



**Scandinavian  
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Training Center

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# Course: Oil and Gas Laboratory Operations Management MBA

Code	City	hotel	Start	End	price	Language - Hours
109	Abha	Hotel Meeting Room	2025-09-07	2025-09-11	11450 SR	En - 25

## INTRODUCTION

An Oil and Gas production laboratory is a vital component in maintaining control of field operations. It is important that managers; technicians; chemists and others have a good understanding of the abilities and limitations of a field laboratory so that they can better use the laboratory and its staff to control and optimise the oilfield process.

**A production laboratory contributes to the operation in the following ways:**

- Measurement and reporting of vital data
- Compliance with legislative criteria
- Provides early warning of potential plant problems
- Control and optimisation of the injection of oilfield chemicals
- First line analysis and identification of unknown substances / deposits
- Determination of product quality and fiscal measurements

**This programme will explain to delegates:**

- What happens within an oil and gas field laboratory and why this is important to a successful oilfield operation
- How to efficiently run such a laboratory
- How to produce accurate and reliable results
- How the laboratory contributes to the safe and efficient operation of plant and equipment
- How to calculate chemical injection rates



- Fiscal responsibilities during custody transfer
- Laboratory Quality Management
- How to use the laboratory for problem solving

## **PROGRAMME OBJECTIVES**

- To better understand the function, importance and operation of oil and gas laboratories
- To understand how to optimise the day to day operation of the oil and gas laboratory
- To gain an insight into how Quality Management is important within and Oil and Gas Laboratory
- To understand how the results obtained from the laboratory can enhance the operation of the process system and contribute to the integrity of plant and equipment
- To understand how process chemicals function and how to utilise them effectively
- To understand how metering systems operate and how laboratory data contributes to accurate metering and tanker loading (custody transfer).

## **TRAINING METHODOLOGY**

This is carried out by a series of lectures supported by comprehensive notes; delegates are encouraged to ask questions and participate in the sessions leading to an informal learning environment

## **PROGRAMME SUMMARY**

This programme covers the essential aspects of the day-to-day operation of oil and gas laboratories, how the laboratory is used as a tool to facilitate optimisation of the process plant, control of environmental emissions, plant and equipment integrity and for product quality control.



# PROGRAMME OUTLINE

## DAY 1 - Role of the Laboratory Chemist in Oil and Gas Laboratories

- Quality Assurance and Control
- Control of Chemicals
- Health, Safety and Environmental Considerations
- Adherence to Legislation

### Laboratory Management

- Laboratory Quality Management
- Equipment Maintenance
- Housekeeping
- Calibrations
- Stock Management
- Reporting
- Chemical Segregation and Storage

## DAY 2 - Sampling of Process Fluids

- The importance of representative sampling
- Health and Safety considerations
- Pressurised Sampling (oil and gas)
- Atmospheric Sampling
- Water Sampling

### Laboratory Analysis

- Base Sediment & Water
- Water in Oil by Karl Fischer
- Oil in Water Testing



- Density Measurement
- Determination of Reid Vapour pressure
- General Produced Water Testing
- Potable Water Testing
- Utilities Analysis
- Microbiological Analysis

### **DAY 3 - Plant and Equipment**

- Separation Systems
- Oilfield Chemicals

### **DAY 4 - Plant and Equipment**

- Enhanced Oil Recovery
- Metering

### **DAY 5 - Plant and Equipment**

- Summary
- Programme Evaluation Session



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.