



London TDM

# Engineering and Technical Skills Training Courses

**Course Venue:** United Arab Emirates - Dubai

**Course Date:** From 26 October 2025 To 30 October 2025

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

This comprehensive 5-day course on 'Mechanical Seals and Pumps Maintenance' is designed for industry professionals seeking to deepen their technical knowledge and skills. Participants will learn the fundamentals of mechanical seals and pumps, understand their operation and maintenance, and become proficient in troubleshooting and repair techniques to ensure optimal performance in various industrial applications.

### Objectives

- Understand the fundamentals of mechanical seals and pump operation.
- Identify and classify different types of pumps and mechanical seals.
- Learn best practices for maintenance and troubleshooting.
- Develop skills to perform inspections and diagnostics.
- Enhance safety awareness during maintenance procedures.

## Course Outlines

### Day 1: Introduction to Mechanical Seals

- Overview of mechanical seals and their applications
- Components and types of mechanical seals
- Seal material selection and compatibility
- Principles of seal operation and performance
- The importance of seal face lubrication

### Day 2: Introduction to Pumps

- Classification of pumps: centrifugal, positive displacement, and others
- Pump components and design considerations
- Basic fluid dynamics in pump operations
- Common pump performance curves and their interpretation
- Energy efficiency in pump systems

### Day 3: Pump and Seal Installation and Commissioning

- Pre-installation checks and procedures
- Proper alignment and installation techniques
- System flushing and startup processes
- Troubleshooting installation errors
- Documenting installation and commissioning records

### Day 4: Maintenance and Troubleshooting

- Developing a maintenance schedule and checklist
- Common mechanical seal and pump failure modes
- Diagnostic tools and techniques for troubleshooting
- Repair procedures for mechanical seals and pumps
- Case studies and real-world problem-solving exercises

## **Day 5: Advanced Topics and Safety**

- Advanced sealing technologies and innovations
- Pump system optimization and upgrades
- Environmental considerations and compliance
- Safety protocols during maintenance operations
- Final assessment and feedback session