MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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DESIGN OF MODERN ELECTRICAL DISTRIBUTION SYSTEMS

"Powering the Future: Efficient, Safe, and Reliable Electrical Distribution Design."

Schedule

Venue (In-house)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

Modern electrical distribution systems form the backbone of industrial, commercial, and residential power networks. Efficient design, safety, and reliability are critical in today's energy landscape, which includes increasing integration of renewable sources, smart grid technologies, and advanced automation.

The Design of Modern Electrical Distribution Systems course equips participants with practical knowledge and technical skills to design, analyze, and optimize electrical distribution networks. Through hands-on exercises and real-world case studies, participants will learn to develop safe and efficient low, medium, and high voltage systems, implement protection schemes, perform load and reliability analysis, and ensure compliance with international electrical standards.

Objectives

By the end of this course, participants will be able to:

- Understand the core components and principles of modern electrical distribution systems.
- Design low, medium, and high voltage distribution networks efficiently and safely.
- Apply protective devices and fault coordination schemes to ensure system reliability.
- Conduct load analysis, voltage drop calculations, and power quality assessments.
- Integrate renewable energy sources and smart grid technologies into distribution networks.
- Perform reliability and fault analysis to optimize system performance.
- Ensure compliance with national and international electrical standards.
- Utilize best practices for energy efficiency and sustainable design.

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Why Attend

As electrical networks become more complex, mastering the design of modern distribution systems is essential for engineers, technicians, and managers. This course provides hands-on experience with real-world scenarios, enabling participants to design efficient, safe, and resilient networks. Whether upgrading existing skills or entering the field of power system design, attendees will gain the knowledge needed to deliver industry-standard electrical solutions.

Target Audience

This course is suitable for:

- Electrical Engineers and Power System Designers
- Electrical Technicians and Maintenance Professionals
- Utility Company Engineers and Consultants
- Project Managers and Electrical Project Supervisors
- Graduate Students in Electrical Power Systems
- Professionals involved in industrial, commercial, or residential power network design

Individual Benefits

- Gain practical knowledge of modern electrical distribution systems.
- Enhance skills in load analysis, protection, and network optimization.
- Improve problem-solving and analytical capabilities in electrical design.
- Increase professional value and career opportunities.
- Develop confidence in designing safe, reliable, and energy-efficient networks.
- Learn to integrate smart grid and renewable energy solutions into designs.

Organizational Benefits

- Streamline electrical design and maintenance workflows.
- Enhance reliability and safety of distribution networks.
- Optimize energy efficiency and reduce operational costs.
- Ensure compliance with safety and regulatory standards.
- Build in-house expertise for modern power system design and management.
- Support the implementation of sustainable and future-ready electrical networks.

Instructional Methodology

The training employs a practical, hands-on approach through:

- Interactive lectures and software demonstrations
- Real-world case studies and design scenarios
- Step-by-step exercises on system design and protection
- Group workshops and collaborative problem-solving sessions
- Assignments focused on practical distribution challenges
- Continuous feedback and Q&A sessions to reinforce learning

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Course Outline

Module 1: Introduction to Electrical Distribution Systems – Components and Principles

Module 2: Load Analysis, Forecasting, and Network Planning

Module 3: Low and Medium Voltage System Design – Feeders, Panels, and Cables

Module 4: Protective Devices and Fault Coordination

Module 5: High Voltage Distribution Systems and Substation Design

Module 6: Power Quality, Reliability, and Fault Analysis

Module 7: Integration of Renewable Energy and Smart Grid Technologies

Module 8: Energy Efficiency and Sustainable Design Practices

Module 9: Standards, Codes, and Regulatory Compliance

Module 10: Capstone Project – Comprehensive Electrical Distribution System Design

Certification

Upon successful completion, participants will receive a Certificate in Design of Modern Electrical Distribution Systems, recognizing their expertise in designing safe, reliable, and energy-efficient electrical networks.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**