CONTINUOUS IMPROVEMENT ASSOCIATE
(Time-Based)

APPENDIX A

O*NET CODE 13-1111.00

This training outline is a minimum standard for Work Processes and Related Instruction. Changes in technology and regulations may result in the need for additional on-the-job or classroom training.

WORK PROCESSES

Approximate Hours

A. Safety and Workplace Orientation **50**

1. Follow employer-specific safety procedures around things such as: workstations, machinery, equipment.
2. Recognize and minimize potential hazards (if applicable).
3. Adhere to Occupational Safety and Health Administration (OSHA) General Industry safety standards (if applicable).
4. Maintain clean workspace.
5. Demonstrate awareness of First Aid, CPR, and bloodborne pathogens (if applicable).
6. Complete all employer-specific “onboarding”.

B. The Continuous Improvement Blueprint **500**

1. Describe Continuous Improvement (CI).
2. Learn employer’s Operations Management System (OMS):
   a. What is it?
   b. What does it do?
   c. What is its goal?
3. Develop an understanding of workplace culture; describe its elements; describe process of moving from a state of cultural “unawareness” to embedded cultural change.
4. Describe the difference between a Lean Production Model and the Classical Management Model.
5. Learn and define the “8 types of waste”.

C. Continuous Improvement Methodology: Cell Formatting/Redesign **1450**

1. Learn, understand, and explain the mission and goals of CI.

2. (a) Learn and perform value stream mapping; define the rationale for a value stream map;(b) construct a current-state map, including at minimum process material movement, information flow, push and pull, inventory and process time, apply Lean Guidelines, draw Future-State Map.
3. Perform Process Mapping: include common elements, such as tasks and activities, decision points, cycle times, work in process, sequence, loops, travel/distance, yield/scrap.
4. Define and calculate Takt Time.
5. Perform a Product-Quality Analysis.
6. Compose a Process-at-a-glance chart.
7. Construct a Process Matrix, with special attention to “Star Part”.
8. Draw a Part Spaghetti Chart.

D. Continuous Improvement Methodology: Standard Work **1000**

1. Conduct Time Observation(s): observe, record task(s), and time of person's actual work.
2. Perform a Capacity Analysis.
3. Create a Standard Work Combination Sheet.
4. Draw a Standard Work Sheet: outline work path of operator(s).
5. Use an Operator Bar Chart to compare actual task cycle time to Takt Time; plot manual, automatic, walking, and set-up time for each operation as it pertains to material/workflow.
6. Calculate the Standard Work In Process (SWIP); combine to create a SWIP & Operators Calculation.

E. Continuous Improvement Methodology: Other CI Tools **1000**

1. Understand major components of Visual Workplace/Factory/etc.
    a. Equipment (such as printers, computers, servers)
    b. Tooling (such as templates, checklists, standard operating procedures
    c. People
    d. Product(s)

2. Conduct a 5S Evaluation: assess work areas' Sort, Straighten, Shine, Standardize, and Sustain components and assign a rating.
3. Perform a Setup Reduction. Compose a Set-Up Bar Chart and Set-Up Observation Analysis Sheet.
4. Use Mistake-Proofing to improve quality by identifying root cause of defects, then take steps to eliminate defect(s).
5. Learn elements of a Total Productive Maintenance (TPM) System; implement steps to maximize productive time and minimize shutdowns requiring maintenance.
6. Evaluate workflow to determine if a Pull System is in place.

Approximate Total Hours 4000

Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to https://dol.ny.gov/public-work-and-prevailing-wage

CONTINUOUS IMPROVEMENT ASSOCIATE

APPENDIX B

RELATED INSTRUCTION

Safety, Health and The Workplace

1. General Workplace Safety
2. Proper Use of Personal Protective Equipment (PPE) (if applicable)
3. OSHA 10 Hour for General Industry (if applicable)
4. Right-to-Know/Safety Data Sheets (SDS)
5. First Aid & CPR (6.5 hours minimum) (if applicable)
6. Sexual Harassment Prevention Training – MUST comply with Section 201-g of the Labor Law

Trade Theory, Trade Science, and Trade Skills

1. Workplace Culture – Mission & Goals
2. Waste – manufacturing and/or support/administrative processes
    a. Cell Formation/Redesign
        i. Takt Time Calculation(s)
        ii. Product Quantity (P-Q) Analysis
        iii. Process Matrix
        iv. Process-at-a-glance
        v. Part Spaghetti Chart
    b. Standard Work
        i. Time Observations
        ii. Capacity Analysis
        iii. Standard Work Combination Sheet
        iv. Standard Work Sheet
        v. Operator Bar Chart
        vi. Standard Work In Process (SWIP)
    c. Other CI Tools
        i. Visual Controls
        ii. 5S Evaluation
        iii. Red Tag

iv. Setup Reduction

v. Mistake Proofing

vi. Total Productive Maintenance (TPM)

vii. Pull Systems

3. Lean Philosophy

Additional Topics As Necessary

A minimum of 144 hours of Related Instruction are required for each Apprentice for each year.

Appendix B topics are approved by New York State Education Department.