

CAREER

Electronics for High Tech Industries Certificate

According to the Bureau of Labor Statistics, "Employment of electrical and electronics installers and repairers of commercial and industrial equipment is expected to grow by 5% from 2010 to 2020." Join us if you want to be a part of this growing field and become an electronics technician, assembler, installer or troubleshooter in the electronics field. No previous knowledge of electronics is required, but you must have a high school diploma or G.E.D. and have a solid knowledge of basic math. Also, good eye-hand coordination, arm-hand steadiness, attention to detail and analytical thinking skills will help you succeed.

Introduction to Electronics

CEU 3.2

Gain an understanding of key electronics and electricity laws, and the rules and concepts affecting the design, construction, installation, maintenance and troubleshooting procedures for nearly all types of electronics currently available on the market. Using a typical analog and/or digital meter, learn to identify and test components both in and out of a circuit board. Basic soldering, circuit assembly and component installation and removal techniques are covered as well as AC/DC signals, current, voltage, resistance, ohm's law, power law, series and parallel circuits, short and open conditions and much more.

PLEASE NOTE: All materials and equipment will be supplied by the instructor.

Prerequisite: No previous knowledge of electronics or electricity is needed.

Required: High school diploma or GED.

Instructor: Santronics, Inc.

Tuition: \$150 + general fee \$450. Total \$600

ELEC 002-09 Saturdays, 9 a.m.-6 p.m.,
October 14, 21, 28, November 4



Testing Equipment and Troubleshooting CEU 2.0

Learn to measure frequency and other time-related signals, as well as how to use crucial testing equipment to measure AC and DC voltage and current. Careful attention will be given to the proper use of the digital and analog multi-meter and the oscilloscope. Gain knowledge about other instruments including the capacitance, ESR and inductance meters, the signal generator, frequency counter and bench DC power supplies. Perform typical live measurements on real-life circuits provided for class practice and increase your knowledge. Receive an introduction to the troubleshooting process and learn to apply commonly used procedures and techniques to diagnose and repair circuit failures. Enhance your understanding of troubleshooting methods by wiring and/or working on "bugged" circuits provided for class practice.

PLEASE NOTE: All materials and equipment will be supplied by the instructor.

Prerequisite: Successful completion of Introduction to Electronics.

Required: High school diploma or GED.

Instructor: Santronics, Inc.

Tuition: \$100 + general fee \$200. Total \$300

ELEC 003-09 Saturdays, 9 a.m.-6 p.m.,
November 11, 18, and Saturday, 9 a.m.-1 p.m.,
December 2



Troubleshooting Electronic Systems

CEU 4.4

Receive a practical and realistic understanding of the operation, maintenance and repair of key electronic and electrical circuits commonly found in a wide variety of machines, across multiple fields, tied to the electronics industry. These include DC power supplies and inverters, servos and timing, sensing, signal and amplifier, motor drive and logic circuits, microprocessor-based electrical systems, and many other relevant supporting circuits. Develop a deeper understanding of the troubleshooting process and learn to apply commonly used procedures and techniques to diagnose and repair typical circuit failures. Enhance your understanding of troubleshooting methods by building and performing typical measurements and troubleshooting on a wide variety of real-life circuits provided for class practice.

PLEASE NOTE: All materials and equipment will be supplied by the instructor.

Prerequisite: Successful completion of Testing Equipment and Troubleshooting.

Required: High school diploma or GED.

Instructor: Santronics, Inc.

Tuition: \$150 + general fee \$450. Total \$600.

ELEC 004-09 Saturdays, 9 a.m.-6 p.m.,
December 9-January 20 and Saturday, 9 a.m.-1 p.m.,
January 27 (No class December 23, 30) (6 sessions)



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Want to Learn More?

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NNJHPC@middlesexcc.edu

*You may also qualify for job placement
assistance at no charge*

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