none">1. Assist recording and summarizing financial data2. Support coordination of work schedules and duty assignments3. Use quality tools4. Calibrate tools and equipment (W/S)5. Analyze production productivity processes6. Monitor operations for product and process quality7. Support investigation of root causes of product and/or process failure8. Take corrective action to restore or maintain quality9. Participate in quality improvement processes

W/S = Worksite Experience or In Simulation

REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

Some of the related instruction courses can bridge into the following registered apprenticeship:

- Industrial Manufacturing Technician

POST-SECONDARY PATHWAY OPPORTUNITIES

There are several post-secondary pathway opportunities in this area. Following is partial list.

- Industrial Maintenance Mechanic Technical Diploma
- Manufacturing Quality



PRODUCTION OPERATIONS

Youth Apprenticeship
ON-THE-JOB LEARNING PERFORMANCE STANDARDS GUIDE

YOUTH APPRENTICE INFORMATION

Youth Apprentice Name	
YA Coordinator	YA Consortium
School District	High School Graduation Date

REQUIREMENTS

Requirements

Youth Apprentices must complete ALL the items listed below. Check completed areas.

- ☐ Competency checklist
- ☐ Employability Skills checklist (in this job book) or the DPI Employability Skills Certificate
- ☐ Related instruction equal to 1 high school credit or at least 3 college credits
- ☐ Minimum of 450 work hours

HOURS

Record the hours the youth apprentice worked.

Total Hours Employed	Company Name	Telephone Number

CAREER PREPARATION

Youth apprentices must complete **one** of the following during Youth Apprenticeship participation:

- ☐ 1. Student is participating in a local or regional career pathway*.

Identify the pathway below:

For more information contact the [Wisconsin Department of Public Instruction](#). Additional help may be found on the WI DPI [Wisconsin Pathways – Regional Career Pathways](#) and [DPI Career Clusters and Pathways](#) web pages.

***Local and Regional career pathways** as defined by the WI DPI means that a student is participating in or has completed at least one CTE class in a cluster pathway sequence and has completed at least one of the other career pathway components: instructional related course, work-based learning, dual college credit, and/or career and technical student organization.

- ☐ 2. Student has completed one of the following certificates during their YA program or possess current certification earned previously.

A copy of the certificate must be uploaded with the completed checklist. Select the certificate from the list below.

- ☐ OSHA Safety Training (10 or 30)
- ☐ Leadership Certificate (DPI)
- ☐ DWD-BAS: Wisconsin Department of Workforce Development, Bureau of (Adult) Apprenticeship Standards
- ☐ SNAP ON Certifications (i.e., precision measurement)
- ☐ Manufacturing Skill Standards Certification (MSSC)
- ☐ Other certificates identified by the CTE Approved Certifications List related to this occupational field (or related to this occupation)
dwd.wisconsin.gov/det/cte incentive/ (YA certificates excluded)

Title of Certification:

- ☐ 3. Student is participating in a [Dual Enrollment Course](#) connected to any postsecondary education provider including UW System, Wisconsin Association of Independent Colleges and Universities (WAICU), and any of the 16 Wisconsin Technical Colleges (WTCS).

College Name:

College Course Title:

Course Number:

For more information on Dual Enrollment opportunities, please click on one of the below resources:

- [WTCS](#)
- [WAICU](#)
- UW System – connect with the college of choice.

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 Signature	Employer/Mentor Signature
Employer/Mentor	Employer/Mentor
Business/Company	Business/Company
Date Signed	Date Signed
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 Signature	Youth Apprentice Signature
Youth Apprentice	Youth Apprentice
School District / High School	School District / High School
Date Signed	Date Signed

EMPLOYABILITY SKILLS

Youth apprentices must demonstrate key employability skills.

The DWD YA program employability skills requirement may be attained and demonstrated through two processes. (See options listed below.) Employability skills must be completed for every year a student is in the program. The DPI Employability Skills Certificate may be counted as meeting one of those two years, provided the certificate is earned in the same year the student is enrolled in youth apprenticeship or they can complete the YA Employability Skills in the OJL. The Employability Skills Certificate must be obtained through the DPI.

