

## Process Analyzers

# ULTRAMAT 23 Service & Repair

### General Information

Course Code: PIA-PACGAC23

Length: 1 Day

### Audience

This hardware course is intended for individuals responsible for the maintenance and operation of Siemens Ultramat 23 Continuous Gas Analyzer.

### Profile

0.7 CEUs (Continuing Education Credits)

In this course students will setup, calibrate and perform basic maintenance functions on the Siemens Ultramat 23 Infrared Continuous Gas Analyzer System including hardware and software.

This course can be taught at the customer's site and customized to meet the customer's needs. With advance notice, customer specific applications can be taught.

### Objectives

*Upon completion of this course, the student shall be able to:*

- Calibrate the Ultramat 23 analyzer using zero and span gasses.
- Replace the primary modules in Ultramat 23
- Replace and align the detector bench
- Set parameters in the Ultramat 23 thru the HMI.
- Clean the detector cell

### Topics

1. Principles of ULTRAMAT 23 Operation
  - a. Infrared Analysis
  - b. Analyzer Bench Identification
  - c. Electronic Board Identification
2. ULTRAMAT 23 Maintenance
  - a. Software
  - b. Panel Operation
  - c. Bench Disassembly
  - d. Pneumatic Pump
  - e. Condensate Trap
  - f. Cell Cleaning
  - g. Calibration
3. Labs
  - a. Familiarization and Identification of Hardware and Parts
  - b. Software and Communications
  - c. Hardware Disassembly
  - d. Hardware Assembly
  - e. Calibration