

Uninterruptible Power Supply (UPS) Systems: Design to Maintenance





Uninterruptible Power Supply (UPS) Systems: Design to Maintenance

Ref: 32106_129482 Date: 22 - 26 Jun 2025 Location: Dubai (UAE) Fees: 3900 Euro

Course Description

This comprehensive 5-day course covers all aspects of Uninterruptible Power Supply UPS systems. Participants will learn about UPS principles, design considerations, installation procedures, and maintenance techniques. The course combines theoretical knowledge with practical applications to provide a well-rounded understanding of UPS systems.

Learning Objectives

- Understand the fundamental principles and types of UPS systems
- Learn to design and select appropriate UPS solutions for various applications
- Master installation procedures and best practices for UPS systems
- Develop skills in UPS maintenance, troubleshooting, and performance optimization
- Gain insights into emerging trends and technologies in UPS systems

Course Modules

Day 1: Introduction to UPS Systems

- UPS fundamentals and operating principles
- Types of UPS systems: static, rotary, and hybrid
- UPS topologies: online, offline, and line-interactive
- Power quality issues and UPS solutions

Day 2: UPS Design and Selection

- Load analysis and UPS sizing
- Battery selection and sizing
- Redundancy configurations
- Environmental considerations
- Cost-benefit analysis

Day 3: UPS Installation and Integration

- Site preparation and planning
- Electrical installation requirements
- Grounding and protection systems
- Integration with existing power systems
- Commissioning and acceptance testing

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Day 4: UPS Maintenance and Troubleshooting

- Preventive maintenance schedules
- · Battery maintenance and testing
- Common UPS faults and diagnostics
- Troubleshooting techniques
- Emergency procedures

Day 5: Advanced Topics and Future Trends

- Energy efficiency in UPS systems
- · Smart UPS and remote monitoring
- Modular UPS systems
- Renewable energy integration with UPS
- Emerging technologies in UPS design

Practical Wins for Participants

- Ability to design and specify UPS systems for various applications
- Skills to perform UPS installation and commissioning
- Expertise in UPS maintenance and troubleshooting
- Knowledge to optimize UPS performance and energy efficiency



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