TRAINING PROGRAM

Instrumental Analysis In Petroleum Industry

Introduction:

The efficient use of the advance analytical methods and modern analytical instruments are very imperative tools to solve any laboratory problem. The course provides the basic and advance of analytical analysis methods of most used instruments. In addition, it provides elegant tools for obtaining qualitative and quantitative data techniques with practice work on analysis software.

Who Should Attend?

The course is of interest for any person working in any analytical laboratory. The course for chemists, lab technicians, chemical engineers, instrument engineers and supervisors who work in Laboratory.

Methodology:

This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include;

- Lectures
- Workshop & Work Presentation
- Case Studies and Practical Exercise
- Videos and General Discussions

Certificate:

BTS attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration

Course Objectives:

Upon the successful completion of this course, the participants will have an understanding of

Principles and practices of the modern instruments technique

Course Outline:

1. LABORATORY ANALYTICAL INSTRUMENTATION

    - Spectrometric Instruments

        - Molecular Spectrometry

            - Ultraviolet, Visible and Near Infrared
            - Infrared and Raman
            - Luminescence
            - Nuclear Magnetic Resonance
            - Mass Spectrometry

        - Atomic Spectrometry

            - Atomic Absorption and Atomic Fluorescence Spectrometry
            - Flam photometer Spectrometry

- Inductively Coupled Plasma–Optical Emission Spectrometry
- Inductively Coupled Plasma–Mass Spectrometry
- X-ray (Fluorescence- Diffraction)

- Separation Instruments

  - Gas Chromatography
  - High Performance Liquid Chromatography
  - Ion Chromatography

- Electrochemical Instruments

  - Potentiometry
  - Voltammetry
  - Amperometry
  - Conductimetry

- Other Instruments

2. PORTABLE ANALYTICAL INSTRUMENTATION

- Portable Instruments in the Laboratory

  - Spectrometric Instruments
  - Separation Instruments
  - Electrochemical Instruments

- Portable Instruments in Various Applications

  - Environmental Applications
  - Water Quality Monitoring
  - Soil and Sediment Testing
  - Air Monitoring
  - Other Applications

3. Process Analytical Instrumentation

- In-Process Sampling
- In-Process Analysis

- Flow Injection Analysis
- Spectroscopic Analysis
- Separation Analysis
- Imaging Analysis
- Electrochemical Analysis