MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

COUPLINGS, GEARS, GEAR BOXES, BEARINGS, SEALS & LUBRICATION

"Optimizing Rotating Equipment Reliability through Effective Selection, Maintenance, and Lubrication Practices"

Schedule

Date	Venue	Fees
19 – 20 Feb 2026	Kuala Lumpur, Malaysia	USD 1995 per delegate
21 – 22 Apr 2026	Dubai, UAE	USD 1995 per delegate
08 – 09 Jul 2026	Manama, Bahrain	USD 1995 per delegate
11 – 12 Nov 2026	Riyadh - KSA	USD 1995 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Couplings, gears, gearboxes, bearings, seals, and lubrication are critical components of rotating machinery systems. Their performance directly impacts equipment reliability, efficiency, and operational safety. Improper selection, installation, or maintenance can lead to premature failures, unplanned shutdowns, and costly repairs.

This 2-day technical course provides a comprehensive understanding of how these mechanical elements function and interact within systems. It emphasizes best practices in component selection, fault diagnosis, condition monitoring, and lubrication management to improve equipment uptime and reduce maintenance costs.

Objectives

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

- Understand the functions and failure modes of couplings, gears, bearings, seals, and lubricants
- Select appropriate components based on load, speed, environment, and alignment needs
- Apply installation, inspection, and preventive maintenance procedures
- Diagnose common faults using symptoms and condition monitoring tools
- Optimize lubrication strategies for various operating conditions

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Why Attend

- Gain practical knowledge to reduce mechanical failure and downtime
- Learn how to extend the life of critical rotating components
- Improve machinery efficiency and reliability through precision maintenance
- Understand the interplay of components in rotating equipment systems
- Identify root causes of wear, misalignment, overheating, and noise

Target Audience

This program is designed for:

- Maintenance and reliability engineers
- Mechanical and plant engineers
- Rotating equipment specialists and technicians
- Maintenance planners and supervisors
- Technical professionals responsible for asset performance

Individual Benefits

Key competencies that will be developed include:

- Understanding mechanical component function and failure
- Proficiency in inspecting, aligning, and assembling couplings and gears
- Practical lubrication and contamination control techniques
- Knowledge of bearing life calculation and seal compatibility
- Ability to interpret wear patterns and prevent recurring faults

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced equipment downtime and maintenance costs
- Improved root cause failure analysis of mechanical issues
- Enhanced predictive and preventive maintenance capability
- Better safety, reliability, and lifecycle management of assets
- Stronger compliance with OEM and industry best practices

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Component function, types, and application limits
- Case Studies – Real-world failures and what could have been done differently
- Workshops – Fault diagnosis, maintenance checklists, and oil analysis
- Peer Exchange – Common challenges and solutions across industries
- Tools – Maintenance charts, lubrication tables, and inspection guides

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Course Outline

DETAILED 2-DAY COURSE OUTLINE

Training Hours: 07:30 AM – 03:30 PM **Daily Format**: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Mechanical Components – Operation and Failure Prevention

- Module 1: Couplings – Selection and Maintenance (07:30 – 09:30) • Types: rigid, flexible, fluid, gear, grid • Misalignment effects and vibration signatures • Installation and alignment procedures
- Module 2: Gears and Gearboxes (09:45 – 11:15) • Gear types and transmission principles • Load capacity, backlash, and tooth wear • Gearbox troubleshooting and inspection
- Module 3: Bearings – Types and Performance (11:30 – 01:00) • Ball, roller, thrust, and specialty bearings • Mounting and dismounting techniques • Bearing clearance, preload, and failure analysis
- Module 4: Workshop – Component Failure Modes (02:00 – 03:30) • Teams analyze real failure samples and match to root causes

Day 2: Sealing Systems and Lubrication Practices

- Module 1: Seals – Types and Troubleshooting (07:30 – 09:30) • Static vs. dynamic seals • Common causes of leakage • Compatibility with lubricants and operating conditions
- Module 2: Lubrication Fundamentals (09:45 – 11:15) • Oil vs. grease – selection and application • Viscosity, additives, and film strength • Lubrication intervals and replenishment
- Module 3: Lubrication Monitoring and Contamination Control (11:30 – 01:00) • Oil sampling and condition-based maintenance • Filtration, breathers, and moisture management • Interpreting lab reports and wear analysis
- Module 4: Final Workshop – Maintenance & Lubrication Plan (02:00 – 03:30) • Develop a component care plan for a simulated system

Certification

Participants will receive a Certificate of Completion in Couplings, Gears, Gear Boxes, Bearings, Seals & Lubrication, confirming their technical proficiency in maintaining and optimizing critical rotating equipment components.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**