

Bahrain Wiring Regulation (Wireman)

PREPRATION

Certified by:

Ministry of Electricity and Water



Al Mashreq Training

+973 17 140 144

info@almashreqbh.com

+973 17 140 114

www.almashreqbh.com



Al Mashreq
training

ALMASHREQBH



Introduction

Electrical wiring installation program to develop electrical wiring skills for students through systematic training that would enable the students to construct and test various electrical circuits using appropriate electrician tools, wires, protective devices, and wiring accessories as per Bahrain Regulation.

Learning Outcomes:

At the end of this course, the learner should be able to:

- Able to understand the electrical safety role in workplace and how to use electrical installation wiring regulations.
- Able to describe the fundamental concepts, principles, theories and terminology used in electricity:
 - ▷ Electrical Generation
 - ▷ Electrical Distribution
 - ▷ Electricity Voltage
 - ▷ Electricity Current
 - ▷ Electricity Load-resistance
 - ▷ Electrical Power
 - ▷ Electrical Energy
 - ▷ Unit conversation





- Able to understand characteristics of electricity system in Bahrain
- Able to define and know the use of and where to use the following:
 - excess current protection device
 - Earth leakage protection device
 - Wire (type, color, size)
 - Wire enclosure system
 - Able to Understand the following:
 - Final Circuit
 - Switches
 - Socket outlet
 - Wiring accessories
- Able to understand the following:
 - Electrical motor (Power circuit, control circuit)
 - Escalators (Lift) installation requirement
 - installation requirement of Domestic appliances, Air condition, water heater, Boilers, underwater light, construction/ building sites
 - Fireman's Emergency
- To be able to carry out Electrical Inspection and testing

Course Content:

- Introduction to Bahrain Wiring Regulation course outline, Safety procedure
 - Outline of the course program, and what is required to succeed
 - Electrical safety
 - Purpose of Electrical regulation





- **Electrical fundamental and principle**
 - ▷ Electrical Generation
 - ▷ Electrical Distribution
 - ▷ Electricity Voltage
 - ▷ Electricity Current
 - ▷ Electricity Load-resistance (Series and Parallel)
 - ▷ Electrical Power
 - ▷ Electrical Energy
 - ▷ Unit conversation
- **Characteristics of Electricity system in Bahrain**
 - ▷ Single phase
 - ▷ Three Phase
 - ▷ Ambient Temperature (Summer, Winter, Industry)
 - ▷ EDD requirement for (Single/Multi) metering building
 - ▷ Equipment P.f
- **Customer service point**
 - ▷ Meter Position ,meter cabinet
 - ▷ EDD requirement based on Customer Load
 - ▷ Distribution substation requirement
- **Excess current protection devices**
 - ▷ Why we need and how to find the rate ,fusing rate
 - ▷ Switching rate
- **Earth leakage protection device**
 - ▷ Types of ELCB and Where to use it
 - ▷ Calculate Wire voltage drop
 - ▷ Methods of cable installation
 - ▷ Installation Cable
 - ▷ Types (PVC,XLPE,MICC)
 - ▷ Flexible and non-flexible
 - ▷ Color code
- **Trunk/Duct/Conduit**
 - ▷ Space factor
 - ▷ Calculation size of Trunk/Duct/Conduit
 - ▷ Metallic and non-metallic conduit
- **Wiring and distribution arrangement**
 - ▷ Switches Types
 - ▷ Final circuit
 - ▷ Socket (Ring and Radial)
 - ▷ Under floor duct
 - ▷ Conservation of electricity
- **Electrical Motor**
 - ▷ Draw and understand Power circuit
 - ▷ Draw and understand Control circuit
- **Installation requirement for Domestic appliances**
 - ▷ Escalators
 - ▷ Air condition
 - ▷ Water heater
 - ▷ Boilers
 - ▷ Under water light



- **Electrical emergency system**
 - ▷ Storage Battery
 - ▷ Generator
 - ▷ Built-in Equipment
- **Electrical Inspection and test**
 - ▷ Test requirement, period
 - ▷ Visual inspection
 - ▷ Continuity Test
 - ▷ Polarity test
 - ▷ Installation test
- ▷ Ring main test
- ▷ ELCB/RCCB test
- ▷ ECCR(Earth Circuit Conductor Resistance)Test
- ▷ Earth electrode test
- ▷ Phase rotation test
- **Earth loop impedance test**

Course Duration:

60 hours

Assessment:

The assessment comes in two parts:

- Part one: theoretical and practical assessment upon the course completion
- Part two: a theoretical assessment done by the electricity and water authority in Bahrain.

Eligibility Criteria

- A Bahraini, secondary school graduates or diploma (electrical engineering only)
- The person must be medically fit.

Certification:

Certified by Ministry of Electricity and Water.

After successful completion, the candidate will receive a wireman license from Ministry of Electricity and Water.

