Predictive Maintenance Strategy

Mapped Services Training Provider

Target Student

Maintenance Managers, PdM Managers, Maintenance professionals, continuing education students, and any person responsible for justifying or managing duties related to a condition-based monitoring program.

Learning Objectives

1. **Explain how applying a combination of maintenance strategies mitigates risk and optimizes your asset maintenance plan.**

2. **Define the purpose and benefits of condition-based maintenance.**

3. **Describe how predictive maintenance enables proactive maintenance planning and scheduling.**

4. **Explain how to use risk mitigation to establish a condition-based maintenance program.**

   a. **Criticality, FMEA, Failure Modes**

5. **Make a business case to justify CbM program investment.**

6. **Summarize benchmarks and trends in the predictive and condition-based maintenance disciplines.**

7. **Summarize prevalent condition-based technologies in use today:**

   a. **Definition**
   b. **Application**
   c. **Needed tools, training, resources and safety concerns for implementation**
   d. **Critical success factors**
   e. **Pitfalls**
   f. **Case study**

8. **Describe the role of Precision Maintenance in a Condition-based Maintenance program**

9. **Report program results: reliability improvements and financial value.**

10. **Draft program action plan that incorporates critical success factors in the following areas:**

    a. **Program objectives**
    b. **Application: technology, techniques and equipment**
    c. **Measures**
    d. **Infrastructure and resources**
    e. **Organizational support**

Condition-based maintenance is a philosophy that uses the equipment's operating condition to make data-driven decisions and improve quality, productivity and profitability. Unlike industry courses that focus on applying specific predictive technologies like vibration monitoring or oil analysis, this course focuses on establishing, managing and sustaining results from a comprehensive condition-based program.

The course considers predictive maintenance and other techniques as a component of a larger asset maintenance strategy to diagnose, prevent and postpone failures. You will learn the theory and application of multiple PdM technologies. You will review critical success factors of results-producing programs. Through group activities and case studies, you will determine which technologies to use, how to set goals for your program, track progress and practice how to communicate results to different stakeholders. By the end of the session, you will have outlined what a successful condition-based program can look like at your organization.

This course is one of six courses that can be applied to the Maintenance Management Certification program.

This course is one of the four courses that lead to the Reliability Engineering Certification program.