

International Research, Education and Training Center NGO (R/C 80550594)
Rahvusvaheline teadus-, haridus- ja koolituskeskus MTÜ
Non-Profit Organization / Mittetulundusühing

TRAINING PROGRAM

FOR ELECTRICAL AND ELECTRONIC ENGINEERING

EHVE-ELECTRICAL HIGH VOLTAGE ENGINEERING-01
EMVE-ELECTRICAL MEDIUM VOLTAGE ENGINEERING-02
ELVE-ELECTRICAL LOW VOLTAGE ENGINEERING-03

TABLE OF CONTENTS

| |
|---|
| 01010-Electrical Circuits Fundamentals |
| 01011-Electrical Circuits and Wiring Systems |
| 01012-Electrical Troubleshooting and Faults |
| 01013-Harmonics in Electric Power Systems: Effects and Prevention |
| 01014-Transformers: Basics, Maintenance, and Diagnostics |
| 01016- Electric Power Distribution Systems Design and Installation |
| 01017-Electrical Design of Overhead Power Transmission Lines and Installation |
| 01018-Electrical Grounding, Surge and Lightning Protection. |
| 01019-Power Distribution Systems. Smart Grid |
| 01020-Maintenance and Troubleshooting of UPS Systems |
| 01021- Electric Motors and Variable Speed Drives |
| 01022- Electrical Distribution Principles and Applications |
| 01023- Power Compensation Control Strategy and Modelling |
| 01024- Supervisory Control and Data Acquisition-SCADA Systems |
| 01025- Partial Discharge Detectors & Testing |
| 01026-Reactive Power Management and Power Factor Correction |
| 01027- Theory and Application of Industrial Electronics |
| 01028- Overhead Lines, Maintenance and Construction |
| 01029- Construction & Design of Overhead Transmission Lines |
| 01030- Cable Termination & Wire Connectors |
| 01031- Load Flow or Power Flow Analysis |
| 01032- Design and Optimization of Overhead Transmission Lines |
| 01033- High Voltage Electrical Safety |
| 01034-Instrumentation, Controls and Electrical Systems for Facilities Engineers |
| 01035- Distributed Control Systems DCS Programming Essentials |
| 01036-Design & Development of Isolated DC to DC Converters (7 Days) |
| 01037- Air Circuit Breaker Construction and Operation |
| 01038- Troubleshooting Printed Circuit Boards, Design, Implementation |
| 01039- Electrical Protection Devices: Construction & Maintenance |
| 01040-Diesel Generator: Operation and Maintenance |
| 01041- Power System Control and Protection |
| 01042-CYMGRD-Grounding Grid Analysis |
| 01043-Industrial Electronics Maintenance Skills |
| 01044-Arc Flash Analysis and Prevention Techniques |
| 01045- Electrical Insulators Specifications |
| 01046- Transmission Lines Operations, Protection and Maintenance |
| 01047-Power Plant Operations and Maintenance |
| 01048-Switchgear and Circuit Breakers |
| 01049-Basic Instrumentation For Process Operators |
| 01050-Digital Image Processing Using MATLAB (DIP) |
| 01051-Introduction to Digital Filters with Audio Applications |

01011 Electrical Circuits and Wiring Systems

Course Description

This course introduces the care and use of tools and materials used in electrical installations as well as the requirements of the National Electrical Code. Topics include lighting, overcurrent protection, conductors, branch circuits, condelectrical, and safety and electrical blueprint reading. Upon completion, participants should be able to properly install conduits, wiring, and electrical distribution equipment associated with basic electrical installations

Course Objectives

Understanding the basic electrical theories
Being familiar with the codes and standards related to residential wiring
Understanding electrical plans
Learning how to use electrical installation tools
Learning how to use materials and equipment in electrical installations

Who Should Attend?

- ✓ Engineers
- ✓ Electricians
- ✓ Technicians
- ✓ Contractors
- ✓ Anyone aspire to increase his capabilities in this area

Course Details/Schedule

Day 1

- Review of electrical theory
- Circuit elements
- Electrical power and energy
- Codes and standards

Day 2

- Blueprint reading of electrical plans
- Tools, materials and equipment used in electrical installations
- Electrical connections
- Types of connections

Day 3

- Services
- Service entrance
- Roughing in services
- Service panels
- Service drops

Day 4

- Wiring methods using non-metallic sheathed cable
- Wiring methods using armored flexible cable
- Wiring methods using conduit
- Switches and switching circuits
- Introduction to “Low Voltage” systems

Day 5

- Large appliances
- Multiple family dwelling
- Electrical design
- Estimating electrical wiring

TRAINING PROGRAM
FOR ELECTRICAL AND ELECTRONIC ENGINEERING

EHVE-ELECTRICAL HIGH VOLTAGE ENGINEERING-01
EMVE-ELECTRICAL MEDIUM VOLTAGE ENGINEERING-02
ELVE-ELECTRICAL LOW VOLTAGE ENGINEERING-03

International Research, Education and Training Center NGO (R/C 80550594)
Rahvusvaheline teadus-, haridus- ja koolituskeskus MTÜ
Non-Profit Organization / Mittetulundusühing