

## 1. AUTOMATION: DRAFT NEW STANDARDS (12 CH)

### OLD STANDARDS

1. Troubleshoot industrial automation systems.
2. Apply the principles of robotics to automated systems.
3. Create and operate human machine interfaces to control automated systems.

### PROPOSED NEW STANDARDS

Understand, operate, troubleshoot, and maintain automated systems

Apply the principles of programmable logic controllers, human-machine interfaces and robotics to automated systems.

Collecting and processing data from automated systems.

## 2. HYDRAULICS, PNEUMATICS, MOTORS: DRAFT NEW STANDARDS (12 CH)

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### OLD STANDARDS

- 01.0 Demonstrate an understanding of industrial processes and material properties.
- 02.0 Demonstrate a fundamental understanding of electronics and electricity.
- 03.0 Understand, operate, troubleshoot, and maintain pneumatic, hydraulic, and electromechanical components and/or systems.

### PROPOSED NEW STANDARDS

Demonstrate knowledge of industrial processes and materials properties. (same)

Demonstrate a fundamental understanding of electronics and electricity. (same)

Understand, operate, troubleshoot, and maintain automated systems. (no standard for hy, pneumatic, motors)

### 3. MECHATRONICS: DRAFT NEW STANDARDS (30 CH)

#### OLD STANDARDS

- 01.0 Demonstrate an understanding of industrial processes and material properties.
- 02.0 Generate and interpret computer-aided drawings.
- 03.0 Demonstrate a fundamental understanding of electricity and electronics.
- 04.0 Demonstrate an understanding of industrial safety, health, and environmental requirements.
- 05.0 Demonstrate proficiency in using tools, instruments, and testing devices.
- 06.0 Demonstrate basic troubleshooting skills.
- 07.0 Demonstrate appropriate communication skills.
- 08.0 Demonstrate appropriate math skills.
- 09.0 Understand, operate, troubleshoot, and maintain pneumatic, hydraulic, and electromechanical components a
- 10.0 Understand, operate, and maintain industrial automation systems.
- 11.0 Troubleshoot industrial automation systems.
- 12.0 Apply the principles of robotics to automated systems.
- 13.0 Create and operate human machine interfaces to control automated systems.

#### PROPOSED NEW STANDARDS

- 01.0 Demonstrate an understanding of industrial processes and material properties.
- 02.0 Generate and interpret computer-aided drawings.
- 03.0 Demonstrate a fundamental understanding of electricity and electronics.
- 04.0 Demonstrate an understanding of industrial safety, health, and environmental requirements.
- 05.0 Demonstrate proficiency in using tools, instruments, and testing devices.
- 06.0 Demonstrate basic troubleshooting skills.
- 07.0 Demonstrate appropriate communication skills.
- 08.0 Demonstrate appropriate math skills.
- 09.0 Understand, operate, maintain and troubleshoot automated systems.
- 10.0 Troubleshoot industrial automation systems.
- 11.0 Apply the principles of programmable logic controllers, human-machine interfaces, and robotics to automated systems.
- 12.0 Apply the principles of industrial networking to automated systems.
- 13.0 Collecting and processing data from automated systems