1. If a student has successfully completed a Wisconsin Department of Public Instruction (DPI) State-Certified Cooperative Education, [Co-Op Employability Skill certification](#) then they have met the YA Employability Skills requirement for that year. A copy of the student's DPI Co-Op Employability Skill Certificate must be maintained on file with their YA regional consortium.

☐ Earned Wisconsin Employability Skills Certificate (checked if applicable) or,

2. Completed and rated "Employability Skills" through this YA OJL guide as described below.

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

The following skills are required of all youth apprentices.

Employability Skills		Rating		
Competency and Rating Criteria		Minimum Rating of 2 for EACH Check Rating		
		1	2	3
1. Develops positive work relationships with others. <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> • 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employability Skills		Rating		
Competency and Rating Criteria		Minimum Rating of 2 for EACH Check Rating		
		1	2	3
2. Communicates effectively with others <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> • Adjust 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Collaborates with others <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> • 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Maintains composure under pressure <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> • 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Demonstrates integrity <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> • 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employability Skills		Rating		
Competency and Rating Criteria		Minimum Rating of 2 for EACH Check Rating		
		1	2	3
6. Performs quality work <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> • 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Provides quality goods or services (internal and external) <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> • 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Shows initiative and self-direction <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> • 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employability Skills		Rating		
Competency and Rating Criteria		Minimum Rating of 2 for EACH Check Rating		
		1	2	3
9. Adapts to change <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Demonstrates safety and security regulations and practices <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> Follows personal safety requirements Maintains a safe work environment Demonstrates professional role in an emergency Follows security procedures Maintains confidentiality 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Applies job-related technology, information, and media <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> Applies technology effectively in the workplace Assesses and evaluates information on the job Assesses training manuals, website, and other media related to the job 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Fulfills training or certification requirements for employment <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Sets personal goals for improvement <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> 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 		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMPETENCIES

Production Operations youth apprentices must complete a **total of 16** competencies. All **7** Manufacturing Fundamentals Competencies must be complete. No substitutions to this list. **Eight** of the 9 Production Operations competencies listed below must be complete. Employers can substitute up to **1** competency with another occupationally appropriate skill. Substitutions must be added to the competency list for assessment. Note that where necessary, skills can be simulated.

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

Rating Scale

3: Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior

2: Meets entry level criteria | Requires some supervision | Often displays this behavior

1: Needs improvement | Requires much assistance and supervision | Rarely displays behavior

MANUFACTURING FUNDAMENTALS – Complete all competencies

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
1. Focus on customer needs <ul style="list-style-type: none">Identify internal and external customers impacted by the production processSatisfy internal and external customer's expectationsCollaborate with teamAssist work site professional to keep internal and/or external customers informed of project progress and decisions that may affect themDefine the impact of the Voice of the CustomerDetermine the impact of your work to the internal and external customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
2. Use various instruments <ul style="list-style-type: none"> 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 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Operate tools and equipment safely <ul style="list-style-type: none"> 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 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
4. Practice quality assurance principles <ul style="list-style-type: none"> • 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 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Follow personal safety requirements (safety) <ul style="list-style-type: none"> • 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 Material Safety Data Sheets (MSDS) • 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 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
6. Maintain a safe work environment (safety) <ul style="list-style-type: none"> • 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 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Demonstrate professional role to be used in an emergency (safety) <ul style="list-style-type: none"> • 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 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PRODUCTION OPERATIONS

