





# Course: Chemical Laboratory Instrumentation: Operation, Quality and Safety of Equipment

Code	City	hotel	Start	End	price	Language - Hours
722	Dammam	<b>Hotel Meeting Room</b>	2025-09-14	2025-09-18	11450 SR	En - 25

#### **Overview**

This Practical seminar is addressed to both new and experienced users of chemical laboratories. It includes an overview of most important chemical and physical processes employed in a chemical laboratory to achieve recognition, measurement, transfer, purification, storage and reaction of chemicals. It also includes Health and Safety as well as Quality and Environmental Management procedures to design and maintain a QHSE Management environment. Related topics such as SDS and GHS systems are also presented. Experimental sessions are included in this course.

## **Description**

- SDS and GHS
- Extraction and distillation
- Purification
- Experimental session: Adsorption of CO2 [or other compounds specified at each location]; set up, run and report
- Transfer methods
- Reaction methodologies
- Reactors fundamentals
- Experimental reaction set up
- Chromatography
- Experimental session: Chromatography set up and reporting
- Spectroscopy



- GS experimental [LIVE] session
- Spectroscopy video sessions
- Computational Chemistry tools
- LIVE Computational chemistry session
- Sensors and detectors
- LIVE Computational Chemistry session on adsorption- reaction based sensors
- Measurements and calibration
- Experimental session on measurement and calibration
- Types of glassware
- Traditional and modern digital equipment
- Experimental session: Glassware and digital equipment
- Scientific background
- Organization
- HS Management
- QHSE Management



The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

## **Program Timings:**

• 9:00 AM to 2:00 PM

## The program includes:

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.