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 are advanced technical professionals who work at the intersection of **mechanical systems, electronics, robotics, and computer control**. They help design, build, test, operate, and maintain automated and intelligent systems used in modern manufacturing, robotics, and industrial environments. Their role is critical to the operation of smart machines and Industry 4.0 technologies.

This career is well suited for individuals who enjoy hands-on technical work, troubleshooting complex systems, and working with automation and robotics.

What Do Electro-mechanical and Mechatronics Technologists and Technicians Do?

These professionals support the development and operation of integrated mechanical and electronic systems.

Common responsibilities include:

- Installing and maintaining automated machinery and robotic systems
- Testing electro-mechanical components and assemblies
- Troubleshooting mechanical, electrical, and control system issues
- Assisting engineers with system design and prototyping
- Programming or configuring sensors, controllers, and actuators
- Performing preventive maintenance and system calibration
- Documenting system performance and maintenance activities

Systems and Technologies They Work With

Electro-mechanical and mechatronics technicians work with integrated technologies such as:

- Robotics and Automation Systems
- Programmable Logic Controllers (PLCs)
- Sensors and Actuators
- Hydraulic and Pneumatic Systems
- Industrial Control and Motion Systems
- Computer-Integrated Manufacturing (CIM)

Skills and Abilities Needed

These roles require multidisciplinary technical skills.

Core Professional Skills

Personal Qualities That Matter

Education and Training Pathway

Entry into this field typically requires postsecondary technical education:

- Associate Degree (common): Mechatronics, electro-mechanical technology, or engineering technology
- Bachelor's Degree (optional): Engineering technology or applied engineering for advancement
- Hands-On Lab Training:[[/B]] Core part of education programs
- On-the-Job Training: Learning equipment-specific systems
- Industry Certifications (optional): Automation, robotics, or controls credentials

Where Do Electro-mechanical and Mechatronics Technologists and Technicians Work?

They are employed in highly technical industrial environments:

- Advanced Manufacturing Facilities
- Robotics and Automation Companies
- Automotive and Aerospace Manufacturers
- Food, Pharmaceutical, and Packaging Plants
- Engineering and Industrial Services Firms

Work may involve shift schedules and hands-on field or plant environments.

How Much Do Electro-mechanical and Mechatronics Technologists and Technicians Earn?

Earnings vary by industry, experience, and technical scope:

- Entry-Level Technicians: Typically earn strong technical wages
- Experienced or Specialized Technologists: Often earn higher compensation
- Automation or Robotics Specialists: May earn more due to advanced expertise

Compensation often includes benefits and overtime opportunities.

Is This Career Difficult?

This career is technically demanding and constantly evolving. Professionals must understand multiple systems—mechanical, electrical, and digital—and troubleshoot issues that span disciplines. The challenge lies in staying current with automation technology while maintaining precision and safety.

Who Should Consider This Career?

This career may be a strong fit if you:

- Enjoy hands-on technical problem solving
- Are interested in robotics, automation, and smart machines
- Like working with both hardware and software
- Are detail-oriented and safety-conscious
- Want a future-focused technical career

How to Prepare Early

- Take courses in physics, electronics, and mechanical systems
- Learn basic programming and PLC concepts
- Practice reading schematics and wiring diagrams
- Gain hands-on experience with robotics kits or automation labs
- Explore mechatronics or engineering technology programs

Electro-mechanical and mechatronics technologists and technicians keep intelligent machines running—integrating mechanics, electronics, and control systems to power the automated factories and technologies shaping the future of industry.