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ME243:
Maintenance Planning & Scheduling Excellence

Training Description:

Effective maintenance planning and scheduling are critical to improving equipment reliability, reducing downtime, maximizing maintenance productivity and optimizing maintenance costs. Organizations that implement structured planning and scheduling processes achieve higher schedule compliance, improved workforce utilization, increased asset availability and greater operational efficiency.

This intensive training course provides participants with internationally recognized maintenance planning and scheduling best practices based on reliability-centered maintenance principles, work management excellence and leading industrial standards. Participants will learn how to develop effective maintenance plans, prioritize work, optimize maintenance resources, manage preventive maintenance programs, utilize CMMS effectively, monitor maintenance KPIs and continuously improve maintenance performance.

Throughout the training course, participants will engage in practical workshops, case studies, group discussions and planning exercises that simulate real maintenance environments. The training course is suitable for organizations operating in oil & gas, petrochemicals, manufacturing, utilities, mining, power generation, transportation and heavy industries.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Understand maintenance planning and scheduling best practices
- ✓ Differentiate planner and scheduler responsibilities
- ✓ Develop efficient maintenance work management processes
- ✓ Improve work order quality and planning accuracy
- ✓ Estimate labor, tools, materials, and contractor requirements
- ✓ Build realistic weekly and daily maintenance schedules
- ✓ Increase schedule compliance and workforce productivity
- ✓ Optimize preventive and predictive maintenance planning
- ✓ Manage maintenance backlog using risk-based prioritization
- ✓ Plan and coordinate shutdowns and major maintenance events
- ✓ Utilize CMMS for planning, scheduling, reporting, and KPI monitoring
- ✓ Analyze maintenance performance using international KPIs
- ✓ Implement continuous improvement strategies for maintenance excellence

Training Designed for:

This training course is intended for Maintenance Managers, Maintenance Engineers, Maintenance Supervisors, Maintenance Planners, Maintenance Schedulers, Reliability Engineers, Asset Integrity Engineers, Plant Engineers, Operations Supervisors, Production Managers, CMMS Administrators, Shutdown Coordinators, Project Engineers, Maintenance Team Leaders and Technical Professionals responsible for maintenance planning.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

MAINTENANCE PLANNING FUNDAMENTALS & WORK MANAGEMENT EXCELLENCE

- Module 1: Introduction to Maintenance Planning & Scheduling
  - Maintenance Management Fundamentals
  - Maintenance Strategy Overview
  - Reactive, Preventive, Predictive and Proactive Maintenance
  - Asset Reliability Principles
  - Reliability Culture
  - Maintenance Workflow Overview
  - Work Management Process
  - Maintenance Organizational Structure
- Planner & Scheduler Roles
  - Planner Roles and Responsibilities
  - Scheduler Roles and Responsibilities
  - Planner vs Scheduler
  - Maintenance Team Interfaces
  - Coordination with Operations
- Maintenance KPIs
  - Maintenance Performance Indicators
  - Schedule Compliance
  - PM Compliance
  - MTBF
  - MTTR
  - OEE
  - Backlog KPIs
  - Planned vs Unplanned Work
- Practical Workshop:
  - Mapping the Maintenance Work Management Process
  - Planner vs Scheduler Responsibility Matrix
  - Maintenance Workflow Exercise

DAY TWO:

MAINTENANCE PLANNING PROCESS & RESOURCE PLANNING

- Module 2: Maintenance Planning Process
  - Work Identification
  - Work Request Management
  - Work Prioritization
  - Work Order Lifecycle
  - Job Scope Definition
  - Planning Standards

- Job Planning Principles

❖ Module 3: Work Order Planning
- Reviewing Work Requests
- Defining Job Scope
- Estimating Labor Hours
- Material Requirements Planning
- Spare Parts Planning
- Tool & Equipment Planning
- Contractor Planning
- Safety Requirements
- Permit to Work Considerations

❖ Module 4: Resource Planning
- Workforce Planning
- Skill Requirements
- Craft Allocation
- Capacity Planning
- Resource Availability
- Contractor Resource Planning
- Resource Leveling

❖ Practical Workshop:
- Develop Complete Maintenance Job Plans
- Estimate Labor and Resources
- Prepare Resource Allocation Plan

