# Course Outline

- Good Manufacturing Practice (GMP) Requirements
- DQ, IQ, OQ, and PQ for Analytical Instruments
- Instrument Commissioning Protocols and Standard Operating Procedure for Instrument Calibration
- Performance Parameters for LC, Infrared Spectrometers, UV-Vis spectrophotometers, and Automated Workstations
- Effects of Performance Parameters on Data Quality
- Verification Tests
- Use of Reference Standards
- Traceability

# Prerequisites

None.

# Student Profile

Technical personnel performing chromatographic analyses in the pharmaceutical, bio-technology, environmental, food, cosmetic or chemical industries.

---

**H1183A**

One Day Lecture Only

**Description**

Teaches basic, valuable skills for enhancing the quality of analytical data.

This course covers the basic principles of chromatography instrument operation, focusing on design qualification (DQ), installation qualification (IQ), operational qualification (OQ), and performance verification (PV) for liquid chromatographs, UV-Vis spectrophotometers, infrared spectrometers and automated workstations.