Skills International for Training & Consulting

Training Course

Mechanical Maintenance Fundamentals

Skills International for Training & Consulting

سكلز الدولية للتدريب والإستشارات

Course Plan

Course Introduction:

Mechanical maintenance plays a critical role in ensuring the reliability, safety, and efficiency of industrial systems and equipment. As machinery becomes more complex and operations demand higher availability, technicians and engineers must be well-versed in maintenance fundamentals.

This course provides participants with a comprehensive understanding of mechanical maintenance principles, common mechanical systems and components, maintenance planning, and troubleshooting techniques. The training emphasizes both theoretical knowledge and practical skills necessary for effective maintenance operations.

Course Objectives:

- ✓ Understand the principles of mechanical maintenance and its importance in industrial operations.
- ✓ Identify the main components and functions of mechanical systems.
- ✓ Apply preventive, predictive, and corrective maintenance strategies.
- ✓ Utilize tools, instruments, and maintenance techniques safely and effectively.
- ✓ Diagnose and troubleshoot common mechanical issues.
- ✓ Develop maintenance plans and schedules based on operational needs.
- ✓ Interpret technical drawings and maintenance manuals.
- ✓ Improve the reliability and lifespan of mechanical systems.
- ✓ Follow safety procedures and best practices in maintenance activities.

Who should attend?

- Maintenance technicians and engineers
- Mechanical supervisors and team leaders
- Plant operators and mechanical fitters
- Industrial equipment users and operators
- Technical staff in manufacturing and production
- Engineering students and recent graduates
- Anyone involved in mechanical system maintenance

Training Methods:

- ✓ Online Video material.
- ✓ Presentation.
- ✓ Live Interactive sessions.
- ✓ Course presenter will make extensive use of all tools that will be needed for the virtual environment.
- ✓ Questions & Answers

Course Outline:

Day One

- Introduction to Mechanical Maintenance
- Types of Maintenance: Preventive, Predictive, and Corrective
- Basic Mechanical Principles and Terminology
- Mechanical Components: Bearings, Gears, Couplings, Belts, Chains
- Pumps and Compressors: Types, Operation, and Maintenance

Day Two

- Valves and Piping Systems
- Hydraulic and Pneumatic Systems Maintenance
- Shaft Alignment and Balancing Techniques
- Lubrication Systems and Best Practices
- Maintenance Tools and Equipment Handling

Day Three

- Fasteners and Torque Specifications
- Vibration Analysis and Condition Monitoring
- Thermal Imaging and Non-Destructive Testing (NDT)
- Root Cause Failure Analysis (RCFA)
- Reading Technical Drawings and Schematics

Day Four

- Maintenance Planning and Scheduling
- Spare Parts Management and Inventory Control
- Standard Operating Procedures (SOPs)
- Work Order Systems and Documentation
- Safety Practices in Mechanical Maintenance

Day Five

- Lockout/Tagout (LOTO) Procedures
- Emergency Maintenance and Response
- Reliability-Centered Maintenance (RCM)
- Energy Efficiency in Mechanical Systems
- Case Studies and Practical Troubleshooting Exercises

Training Details

Course Duration	5 Days
Pre-Schedule	29 Sept – 3 Oct 2025
Venue	DoubleTree by Hilton London Kensington
Training Fees Per Person	KWD 1800 (One Thousand Eight Hundred Only)
Course Fees Include	✓ Tuition documentation ✓ Curriculum and Training Handout ✓ Five star Lunch ✓ Completion Certificates ✓ Lunch Included