



MANUFACTURING
SKILL STANDARDS
COUNCIL



Next Generation Workforce Certification: Innovative Tools for Educating and Upskilling Supply Chain Automation Technicians

*Briefing by
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Special Thanks to NCSCA



- ▶ MSSC would like to express our special thanks to the NCSCA for the many years of collaboration involved in getting to the point we are at today including:
- ▶ Assistance with providing critical SME to define, identify, & validate our standards.
- ▶ Assistance in providing critical SMEs in the development process of both the e-learning and the hands-skill boss device.
- ▶ Enabling input from industry on career path demand and benefits of the CT-SCA.

MSSC: NATION'S GOLD STANDARD



- ▶ National leader in certifying front-line technicians in advanced manufacturing and logistics
- ▶ Federally recognized in 1998 under National Skill Standards Act
- ▶ Original Production Standards developed by 700+ corporations & national trade associations
- ▶ Institutionalized: 2700 MSSC-trained instructors, 1780-authorized test sites, mostly in community colleges and high schools, and 75 field reps, in 50 states.
- ▶ Only national certification body accredited under ISO 17024 for Mfg. & Logistics (Personnel Certification) and endorsed by NAM for manufacturing and logistics
- ▶ Certifications: Certified Production Technician (CPT); hands-on CPT+; Certified Logistics Technician (CLT); Certified Forklift Technician (CFT),
- ▶ **NEW:** Certified Technician-Supply Chain Automation (CT-SCA) : (3 Certifications)

Certified Technician-Supply Chain Automation (CT-SCA): BACKGROUND



- ▶ Collaboration between NCSCA, MHI, MSSC, Amatrol, MHEDA
- ▶ *CT-SCA: A person who installs, operates, supports, upgrades or maintains the automated material handling equipment & systems that support the supply chain*
- ▶ **Comprehensive System:**
 - Industry-defined, nationally validated standards
 - Courseware
 - Instructor Training
 - Assessment
 - Credentials
 - Registry

MSSC CT-SCA 3 Certifications



- ▶ Certification- **CTSCA-EM**: Equipment Maintenance - Maintaining Equipment/Systems
- ▶ Certification- **CTSCA-ER**: Equipment Repair - Installing, Modifying, Troubleshooting and Repairing Equipment/Systems
- ▶ Certification- **CTSCA-NR**: Network Repair - Installing, Modifying, Troubleshooting and Repairing Basic Controllers and Networks



CTSCA EQUIPMENT MAINTENANCE(EM): KEY ACTIVITIES



- ▶ **Implement and remove equipment/system safety protocols**
- ▶ **Identify and operate major automated equipment/systems**
- ▶ **Monitor machine/system operation**
- ▶ **Ensure key parts and components are available in inventory**
- ▶ **Implement preventive maintenance**
- ▶ **Perform preventive maintenance**
- ▶ **Establish monitoring and maintenance schedule for equipment/lubrication condition**
- ▶ **Safely use hand tools to maintain equipment**
- ▶ **Communicate with co-workers to promote productivity**
- ▶ **Perform technical and administrative duties**



CT-SCA EQUIPMENT REPAIR (ER) KEY ACTIVITIES



- ▶ **Troubleshoot machines – mechanical/electrical/hydraulic/pneumatic systems**
- ▶ **Prepare for repair**
- ▶ **Repair – mechanical/electrical/hydraulic/pneumatic systems**
- ▶ **Install, move or remove equipment**



CT-SCA NETWORK REPAIR (NR) KEY ACTIVITIES



- ▶ **Install and maintain PLCs and PLC modules**
- ▶ **Troubleshoot and repair PLCs with discrete I/O PLC modules**
- ▶ **Modify, troubleshoot or manipulate standard PLC operating programs and test/verify them for correct operation**
- ▶ **Install, maintain, and troubleshoot PLC systems with variable frequency AC drives**
- ▶ **Operate and test equipment network system, scanners, and run systems**

Certification Assessments



- ▶ **2 Assessments Per Certification:**
 - **CTSCA-EM:** Equipment Maintenance
 - **CTSCA-ER:** Equipment Repair
 - **CTSCA-NR:** Network Repair
- ▶ **Each Assessment Process Includes:**
 - **90-120 minute written assessment (online)**
 - **Hands-on performance-based assessment using Amatrol Skill Boss-Logistics device**
- ▶ **CT-SCA Master Instructor Training:**
 - **Held at Amatrol**
 - **Build a network of Master Training Center to train local instructors**

Value of “Skill Boss” Devices: SBP and SBL



- ▶ Adds Hands-on feature to MSSC Certifications to validate skills
- ▶ Meets ISO 17024 requirement for consistent testing
- ▶ Combined with national certification, increases attraction among students to manufacturing and logistics careers
- ▶ Makes technician training accessible to much larger number of schools and company training centers, including in underserved rural and urban areas
- ▶ Already being used successfully with MSSC Certified Production Technician Plus (CPT+) hands-on program.



Skill Boss- Manufacturing: Hands-On Device for CPT+





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