The goal of this course is to provide a basic understanding of the system electronics including I/O, display properties and configurations for the ABB Continuous Emissions Monitoring System (CEMS).

**Learning objectives**

Upon completion of this course the participants will be able to:

- Maintain the analyzer system for optimal performance
- Use functional blocks to be able to configure the CEM system
- Calibrate the CGA analyzer
- Interpret analyzer readings for desired system performance
- Interpret status messages and alarms to help identify system conditions
- Disassemble and reassemble system hardware.
- Understand the SMT, TCT, and HMI software packages

**Participant profile**

This training is targeted to Service Engineers and Maintenance Technicians.

**Prerequisites**

This is an entry level course that is designed for personnel new to this system as well as individuals needing refresher training.

**Topics**

- Troubleshooting system module problems
- System module configuration & configuration changes
- Monitor & control of system I/O
- Cleaning, maintaining, and servicing analyzer system
- Calibration procedures

**Course type and methods**

This is an instructor led course. Approximately 35% of the course is hands-on lab activities.
**Course outline**

**Day 1**
- Introduction
- Documentation
- Operators Manual
- Housing designs and components
- Software operations and menu tree
- Lab

**Day 2**
- Function Block programming
- Analyzer Modules and detector theory
- Sample System basics
- Maintenance and testing process
- Lab

**Day 3**
- Calibration procedures
- Additional software; HMI, SMT and TCT
- Lab

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**North America Customer Service Center**

29801 Euclid Avenue  
Wickliffe OH 44092-1832, USA  
Tel: 1 800 HELP 365 (1 800 435 7365)  
Outside USA/Canada: +1 440 585 7804  
Fax: +1 440 585 5087  
E-mail: abbuniversity@us.abb.com  
www.abb.us/abbuniversity

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