

agileEMI Equipment Maintenance Institute: Basic Electricity & Electronics

Who should attend?

This course is primarily designed for equipment engineers, maintenance technicians and additional personnel who require basic knowledge of electrical principles and electronic devices.

Course Description

Designed to teach the principles of electricity and electronics, the hands-on training format of this class incorporates practical exercise kits combined with lecture, demonstration and visual aids.

Course Modules & Objectives

After completing this course, students will be able to:

- Demonstrate a basic understanding of electrical principles
- Demonstrate a basic understanding of common electrical components
- Demonstrate the ability to solve for missing values in series and parallel circuits
- Demonstrate practical knowledge of select electrical measurement devices

Module One: Electrical Safety

- Warning labels related to electricity
- Hazard levels related to shock
- Personal protective equipment (PPE) available for working with electricity

Module Two: Basic Direct Current (DC) Overview

- Voltage
- Current
- Resistance
- Ohm's Law
- DC

Module Three: DC Components

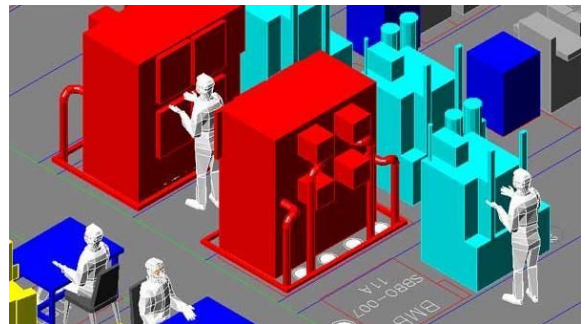
- Power generation
- Circuit components
- Overload protection devices

Module Four: DC Theory

- Series circuits
- Parallel circuits
- Opens, shorts and grounds

Module Five: Alternating Current (AC) Overview

- Kirchoff's Current Law
- Ohm's Law
- Power
- Inductance and capacitance
- Reactance
- Impedance



Module Six: AC Theory

- Series circuits
- Parallel circuits
- AC versus DC review

Module Seven: Power Distribution

- Site-specific power distribution
- Common expected voltages

Module Eight: Practical

- Measurement devices
- Voltage divider

Module Review: Course Summary

- Competency test
- Wrap up

Self and Peer Reviews

Registration Information

Prerequisites:

none

Course Length: 8 hours

Course Type: Instructor-led

Course Number: ATCP.BEE.101

about agileTCP

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