

ELECTRICAL DESIGN AND INSTALLATION COURSE

Topic	Apply electrical design and calculations on the project architectural drawings, and to prepare them for execution of electrical works.
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Duration	Four (4) hours per day for Seven (7) days, for a total duration of (28) hours
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1. This is Course to all Electrical, Communication and Mechatronic Engineers that are working in Design, Consultant and Construction fields.

2. Course Description

- This course will cover the basic concepts of electrical design and installation, which will enable the participants to read the electrical drawings and design them.
- The participants will improve their knowledge in the field of electrical design, consultancy and construction.
- The course will cover four main topics: Load estimation, lighting, power and calculation software related to electrical design field.

3. Course Content.

- Introduction to Electrical Design and Installation.
- Coordination with Architectural, Civil and Mechanical works.
- To determine of the Electrical requirements before the design.
- Loads estimation (W/m^2) per areas including Lighting system, power and mechanical equipment.
- Design Lighting Systems using DIALux  Program, and select the lighting fixtures.
- Design of Power System.
- Types of Circuits Breakers and How to use and connect them.
- Types of Power Cables and How to select cross section area.
- Design Panel Boards according to International Codes (MDB, SMDB. DB,...MCC)
- Calculate the Voltage Drop and Short Circuit Using Ecodial  Software Program.
- Using AutoCAD  Electrical Design.
- Generator and transformer type design & selection.
- Definition of the main types of Earthing protection systems.
- Design of a final project to cover all the topics mentioned in the course.