



Electrical Systems Design based on PEC 2009

Course Outline

At the end of the program, the participants will be able to:

- Familiarize themselves on the different types of services and service equipments.
- Understand the schematic and actual wiring diagram.
- Apply the actual wiring diagram in Electrical Systems Design.
- Understand the different parts of an electrical plan.
- Understand the proper way of sizing a conductor and circuit breaker. Understand the actual load analysis method of electrical design.
- Understand the proper way of sizing a conductor and protection for motor loads.
- Understand the proper way of sizing transformer and generator.
- Calculate the voltage drop for feeders.
- Understand the proper way of sizing low voltage switchgear.
- Understand the proper way of sizing the KAIC rating of a circuit breaker.

DAY-1

- A) GENERAL INTRODUCTION AND PRE-TEST
- B) RESIDENTIAL BUILDING WIRING INSTALLATION
 - 1) Different Types of Services
 - 2) Service Equipments
 - 3) Schematic Diagram
 - 4) Actual Wiring Diagram
- C) RESIDENTIAL BUILDING ELECTRICAL DESIGN
 - 1) General Notes & Specifications
 - 2) Legend & Symbols
 - 3) Location Map
 - 4) Power Lay-Out
 - 5) Basic Motor Computation
 - 6) Branch Circuit Conductor and Circuit Breaker Coordination
 - 7) Lighting Lay-Out
 - 8) Load Schedule
 - 9) Riser or One Line Diagram
 - 10) Service Entrance Computations

DAY-2

- D) COMMERCIAL/INDUSTRIAL BUILDING ELECTRICAL DESIGN

- 1) Three Phase System
 - 2) General Notes & Specifications
 - 3) Power Lay-Out
 - 4) Lighting Lay-Out
 - 5) Motor Calculations
 - 6) Load Schedule
 - 7) Riser or One Line Diagram
 - 8) Feeder Computations
 - 9) Service Entrance Computations
 - 10) Transformer And Generator Sizing
- E) Grounding Installations for Commercial and Industrial Applications (2 HOURS)
- 1) Ungrounded Installations
 - 2) Preventing Electrical Ground
 - 3) Designing Grounding Installations

DAY-3

- F) HIGH-RISE BUILDING ELECTRICAL DESIGN
- 1) General Introduction
 - 2) Pre-Design Factors
 - 3) Building Description
 - 4) Riser Diagram
 - 5) Load Computation
 - 6) Voltage Drop Computation
 - 7) Feeder & Sub-feeder Computations
 - 8) Transformer Sizing
 - 9) Motor Load Computation
 - 10) Elevator Load Computation
 - 11) Main Feeder Computation
 - 12) Emergency Systems Computation or Generator Sizing
 - 13) Low Voltage Switchgear (LVSG) Computation
 - 14) Fault Current Calculation
 - 15) Protective Device Coordination Analysis
 - 16) Injection of Fault Currents and Tripping Time Evaluation
 - 17) Customizing and Importing the Time Current Coordination Graph
 - 18) Practical Exercises (Short Circuit, Load Flow, Motor Starting and PDC)

Course details

Who should attend?

- Electrical Engineers
- Engineering department staff
- Test engineers
- Cadet engineers
- Substation engineers
- Engineering faculty members

Date/s offered:

February 16 to 18
May 16 to 18
November 16 to 18

Venue:

7th Floor Integrated
Professional Office Bldg, 14
Quezon Avenue, Quezon City,
Philippines

Registration fee:

Php 12,800.00 per person
3 participants from one
company get 10% discount

Student and faculty rate less
30%

About PAMAV

PAMAV was formed in 2005 to offer competency training programs and continuous education that offers up-to-date skills and knowledge thru exposure to various current industry practices. We are a pioneer training center in the Philippines that offers competency-based training for Engineering professionals.

PAMAV offers public and in-house training seminars.



PAMAV TRAINING INSTITUTE & TECHNOLOGY CENTER, INC.

Competency-Based Training for Global Excellence

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Registration form

Title	First name	Last name
Designation		
Company Name		
Telephone number		
Mobile number		
Email		

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Other courses available

Insulation Power Factor

Substation Design and Construction

Protective Relaying

Computer Aided Design for EE

Effective Communication for Engineers

Professional Image and business etiquette

For more information and assistance,
contact Sales at telephone (632) 7433694 or contact@pamavtech.com
www.pamavtech.com