



Certified Production Technician 4.0®

Training & Certification

CPT 4.0 is a **nationally portable, industry-led** program that prepares and certifies individuals for career pathways in advanced manufacturing. This online training program delivers the 21st Century, in-demand skills that today's employers need for over 6 million frontline production jobs.

CPT 4.0 is delivered and customized locally through 1,500 MSSC Centers with a network of over 2,300 Authorized Instructors at colleges, secondary schools, and other convenient locations.



Well-Established Technologies already included in MSSC Production Standards:

Computer numerically controlled (CNC), Statistical Process Control (SPC), Six Sigma, Total Quality Management (TQM), Lean, Robots, Sensors, Programmable Logic Controllers (PLCs), Human Machine Interface (HMI), Lasers, Mechatronics, Plan-Do-Check-Act, Root Cause Failure Analysis, Pareto Analysis, Barcodes, PC Ethernet, Variable Frequency Drives (VFD).

Newly Emerging "Industry 4.0":

5G, Artificial Intelligence (AI), Autonomous Robots, Additive (3D), Data Analytics, Industrial Internet of Things (IIOT), Augmented Reality, Nanomanufacturing, Advanced Materials.



The Manufacturing Skill Standards Council®: MANUFACTURING THE FUTURE

The Manufacturing Skill Standards Council, a 501(c)3 non-profit, is an industry-led training, assessment, and certification system focused on the core skills and knowledge needed by the nation's front-line production and material handling workers. MSSC, the only ISO Standard 17024 certified program covering entry-level to basic front line supervisor skills, is nationally recognized, federally endorsed, and has been vetted by the U.S. Departments of Labor, Education, Justice, VA, and Jobs Corps.

New Performance Based Assessment and Hands-on Training Device - CPT 4.0 + Skill Boss



With Skill Boss



CPT 4.0+ certification provides employers further proof of an individual's skill set by requiring successful demonstration of hands-on skills in electronic, electrical, fluid power, & mechanical systems.

Skill Boss provides the tool you need to teach or evaluate an individual's skills as they install, adjust, & troubleshoot components on this fully functional mechatronics system, applicable to both discrete parts & process manufacturing.

Certifications

MSSC's full Certified Production Technician 4.0 (CPT 4.0) certification consists of 5 stackable credentials: **Safety & Employability, Manufacturing Process & Production, Quality Practices & Measurement, Maintenance Awareness, and Green Production.** The CPT Plus certification compliments the full CPT credential by providing employees with proof that an individual has the comprehensive technical knowledge and hands-on skills needed to be qualified production technicians.

Safety & Employability

- Production Teams
- Training and Leadership
- Safety Organization
- Personal Protective Equipment
- Fire and Electrical Safety
- Work Area Safety
- Hazardous Material Safety
- Tool and Machine Safety
- Material Handling Safety

Manufacturing Process & Production

- Mechanical Principles
- Mechanical Linkages
- Gear Drives
- Machining Processes
- Machine Tooling
- Machine Operations
- Equipment Procedures
- Production Planning and Workflow
- Production Control

Quality Practices & Measurement

- Multi-view Drawings
- Assembly Drawings and Fasteners
- Geometric Dimensioning and Tolerancing
- Basic Measurement
- Precision Measurement Tools
- Dimensional Gauging
- Quality Systems
- Introduction to SPC
- Control Charts
- Continuous Improvement

Maintenance Awareness

- Welding
- Basic Electrical Circuits
- Electrical Measurements & Power
- Pneumatic Power Systems
- Basic Pneumatic Circuits
- Principles of Pressure and Flow
- Lubrication Concepts
- Bearings and Couplings
- Belt & Chain Drives
- Machine Control Concepts, Automation, & Operation Modes
- Electrical Motor Control

Green Production

Certification in the use of equipment, technologies, and processes that will improve the environmental performance of manufacturing companies.

MSSC and the Manufacturing Institute of the National Association of Manufacturers collaborated with the National Student Clearinghouse (NSC) in a data sharing initiative and identified significant wage growth for CPT certificates over the last 6 years.

Students who earn the MSSC Safety Certificate start earning about \$20K the first year and progressively increase their wages with each additional CPT Certificate for Quality Practices & Measurement, Manufacturing Processes & Production, and Maintenance Awareness resulting in an earning potential within five years of close to \$45,000/yr for those passing all four, which is needed for a full CPT Certification.



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