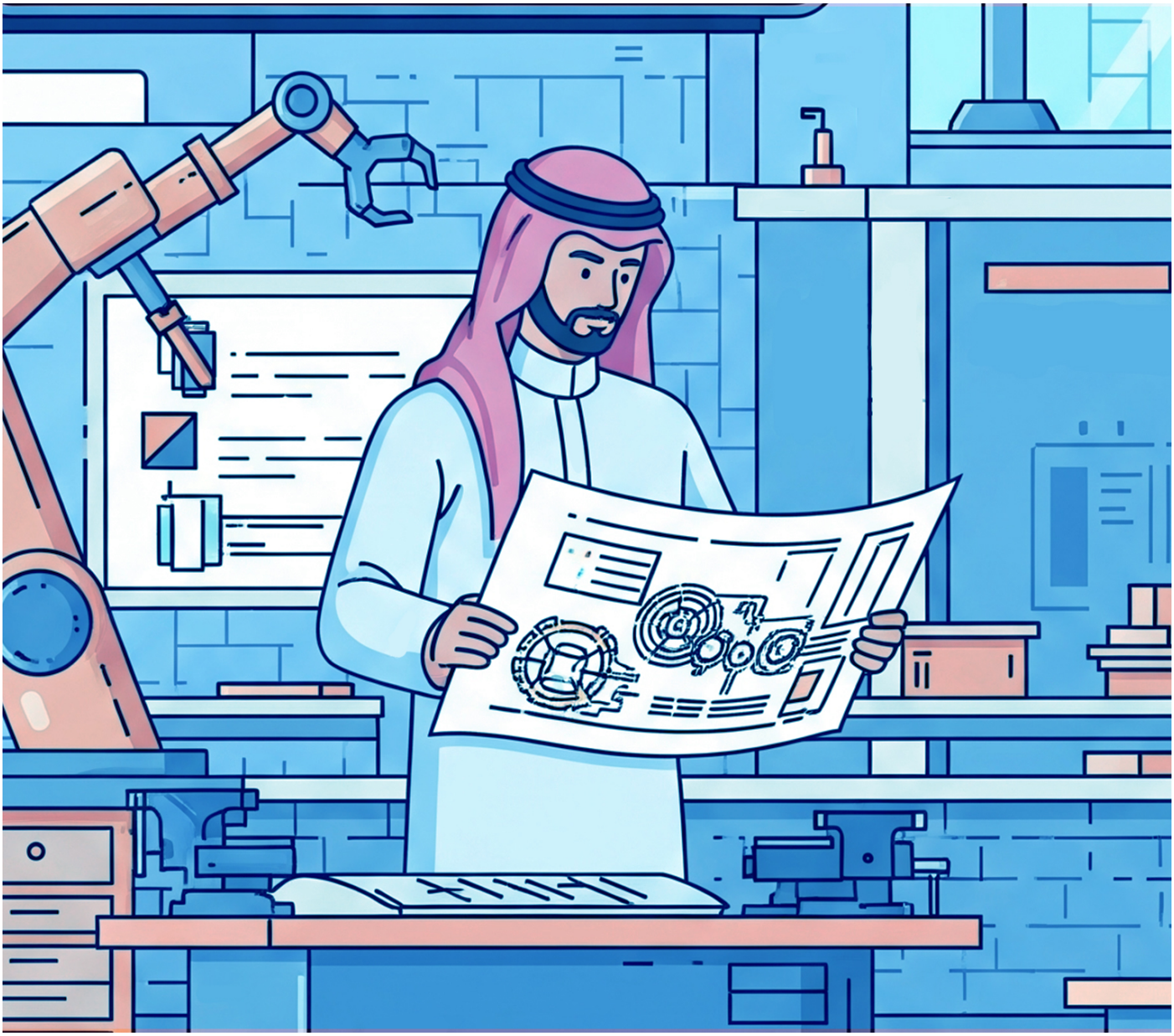
BOOST
THE LEADING TRAINING PROVIDER



Mechanical Engineering

Pump Installation and Maintenance

Course Introduction

This training course is designed to provide participants with the essential basic pumping concepts. This course will cover topics such as maintenance of packing and seals, maintenance and overhaul of centrifugal pumps, and maintenance of rotary pumps.

Target Audience

- Automotive Engineer
- Boiler Engineer
- Ceramics Engineer
- Equipment Engineer
- High-Pressure Engineer
- Marine Engineer
- Mechanical Design Engineer
- Mechanical Engineer
- Naval Architect
- Pipeline Engineer
- Power Engineer
- Rotating Equipment Engineer
- Senior Mechanical Engineer
- Turbine Engineer
- Validation Engineer

Learning Objectives

- Assess a pump's capacity by determining the NPSHA of the system.
- Measure the brake horsepower required to drive a pump under given conditions.
- Identify the two major functions of packing and seals.

- Explain the selection and installation of packing rings on a pump shaft.
- Learn how to install a mechanical seal on a pump shaft.
- Explain how to align and level a pump on its base.
- Recognize the needs for and uses of auxiliary pump drives.
- Identify the major symptom of faulty packing and of cavitation on a pump impeller.
- Describe the causes and remedies of common centrifugal pump problems.
- Conduct a periodic inspection of the major pump components.
- Understand the procedures involved in disassembling, inspecting, reassembling, and reinstalling a centrifugal pump.
- Check the runout of a pump shaft and the clearances between stationary rings and the impeller or rotating rings.
- Identify the differences between the different types of rotary pumps.
- Identify the major problem areas in a rotary pump.
- Perform troubleshooting for some of the common problems of rotary pumps.
- Develop a maintenance schedule for inspections and a record-keeping log.

Course Outline

- **01 DAY ONE**

  Basic Pumping Concepts
  - Available and required NPSH
  - Checking pump capacity
  - Computing pump power requirements
  - Operational factors
  - Priming a pump
- **02 DAY TWO**

  Maintaining Packing and Seals
  - Selecting packing material
  - Removing old
  - Installing new packing
  - Mechanical seals
  - Maintenance and troubleshooting
- **03 DAY THREE**

Maintaining Centrifugal Pumps

- Installing the pump
- Preparing the foundation
- Checking alignment
- Inspection
- Common problems
- Cavitation
- Ring seizure
- Overheating

- **04 DAY FOUR**

Overhauling Centrifugal Pumps

- Preparation
- Moving, disassembling, reassembling, and reinstalling a pump
- Inspecting parts
- Checking clearances

- **05 DAY FIVE**

Maintaining Rotary Pumps

- Installing, maintaining, and troubleshooting rotary pumps
- Aligning pump and piping
- Direction of rotation
- Startup
- Scheduling inspections
- PM

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 7, 2025	April 11, 2025	5 days	4250.00 $	UAE - Abu Dhabi
July 28, 2025	Aug. 1, 2025	5 days	4250.00 $	UAE - Dubai
Nov. 2, 2025	Nov. 6, 2025	5 days	4250.00 $	Egypt - Cairo