MERCURY

Oil & Gas Artificial Lift (ESP) Training

11 - 15 Apr 2027
Cairo (Egypt)

Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

Oil & Gas Artificial Lift (ESP) Training

Ref.: 15812_328962 **Date:** 11 - 15 Apr 2027 **Location:** Cairo (Egypt) **Fees:** 4000 **Euro**

Introduction:

Artificial lift is a process in oil and gas operations that enables the extraction of hydrocarbons from wells where natural pressure is insufficient. This Oil and Gas Artificial Lift ESP training course focuses on Electric Submersible Pumps ESP. This widely used artificial lift technology helps maximize oil recovery rates by providing the energy required to lift fluids from the reservoir to the surface.

Participants will learn ESP systems, covering principles, system components, operational techniques, and troubleshooting methodologies. This foundational Oil and Gas Artificial Lift ESP training course empowers field operators, production engineers, and technical personnel with the knowledge to optimize ESP performance, increase production, and reduce downtime in oilfield operations.

Through case studies and hands-on simulations, attendees will learn the engineering principles and best practices for effective artificial lift management. The Oil and Gas Artificial Lift ESP training provides an understanding of artificial lift systems in the oil and gas industry, focusing on ESP artificial lift systems. Participants will explore the definition of artificial lift, its importance in enhancing oil recovery, and the types of artificial lift in oil and gas, including gas lift artificial lift and electric submersible pumps ESP.

This Oil and Gas Artificial Lift ESP course delves into artificial lift methods, design, and optimization solutions to improve artificial lift performance. It covers the latest artificial lift equipment and artificial lift systems for oil and gas, equipping engineers with knowledge of artificial lift solutions and strategies for artificial lift optimization. It is ideal for professionals seeking to enhance their expertise as artificial lift engineers and those looking to implement advanced artificial lift methods for oil and gas operations.

Targeted Groups:

- Field Operators and Technicians.
- Production Engineers.
- Petroleum Engineers.
- Maintenance Engineers.
- Operations Managers.
- Oilfield Service Providers.
- Artificial Lift Specialists.
- Reservoir Engineers.
- Drilling and Completion Engineers.

Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

Course Objectives:

At the end of this Oil and Gas Artificial Lift ESP course, the participants will be able to:

- Understand the fundamentals of Electric Submersible Pumps ESP and their role in artificial lift.
- Identify key components and functions of ESP systems in oilfield operations.
- Learn to design and select appropriate ESP systems for specific oil and gas well conditions.
- Gain skills to install, commission, and maintain ESP systems safely and effectively.
- Develop troubleshooting techniques for common ESP issues to minimize downtime.
- Optimize ESP performance to enhance production rates and oil and gas well efficiency.
- Apply best practices in monitoring and analyzing ESP performance metrics.
- Strengthen knowledge of safety protocols and risk management in ESP operations.
- Explore case studies to understand practical applications and challenges in the field.

Targeted Competencies:

By the end of this Oil and Gas Artificial Lift ESP training, the participants competencies will:

- ESP System Design and Selection.
- Installation and Commissioning Techniques.
- Troubleshooting and Problem Solving.
- Performance Monitoring and Optimization.
- Maintenance and Reliability Management.
- Electrical and Mechanical Knowledge of ESPs.
- Safety and Risk Management in Artificial Lift.
- Production Efficiency Analysis.
- Reservoir and Fluid Dynamics Understanding.

Course Content:

Unit 1: Introduction to Artificial Lift and ESP Systems:

- Overview of artificial lift methods and their applications in oil and gas.
- Introduction to Electric Submersible Pumps ESP and their role in boosting production.
- Types of ESP systems and their suitability for different well conditions.
- Key benefits and limitations of ESPs in oilfield operations.
- Introduction to key ESP components: motor, pump, seal, and intake.

Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

Unit 2: ESP System Design and Selection Criteria:

- Analyzing well characteristics for ESP suitability.
- Criteria for selecting ESP system size and specifications.
- Understanding power requirements for ESPs in different reservoirs.
- Choosing ESP materials based on fluid composition and temperature.
- Calculating and configuring pump stages to meet specific production targets.
- Introduction to ESP software tools for system design.

Unit 3: Installation, Commissioning, and Operational Best Practices:

- Step-by-step ESP installation procedures and requirements.
- Overview of commissioning processes to ensure ESP readiness.
- Safety protocols during ESP installation and start-up.
- Techniques for optimizing ESP settings for various production rates.
- Operational guidelines to enhance ESP efficiency and reduce wear.
- Practical case studies on installation challenges and solutions.

Unit 4: Monitoring, Troubleshooting, and Maintenance of ESPs:

- Identifying common ESP issues and failure modes.
- Techniques for real-time ESP performance monitoring.
- Using downhole sensors and surface equipment for diagnostics.
- Troubleshooting ESP problems: low efficiency, electrical issues, gas lock, etc.
- Maintenance schedules and procedures to maximize ESP lifespan.
- Importance of well fluid analysis in ESP maintenance strategies.

Unit 5: Performance Optimization and Advanced ESP Applications:

- Methods for optimizing ESPs to match changing reservoir conditions.
- Advanced technologies: variable speed drives VSDs and automated control systems.
- Integrating data analytics for predictive maintenance and optimization.
- Techniques for extending ESP run life in harsh environments.
- Economic evaluation of ESP performance and cost-effectiveness.
- Future trends in ESP technology and artificial lift innovation.

Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

MERCURY

Registration form on the :
Oil & Gas Artificial Lift (ESP) Training

code: 15812 **From:** 11 - 15 Apr 2027 **Venue:** Cairo (Egypt) **Fees:** 4000 **Euro**

Complete & Mail or fax to Mercury Training Center at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng):
.....
Position:
.....
Telephone / Mobile:
.....
Personal E-Mail:
.....
Official E-Mail:
.....

Company Information

Company Name:
.....
Address:
.....
City / Country:
.....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng):
.....
Position:
.....
Telephone / Mobile:
.....
Personal E-Mail:
.....
Official E-Mail:
.....

Payment Method

☐ Please invoice me

☐ Please invoice my company