Electro-mechanical and Mechatronics Technologists and Technicians

SOC: 17-3024 • Career Profile Report

■ Key Facts

$70,760	15,000	+1.0%
Median Salary	Employment	Growth Rate

■ Requirements & Salary Range

Education: Associate's degree

■ Automation Risk Assessment

Low Risk - 17.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■■ Work-Life Balance

4.3/10 - Fair work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	8.2/10	**Investigative**	8.8/10
Artistic	6.4/10	**Social**	5.2/10
Enterprising	5.8/10	**Conventional**	6.6/10

■ Top Skills Required

Communication skills, Detail oriented, Dexterity, Logical-thinking skills, Math skills, Mechanical skills, Problem-solving skills, Writing skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Electro-mechanical and Mechatronics Technologists and Technicians typically perform the following tasks: • Test performance of electromechanical assemblies, using test instruments such as oscilloscopes, electronic voltmeters, or bridges. • Install or program computer hardware or machine or instrumentation software in microprocessor-based systems. • Read blueprints, schematics, diagrams, or technical orders to determine methods and sequences of assembly. • Modify, maintain, or repair electrical, electronic, or mechanical components, equipment, or systems to ensure proper functioning. • Inspect parts for surface defects. • Install electrical or electronic parts and hardware in housings or assemblies, using soldering equipment and hand tools. • Verify part dimensions or clearances to ensure conformance to specifications, using precision measuring instruments. • Fabricate or assemble mechanical, electrical, or electronic components or assemblies. • Align, fit, or assemble component parts, using hand or power tools, fixtures, templates, or microscopes. • Produce electrical, electronic, or mechanical drawings or other related documents or graphics necessary for electromechanical design, using computer-aided design (CAD) software. • Select electromechanical equipment, materials, components, or systems to meet functional specifications. • Establish and maintain inventory, records, or documentation systems. • Develop, test, or program new robots. • Prepare written documentation of electromechanical test results. • Repair, rework, or calibrate hydraulic or pneumatic assemblies or systems to meet operational specifications or tolerances. • Select and use laboratory, operational, or diagnostic techniques or test equipment to assess electromechanical circuits, equipment, processes, systems, or subsystems. • Operate, test, or maintain robotic equipment used for green production applications, such as waste-to-energy conversion systems, minimization of material waste, or replacement of human operators in dangerous work environments. • Determine whether selected electromechanical components comply with environmental standards and regulations. • Develop or implement programs related to the environmental impact of engineering activities. • Train others to install, use, or maintain robots.