

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 typically perform the following tasks:

- Assemble or disassemble complex mechanical systems.
- Interpret engineering sketches, specifications, or drawings.
- Calculate required capacities for equipment of proposed system to obtain specified performance and submit data to engineering personnel for approval.
- Review project instructions and blueprints to ascertain test specifications, procedures, and objectives, and test nature of technical problems such as redesign.
- Provide technical support to other employees regarding mechanical design, fabrication, testing, or documentation.
- Test machines, components, materials, or products to determine characteristics such as performance, strength, or response to stress.
- Draft detail drawing or sketch for drafting room completion or to request parts fabrication by machine, sheet or wood shops.
- Analyze test results in relation to design or rated specifications and test objectives, and modify or adjust equipment to meet specifications.
- Record test procedures and results, numerical and graphical data, and recommendations for changes in product or test methods.
- Prepare specifications, designs, or sketches for machines, components, or systems related to the generation, transmission, or use of mechanical or fluid energy.
- Read dials and meters to determine amperage, voltage, electrical output and input at specific operating temperature to analyze parts performance.
- Design molds, tools, dies, jigs, or fixtures for use in manufacturing processes.
- Review project instructions and specifications to identify, modify and plan requirements fabrication, assembly and testing.
- Design specialized or customized equipment, machines, or structures.
- Conduct failure analyses, document results, and recommend corrective actions.
- Set up and conduct tests of complete units and components under operational conditions to investigate proposals for improving equipment performance.
- Assist engineers to design, develop, test, or manufacture industrial machinery, consumer products, or other equipment.
- Prepare layouts of machinery, tools, plants, or equipment.
- Prepare equipment inspection schedules, reliability schedules, work plans, or other records.
- Set up prototype and test apparatus and operate test controlling equipment to observe and record prototype test results.

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