



## CAREER PROFILE

# Electrical and Instrumentation (E&I) Technician

### **JOB OUTLOOK<sup>1</sup>**

Overall employment of E&I technicians is projected to decline slightly over the next ten years, although growth may vary by area of expertise. Recent improvements and innovations in electrical design are expected to reduce the need for installation and repair of electronic equipment. For example, improvements in motor vehicle sound, security, and navigation systems have reduced demand for aftermarket products.

### **SALARY RANGE<sup>1</sup>**

\$39,570 – \$88,020

### **WHO ARE THEY?<sup>1,2</sup>**

Electrical and instrumental (E&I) technicians are problem-solving, observant, detail-oriented, dexterous professionals who work with electrical equipment in industrial settings. They can draw accurate conclusions about information provided by tests to determine whether equipment is in need of repair or replacement. They keep up to date with innovations and trends and are proficient with a variety of tools used to maintain and repair electronic equipment and instruments. They are able to coordinate finger and hand movements to manipulate and adjust parts. They have physical stamina and are prepared to spend much of their time walking, standing, and kneeling. E&I technicians are comfortable interacting with people from different backgrounds and areas of expertise, including customers.

### **WHAT DO THEY DO?<sup>1,2</sup>**

Electrical and Instrumentation Technicians install, inspect, troubleshoot, and repair electrical equipment in workplace settings such as repair shops and factories. Electrical equipment includes AC motors, AC/DC controls, wiring, networks, industrial computers, and motor-driven systems called servos. E&I technicians interact with customers to discuss issues and needs regarding electrical equipment. They conduct inspections and tests, diagnose problems, and execute repairs. They are able to take apart and reassemble electrical equipment, utilize specialized tools for working with electronics, and must keep detailed records of equipment maintenance and repairs. Finally, E&I technicians participate in ongoing training and professional development to keep up to date with trends and innovations with electrical equipment and instruments.



## CAREER PROFILE

# Electrical and Instrumentation (E&I) Technician

### EDUCATION/ TRAINING

- High school diploma
- Associate degree in electronics, instrumentation, industrial controls, or robotics
- 3–5 years of experience of fieldwork working with electronic equipment and instruments

### HOW DO I BECOME ONE?<sup>1,2</sup>

E&I technicians need at least a high school education. Most specializations within the field require additional training and up to 5 years of work experience. Some firms require an Associate Degree in a field such as electronics, instrumentation, industrial controls, or robotics. In addition, E&I technicians need communication skills for interacting with customers; technical skills for using tools for installing, repairing, and maintaining equipment, and color vision for working with color-coded electronic components and wires.

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<sup>1</sup> "Electrical and Electronics Engineering Technicians," BLS Occupational Outlook Handbook, <https://www.bls.gov/ooh/installation-maintenance-and-repair/electrical-and-electronics-installers-and-repairers.htm>.

<sup>2</sup> "E&I Technician at GAF Materials Corp," Job Listing, Job Openings for Disabled Veterans, <https://www.jofdav.com/jobs/20924095-e-i-technician>.