



## STUDENT ACTIVATION



# Electrical and Instrumentation (E&I) Technician

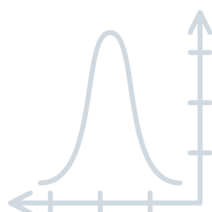
## OVERVIEW

Electrical and Instrumental (E&I) Technicians are problem-solving, detail-oriented, dexterous professionals who work with electrical equipment in industrial settings. They install, inspect, troubleshoot, and repair electrical equipment in 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.



## EVALUATE YOUR INTEREST

- I enjoy diagnosing problems and then fixing things, especially electrical equipment, appliances, and devices.
- I like figuring out how things work and identifying the importance of the various component parts of complex items. I enjoy taking things apart to learn more about how they are designed.
- I am dexterous; I have excellent hand-eye coordination and can use my fingers and hands to work on parts that might be in tight places.
- I am a problem-solver. I have a knack for asking smart questions that help others identify problems and issues. I work with others to formulate solutions to problems.
- I enjoy working with a wide variety of tools.




# Electrical and Instrumentation (E&I) Technician

STUDENT ACTIVATION (CONTINUED)



## CAREER CONNECTION

<b>How does this career affect me?</b>	<b>What are some other similar careers?</b>	<b>How does this career affect the world?</b>
<p>Devices that rely on electronics play a crucial role in our everyday lives at home and in the workplace. Power tools are used in workplaces, in homes, and for a broad and nearly endless array of tasks, from repairing vehicles, to maintaining yards and landscapes, to creating furniture. Appliances make routine tasks at home easier so people can enjoy more leisure time. Electronic systems in vehicles keep and maintain comfortable temperatures, provide entertainment, and help drivers navigate journeys. E&amp;I technicians install, maintain, and repair electronic equipment. Their work makes a wide range of products more accessible to the general population. It also enables them to operate effectively and efficiently.</p>	<p><b>Electricians</b> install and maintain home and workplace systems that rely on electricity for power. These include communications and lighting systems.</p> <p><b>Electro-mechanical technicians</b> operate and maintain electro-mechanical equipment, such as robots and power tools.</p> <p><b>Service Delivery Technicians</b> provide technology support to workplace computer users and organizations.</p> <p><b>Electrical engineers</b> design, develop, and maintain electrical equipment.</p> <p><b>Aircraft Maintenance Technicians</b> maintain and perform repairs on airplanes and helicopters.</p> <p><b>Aerospace Engineering and Operations Technicians</b> operate and maintain equipment used to design, build, and maintain aircraft and space vehicles.</p> <p><b>Automotive and Heavy Equipment Service Technicians and Mechanics</b> inspect, maintain, and repair automobiles and trucks as well as heavy equipment such as tractors, cranes, and military vehicles.</p>	<p>Consumers at home and employees serving a wide variety of roles in workplaces across industries and government have long been dependent on electronic equipment that make lives easier. E&amp;I technicians are responsible for installing, maintaining, and repairing innovations that have advanced the fields of communications, medicine, heating and cooling, and transportation.</p> 



## TAKE ACTION

- Consult manuals and online resources to learn more about the workings of electronic items in your home, such as appliances; sound and navigation systems in vehicles; and entertainment and communication devices. When possible, assist with repair work on these items, learning to use a variety of tools and your hands to replace, adjust, and manipulate parts.
- Visit a flea market or thrift store and buy an old appliance, power tool, television set, or some other electronic item. Use tools and your hands to take the item apart, study how it works, and reassemble it. Make observations about differences between the item you acquired and newer, improved versions.
- Join an organization or take a class at school that assembles or repairs electronic items. Examples might include robotics team, a technology club, or a basic electronics course.

