



MICROSOFT TRAINING

Uninterruptible Power Supply Systems Course

Master UPS systems design, installation, and maintenance to ensure reliable power for critical IT infrastructure. Gain expertise in power continuity.

DURATION

40 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

-
- Globally Recognized Certification
 - Expert-Led Hands-On Training
 - Flexible Scheduling

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COURSE OVERVIEW

This intermediate-level Uninterruptible Power Supply Systems course, tailored for professionals operating within Microsoft-centric IT environments, provides a comprehensive deep dive into the critical components of power protection. Participants will gain the essential knowledge and practical skills required to design, install, configure, manage, and troubleshoot various UPS topologies. The curriculum emphasizes the strategic importance of reliable power solutions in maintaining business continuity and data integrity, particularly within modern data centers and server rooms where Microsoft operating systems and applications are paramount.

Through a blend of theoretical understanding and practical application, this 40-hour course covers core technologies such as different UPS architectures (e.g., Online, Line-Interactive), battery technologies, and integration techniques with existing IT infrastructure. Graduates will be equipped to mitigate power disturbances, prevent data loss, and ensure the uninterrupted operation of critical systems. Mastering UPS systems not only enhances an organization's resilience against power outages but also significantly boosts a professional's value in roles demanding expertise in robust infrastructure management and disaster preparedness.

Duration	40 hours
Level	Intermediate
Vendor	Microsoft

COURSE CURRICULUM

01 Module 1: Fundamentals of Power and UPS Systems

- Understanding Electrical Power Basics (AC/DC, Voltage, Current, Frequency)
- Types of Power Disturbances and Their Impact on IT Systems
- Introduction to Uninterruptible Power Supply (UPS) Technology
- Overview of UPS Topologies: Standby, Line-Interactive, and True Online Double Conversion
- Key Components of a UPS System: Inverters, Rectifiers, Batteries, and Static Bypass

02 Module 2: UPS System Design, Sizing, and Installation

- Assessing Power Requirements: Calculating VA, Watts, and Power Factor
- Battery Technologies and Runtime Calculation for Critical Loads
- Redundancy Strategies (N+1, 2N) and Scalability Considerations
- Site Preparation and Environmental Factors for UPS Deployment
- Safe Installation Practices, Electrical Connections, and Grounding Procedures

03 Module 3: Configuration, Monitoring, and Management

- Initial Setup and Configuration of UPS Units (Local and Remote Interfaces)
- Integrating UPS with Network Management Systems (e.g., SNMP, Modbus)
- Utilizing Microsoft Tools for UPS Monitoring and Automated Shutdown (e.g., PowerShell, Windows Server Power Options)
- Battery Health Monitoring and Predictive Maintenance Tools
- Alarm Management, Notification Systems, and Event Logging

04 Module 4: Maintenance, Troubleshooting, and Best Practices

- Developing a Preventive Maintenance Schedule for UPS Systems and Batteries
- Common UPS Faults, Error Codes, and Diagnostics
- Troubleshooting Battery Issues, Inverter Failures, and Communication Problems
- Safe Battery Replacement Procedures and Disposal Guidelines

- Firmware Updates, Calibration, and Performance Optimization

05 Module 5: Advanced Integration and Power Continuity Planning

- Coordinating UPS Systems with Backup Generators for Extended Power Protection
- Implementing Graceful Shutdowns for Virtualized Environments (e.g., Microsoft Hyper-V Clusters)
- Developing Comprehensive Disaster Recovery Plans Incorporating UPS Systems
- Energy Efficiency, Green IT Practices, and Cost Optimization
- Compliance with Industry Standards and Best Practices for Critical Power Infrastructure

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Data Center Infrastructure Engineer**
- > **IT Operations and Facilities Specialist**
- > **Critical Power Systems Technician**

FREQUENTLY ASKED QUESTIONS

Q: What specific prerequisites are recommended for professionals enrolling in this Intermediate Uninterruptible Power Supply Systems course?

While there are no strict certification prerequisites, attendees should have a foundational understanding of basic electrical concepts and experience with managing Windows Server environments or general IT infrastructure. Familiarity with data center operations and network fundamentals will significantly enhance your learning experience in this intermediate course.

Q: How will this course specifically prepare me to manage UPS systems within a data center heavily reliant on Microsoft technologies?

This course goes beyond generic UPS training by focusing on integration with Microsoft-centric environments. You will learn to leverage PowerShell for advanced monitoring, configure graceful shutdowns for Hyper-V virtual machines, and integrate UPS management with Windows Server and System Center for comprehensive power continuity and disaster recovery strategies, ensuring seamless operation of your Microsoft infrastructure.

Q: What specialized skills will I gain that are unique to optimizing UPS performance and longevity, especially concerning battery health?

You will acquire specialized skills in advanced battery management, including precise runtime calculations, understanding different battery chemistries (e.g., VRLA, Lithium-ion) and their maintenance requirements, and implementing predictive analytics for battery lifespan. The course covers best practices for battery testing, cycling, and replacement strategies to maximize UPS reliability and extend the life of your critical power infrastructure.

ABOUT COMPUTER PRIDE

**computerpride*****East Africa's Premier IT Training Center***

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

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