

TRAINING TITLE

OILFIELDS PROCESSES AND EQUIPMENT

Training Duration

5 day

Training Venue and Dates

Ref. No. PE115	Oil fields processes and Equipment	5	15-19 Sep. 2025	\$5,500	DUBAI, UAE
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In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- \$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

A learning program designed to equip professionals with a thorough understanding of the critical processes, technologies, and equipment used in oilfields within the oil and gas industry. This course covers the entire lifecycle of oilfield operations, from exploration and drilling to production, processing, and transportation. It focuses on the essential equipment and techniques involved in each stage and addresses the safety, environmental, and regulatory considerations that are integral to the industry's operations.

TRAINING OBJECTIVES

By the end of the course, participants will be able to understand

- Gain an in-depth understanding of the key processes in oilfield operations, from exploration to production.
- Learn about the latest oilfield technologies and equipment, including drilling rigs, production systems, and artificial lift systems.
- Understand the critical safety protocols, environmental concerns, and regulatory standards governing oilfield operations.
- Develop the skills needed to troubleshoot, maintain, and optimize oilfield equipment to maximize efficiency and reduce downtime.
- Explore real-world case studies

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WHO SHOULD ATTEND?

This course is intended for:

- **Petroleum Engineers**
- **Production Engineers**
- **Reservoir Engineers**
- **Well Services Technicians**
- **Drilling Engineers**
- **Oilfield Operations Personnel**
- **Maintenance Technicians**
- **Health, Safety, and Environmental (HSE) Professionals**
- **Equipment Manufacturers and Suppliers**
- **Project Managers in Oil & Gas**
- **Field Supervisors and Managers**

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 motivating 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 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

COURSE PROGRAM: www.definettraining.com

Day 1: Introduction to Oilfield Operations and Exploration

Objective: To understand the oilfield lifecycle and the fundamental processes involved in exploration and drilling.

- **Introduction to the Oil and Gas Industry**
 - **Overview of the oil and gas sector**
 - **Importance of oilfields in global energy markets**
 - **Key terminologies and concepts**

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- **Oilfield Exploration**
 - Geology and reservoir engineering fundamentals
 - Seismic surveys and well logging techniques
 - Exploration methods: Wildcat wells, appraisal wells
- **Drilling Operations**
 - Drilling rigs and types of drilling equipment
 - Drilling process and drilling mud systems
 - Wellbore construction and casing design

Day 2: Drilling Equipment and Techniques

Objective: To dive deeper into the tools, equipment, and techniques involved in the drilling process.

- **Drilling Rigs and Equipment**
 - Components of a drilling rig: Top drive, blowout preventer, rotary table
 - Drilling strings, bits, and downhole tools
 - Rig types and selection criteria for specific conditions
- **Well Control and Safety**
 - Blowout prevention techniques and BOPs
 - Well kill techniques and pressure management
 - Drilling hazards and safety measures
- **Advanced Drilling Techniques**
 - Directional drilling and horizontal wells
 - Managed pressure drilling
 - Drilling optimization and cost control

Day 3: Production and Well Completion

Objective: To understand the processes and equipment used to bring hydrocarbons to the surface.

- **Well Completion Techniques**
 - Well completion processes: Open-hole vs. cased-hole completions
 - Production tubing and packers
 - Perforation techniques and production stimulation (hydraulic fracturing, acidizing)
- **Artificial Lift Systems**
 - Types of artificial lift: Rod pumps, gas lift, electric submersible pumps (ESP)
 - Selection criteria for artificial lift systems
 - Installation and maintenance of lift systems
- **Production Optimization**

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- Measuring and managing production rates
- Reservoir management and enhanced oil recovery (EOR) methods
- Artificial intelligence and data analytics in production optimization

Day 4: Oilfield Processing and Transportation

Objective: To examine the processes that prepare oil and gas for transportation and commercial use.

- **Production Facilities and Equipment**
 - Separator types (two-phase, three-phase)
 - Dehydration and desulfurization units
 - Storage and transportation of crude oil and gas
- **Oil and Gas Processing**
 - Separation processes: Gravity, centrifugal, and mechanical separation
 - Gas treatment and sweetening (removal of H₂S, CO₂)
 - LPG, LNG production, and transportation
- **Pipeline Systems**
 - Pipeline construction, operation, and integrity management
 - Transportation challenges: Flow assurance and pipeline maintenance
 - Safety and environmental considerations in pipeline operations

Day 5: Environmental, Safety, and Regulatory Considerations

Objective: To understand the environmental, safety, and regulatory frameworks governing oilfield operations.

- **Environmental Impact of Oilfields**
 - Environmental risks: Spills, contamination, emissions
 - Waste management and remediation techniques
 - Climate change impacts and sustainable practices
- **Health, Safety, and Environmental (HSE) Practices**
 - Safety protocols in oilfield operations
 - Emergency response and incident management
 - HSE regulations and certifications (OSHA, API)
- **Industry Standards and Regulations**
 - Global and regional oil and gas regulations
 - Ethical issues and corporate responsibility
 - Emerging technologies for safe and sustainable operations

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NOTE:

Pre-& Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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