# Repairing Instruments Training and Education Class

## 1.5 day Initial Class

### Introduction
- Instructor and student welcome and introductions
- Safety review
- MSA overview
- Course administration
- Review of RITE handout

### Basic requirements
- Legal and minimum requirements for repairing meters
- Calibration gas requirements
- Sensor date code and software revision code discussion
- ESD (Electro-static Discharge)
- Gas interferents and combustible gas factors.

### Sensor Theory
- Electro-chemical
- Catalytic bead with demonstration of exploding gases
- Infrared
- Photo Ionization
- Symptoms of gas poisoning.

### Altair
- Overview of current models
- Competitive review
- Operational review with setup mode (MSA Link)
- Zero and calibration review
- Common problems and repair

### Altair Pro & 2X
- Overview of models
- Operational review with setup mode (MSA Link)
- Zero and calibration review
- Disassembly, inspection and function of specific parts with reassembly and functional check.
- Common problems and repair

### Altair 4 & Altair 4X
- Overview of differences between models
- Operational review with setup mode (MSA Link)
- Zero and calibration review
- Disassembly, inspection and function of specific parts with reassembly and functional check.
- Common problems and repair

### Altair 5 and Altair 5X alarm
- Overview of differences between models
- Operational review with setup mode (MSA Link)
- Zero and calibration review
- Disassembly, inspection and function of specific parts with reassembly and functional check.
- Common problems and repair

### Galaxy and GX2 Calibration Stations (Day 2)
- Review of previous day
- Overview of differences between models
- Operational review with setup mode (MSA Link Pro)
- Disassembly, inspection and function of specific parts with reassembly and functional check.
- Common problems and repair

### Sirius
- Overview of Sirius model
Operational review with setup mode (MSA Link)
Zero and calibration review
Disassembly, inspection and function of specific parts with reassembly and functional check.
Common problems and repair

Older equipment:
- Solaris, Orion, Orion Plus, Five Star, Passport, Pulsar, Titan, Explosimeter, Model 60, Gascope

Overview of model and replacement unit.
Limits of repair.

Course Summary
- Open book/open note evaluation
- Complete course evaluation final administration and wrap up