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# Course: Oil and Gas Laboratory Operations Management MBA

Code	City	Hotel	Start	End	Price	Language - Hours
109	Hamburg (Germany)	Hotel Meeting Room	2025-02-24	2025-03-28	5950 €	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 and Development 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 coffee break sessions during lectures.