

# Gas and Liquid Chromatography and Troubleshooting Course

## Venue Information

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**Venue:** London UK

**Place:**

**Start Date:** 2026-10-13

**End Date:** 2026-10-17

## Course Details

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**Net Fee:** £4750.00

**Duration:** 1 Week

**Category ID:** OAGTC

**Course Code:** OAGTC-5

## Syllabus

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### Course Syllabus

#### Introduction

**Gas & Liquid Chromatography and Troubleshooting is a comprehensive course covering the following areas:**

- Sample preparation
- Sample introduction
- Sample separation
- Columns
- Detectors
- Data acquisition

**This program is designed to give the participants the capability to:**

- Gain the basic theoretical aspects of Gas Chromatography
- Communicate practical information, capabilities and limitations of Gas & Liquid Chromatography
- Gain confidence on the analysis technique, troubleshooting and analytical results evaluation.

## **The Content**

### **Introduction to Chromatography**

- The History of Chromatography – GC & LC
- Overview of GC & LC Chromatography
- The Modern Chromatograph
- Liquid Chromatography – The Development Process
- Factors Controlling Retention
- Molecular Forces and Chromatographic Selectivity
- Effects of Stationary Phase Loading on the Performance of a Chromatographic System
- Chromatography Nomenclature

### **Chromatography Basics**

- Basic Chromatography
- Sample Introduction
- The role of sample introduction and injection ports in GC operations
- Injection ports maintenance and its impact on GC performance
- Columns
- The role of columns in GC operations.
- Column selection & maintenance
- How columns can impact GC performance

### **GC Operation**

- Peak Dispersion in a Chromatographic Column
- Detector Selection
- The role of Detectors in GC operations
- Detector maintenance
- How detectors can impact GC performance
- Setup and GC. Operation, Basic steps
- Preparation for operation.
- Sampling Techniques

### **Data Acquisition and Calibration**

- Calibration
- Data Acquisition and Processing System
- Calibration linked to GC performance

### **Applications and troubleshooting**

- ISO 17025 Accreditation Basics
- Laboratory Management & Troubleshooting