



## CERTIFIED PRODUCTION TECHNICIAN HIGH PERFORMANCE MANUFACTURING ACADEMIC AND EMPLOYABILITY SKILLS

The Manufacturing Skill Standards Council (MSSC) credentialing system leading to a CPT covers the four critical work activities, as defined by MSSC's industry-led, nationally validated skills standards, common to all sectors of manufacturing: Safety, Quality & Continuous Improvement, Manufacturing Processes & Production, and Maintenance Awareness. Each area is addressed with a separate assessment. MSSC training and assessments are organized around those four modules. An individual can earn a "Certificate" if they pass one or more assessments. However, they must pass all four assessments to earn the full "CPT" certification. MSSC strongly recommends that individuals be at the 9<sup>th</sup> grade level of math and 10<sup>th</sup> grade level of English before attempting MSSC courses and assessments.

### KEY ACTIVITY AREAS FOR MSSC COURSES AND ASSESSMENTS:

#### SAFETY

1. Work in a Safe and Productive Manufacturing Workplace
2. Perform safety and environmental inspections
3. Perform emergency drills and participate in emergency teams
4. Identify unsafe conditions and take corrective action
5. Provide safety orientation for all employees
6. Train personnel to use equipment safely
7. Suggest processes and procedures that support safety of work environment
8. Fulfill safety and health requirements for maintenance, installation, and repair
9. Monitor safe equipment and operator performance
10. Utilize effective, safety-enhancing workplace practices

#### MANUFACTURING PROCESSES & PRODUCTION

1. Identify customer needs
2. Determine resources available for the production process
3. Set up equipment for the production process
4. Set team production goals
5. Make job assignments
6. Coordinate work flow with team members and other work groups
7. Communicate production and material requirements and product specifications
8. Perform and monitor the process to make the product
9. Document product and process compliance with customer requirements
10. Prepare final product for shipping or distribution

#### QUALITY PRACTICES & MEASUREMENT

1. Participate in periodic internal quality audit activities
2. Check calibration of gages and other data collection equipment
3. Suggest continuous improvements
4. Inspect materials and product/process at all stages to ensure they meet specifications
5. Document the results of quality tests
6. Communicate quality problems.
7. Take corrective actions to restore or maintain quality
8. Record process outcomes and trends
9. Identify fundamentals of blueprint reading
10. Use common measurement systems and precision measurement tools

#### MAINTENANCE AWARENESS

1. Perform preventive maintenance and routine repair
2. Monitor indicators to ensure correct operations
3. Perform all housekeeping to maintain production schedule
4. Recognize potential maintenance issues with basic production systems, including knowledge of when to inform maintenance personnel about problems with:
  - Electrical systems
  - Pneumatic systems
  - Hydraulic systems
  - Machine automation systems
  - Lubrication processes
  - Bearings and couplings
  - Belts and chain drives

**NOTE:** MSSC assesses core understanding of the key work activities and core technical knowledge and skills needed in high-performance manufacturing, as defined by MSSC Production Skill Standards. Given online, MSSC Assessments also help measure basic computer, problem-solving and analytical skills and one's ability to apply knowledge to specific situations identified in the assessments. There are no experiential or hands-on requirements for MSSC certification as it is expected that individual employers will determine those requirements based upon their own specific needs. MSSC does not require that individuals take MSSC courses prior to testing.

