

Reliable Precision Maintenance (RPM)

Training Course Outline

COURSE DESCRIPTION

Learn about precision maintenance best practices in this ultimate training session for individuals who maintain and repair rotating machines. The *Reliable Precision Maintenance* course is a three and a half day intensive training program that covers the principles and techniques of alignment, causes of machine vibration and unbalance, precision measuring tools, lubrication, couplings, bearings, mechanical seals, and efficient maintenance practices.



Who Should Take This Class?

- Newer, less experienced technicians, who rely heavily on others to complete basic tasks or need constant supervision.
- Those who need to reduce employee turnover and build morale and teamwork.
- Anyone who loses hours aligning the same machine on a regular basis.
- Those who have a high number of bearing and seal failures, and coupling replacements.
- Technicians who don't perform shaft alignment frequently enough to be proficient and need to build confidence.



Hands-On

Significant hands-on training time, building both competence & confidence.



Expert Trainers

Expert trainers with decades of maintenance experience on all types of industrial equipment.



Small Class Size

Small class size with an excellent student to instructor ratio.



Complimentary Toolkit

Includes Audel's Millwright & Mechanics Guidebook; Precision Measuring Tools: 6" Steel Ruler, Digital Calliper, 0-1" Micrometer, Feeler Gauge Set, Belt Tensioning Tool, Belt & Sheave Gauge Tool, and Laser Tachometer.

CURRICULUM

Day One

Safe Working Practices: PPE, LOTO

Maintenance Strategies: Reactive, Preventative, Predictive, and Condition-Based

Belt and Sheave Installation and Maintenance: Sheave Alignment, Belt Tensioning, Sizing, Maintenance

Vibration Basics: Purpose, Terms, Levels, Application in Maintenance

Practical Application of Vibration: Safe and proper sensor application, understanding a basic vibration report, correlating vibration with repair actions and troubleshooting

Day Two

Precision Measuring Tools: Discuss and Demo: Dials, Belt and Sheave Gauges, Callipers, Micrometers, Laser Alignment, Sheaves

Bearing and Fits: Bearing Functions, Fits, Bearing Classifications, Installation and Handling Practices

Coupling: Types, Alignment Tolerances, Maintenance

Shaft Alignment: Terms, Purpose, Pre-Alignment, Basic and Advanced Alignment Practices

Hands-On: Vibration Data Collection and Analysis

Hands-On: Shaft Alignment

Day Three

Fasteners and Torque: Bolts, Hardness, Torque Values, Thread Types

Lubrication: Types and Weights, Cleanliness, Compatibility, Levels, Grease Applications

Mechanical Seals: Proper Design, Cleanliness, Handling

Q&A

Hands-On: Alignment and Vibration Checks

Day Four

Balancing Fundamentals: Identifying Types and Causes of Unbalance

Machinery Balancing: What is Unbalance, Types: Static, Couple, Dynamic

Q&A

Hands-On Practice

Exam: Optional

**Have a Question,
Want to Sign Up?**

acoem.us/training

CONTACT US
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-  **Duration:** 3.5 Days
-  **Class Size:** 15 Students
-  **Location:**
Acoem USA
530-G Southlake Blvd.
Richmond, VA 23236
Also, available at your facility.
-  **Cost:** Visit our website
for up-to-date pricing