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COURSE BROCHURE

Advanced Building Services Maintenance and Performance Training Course

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Registered in the United Kingdom and Saudi Arabia

Advanced Building Services Maintenance and Performance Training Course

Building Services Maintenance and Performance is a 2-week advanced training course for building services managers, MEP engineers and maintenance supervisors, built around one work product, a building services maintenance and performance plan. Chillers, switchgear, pumps and lifts now run longer hours under tighter energy targets, and a single plant failure can close a ward, a data hall or a shopping floor. Jupiter Prime Training delivers this course on Building Services Maintenance and Performance.

Why Building Services Maintenance and Performance Matters Now

Three pressures meet in the plant room. Occupiers expect stable temperatures, clean air, hot water and working lifts at all hours. Energy prices and carbon targets push owners to cut consumption from HVAC and lighting, which account for most building energy use. Skilled MEP technicians are scarce, so supervisors must plan work precisely and use building management system data rather than routine visits. A building whose services are maintained to a clear plan runs efficiently and avoids costly breakdowns; one maintained by habit wastes energy and suffers failures at peak load. The course links engineering practice to ISO 41001 for facility management systems.

Who Gains Most from Building Services Maintenance and Performance

- Managers accountable for the reliability of HVAC, electrical, plumbing and vertical transport plant
- MEP engineers who set maintenance tasks, tolerances and inspection frequencies
- Supervisors who schedule technicians, specialist subcontractors and shutdown windows
- BMS operators who monitor alarms, trends and control strategies
- Energy leads who track consumption and propose plant upgrades

An engineering or technical services department gains most when its MEP engineers, supervisors and BMS operators attend together and adopt one maintenance regime.

Building Services Maintenance and Performance Capabilities

Participants leave able to keep each engineering system running to specification and prove it with data from the plant itself.

- Design planned preventive maintenance schedules for chillers, air handling units and pumps — maintenance supervisors
- Specify electrical inspection, thermography and switchgear testing regimes — duty holders
- Apply water system and drainage maintenance routines that protect hygiene — occupiers
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Calculate energy performance indicators and identify plant-level savings — energy leads and finance
- Build BMS alarm and trend reviews into daily operations — control room operators
- Assess commissioning and handover records before accepting new plant — project teams

Key Building Services Maintenance and Performance Terms

- MEP Services — the mechanical, electrical and plumbing systems that heat, cool, power, light and supply water to a building.
- Building Management System BMS — a control network that monitors and operates HVAC, lighting and other services from central software.
- Planned Preventive Maintenance PPM — scheduled inspection and servicing carried out before failure to keep plant within specification.
- Commissioning — the process of testing and adjusting new or modified systems so they perform as designed before handover.
- Energy Use Intensity — annual building energy consumption divided by floor area, used to compare performance across sites.
- Thermography — infrared imaging that reveals hot spots in electrical panels and mechanical equipment before they fail.

Building Services Maintenance and Performance Day by Day

Day 1: Engineering Services in Context

- Building Services Inventory — Mapping HVAC, Electrical, Plumbing and Lifts
- Service Criticality by Building Type — Hospitals, Offices, Malls and Data Halls
- Occupier Comfort Requirements — Temperature, Humidity, Air and Lighting
- Plant Room Condition Survey — Spotting Wear, Leaks and Hazards
- Maintenance Regime Benchmark — Comparing Current Practice With Peers

Day 2: HVAC Systems

- Chiller and Cooling Tower Maintenance — Efficiency and Water Treatment
- Air Handling Unit Servicing — Filters, Belts, Coils and Dampers
- Fan Coil and VRF Maintenance — Zone Comfort and Refrigerant Checks
- Ventilation Rate Verification — Fresh Air and Indoor Air Quality
- Refrigerant Management — Leak Detection and Phase-Out Planning

Day 3: Electrical Systems

- High and Low Voltage Switchgear Testing — Protecting Supply Continuity
- Standby Generator and UPS Maintenance — Load Tests and Battery Health
- Thermographic Surveys — Finding Overheating Before Failure
- Earthing and Lightning Protection Inspection — Safety and Equipment Protection
- Lighting Systems and Controls — LED Retrofit and Occupancy Sensing

