



*Training Course:  
Power System Distribution Fundamentals*

*22 - 26 September 2024*

*Cairo (Egypt)*

*Holiday Inn & Suites Cairo Maadi, an IHG Hotel*

## Training Course: Power System Distribution Fundamentals

Training Course code: EN234883 From: 22 - 26 September 2024 Venue: Cairo (Egypt) - Holiday Inn & Suites Cairo Maadi, an IHG Hotel Training Course Fees: 3900 € Euro

### Introduction

This 5 Days Power System Distribution Fundamentals Training Course covers the fundamentals of power distribution, power cables, power convertors, and voltage fluctuations.

The main purpose of this Power System Distribution Fundamentals training course is to enhance the participant's skills and competencies through a substantial training course.

This course will provide you with detailed technical proficiency in this domain that you require to understand the operation and functions of power distribution.

This Global Horizon training course will inspire you with the knowledge of power distribution systems and how to plan and carry out its functional aspects competently.

### Training Program Objectives

Upon completing this "Power System Distribution Management" program successfully at GH4T, participants will be able to:

- Acknowledge the essentials of practical power distribution systems
- Resolve short-circuit issues swiftly and successfully
- Select the correct type of equipment for the right application
- Measure the effect of fault levers on switchgear ratings
- Classify the different functions for various types of cable protection
- Use and protect power transformers fittingly
- Evaluate and stipulate correct earthing all over your electrical network

### Training Methodology

This is an interactive Power System Distribution Management training program and will consist of the following training approaches:

- Lectures
- Seminars
- Presentations
- Group Discussions
- Assignments
- Case Studies & Practical Exercises

### Organizational Benefits

Companies who send in their employees to participate in this Power System Distribution Management course can benefit in the following ways:

- Keep your company one step ahead with this all-inclusive overview of power distribution systems
- Completing this course successfully will give you more confidence in the handling of power distribution systems
- Gain practical knowledge that will give you an edge in your workplace
- Discussion-based sessions let you communicate with your instructor and fellow students
- Interactive sessions let you connect with your instructor and peers to learn from real-world examples that will build your skillset and can be applied in your respective roles
- You can obtain a professional qualification at a competitive cost if you sign up for this course with Zoe

## Personal Benefits

Professionals who participate in this Power System Distribution Management course can benefit in the following ways:

- Enhance your productivity through skill training
- Bring yourself up to speed on the latest trends and technologies used in power systems
- Benefit from a tailor-made academic program for technicians or equivalent workforce involved in the energy sector
- Get yourself trained, assessed, and certified by experts in the domain
- Improve your skills and get yourself qualified for further training and qualification in this field

## Target Audience

This course is ideal for technicians, engineers, or equivalent employees working in the power or electricity sectors, or persons working as electrical technicians. The program will also be useful to engineers, supervisors, and other technical individuals who require a fundamental understanding of how power distribution systems function.

If you are a stakeholder in the power industry, as a consumer, or as an employee, or if you are seeking a job in the power industry, this course will be extremely useful to you.

## Course Outline

### Day 1

#### INTRODUCTION

- What is power distribution system?
- Characteristics of distribution systems
- The 3-phase AC power system
- Multiple voltage levels in power distribution
- Expandability
- Voltage classification
- Types of distribution systems

### Day 2

#### FUNDAMENTALS OF PROTECTION

- Requirements for Power Distribution System
- Safety equipment and procedures
- Power distribution protection components and systems

- Relays
- Time and current grading
- Protection integrated into LV devices
- Significance of settings and coordination of protective relays

### Day 3

#### DISTRIBUTION SYSTEM PLANNING

- Data collection
- Selection of appropriate equipment
- The need for system development
- Location of key assets
- Planning of electrical system configuration
- Selection of basic system parameters
- Protection of future growth of electricity demand
- Equipment ratings/sizing

### Day 4

#### TRANSFORMERS, SWITCHGEAR, CIRCUIT BREAKERS, and CABLES

- Transformer theory Power transformers and distribution transformers
- Installation of transformers
- Voltage control and Troubleshooting
- Switchgear components, and types
- Switchgear ratings
- Fault detection of cable installations
- Types of circuit breakers
- Assessment of various breakers
- Cable Basic design, selection, and sizing
- Types and construction of cables
- Fault detection of underground cable installations

### Day 5

#### IN-PLANT GENERATION

- Types of in-plant generation
- In-plant power generation sources

#### POWER QUALITY

- Tackling voltage fluctuations and flicker
- Effect of power interruptions and needs of equipment
- Handling voltage irregularities
- Power factor and power factor improvement by capacitor banks

#### EARTHING AND SAFETY

- Role of electrical insulation in safety
- Earthing in outdoor installations

- Earthing of power supply and its safety consequences

## Registration form on the Training Course: Power System Distribution Fundamentals

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

### Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....  
 Position: .....  
 Telephone / Mobile: .....  
 Personal E-Mail: .....  
 Official E-Mail: .....

### Company Information

Company Name: .....  
 Address: .....  
 City / Country: .....

### Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....  
 Position: .....  
 Telephone / Mobile: .....  
 Personal E-Mail: .....  
 Official E-Mail: .....

### Payment Method

- Please find enclosed a cheque made payable to Global Horizon
- Please invoice me
- Please invoice my company

### Easy Ways To Register

Telephone:  
+201095004484 to  
provisionally reserve your  
place.

Fax your completed  
registration  
form to: +20233379764

E-mail to us :  
info@gh4t.com  
or training@gh4t.com

Complete & return the  
booking form with cheque  
to: Global Horizon  
3 Oudai street, Aldouki,  
Giza, Giza Governorate,  
Egypt.