DAY THREE:

MAINTENANCE SCHEDULING & PREVENTIVE MAINTENANCE

❖ Module 5: Maintenance Scheduling Fundamentals
- Scheduling Principles
- Weekly Scheduling Process
- Daily Scheduling Process
- Schedule Development
- Schedule Optimization
- Schedule Compliance Best Practices
- Coordination with Operations

❖ Module 6: Preventive Maintenance Scheduling
- PM Program Development
- PM Frequencies
- PM Optimization
- Regulatory Maintenance Requirements
- Predictive Maintenance Integration
- PM Backlog Management

❖ Shutdown & Turnaround Planning
- Shutdown Planning Fundamentals
- Major Maintenance Coordination
- Resource Coordination

- Schedule Integration

❖ Practical Workshop:

- Build Weekly Maintenance Schedule
- Develop Preventive Maintenance Calendar
- Schedule Optimization Exercise

DAY FOUR:

BACKLOG MANAGEMENT, SHUTDOWN PLANNING & CMMS

❖ Module 7: Maintenance Backlog Management

- Understanding Maintenance Backlogs
- Backlog Prioritization
- Risk-Based Prioritization
- Backlog Aging
- Backlog KPI Monitoring
- Backlog Reduction Strategies

❖ Module 8: Shutdown & Major Maintenance Planning

- Shutdown Planning Process
- Scope Development
- Critical Path Activities
- Resource Coordination
- Risk Assessment
- Execution Monitoring
- Lessons Learned

❖ Module 10: CMMS Systems

- Introduction to CMMS
- Work Order Management
- Preventive Maintenance Setup
- Resource Assignment
- Reporting & Dashboards
- Data Quality Management

❖ Common CMMS Platforms

- IBM Maximo
- SAP Plant Maintenance
- Infor EAM

❖ Practical Workshop:

- Analyze Maintenance Backlog
- Build Shutdown Maintenance Plan
- CMMS Planning Exercise

DAY FIVE:

PERFORMANCE MEASUREMENT, REPORTING & CONTINUOUS IMPROVEMENT

❖ Module 9: Maintenance Performance Measurement

- Schedule Compliance
- Work Order Completion Rate
- Planned vs Unplanned Work
- Resource Utilization

- Backlog Analysis
- MTBF
- MTTR
- OEE Analysis
- PM Compliance

❖ Module 11: Maintenance Reporting & Dashboards
- Weekly Maintenance Reports
- Monthly Reports
- Executive Dashboards
- KPI Scorecards
- Maintenance Analytics
- Performance Review Meetings

❖ Module 12: Best Practices in Maintenance Planning & Scheduling
- Planner Best Practices
- Scheduler Best Practices
- Work Prioritization Matrix
- Maintenance Maturity Assessment
- Reliability Culture
- Continuous Improvement
- Lessons Learned
- Action Planning

❖ Final Workshop:
Participants will complete an integrated maintenance planning project that includes:
- Creating a Weekly Maintenance Schedule
- Estimating Labor and Resource Requirements
- Building a Preventive Maintenance Schedule
- Analyzing Maintenance Backlog
- Developing Maintenance KPI Dashboards
- Preparing a Shutdown Maintenance Plan
- Presenting an Improvement Action Plan

❖ Course Conclusion
❖ POST-ASSESSMENT and EVALUATION

Key Performance Indicators Covered:

❖ Schedule Compliance (%)
❖ PM Compliance (%)
❖ Planned vs Unplanned Work (%)
❖ Backlog Weeks
❖ Backlog Age
❖ Work Order Completion Rate
❖ Resource Utilization (%)
❖ Mean Time Between Failures (MTBF)
❖ Mean Time To Repair (MTTR)
❖ Overall Equipment Effectiveness (OEE)
❖ Emergency Work Percentage

- Maintenance Cost per Asset
- Preventive Maintenance Effectiveness
- Maintenance Productivity Index

Training Methodology:

The course includes:

- Industrial case studies
- Practical planning exercises
- CMMS demonstrations
- Maintenance scheduling simulations
- KPI analysis
- Individual assignments
- Best practice benchmarking

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

USD$ TBA - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:
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