

OJT CORE COMPETENCIES

Electromechanical and Mechatronics Technician

TERM OF APPRENTICESHIP

The term of the apprenticeship is 1 year.

APPRENTICESHIP APPROACH

Time-based

Competency-based

Hybrid

Apprenticeships may be time-based, requiring a set number of OJT (on-the-job training) and RTI (related technical instruction) hours; competency-based, allowing completion once all skills are mastered; or hybrid, blending both time and competency requirements.

SCHEDULE AND CHECKLIST

Essential Job Categories	Competencies
Understands Safety Procedures	<ul style="list-style-type: none">• Adheres to personal grooming requirements in the facility• Uses personal protective equipment• Follows fire safety procedures• Works around energy sources and performs lockout/tag-out procedures• Handles and stores hazardous materials as assigned• Demonstrates both emergency and standard shutdown of all required equipment• Uses and locates eye wash sinks and first-aid kits• Demonstrates, reports, and responds promptly, safely, and appropriately to emergency or hazard situations and troubleshoots any issues that may arise• Employer-specific task
Understands Blueprints or Schematics	<ul style="list-style-type: none">• Understands how to read and interpret schematic drawings, diagrams, blueprints, specifications, work orders or reports to determine material requirements or assembly instructions• Align parts or work pieces to ensure proper assembly.• Position, align, or adjust workpieces or electrical parts to facilitate wiring or assembly.• Translate electromechanical drawings into design specifications applying principles of engineering, thermal or fluid sciences, mathematics, or statistics.• Determine operational/fabrication methods based on the schematics and/or blueprints• Employer-specific task

OJT CORE COMPETENCIES

Electromechanical and Mechatronics Technician

SCHEDULE AND CHECKLIST

Essential Job Categories	Competencies
Interprets Technical Information	<ul style="list-style-type: none">• Set-up and operate specialized or standard test equipment to diagnose, test, or analyze the performance of electromechanical components, assemblies, or systems.• Measure and adjust voltages to specified values to determine operational accuracy of instruments.• Identify and resolve equipment malfunctions• Review existing electrical engineering criteria to identify necessary revisions, deletions or amendments to outdated material.• Identify energy-conserving production or fabrication methods• Fabricate or assemble mechanical, electrical, or electronic components or assemblies• Understands company policies and procedures• Employer-specific task
Understands Quality Assurance	<ul style="list-style-type: none">• Able to use mechanical tools to accurately measure necessary specifications• Ensure all production documentation is completed including logs, manuals, tests, and operations.• Inspect components and assembly for non-conformances• Determine whether selected electromechanical components comply with environmental standards and regulations.• Able to use testing equipment to verify specifications• Employer-specific task
Demonstrates Knowledge of Routine Equipment Maintenance	<ul style="list-style-type: none">• Demonstrates understanding of preventative maintenance requirements• Review, develop or prepare maintenance standards• Modify, maintain or repair electrical, electronic, or mechanical components, equipment or systems to ensure proper functioning• Employer-specific task
Adapts Concepts to Green Technologies	<ul style="list-style-type: none">• Test electrical aspects of new green and/or renewable energy technologies and assess adaptability and maximize energy production• Understands energy management systems and battery management systems• Understand battery construction and technologies• Understands power inverters, converters and adapters• Assemble electrical systems and prototypes• Employer-specific task