

# Sample Systems for Process Analyzers: Design and Operation

Presented by Ron Eddleman

**Control Analytics, Inc. is pleased to offer an opportunity to learn from one of the best. Study basic design, operation and troubleshooting of Analytical Sample Conditioning Systems at our factory sponsored training courses.**

**The three day training courses are being offered in multiple locations along the Gulf Coast as well as Control Analytics, Inc.'s Training Centers in Houston, TX and Export, PA. (25 miles east of Pittsburgh)**

## Course Description

Sample Systems for Process Analyzers, Design and Operation will be presented by **Ron Eddleman**. The course will include discussions on the Complete Sample System, including sample point and location, transport of sample to the sample system, proper sample system design, stream switching, calibration/validation and sample return and recovery systems.

Class room exercises and real world examples of proper system design along with what not to do and the common mistakes made when trying to improve the reliability of Analytical Systems will be covered.



This training is targeted to Analyzer/Instrument Technicians, Operators and Engineers responsible for specification, operation, maintenance and repair of analytical sample systems.

Please join us Sept 27-29 or Dec 6-8, 2016 in Stafford, Texas at our Gulf Coast Training Facility.



## Registration – for Sept 27-29 or Dec 6-8, 2016 in Stafford, TX

The cost for the 3-Day Sample System training is \$1,500 per person and includes registration, lunches, snack breaks, and all training materials. A purchase order, or full payment is needed to register and hold your spot. Payment is due 10 business days prior to start of the course. Substitutions of an attendee may be made at any time. Note: Class price does not include customer travel costs or lodging.

Please call Larry George at 1-800-240-8619 to reserve your space, as class sizes are limited.

## Course outline - Sample Systems for Process Analyzers

- Day 1
  - The Complete System Overview
  - The need for Complete and Accurate stream data.
  - Sample Point Location
  - Probe Considerations
  - Sample Phase
  - Transport Line Requirements
- Day 2
  - Fast Loop Sample Flows
  - Lag Time
    - Process Lag Time
    - Sample Transport Lag time
    - Measurement Lag Time
  - Sample Return concerns including Sample Recovery Systems
  - System Pressure Drop
- Day 3
  - Sample System Design
  - Filtration
  - Dead Legs
  - Sample Mixing Issues
  - Stream Switching Systems
  - Calibration/Validation systems
  - Designs for Specific Analyzer Technologies



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