BLACKBIRD FOR TRAINING

# Maintenance and Operation Planning

11 – 22 January 2027
Washington (USA)



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## Introduction

In today's fast-paced industrial world, an efficient operations and maintenance plan is essential for the smooth functioning of equipment and facilities. This Advanced Course in Maintenance and Operation Planning is designed to provide participants with the knowledge and hands-on skills necessary to develop a robust facility operation and maintenance plan. Participants will dive deep into the latest trends in operation and maintenance management, focusing on maintenance repair and operations MRO, preventive maintenance strategies, and modern technologies that help maximize equipment reliability, reduce downtime, and optimize resources. With a combination of theoretical learning, practical exercises, and real-life case studies, this course prepares you to effectively manage operation and maintenance activities and achieve long-term operational success.

## Course Objectives

- Understand the importance of maintenance and operation planning: Learn the role of maintenance and operations in enhancing equipment reliability and availability.
- Explore trends and best practices: Gain insights into the most effective operations and maintenance solutions, including preventive and predictive maintenance.
- Master maintenance scheduling and resource allocation: Develop strategies for maintenance repair and operating supplies and optimize scheduling to improve efficiency.
- Learn failure analysis techniques: Understand how to conduct root cause analysis RCA and failure modes and effects analysis FMEA to address equipment issues proactively.
- Implement predictive maintenance technologies: Learn advanced techniques such as vibration analysis and thermography to monitor and predict potential equipment failures.
- Use performance metrics: Track key performance indicators KPIs to assess the effectiveness of your maintenance and operation efforts and improve them over time.
- Understand budgeting and cost control: Develop skills in maintenance budgeting and managing operations and maintenance funds efficiently.
- Leverage CMMS and EAM software: Learn to implement Computerized Maintenance Management Systems CMMS and Enterprise Asset Management EAM tools in real-world settings to streamline your operation and maintenance contract.
- Enhance team management skills: Gain insights into the maintenance and operations definition, organizational structures, and team management strategies to ensure smooth operation within your team.



# Course Outlines

## Day 1: Introduction to Maintenance and Operation Planning

- The critical role of maintenance and operation planning for equipment reliability and operational efficiency.
- Overview of different maintenance strategies: reactive, preventive, predictive, and proactive.
- Introduction to operation and maintenance management tools and software solutions, such as CMMS.

## Day 2: Objectives and Benefits of Preventive Maintenance

- Understanding preventive maintenance for asset longevity and cost reduction.
- Developing and implementing preventive maintenance schedules for operational efficiency.
- Implementing condition-based monitoring techniques as part of a comprehensive facility operation and maintenance plan.

## Day 3: Maintenance Planning and Scheduling

- Effective maintenance scheduling and resource allocation.
- Optimizing maintenance repair and operations by utilizing best practices in planning.
- Key considerations in work order management and operation and maintenance activities.

## Day 4: Failure Analysis and Root Cause Identification

- Root cause analysis RCA methodologies and their application in maintenance management.
- Tools and methods for effective failure analysis and developing corrective action plans.
- Understanding failure modes and effects analysis FMEA to predict and mitigate issues.

## Day 5: Predictive Maintenance Technologies

- Introduction to predictive maintenance technologies and their role in reducing downtime.
- Using vibration analysis and infrared thermography for early fault detection.
- Implementing predictive strategies in your maintenance and operation activities.

## Day 6: Maintenance Performance Metrics and KPIs

- Key performance indicators KPIs for assessing maintenance and operational effectiveness.
- Techniques for using maintenance performance metrics to drive continuous improvement.
- Establishing and refining performance measurement systems in maintenance operations.



## Day 7: Maintenance Budgeting and Cost Control

- Key budgeting strategies for maintenance repair and operating supplies.
- Cost control techniques for efficient use of operations and maintenance funds.
- Understanding total cost of ownership TCO in maintenance decision-making.

## Day 8: Computerized Maintenance Management Systems CMMS

- Overview of CMMS and EAM software for efficient maintenance management.
- Key features and benefits of CMMS in operation and maintenance management.
- Implementing CMMS and operation and maintenance contract management in real-world scenarios.

## Day 9: Maintenance Organization and Team Management

- Structuring maintenance teams for optimal productivity.
- Understanding roles and responsibilities within the maintenance department.
- Effective communication and collaboration in maintenance repair and operations.

## Day 10: Maintenance Optimization and Continuous Improvement

- Strategies for optimizing maintenance workflows to maximize efficiency.
- Implementing Lean maintenance principles and continuous improvement methodologies like Six Sigma and Kaizen.
- Developing a culture of continuous improvement in facility operation and maintenance.

# Why Attend This Course: Wins & Losses!

- Practical Skills for Real-World Applications: Learn how to design a comprehensive operations and maintenance plan for your facility, optimizing both preventive and predictive maintenance.
- Boost Operational Efficiency: Implement strategies that reduce downtime, enhance equipment reliability, and ensure smoother facility operation and maintenance.
- Gain Mastery of Cutting-Edge Tools: Get hands-on experience with advanced CMMS and EAM software that help you streamline maintenance repair and operating supplies management.
- Improve Budgeting and Cost Management: Master maintenance budgeting techniques and strategies for managing operations and maintenance funds effectively.
- Enhance Career Opportunities: Whether you are a maintenance technician, a manager, or a professional involved in maintenance and operation activities, this course will provide you with a competitive edge in the field.



## Conclusion

By the end of the Advanced Course in Maintenance and Operation Planning, you will be equipped with the essential knowledge and practical skills to enhance your facility's maintenance strategies. From mastering maintenance and operation planning, to implementing predictive technologies, and optimizing maintenance repair and operations, you will be ready to reduce downtime, lower costs, and ensure maximum operational efficiency.

**Don’t miss the opportunity to upgrade your expertise and stay ahead in the evolving world of operations and maintenance management!**

