MERCURY

Modern Maintenance Technologies Course

25 – 29 July 2027
Cairo (Egypt)



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Ref: 9124_268448 **Date:** 25 – 29 July 2027 **Location:** Cairo (Egypt) **Fees:** 4000 Euro

Introduction:

Modern Maintenance Technologies provide significant opportunities to enhance the performance and efficiency of equipment and systems, leading to an optimized Return On Investment ROI. Strategically reducing costs and minimizing downtime while maintaining the highest levels of safety and quality empowers organizations to utilize their assets fully.

This comprehensive, advanced maintenance technologies and industrial solutions course equips participants with the necessary skills and knowledge in cutting-edge maintenance technologies and methodologies. The advanced maintenance technologies and industrial solutions course encompasses a broad spectrum of areas, including equipment, systems, personnel, and management.

This advanced maintenance technologies and industrial solutions training focuses on how maintenance technology contributes to an organization's success. Emphasis is placed on practical applications and gaining tangible results that positively impact the bottom line.

What is Maintenance Technology?

Maintenance technology encompasses the methods, strategies, and tools to keep equipment and systems operating efficiently and effectively. It involves routine care, troubleshooting, and repair procedures that ensure the optimal performance of assets critical to an organization's operations. Advanced maintenance technology solutions include predictive and preventive maintenance, which leverage technology to forecast potential issues and prevent downtime. Organizations can significantly improve maintenance operations by defining maintenance technology and embracing its advancements.

Targeted Groups:

- All professionals involved in Maintenance, Engineering, and Production.
- Individuals seek to understand modern maintenance technologies, evaluate their applicability, and learn implementation strategies beneficial to their organizations.

Course Objectives:

By the end of this advanced maintenance technologies and industrial solutions course, participants will be able to:

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- Apply modern maintenance technologies and methodologies efficiently.
- Understand and articulate how various maintenance technologies enhance maintenance efficiency.
- Comprehend the synergistic effects of different technologies and their collaborative support mechanisms.
- Obtain optimal outcomes by utilizing advanced maintenance technology practices.
- Formulate a strategic action plan to integrate these technologies within individual areas of responsibility, aligning with the overall maintenance strategy and evaluating the resultant benefits.

Targeted Competencies:

At the end of this advanced maintenance technologies and industrial solutions course, the participant's competencies will:

- Asset Management: A Business-like Approach of Maintenance.
- International Standards on Asset Management PAS 55 & ISO 55000.
- Cost/benefit analysis in maintenance decision-making.
- Understand risk assessment and introduction to risk-based maintenance.
- Leverage decision support tools to augment maintenance effectiveness.
- Execute root cause analysis RCA for problem resolution.
- Audit audits, maintenance assessments, and benchmarking are used to enhance asset and maintenance management processes.

Course Content:

Unit 1: Challenging the Traditional Approaches to Maintenance:

- Embrace asset management as a business-like approach to maintenance.
- Apply cost/benefit thinking to determine accurate maintenance spending.
- Apply Basic Optimization Tools to Support Cost.
- Benefit Decisions.
- Introduction to Risk.
- Risk in maintenance and operations.

Unit 2: Risk-Based Maintenance RBM:

- Understand deterioration and possible modes of asset failure.
- Represent risk.
- Implement the seven-step Risk-Based Maintenance RBM methodology.
- Analyze failure behavior
- Select appropriate maintenance tasks.

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Unit 3: Root Cause Analysis RCA:

- Address multiple realities.
- Subjective viewpoints.
- Effective problem-solving.
- Establish cause-and-effect relationships.
- Use RCA methodologies.

Unit 4: Process Audits, Maintenance Assessments and Benchmarking:

- Where are we now?
- Introduction to Process Audits, Benchmarking, and Assessments.
- Process Audit - Basic Theory.
- Auditing in Practice.
- Maintenance Assessment - Basic Theory.
- Execution of a Maintenance Assessment of the Work Planning and Control Process.
- Benchmarking - Basic Theory.
- Benchmark Studies.
- How to Interpret Benchmark Results?

Unit 5: Performance Management and Decision Support Tools:

- Define and measure asset, activity, and process performance.
- Implement specific performance indicators and parameters.
- Influence personal behavior to strengthen performance outcomes.
- Apply advanced decision support tools to optimize maintenance operations.