

Training Title

GENERALIST ENGINEER CROSS-DISCIPLINARY OIL & GAS OPERATIONS FUNDAMENTALS

Training Duration

5 days

Training Venue and Dates

REF PE064	Generalist Engineer Cross-Disciplinary Oil & Gas Operations Fundamentals	5	05 – 09 Jan. 2026	\$6,500	Barcelona, Spain
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Will be held in any of the 4 or 5-star hotels. The exact venue will be informed upon finalization.

Training Fees

\$6,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

Training Certificate

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING OVERVIEW

TRAINING DESCRIPTION

This course is a cross-disciplinary training opportunity for the various subsurface/surface professionals working in the upstream/midstream oil and gas industry. The participants will learn the process facilities engineering principles with emphasis on collaboration and integration among the various disciplines. Participants will learn multi-disciplinary oil processing characterization through PVT data, resource evaluation through geological and engineering data, reservoir drive mechanisms and production optimization. The concepts being taught will be enforced with actual field examples and case studies. Covering the following basics:

- Software literacy
- Automation and data
- Strategic planning
- Quality systems

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- This training course will cover also modern industry and regulatory agencies throughout the world demand verifiable, robust, consistent and effective quality systems

Every engineer, regardless of their area of work, must have core skills in deploying effective quality systems, risk assessments, environmental impacts, to develop and implement proper Standard Operating Procedures that ensure quality and safety everywhere.

TRAINING OBJECTIVES

Upon completion of this course, the participants will be able to understand the following aspects:

- The Generalist Engineer Role and Functions
- Oil & Gas Process Operations Optimization
- Automation and Data
- Strategic Planning
- Quality Systems
- Why we need Generalist Engineer Job
- Auditing in Oil & Gas industries
- Basic Drilling Technologies
- Enhanced Oil Recovery Fundamentals
- Fundamental Skills for Petroleum Geoscientists
- Fundamentals in Petrophysical Log Interpretation: Theory and Practice
- Fundamentals of Oil & Gas Production
- Fundamentals of Renewable Energy
- Geo-Energy and the Global Energy System – An Introduction
- Introduction to Artificial Neural Network
- Introduction to Completion Design
- Introduction to Drilling, Completion and Workover Operations
- Introduction to Energy Transition
- Introduction to Geomechanics
- Introduction to Production Operations
- Introduction to the Oil & Gas Industry
- Mastering Finance for Non-Financial Oil & Gas Personnel
- Microfluidics in the Oil & Gas Industry: Applications and Potential
- Petrophysics Insights: Interdisciplinary Reservoir Evaluation
- Reservoir Engineering for Non-Reservoir Engineers

WHO SHOULD ATTEND?

This course has been researched and developed for Experienced Managers, Superintendents, Supervisors, Engineers, Planners, Team Leaders and Coordinators of:

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- Oil & gas process control and operations staff
- Oil & gas equipment & facilities handling Controller
- Oil & gas field operator II
- Petroleum Engineers
- Reservoir Engineers
- Maintenance Engineers

TRAINING METHODOLOGY:

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivate everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on a daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

DAILY OUTLINE

Following topics will be covered in 5 days.

Day (1):

Introduction to oilfields facilities Networking

- The Generalist Engineer Role and Functions
- Oil & Gas Process Operations Optimization
- Automation and Data
- Strategic Planning
- Quality Systems
- Oilfield common operations elements
- Case Study (1)
- Illustrative related video
- Workshop – learned lessons
- Day (1) quiz

Day (2):

Importance of Operation and Maintenance Planning

- Why we need Generalist Engineer Job

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- Auditing in Oil & Gas industries
- Basic Drilling Technologies
- Enhanced Oil Recovery Fundamentals
- Fundamental Skills for Petroleum Geoscientists
- Available Geoscientists
- Case Study
- Supervision System
- O&M requirements

- Case Study (2)
- Illustrative related video
- Workshop – learned lessons
- Day (2) quiz

Day (3):

Protection of oil & gas processing facilities

- Corrosion control requirement
- Fundamentals in Petrophysical Log Interpretation: Theory and Practice
- Fundamentals of Oil & Gas Production
- Fundamentals of Renewable Energy
- Geo-Energy and the Global Energy System – An Introduction
- Introduction to Artificial Neural Network
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- Case Study (3)
- Illustrative related video
- Workshop – learned lessons
- Day (3) quiz

Day (4):

Operation and Management (O&M) of Oil & Gas Facilities

- Introduction to Completion Design
- Introduction to Drilling, Completion and Workover Operations
- Introduction to Energy Transition
- Introduction to Geomechanics
- Introduction to Production Operations
- Monitoring process information
- Operation records and reports

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- Electrical control systems
- Case study (4)
- Illustrative related video
- Workshop – learned lessons
- Day (4) quiz

Day (5):

Enovation and Software Molding applications

- Introduction to the Oil & Gas Industry operations troubleshooting
- Mastering Finance for Non-Financial Oil & Gas Personnel
- Microfluidics in the Oil & Gas Industry: Applications and Potential expectation
- Petrophysics Insights: Interdisciplinary Reservoir Evaluation
- Reservoir Engineering for Non-Reservoir Engineers
- Case study (5)
- Illustrative related video
- Workshop – learned lessons
- The course recaps
- Competency exam

NOTE:

Pre & Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.

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