



**Chemical, Mechanical Engineering**



**SCANDINAVIAN ACADEMY**  
Training and Development

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

Code	City	hotel	Start	End	price	Hours
722	Doha (Qatar)	Hotel Meeting Room	2024-07-07	2024-07-11	3450 €	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 CO<sub>2</sub> [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 employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:**

- **Theoretical Lectures:**
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- **Scientific Assessment:**
  - We evaluate trainees skills before and after the course to ensure their progress.
- **Brainstorming and Interaction:**
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- **Practical Cases:**
  - We provide practical cases that align with the scientific content and the participants specific needs.
- **Examinations:**
  - Tests are conducted at the end of the program to assess knowledge retention.
- **Educational Materials:**
  - We provide both printed and digital scientific and practical materials to participants.
- **Attendance and Final Result Reports:**
  - We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- **Professionals and Experts:**
  - The programs scientific content is prepared by the best professors and trainers in various fields.
- **Professional Completion Certificate:**
  - Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.
- **Program Timings:**
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.