

### **Course Title: BEARING TECHNOLOGY & MAINTENANCE**      **Course Code: MEC 101**

#### **Course Background / Summary:**

Ball bearings are rotational components that contribute to mechanical assemblies' high performance and long lifetime. In all but the most low-end products, bearings are used with parts that need to rotate. Different types of bearings exist for another purpose. Today, bearing design continues to progress with advanced materials and new geometries enabled by computer-aided design (CAD).

A better understanding of bearing design, especially from a technology & maintenance perspective, can be critical to ensuring the system's performance, durability, and productivity.

#### **Course Objectives:**

- Understand the basic theory and practice of bearing design from a technology and maintenance perspective.
- Identify and optimize the application of different types of bearing at the workplace.
- Enhance individual competencies and knowledge of basic bearing applications and design consideration.
- Analyze and predict the capability and requirement of bearing in actual working conditions.

#### **Target Audience:**

- Service, maintenance, machine repair, or plant/facility staff of an industrial plant, facility, institution, public utility, or commercial building which uses bearings and related equipment.
- Engineers and technicians at industrial plants and facilities responsible for bearing performance and reliability.
- Teaching staff (including vocational and technical teachers) who teach bearings and related equipment.
- Those interested in rolling bearing and rotating equipment performance.

#### **Course Duration: 4 Days**

### **Course Contents**

#### **1.0 Introduction to Bearing Design**

#### **2.0 Rolling Element Bearing**

#### **3.0 Journal Bearing**



**4.0 Thrust Bearings**

**5.0 Tapper Roller Bearing**

**6.0 Selection of Bearing**

**7.0 Bearing Design Factor**

**8.0 Mechanical Aspect of Bearing Design**

**9.0 Bearing Design Procedure**