MERCURY

# Modern Maintenance of the Building

14 – 18 February 2027
Cairo (Egypt)



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# Modern Maintenance of the Building

**Ref:** 15576_315557 **Date:** 14 – 18 February 2027 **Location:** Cairo (Egypt) **Fees:** 4000 Euro

## Introduction:

In today's rapidly evolving architectural landscape, the importance of modern maintenance in building management cannot be overstated. Modern building maintenance encompasses various activities to ensure that structures remain safe, functional, and aesthetically pleasing over time.

The process involves implementing innovative techniques and technologies for efficient and effective building upkeep. Understanding the duties and responsibilities associated with building maintenance is crucial, as it directly impacts the structure's longevity and performance.

This modern building maintenance course will explore the various aspects of building maintenance, including its purpose, objectives, and the numerous benefits it offers. By examining the different types and meanings of building maintenance, participants will gain valuable insights into the advantages of maintaining buildings and how these practices contribute to modern infrastructures' overall success and sustainability.

This modern building maintenance training focuses on implementing computerized maintenance management systems CMMS, smart building technologies, and green building standards. It emphasizes the importance of regular inspections, troubleshooting techniques, and innovative solutions to address common maintenance challenges.

The Modern Building Maintenance course covers the latest trends in building materials and construction methods that impact maintenance strategies. Participants will learn how to develop and execute maintenance plans that ensure building systems' longevity and optimal performance. Topics include HVAC maintenance, electrical systems upkeep, plumbing, structural repairs, and landscape management.

## Targeted Groups:

- Building Managers.
- Maintenance Supervisors.
- Facility Engineers.
- Technical Staff.
- Facility Management Professionals.
- HVAC Technicians.
- Electrical Maintenance Personnel.
- Plumbing Maintenance Workers.
- Structural Repair Technicians.
- Landscape Management Teams.
- Sustainability Coordinators.
- Smart Building Technology Specialists.

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## Course Objectives:

At the end of this modern building maintenance course, the participants will be able to:

- Understand the principles of modern building maintenance.
- Implement preventive maintenance strategies.
- Enhance energy efficiency in building operations.
- Apply safety protocols in maintenance activities.
- Utilize advanced diagnostic tools for maintenance.
- Operate computerized maintenance management systems CMMS.
- Integrate smart building technologies.
- Adhere to green building standards.
- Conduct regular building inspections.
- Develop comprehensive maintenance plans.
- Troubleshoot common maintenance issues.
- Implement innovative maintenance solutions.
- Maintain HVAC systems efficiently.
- Ensure electrical systems are operational.
- Perform effective plumbing maintenance.
- Conduct structural repairs.
- Manage landscape maintenance.
- Stay updated on building materials and methods.

## Targeted Competencies:

Upon the end of this modern building maintenance training, participants' competencies will:

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- Preventive Maintenance Planning.
- Energy Efficiency Optimization.
- Safety Management in Maintenance.
- Diagnostic Tool Proficiency.
- CMMS Operation.
- Smart Building Technology Integration.
- Green Building Standards Compliance.
- Building Inspection Techniques.
- Maintenance Plan Development.
- Troubleshooting Skills.
- Innovative Maintenance Solution Implementation.
- HVAC System Maintenance.
- Electrical System Maintenance.
- Plumbing System Maintenance.
- Structural Repair Execution.
- Landscape Maintenance Management.
- Knowledge of Modern Building Materials.
- Understanding of Construction Methods.

## Course Content:

### Unit 1: Fundamentals of Modern Building Maintenance:

- Introduction to modern maintenance principles.
- Importance of preventive maintenance.
- Overview of maintenance management systems.
- Key regulatory requirements and standards.
- Role of technology in building maintenance.
- Benefits of a structured maintenance approach.
- Historical evolution of building maintenance practices.
- Impact of maintenance on building lifespan.
- Maintenance cost management and budgeting.
- Communication and coordination in maintenance teams.

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## Unit 2: Energy Efficiency and Sustainability:

- Strategies for improving energy efficiency.
- Implementation of green building practices.
- Use of sustainable materials and methods.
- Monitoring and reducing energy consumption.
- Case studies of sustainable maintenance practices.
- Energy auditing and benchmarking.
- Renewable energy integration in buildings.
- Life Cycle assessment of building components.
- Water conservation techniques in maintenance.
- Environmental impact of maintenance activities.

## Unit 3: Advanced Diagnostic and Maintenance Tools:

- Types of diagnostic tools and their applications.
- Utilization of computerized maintenance management systems CMMS.
- Integration of smart building technologies.
- Techniques for effective condition monitoring.
- Data analysis for predictive maintenance.
- Real-time monitoring and IoT applications.
- Automated maintenance scheduling.
- Benefits of remote monitoring and diagnostics.
- Calibration and maintenance of diagnostic tools.
- Software solutions for maintenance management.

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## Unit 4: Safety Protocols and Risk Management:

- Essential safety standards and regulations.
- Risk assessment and management strategies.
- Emergency preparedness and response planning.
- Training and compliance for maintenance staff.
- Incident reporting and investigation procedures.
- Personal protective equipment PPE usage.
- Safety audits and inspections.
- Hazard identification and control measures.
- Ergonomics in maintenance work.
- Fire safety and prevention in building maintenance.

## Unit 5: Specialized Maintenance Areas:

- HVAC system maintenance and optimization.
- Electrical system upkeep and troubleshooting.
- Plumbing system maintenance techniques.
- Structural integrity inspections and repairs.
- Landscape and exterior maintenance best practices.
- Roof maintenance and leak prevention.
- Elevator and escalator maintenance.
- Indoor air quality management.
- Pest control and prevention in buildings.
- Seasonal maintenance tasks and schedules.