

Mechanical Engineering Technologists and Technicians

SOC: 17-3027 • Career Profile Report

■ Key Facts

\$68,730

Median Salary

38,300

Employment

+0.0%

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

7.2/10 - Good 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, Math skills, Mechanical skills, Problem-solving skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Mechanical Engineering Technologists and Technicians assist in **designing, developing, testing, and maintaining mechanical devices, systems, and equipment**. They apply engineering principles to support projects, troubleshoot problems, and ensure proper operation of machinery. Their work is critical in manufacturing, product development, and engineering services.

This career is well suited for individuals who enjoy mechanical design, hands-on problem solving, and applying engineering concepts in practical settings.

What Do Mechanical Engineering Technologists and Technicians Do?

These professionals support engineers by creating designs, testing equipment, and analyzing mechanical systems.

Common responsibilities include:

- Assisting in the design and drafting of mechanical components and systems
- Conducting tests and experiments on mechanical equipment
- Troubleshooting, inspecting, and maintaining machinery
- Using computer-aided design (CAD) and other engineering software
- Preparing technical reports, documentation, and specifications
- Collaborating with engineers, technicians, and production teams
- Ensuring compliance with safety standards and quality requirements

Key Areas of Mechanical Engineering Technology

Technologists and technicians may focus on design, testing, or production:

- Design and Drafting: Creating technical drawings and CAD models
- Testing and Evaluation: Assessing performance and functionality of mechanical systems
- Maintenance and Troubleshooting: Diagnosing issues and performing repairs
- Quality Control and Standards Compliance: Ensuring products meet specifications
- Technical Documentation: Preparing manuals, reports, and design records

Skills and Abilities Needed

These professionals combine mechanical, analytical, and technical skills.

Core Professional Skills

Personal Qualities That Matter

Education and Career Pathway

This role typically requires formal education and practical experience:

- Associate or Bachelor's Degree: Mechanical engineering technology or related field
- Internships or Co-op Experience: Hands-on experience with mechanical systems and design
- On-the-Job Training: Supervised work in testing, manufacturing, or maintenance
- Certification (optional): Credentials in CAD, quality control, or engineering technology
- Continuing Education: Staying current with engineering standards, tools, and technologies

Where Do Mechanical Engineering Technologists and Technicians Work?

They are employed in organizations involved in engineering, manufacturing, and technical services:

- Manufacturing and Industrial Companies
- Engineering and Design Firms

- Research and Development Laboratories
- Construction and Mechanical Services
- Government and Technical Agencies

Work environments include offices, laboratories, production floors, and industrial sites.

Is This Career Difficult?

This career requires technical knowledge, analytical thinking, and practical skills. Technologists and technicians must accurately test, troubleshoot, and maintain mechanical systems while following engineering standards.

Who Should Consider This Career?

This career may be a strong fit if you:

- Enjoy mechanical systems, design, and problem-solving
- Are detail-oriented and technically skilled
- Can work collaboratively with engineers and production teams
- Have analytical thinking and troubleshooting abilities
- Want a career supporting engineering, manufacturing, and technical innovation

How to Prepare Early

- Take courses in mathematics, physics, engineering, and computer-aided design
- Participate in internships, co-ops, or vocational training in mechanical engineering technology
- Gain hands-on experience with machinery, testing, and maintenance
- Develop technical skills in CAD, measurement, and quality control
- Explore educational programs and certifications in mechanical engineering technology

Mechanical engineering technologists and technicians apply engineering principles to design, test, and maintain mechanical systems, supporting innovation, manufacturing, and technical excellence.

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Source: <https://www.bls.gov/ooh/architecture-and-engineering/mechanical-engineering-technicians.htm>