

Electrical and Electronics Engineers

SOC: 17-2070 • Career Profile Report

■ Key Facts

\$118,780 Median Salary	287,900 Employment	+7.0% Growth Rate
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■ Requirements & Salary Range

Education: Bachelor'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

Computer skills, Initiative, Interpersonal skills, Math skills, Problem-solving skills, Project management skills, Communication skills,

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Electrical and Electronics Engineers typically perform the following tasks:

- Modify, maintain, or repair electronics equipment or systems to ensure proper functioning.
- Replace defective components or parts, using hand tools and precision instruments.
- Set up and operate specialized or standard test equipment to diagnose, test, or analyze the performance of electronic components, assemblies, or systems.
- Read blueprints, wiring diagrams, schematic drawings, or engineering instructions for assembling electronics units, applying knowledge of electronic theory and components.
- Identify and resolve equipment malfunctions, working with manufacturers or field representatives as necessary to procure replacement parts.
- Assemble electrical systems or prototypes, using hand tools or measuring instruments.
- Review electrical engineering plans to ensure adherence to design specifications and compliance with applicable electrical codes and standards.
- Assemble, test, or maintain circuitry or electronic components, according to engineering instructions, technical manuals, or knowledge of electronics, using hand or power tools.
- Review existing electrical engineering criteria to identify necessary revisions, deletions, or amendments to outdated material.
- Maintain system logs or manuals to document testing or operation of equipment.
- Select electronics equipment, components, or systems to meet functional specifications.
- Calculate design specifications or cost, material, and resource estimates, and prepare project schedules and budgets.
- Educate equipment operators on the proper use of equipment.
- Supervise the installation or operation of electronic equipment or systems.
- Compile and maintain records documenting engineering schematics, installed equipment, installation or operational problems, resources used, repairs, or corrective action performed.
- Modify electrical prototypes, parts, assemblies, or systems to correct functional deviations.
- Integrate software or hardware components, using computer, microprocessor, or control architecture.
- Procure parts and maintain inventory and related documentation.
- Participate in training or continuing education activities to stay abreast of engineering or industry advances.
- Research equipment or component needs, sources, competitive prices, delivery times, or ongoing operational costs.

*Generated by StartRight • Data from U.S. Bureau of Labor Statistics & O*NET*

Source: <https://www.bls.gov/ooh/architecture-and-engineering/electrical-and-electronics-engineers.htm>