

Electrical Design

Syllabus

Introduction to Electrical System

- Services: Arch, structural, RCP & ID Lighting, Power, Fire Alarm, Emergency Lighting Etc.

Symbols and Legends:

- Power Services, Lighting, Fire Detection, ELV/Low Current, Earthing and Lightning

Lighting:

- Lux level design as per BS 12464, Escape route lighting as per NFPA 101
- Load Calculation using Dialux

Power Services:

- Truncking calculation
- Cables, Cable Sizing, Armored and Unarmored cables, Cable Bending Radius
- Cable tray raceway, Truncking, conduits, Selection and sizing for Cable Tray & Truncking,

Bus bar Details for commercial and high rise residential and commercial buildings.

- Selection and sizing for Bus bar, Installation details and standards .
- Truncking calculation.

Switch Gears(Circuit Breakers)

- Types Circuit Breaker, Rating of Breaker, Short Circuit Rating, Capacitor bank.

Panel Boards(MDB, SMDB, SDB, ect)

- Load Schedule & General Arrangement.

Single line Diagram (SLD)

- Major Components Transformer, Circuit Breakers, Maximum Demand, Voltage Drop Calculation.

Fire Detection:

- Fire alarm system as per NFPA72, Installation details.

ELV/Low Current system :(General concepts)

- (CCTV): Types of cameras and circuiting, TV, Telephone, intercom and internet networking

Earthing and Lightning:

- Introduction to Lightning Arresters, Earthing and Lightning Designing and Installation Details

. Containment Service

- Tray schedule

Fire alarm

- Designing calculation
- Types of drawing: Design drawing and shop drawing

