



London TDM

# Mechanical and Electrical Engineering Training Courses

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

**Course Date:** From 19 October 2025 To 23 October 2025

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

This course, "Advanced Mechanical Sealing Systems," is designed for professionals in the mechanical engineering field who seek to deepen their understanding of sealing technologies. Participants will engage with advanced concepts and practical applications of sealing systems, crucial for enhancing equipment reliability and efficiency in various industries.

## Objectives

- Understand the principles and classifications of mechanical sealing systems.
- Evaluate the performance and limitations of different types of seals.
- Implement advanced sealing technologies in industrial applications.
- Analyze failure modes and troubleshooting techniques for sealing systems.
- Develop strategies for maintenance and optimization of sealing systems.

## Course Outlines

### Day 1: Introduction to Mechanical Seals

- Overview of Mechanical Sealing Systems
- Basic Sealing Principles and Theory
- Classification of Mechanical Seals
- Materials and Designs Used in Seals
- Applications and Industry Use Cases

### Day 2: Design and Selection of Mechanical Seals

- Criteria for Seal Selection
- Design Parameters and Considerations
- Compatibility with Fluids and Environments
- Advanced Computational Methods in Seal Design
- Case Studies and Practical Examples

### Day 3: Installation and Commissioning of Seals

- Installation Guidelines for Different Seal Types
- Commissioning Best Practices
- Common Installation Errors and Solutions
- Standards and Certifications in Sealing Systems
- Interactive Workshop: Hands-On Installation

### Day 4: Performance Evaluation and Troubleshooting

- Performance Testing Techniques
- Troubleshooting Common Seal Failures
- Root Cause Analysis Approaches
- Predictive Maintenance Strategies
- Interactive Session: Problem Solving in Sealing Systems

## **Day 5: Advancements and Future Trends in Sealing Technology**

- Innovations in Seal Materials and Design
- Environmental Considerations in Seal Selection
- Emerging Technologies and Smart Seals
- Future Challenges in the Sealing Industry
- Final Project: Designing a Seal System for Specific Applications