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
1. Assist recording and summarizing financial data <ul style="list-style-type: none"> Support processing of financial information such as bills of lading, accounts receivable, and accounts payable records Calculate and summarize costs Estimate required resources including staff time, staff training, equipment time, equipment maintenance and repair costs, support services and staff required, facility modifications Estimate raw materials quantities needed including costs associated with handling, shipping, and transport Estimate time requirements with times for approvals, delays, and repairs Build an estimated budget for the production process Support preparation of financial reports 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Support coordination of work schedules and duty assignments <ul style="list-style-type: none"> Determine amount of staff needed for services Schedule staff according to hours required, employee status and service coverage required Schedule staff to minimize labor costs Incorporate coverage for vacations or leaves Communicate schedules to staff Maintain changes to master schedule with worksite professional 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Use quality tools <ul style="list-style-type: none"> Define question/problem to be assessed Determine data analysis tool Decide which data needs to be collected Determine when and how to collect data Collect data Organize data using quality tools (i.e. Check Sheet, Pareto Chart, Scatter Diagram, Histogram, etc.) Analyze data collected 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
4. Calibrate tools and equipment (W/S) <ul style="list-style-type: none"> Follow schedule to calibrate tools and equipment Check tool/equipment certification documentation Check tool/equipment certification through observation of use Clean and adjust instruments before calibrating Calibrate tools and instruments accurately and correctly Re-calibrate tools according to procedure Label tools and equipment that have been calibrated Document all calibration activities 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Analyze production productivity processes <ul style="list-style-type: none"> Assist work site professional/team to evaluate a production process Use quality tools Analyze the process to identify staff, tools, equipment, materials, environment, training, safety requirements, and procedures required to produce product Calculate productivity and/or cycle time for the process Assist work site professional/team to identify gaps and brainstorm solutions in productivity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Monitor operations for product and process quality <ul style="list-style-type: none"> Review process control data to ensure process is meeting product specifications Assess process cycle time to ensure that customer and facility needs are met Sample and test materials/products to ensure they meet customer specifications Regularly compare current equipment performance to optimal equipment operations Investigate and report abnormal equipment conditions in a timely manner Monitor equipment correction solved problem Use quality tools and methods to monitor operations Document all quality monitoring activities 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Support investigation of root causes of product and/or process failure <ul style="list-style-type: none"> Participate on team investigation Gather data pertaining to the problem (magnitude, location, timing) Review relevant data and quality monitoring tools Develop a description of the problem or process failure Identify potential contributory relationships Explore solution options 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
8. Take corrective action to restore or maintain quality <ul style="list-style-type: none"> • Apply problem solving steps to reported production issues • Use quality tools • Review previous documentation on similar production issues to identify possible solutions • Create an improvement plan • Determine appropriate action for sub-standard piece/product • Correct the piece/product and/or process to meet quality standards • Communicate quality problems • Suggest continuous improvements to process, piece/product, and/or maintenance to improve production and/or reduce waste • Document corrective actions and outcome • Corrective actions occur in a timely manner • Verify corrective actions are supported by data • Monitor corrective action to validate effectiveness 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Participate in quality improvement processes <ul style="list-style-type: none"> • Use quality tools to map a production process • Identify performance and training issues related to quality • Identify performance indicators to monitor • Assist worksite professionals to monitor production operations, equipment, and/or operator performance measures for product and process quality • Review quality measures for trends • Support periodic internal quality audit activities including testing of raw materials, of product at different production stages, and prior to final release • Document the results of quality tests or audits • Support assessment of customer feedback • Participate in the creation of an improvement plan • Outline changes in improvement plan • Support improvement plan with data 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competency Substitute (if you replaced a competency above, note the competency and rating)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:			

RELATED INSTRUCTION

Indicate which related instruction courses the youth apprentice completed:

Course Title	Credits	Location



Post-Program Completion Survey

Youth Apprenticeship

YA POST-PROGRAM COMPLETION SURVEY

The [Post-Program Completion Survey](#) form is to be provided to each student completing the Youth Apprenticeship program to capture information on the student's plans after leaving the program. The form should be filled out during the final meeting between the student, mentor, and Local Youth Apprenticeship Coordinator, when the final checklist is filled out and signed. Information captured on this form must be entered online using the Youth Apprenticeship Online Data Application (YODA) System.

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.

