

# Electrical Services Explained – 3 Days

## Agenda

### DAY 1

09:15 *Arrival / coffee / tea*

#### 09:30 **Session 1**

- Introduction
- Primary generation & transmission

11:00 *Coffee / tea break (15 mins)*

#### 11:15 **Session 2**

- High Voltage Distribution & Switchgear
- Transformers
- Substation arrangements

13:00 *Lunch (60 mins)*

#### 14:00 **Session 3:**

- Generators & Uninterruptible Supplies
- Low Voltage Distribution
- Single and Three Phase Circuits
- Assessment of Maximum Demand and Diversity

15:15 *Coffee / tea break (15 mins)*

#### 15:30 **Session 4**

- Domestic Supplies
- Commercial & Industrial supplies
- Metering & Tariffs
- Types of Low Voltage Switchgear

16.00 – 16:30 **Q & A**

For more information about this course contact the training team:

[training@cibse.org](mailto:training@cibse.org) | [cibse.org/training](http://cibse.org/training) | +44 (0)20 8772 3660

## Day 2

09:15 *Arrival / coffee / tea*

### 9:30 **Session 1:**

- Dangers of Electricity
- Assessments of Overloads,
- Overview of Short Circuits

11:00 *Coffee / tea break (15 mins)*

### 11:15 **Session 2:**

- Overview of Earth Faults
- Differences between Direct & Indirect Contact
- Physiological Effect of Electric Shock

13:00 *Lunch (60 mins)*

### 14:00 **Session 3:**

- Different Earthing arrangements
- Fuses & Circuit Breakers Applications

14:15 *Coffee / tea break (15 mins)*

### 15:30 **Session 4**

- Types of Final Circuits
- Motors, starters & overloads
- Modern Wiring Systems & Containment
- Matching wiring systems to the building
- Cabling for fire & emergency lighting systems

16.00 – 16:30 **Q & A**

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### Day 3

09:15 *Arrival / coffee / tea*

**9:30 Session 1:**

- Different lighting systems & lamp types
- Lighting Systems Control
- Lighting Circuits and switching arrangements

11:00 *Coffee / tea break (15 mins)*

**11:15 Session 2:**

- Differences between the Ring Main and Radial Power circuits
- Cable Selection Considerations
- Simple Cable Sizing Exercise
- Introduction to Regulations

13:00 *Lunch (60 mins)*

**14:00 Session 3:**

- Overview of the Electricity at Work Regulations
- Overview of the IET Wiring Regulations - BS 7671 (18<sup>th</sup> Edition)
- Inspection & Testing

15:15 *Coffee / tea break (15 mins)*

**15:30 Session 4:**

- Certification & Reporting
- PAT Testing
- A case study of the design and installation of a small electrical installation
- Course Summary

**16.00 – 16:30 Q & A**

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