

## Distribution Course

### Course Objectives

To provide Trainees with understand different types of power distributions systems, the trainees will be aware with the several local and international codes and standards.

Upon completion of the course, the student will be able to: prepare the full design documents for the different types of the buildings with a good awareness with the required software's as Dialux, AutoCAD, Etc.

### Course Description

The electrical distribution course is concerned with the construction field from electrical designer point of view. It provides the full awareness with the electrical systems as: lighting design, coordination with the several departments, MEP coordination, Power system design and calculation including cables, Switching devices, and Routing accessories in addition to earthing and lightning protection through the several design stages.

### Training Structure

16 Class x 2.5 hours = 40 hours

References for the trainee to prepare himself to the course

- <https://www.drgilany.com/>
- <https://www.facebook.com/Eduvate-1311710185651473/>

### Prerequisites

Basic knowledge and skills about using AutoCAD

Electrical power system and protection background

### Course Grading

- Attendance 20%
- Ethics 10%
- Assignments Submission 30%
- Project Submission 40%



+2 010000 50300

+2 010000 93429



Cairo: 2 Hassan Afify St., Makram Ebeid, Nasr City.  
Alex: Mostafa kamel st., Smoha  
Kuwait: Mubarak Al kabier., Sabah Al Salem.



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## Course Contents

1. Introduction & Professional Career path in construction field.
2. Load estimation and Conceptual design process.
3. Bulk Equipment Technical Data & Sizing & Space Requirements.
4. MV & LV Switch Gears Technical Data & Sizing & Space Requirements.
5. Lighting Design
  - Dialux Calculations
  - Drafting Tools - Usage of AutoCAD
  - Factors affect Lighting Calculations
6. Lighting Design Calculations
7. General Power Design
8. MEP Coordination
9. C.B's selection – Selectivity and cascading
10. Power System Calculations
  - Cable Sizing
  - Short Circuit Calculations
  - V.D Calculations
  - Derating factors
11. Earthing networks design
12. Lightning protection systems
13. Smart distribution systems
14. Outdoor lighting
15. Introduction to Revit



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