



MAESTRO
CONSULTANTS

MECHANICAL MAINTENANCE FUNDAMENTALS

COURSE OUTLINE 2025

Contact Us On :

Tel : +971 7 2042072 |

Email: training@maestrouae.net

Website: www.maestrouae.net

TRAINING TITLE

MECHANICAL MAINTENANCE FUNDAMENTALS

VENUE

DUBAI, UAE

DURATION

5 Days

DATES

08-12 September 2025

PRICE

\$5,250 per attendee including training material/handouts, morning/afternoon coffee breaks, and Lunch.

TRAINING INTRODUCTION

This 5-day course provides a solid foundation in mechanical maintenance principles and practices for industrial equipment and systems. It is designed to build essential knowledge on the function, operation, and maintenance of mechanical components such as pumps, bearings, gears, seals, and rotating machinery. The course emphasizes the importance of proper maintenance procedures, failure prevention, and safety, enabling participants to support reliable and efficient plant operations.

TRAINING OBJECTIVES

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

- Understand the core concepts of mechanical maintenance and its role in asset reliability.
- Identify and describe the function of key mechanical components and systems.
- Apply standard procedures for inspection, maintenance, and troubleshooting of mechanical equipment.
- Recognize common mechanical faults and failure modes.
- Support safe maintenance practices and compliance with industry standards

TRAINING AUDIENCE

- Mechanical maintenance technicians and supervisors
- Plant and facility maintenance personnel
- Junior mechanical engineers
- Operations personnel involved in equipment upkeep
- Anyone new to the mechanical maintenance field or seeking a refresher

TRAINING OUTLINE

Day 1: Introduction to Mechanical Maintenance

- Importance of mechanical maintenance in plant reliability
- Types of maintenance: preventive, predictive, corrective
- Maintenance planning and documentation basics
- Safety practices and maintenance standards
- Overview of maintenance tools and equipment

Day 2: Bearings, Shafts, and Couplings

- Types and functions of bearings (ball, roller, plain)
- Lubrication principles and bearing care
- Shaft alignment basics and misalignment issues
- Coupling types and inspection guidelines
- Vibration and noise as fault indicators

Day 3: Pumps, Compressors, and Seals

- Centrifugal and positive displacement pumps
- Compressor types and maintenance considerations
- Common pump/compressor failure modes
- Mechanical seals and packing types
- Routine inspection and maintenance tasks

Day 4: Gears, Gearboxes, and Transmission Systems

- Gear types and applications
- Gearbox construction and lubrication

- Inspection and alignment of transmission systems
- Identifying wear, backlash, and noise issues
- Basic troubleshooting techniques

Day 5: Troubleshooting and Maintenance Best Practices

- Systematic approach to troubleshooting mechanical issues
- Root cause identification and failure prevention
- Documentation and maintenance reporting
- Communication with engineering and operations teams
- Review of mechanical maintenance best practices and course summary

TRAINING CERTIFICATE

MAESTRO CONSULTANTS Certificate of Completion for delegates who attend and complete the training course.

METHODOLOGY

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations. The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.