Day 4: Plumbing, Drainage and Water Systems

- Domestic Water Distribution — Pumps, Tanks and Pressure Sets
- Hot Water Generation — Calorifiers, Temperature Control and Hygiene
- Drainage and Sewage Systems — Blockage Prevention and Lift Stations
- Water Treatment Regimes — Closed Systems and Corrosion Control
- Leak Detection and Metering — Reducing Water Loss

Day 5: Vertical Transport and Fire Systems

- Lift and Escalator Maintenance Contracts — Callout Rates and Availability
- Lift Modernisation Planning — Controllers, Drives and Doors
- Fire Alarm and Detection Servicing — Device Testing and Cause-and-Effect
- Sprinkler and Wet Riser Maintenance — Pumps, Valves and Flow Tests
- Smoke Control Systems — Fans, Dampers and Pressurisation Checks

Day 6: Planned Preventive Maintenance Design

- Task Library Development — Standard Procedures for Each Plant Type
- Frequency Setting — Manufacturer Guidance, Duty and Criticality
- CMMS Work Order Scheduling — Balancing Technician Hours and Shutdowns
- Reactive Maintenance Triage — Priority Codes and Response Times
- Specialist Subcontractor Coordination — Scopes, Access and Sign-Off

Day 7: Building Management Systems

- BMS Architecture — Controllers, Sensors, Networks and Front-End Software
- Alarm Management — Reducing Nuisance Alarms and Missed Faults
- Trend Logging and Fault Detection — Spotting Drift in Plant Performance
- Control Strategy Optimisation — Setpoints, Schedules and Sequencing
- BMS Cyber Hygiene — Access Control and Network Separation

Day 8: Energy Performance

- Energy Use Intensity Benchmarking — Comparing Buildings and Seasons
- Sub-Metering Strategy — Allocating Consumption to Systems and Tenants
- Plant Efficiency Tests — Chiller COP and Pump Curves
- Energy Conservation Measures — Variable Speed Drives and Heat Recovery
- Measurement and Verification — Proving Savings After Upgrades

Day 9: Commissioning, Handover and Lifecycle

- Commissioning Plan — Pre-Functional Checks and Functional Performance Tests
- Handover Documentation — O&M Manuals, As-Built Drawings and Warranties
- Seasonal Recommissioning — Restoring Design Performance in Older Plant
- Plant Replacement Forecasting — Expected Life and Condition Evidence
- Maintenance Performance KPIs — PPM Completion, Uptime and Repeat Faults

Day 10: Practising the Building Services Maintenance and Performance Plan

- Case Building Plant Audit — Applying the Services Inventory and Criticality
- PPM Regime Build — Applying Task Libraries and Frequencies
- Energy Savings Shortlist — Applying Benchmarks and Efficiency Tests
- Peer Review Panel — Testing the Plan Against Failure Scenarios
- Building Services Maintenance and Performance Plan — Completing the Site Plan

Applying Building Services Maintenance and Performance After the Course

- Run a thermographic survey of main electrical panels on one site and schedule corrective work for every hot spot found.
- Review a month of BMS alarms and trends for the chiller plant, then propose setpoint and sequencing changes with estimated energy savings.

Building Services Maintenance and Performance Questions FAQ

What is Building Services Maintenance and Performance and why does it matter now?

Building Services Maintenance and Performance is the planned upkeep and tuning of HVAC, electrical, plumbing, lift and fire systems so a building runs safely and efficiently. It matters now because energy targets, longer operating hours and scarce technicians leave no room for unplanned failures.

Which roles gain most from Building Services Maintenance and Performance?

Building services managers, MEP engineers and maintenance supervisors gain most. BMS operators and energy leads also benefit because the course connects plant maintenance with control strategies and energy performance.

How does Building Services Maintenance and Performance differ from a facilities management strategy course?

It works at plant and system level rather than at portfolio and contract level. A strategy course covers sourcing models and budgets, while this course covers chillers, switchgear, pumps, lifts, BMS, commissioning and the maintenance regime for each system.

What do you bring back from Building Services Maintenance and Performance?

You bring back a building services maintenance and performance plan for a real site, with a services inventory, criticality ranking, PPM regime, BMS review routine, energy savings shortlist and KPIs.

Building Services Maintenance and Performance: The Way Forward

The building services maintenance and performance plan gives the engineering team a single basis for its next scheduling decision, often which plant to service before peak cooling season. MEP engineers, supervisors and BMS operators use it to assign tasks and monitor results. After the first season, revisit task frequencies and energy savings against breakdown records and meter data.