

## Appendix A

### **WORKPROCESS Mechatronics Technician O\*NET-SOC CODE: 49-2094.00 RAPIDS CODE: 2014**

This schedule is attached to and a part of these Standards for the above identified occupation.

**1. TERM OF APPRENTICESHIP**

The term of the occupation shall be 4 Year with an OJL attainment of 8000 hours supplemented by the required hours of related instruction.

**2. RATIO OF APPRENTICES TO MENTORS**

One (1) Apprentice may be employed in each department and/or jobsite employing one (1) qualified Mentor.

**3. APPRENTICE WAGE SCHEDULE**

Apprentices shall be paid a progressively increasing schedule of based on a percentage of the current Mentor wage rate.

*Note: Sponsoring Employers will show their Mentor wage rate on the Employer Acceptance Agreement*

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**4. SCHEDULE OF WORK EXPERIENCE (See attached Work Process Schedule)**

The Sponsor may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

**5. SCHEDULE OF RELATED INSTRUCTION (See attached Related Instruction Outline)**

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	<u>Hours</u>
<b>Safety</b>	<b>250</b>
<b>Preventive Maintenance</b>	<b>1500</b>
Perform preventive maintenance on the various production and warehouse systems. Develop and upgrade preventative maintenance procedures for components, equipment, parts and systems. Perform preventative maintenance and calibration of equipment and systems.	
<b>Documentation</b>	<b>50</b>
Maintain system logs and manuals to document testing and operation of equipment. Procure parts and maintain inventory and related documentation. Provide user applications and engineering support and recommendations for new and existing equipment with regard to installation, upgrades and enhancement.	
<b>Design /Build</b>	<b>1500</b>
Build prototypes from rough sketches or plans. Design basic circuitry and draft sketches for clarification of details and design documentation under engineers' directions, using drafting instruments and computer aided design equipment. Read blueprints, wiring diagrams, schematic drawings, and engineering instructions for assembling electronics units, applying knowledge of electronic theory and components. Assemble electrical and electronic systems and prototypes according to engineering data and knowledge of electrical principles, using hand tools and measuring instruments. Install and maintain electrical control systems and solid state equipment.	
<b>Troubleshooting/Repair</b>	<b>3200</b>

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### WORKPROCESS

#### Mechatronics Technician

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Adjust and replace defective or improperly functioning circuitry and electronics components, using hand tools and soldering iron.

Assemble, test, and maintain circuitry or electronic components according to engineering instructions, technical manuals, and knowledge of electronics, using hand and power tools.

Identify and resolve equipment malfunctions, working with manufacturers and field representatives as necessary to procure replacement parts.

Test electronics units, using standard test equipment, analyze results to evaluate performance and determine need for adjustment.

Analyze and interpret test information to resolve design-related problems.

Modify electrical prototypes, parts, assemblies, and systems to correct functional deviations.

#### **Communication/Collaboration**

**1500**

Maintain working knowledge of state-of-the-art tools, software, etc., through reading and/or attending conferences, workshops or other training.

Provide support and education, working with operators to identify needs, determine sources of problems and to provide information on function of processes.

Evaluate engineering proposals, shop drawings and design comments for sound electrical engineering practice and conformance with established safety and design criteria, and recommend approval or disapproval.

Provide technical assistance and resolution when electrical or engineering problems are encountered.

Review existing electrical engineering criteria to identify necessary revisions, deletions or amendments to outdated material.

**Total 8000**

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### RELATED INSTRUCTION OUTLINE Mechatronics Technician O\*NET-SOC CODE: 49-2094.00 RAPIDS CODE: 2014

Related instruction - This instruction may include, but not be limited to:

*Note:* Due to regional and local code differences and climate conditions, duration of instructional competencies/modules are suggested estimates.

<b>Communications Courses</b> (Expository Writing and Into to Communications)	<b>96</b>
<b>Mathematics</b> (Algebra/Trigonometry I and II)	<b>96</b>
<b>Safety</b> (Industrial Safety/PPE/First Aid)	<b>48</b>
<b>Technical Content</b> (Application Software, DC/AC Circuit Analysis, Electronic Devices, Electrical Machines I and II, Digital Electronics, Intro to Automation, Robot Programming, Programmable Logic Controllers, Diagrams and Schematics, Intro to Automation, Linear IC Applications) Safety is a part of all Instructions	<b>336 (minimum)</b>
<b>Total</b>	<b>576</b>