TRAINING TITLE

MECHANICAL COURSE FOR NON-MECHANICAL ENGINEERS

Training Duration

5 day

Training Venue and Dates

Ref. No. ME164	**Mechanical Course for Non-Mechanical Engineers**	**5**	**23-27 June 2025**	**$5,500**	**Abu Dhabi, UAE**

In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- **$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

This course is designed for non-mechanical engineers who want to understand the fundamentals of mechanical engineering principles, applications, and terminology. It provides an introduction to core mechanical concepts such as mechanics, thermodynamics, materials, and mechanical systems, empowering participants to work effectively with mechanical engineers and teams.

TRAINING OBJECTIVES

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

- Understand the basic concepts and principles of mechanical engineering.
- Gain knowledge of common mechanical systems and their applications.
- Learn about materials and their properties in mechanical applications.
- Understand basic thermodynamics and heat transfer principles.
- Develop the ability to communicate effectively with mechanical engineers and technical teams.

WHO SHOULD ATTEND?

- Non-mechanical engineers and professionals from other engineering disciplines.
- Project managers and team leaders working with mechanical engineers.

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- Technicians, operators, and staff in manufacturing or mechanical environments.
- Anyone interested in gaining a foundational understanding of mechanical engineering.

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.
Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

COURSE PROGRAM

Day 1: Introduction to Mechanical Engineering

- Overview of mechanical engineering and its role in industries
- Basic mechanical concepts: Force, motion, energy, and work
- Introduction to mechanical systems and devices
- Common mechanical engineering applications in various industries

Day 2: Mechanics and Materials

- Basic principles of mechanics: Statics and dynamics
- Types of materials used in mechanical engineering: Metals, polymers, and composites
- Material properties: Strength, hardness, flexibility, and fatigue
- Introduction to stress, strain, and mechanical properties testing

Day 3: Thermodynamics and Heat Transfer

- Basic thermodynamics concepts: Energy, work, heat, and power
- The laws of thermodynamics and their applications
- Heat transfer methods: Conduction, convection, and radiation
- Introduction to engines, refrigeration systems, and heat exchangers

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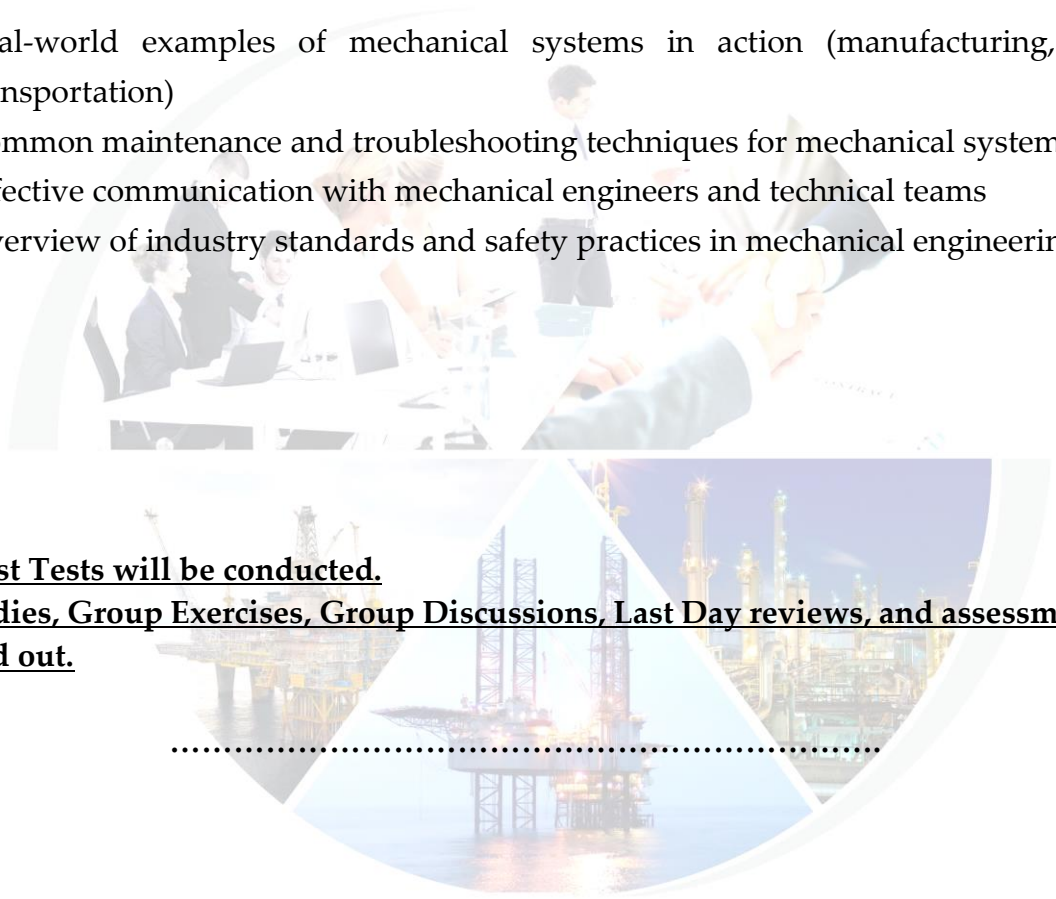
Day 4: Mechanical Systems and Components

- Overview of mechanical systems: Pumps, compressors, motors, and turbines
- Mechanical components: Gears, bearings, shafts, and fasteners
- Understanding mechanical drawings, symbols, and diagrams
- Introduction to vibration, noise, and lubrication in mechanical systems

Day 5: Practical Applications and Communication in Mechanical Engineering

- Real-world examples of mechanical systems in action (manufacturing, energy, transportation)
- Common maintenance and troubleshooting techniques for mechanical systems
- Effective communication with mechanical engineers and technical teams
- Overview of industry standards and safety practices in mechanical engineering



NOTE:
Pre-& Post Tests will be conducted.
Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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