Maintenance Planning and Scheduling with CMMS: Work Orders, Backlog and KPIs

18 – 22 July 2027
Riyadh - KAFD district five-star



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Introduction:

Maintenance planning and scheduling breaks down when work orders arrive with vague descriptions, job plans live in planners' heads, backlog grows unmeasured and the CMMS holds duplicate equipment records and missing spare parts links. Crews then wait for parts, permits and access instead of working. This Core Concept course equips planners, schedulers and supervisors to run the work order cycle in a CMMS from request to close-out, build job packages, control backlog and issue a weekly schedule operations will release equipment for. Participants leave with a Work Management Improvement Plan and a sample weekly schedule.

Course Objectives:

- Run the maintenance work order cycle in a CMMS from work request and approval through planning, scheduling, execution and technical close-out
- Build job plans and task lists with labour, material, tool, permit and duration estimates that crews can execute without delay
- Measure and control maintenance backlog in crew-weeks and prioritise work using a documented criticality and priority matrix
- Prepare a weekly maintenance schedule and daily crew assignments, and agree equipment release with operations in a coordination meeting
- Set up preventive maintenance plans, equipment hierarchy, failure codes and spare parts links in the CMMS so that work history is usable for decisions
- Report schedule compliance, PM compliance, planned work percentage and wrench time, and act on the results

Target Audience:

- Planning staff who prepare job plans, material requests and work packages for maintenance crews
- Scheduling staff who build weekly and daily maintenance schedules and coordinate equipment release
- First-line maintenance supervisors who assign work, check completion and close work orders
- CMMS administrators and key users responsible for equipment records, PM plans and system configuration
- Maintenance stores and materials coordinators who link spare parts to equipment and reserve materials for jobs
- Operations coordinators who raise work requests and agree maintenance windows with maintenance teams

Course Outline:

Day 1: The Maintenance Work Management Process and Current-State Review

- Work Management Cycle Map: Request, Approval, Planning, Scheduling, Execution and Close-Out
- Planning Versus Scheduling: Separate Roles, Planner-to-Craft Ratios and Planner Time Theft
- Work Order Types and Status Codes in a CMMS
- Proactive Versus Reactive Work Balance and the Cost of Break-In Work
- Work Management Maturity Self-Assessment Against a Process Checklist

Day 2: CMMS Data Structures, Hierarchy and Reference Models

- Equipment Hierarchy Design Using the ISO 14224 Taxonomy Levels
- Functional Location and Equipment Record Conventions with Naming and Numbering Rules
- Failure, Cause and Remedy Code Libraries Aligned with ISO 14224
- Bill of Materials and Spare Parts Linkage to Equipment Records
- SMRP Best Practice Metrics and EN 15341:2019+A1:2022 Indicator Definitions for Work Management

Day 3: Planning Job Packages and Building the Weekly Schedule

- Work Request Screening and Priority Matrix Based on Equipment Criticality and Risk
- Job Plan and Standard Task List Writing with Labour, Tools, Materials and Permits
- Material Reservation, Kitting and Staging Before Scheduling
- Backlog Measurement in Crew-Weeks and Ready Backlog Control
- Weekly Schedule Build, Resource Levelling and the Operations Coordination Meeting

Day 4: Preventive Maintenance Set-Up, Data Integrity and CMMS Adoption Problems

- Preventive Maintenance Plan Configuration: Time, Meter and Condition Triggers in the CMMS
- PM Task Review to Remove Duplicate, Low-Value and Missing Tasks
- Work Order Close-Out Quality: Completion Notes, Actual Hours and Failure Coding Audits
- Master Data Cleansing: Duplicate Equipment, Orphan Records and Obsolete Spare Parts
- CMMS Implementation Roadmap, User Roles, Training and Adoption Measures

Day 5: Case Practice and the Work Management Improvement Plan

- Process Plant Case: Backlog Analysis and Priority Reclassification from CMMS Extracts
- Facilities Maintenance Case: Weekly Schedule and Daily Assignment Build
- KPI Dashboard Calculation: Schedule Compliance, PM Compliance and Wrench Time
- Work Management Improvement Plan Drafting with Actions, Owners and Targets
- Plan Presentation and Peer Challenge

Skills You Will Gain:

- Work Order Management
- Job Plan Development
- Backlog Control
- Weekly Maintenance Scheduling
- Equipment Hierarchy Design
- Failure Coding
- Preventive Maintenance Configuration
- Maintenance KPI Reporting

Why Attend This Course:

- Return with a Work Management Improvement Plan and a sample weekly schedule built from realistic CMMS data
- Reduce crew waiting time for parts, permits and equipment access by preparing complete job packages before work is scheduled
- Give managers backlog and compliance figures they can trust because work orders are coded and closed consistently
- Compare planning and CMMS practice with peers from oil and gas, utilities, manufacturing and facilities management in several countries

Conclusion:

Maintenance crews are productive when work arrives planned, scheduled and supported by accurate CMMS data. This course moves from the work management cycle and roles, through equipment hierarchy, failure codes and KPI definitions, to job planning, backlog control and weekly scheduling, and then to preventive maintenance set-up, data cleansing and CMMS adoption. The final day applies these methods to case data and produces a Work Management Improvement Plan with a sample weekly schedule ready for review with maintenance and operations leaders.