



MANUFACTURING
SKILL STANDARDS
COUNCIL



MSSC Certified Automation Technician (CAT) Training and Certification Program

*Joint Briefing by
Leo Reddy, Chair, Manufacturing Skill Standards Council
and Paul Perkins, President, Amatrol Inc.*

Prepare the technologically-savvy, agile Industrial Athlete of the Future



MSSC: NATION'S GOLD STANDARD



- ▶ **National leader in certifying front-line technicians in advanced manufacturing (Certified Production Technician- CPT) and supply chain logistics (Certified Logistics Technician- CLT)**
- ▶ **Federally recognized in 1998 under National Skill Standards Act**
- ▶ **Now institutionalized: some 2400 MSSC-trained instructors, 1540-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 (Personnel Certification) and endorsed by NAM for manufacturing and logistics**

CAT BACKGROUND



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

CAT MSSC CREDENTIALS



- ▶ Certificate- **CAT-PM**: Preventive Maintenance - Maintaining Equipment/Systems
- ▶ Certificate- **CAT-ER**: Equipment Repair - Installing, Modifying, Troubleshooting and Repairing Equipment/Systems
- ▶ Certificate- **CAT-NR**: Network Repair - Installing, Modifying, Troubleshooting and Repairing Basic Controllers and Networks
- ▶ NOTE: 90-120 minute written assessment for each of these three
- ▶ **CERTIFICATION**: Indicated by a ***Plus (+) for each of these three***, based on a ***hands-on*** assessment using device built by Amatrol. Similar to : “CPT Skill Boss” (next slide)



Skill Boss: Hands-On Certification Device for CPT





CAT-PREVENTIVE MAINTENANCE (PM):



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**



CAT-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



CAT-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/very 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



CAT DEVELOPMENT STATUS



- ▶ Definition and validation of national CAT standards: Done
- ▶ Development, piloting and cut scoring of CAT assessments: May 2019
- ▶ Development of courseware fully aligned with assessments: September 2019
- ▶ Development of instructor training: September 2019
- ▶ Development of a CAT hands-on device prototype: October 2019
- ▶ Announcement of CAT program: MHI Fall Conference 2019
- ▶ Piloting of CAT training and assessment program: Commencing October 2019
- ▶ Production of CAT device for delivery: First quarter 2020
- ▶ Formal launch: First quarter 2020

CAT POINTS OF CONTACT



At MSSC:

Raquel Davila
Operations Director
rdavila@msscusa.org

At Amatrol:

Jim Steele
Vice President
jim-steele@amatrol.org

At NCSCA:

Steve Harrington
Industry Liaison
steve@supplychainteched.org