

Electronics Technician



How Green is Changing Electronics Technician Jobs

The nation's energy delivery system is undergoing a major transformation, and soon the "Smart Grid" will replace the current electric system. The Smart Grid is how America plans to manage its future energy independence as well as to generate clean power. The U.S. Department of Energy's Grid 2030 Vision is the plan to modernize and transform the current electric system within the next 20 years.

As the Smart Grid is implemented in communities across the nation the need for trained electronics technicians will increase dramatically. Electronics technicians will need to be trained in the emerging technology of "smart" buildings, Smart Grid, energy-efficient and high-security structures. The newly-trained technicians will be in high demand as the nation continues its transformation toward sustainable, energy-efficient, environmentally-responsible buildings.

The Future of Electronic Technician Employment

Electronics Technician Employment Projections

Demand for electronic technicians who can implement smart systems is projected to grow dramatically as a result of tax incentives and government stimulus programs that specifically mandate renewable energy solutions.

Electronics technicians will find employment in installing, repairing, and updating electronics, telecommunications and computer technology-based systems and equipment as well as maintaining residential and commercial structures. They will also find employment in conducting audits of equipment using electronic controls.

OCCUPATIONAL TITLE	EMPLOYMENT, 2008	PROJECTED EMPLOYMENT, 2018	CHANGE, 2008-18	
			NUMBER	PERCENT
Electrical and electronics installers and repairers	160,900	168,400	7,500	5
Electrical and electronics repairers of commercial and industrial equipment	78,000	81,000	2,900	4
Electrical and electronics repairers of powerhouse, substation, and relay	23,400	26,100	2,700	12
Installers and repairers of home electronic and entertainment equipment	51,200	56,800	5,500	11

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Electronics Technician *cont.*

Employment and Education Changes for Electronics Trades

There will be great employment opportunities for electronics technicians as they are directly connected with the construction and maintenance of the new Smart Grid within residential, commercial, and industrial buildings. As a result, electronics technician jobs are opening up all across the United States and the demand for highly skilled workers is rapidly growing.

The electronics technicians of the future need to possess the technical background and practical skills necessary for careers in the installation, maintenance, support, and troubleshooting of electronics, telecommunications, and computer technology-based systems and equipment as it relates to the Smart Grid and Smart Buildings.

Education – Connecting your Curriculum to the 21st Century

What does this all mean for the education of electronics technicians?

The core requirements for electronics technicians will still consist of completion of an associate degree, or a certificate in Applied Electronics.

Coursework will continue to include basic electrical theory, digital technologies, electronics and circuits, industrial electricity, mechanical electrical control systems, network operating systems, digital communications, microprocessor fundamentals, and more.

Understanding advances in smart technology, Smart Grid and Smart Buildings are all part of the electronic jobs of the 21st century.

Essential Green Electronic Technicians Courses and Competencies

- Digital/Data Communications
- Networking
- Electronic Communications Systems
- Microprocessor Fundamentals
- Electronic Applications: Theory, Application, Lab
- Analog and Digital Circuits
- Smart Grid Fundamentals
- Alternative Energy
- Sustainable Business

Additional Resources, Certificates and Certification

- The Electronics Technician Association provides certification for many levels of electronics technicians: www.eta-i.org
- The North American Board of Energy Practitioners has developed certification programs that could apply to electronics technicians: www.nabcep.org

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