



Course:	Certificate in Electrical Installation (Wireman's Licence Exam Prep)
Guided Learning Hours:	30 hours
Pre-requisite:	Knowledge and experience in Electrical installation

Abstract

This unit will prepare individuals who already have a Diploma in Electrical Installation and working experience in the field, with the technical and practical knowledge required to acquire a wireman's license from the electrical inspectorate division Ministry of Public Utilities. Electricians seeking to sit the wireman's exam and having the required entry requirements will find that this course will prepare them by filling in any gaps in knowledge that they may have and will be focused on the electrical wiring and installation methods to meet the local wiring codes and standards as required.

Target Audience

This course is ideally suited for anyone who wants to learn the technical and knowledge requirements that is required for obtaining the wireman's license and will also be of interest to future electricians who may be considering on obtaining such

Learning outcomes

On completion of this course, learners will be able to:

1. Perform correct practical competences in electrical installation including stripping of conductors, bending of conduits, installation of trunking, wiring of plugs and outlets
2. Interpret various wiring schematic diagrams and connect simple lighting and power circuits such as one-way, two-way and intermediate switching circuits, distribution panels with receptacle outlets, photocell control lighting circuits

3. Identify and apply various regulations as it applies to electrical installation and use the multi-tester to perform test on circuits (polarity, continuity, voltage and current)

Course Content

1. Color Coding

Single Phase: Local wiring color arrangements for live, neutral and ground conductors

Three Phase: Local wiring color code arrangement for all phase, natural and ground conductors, Star and Delta connections

2. Grounding and Bonding Requirements

Application: Equipment grounding conductor, Bonding steel structures. Intersystem bonding

Selection: Sizing ground electrode conductor,

3. Ground Fault Circuit Interrupter (GFCI)

Application: Correct Utilization, Appropriate placement,

4. Electrical Installation work

Practical: Wire stripping and termination, conduit bending, trunking installation, wiring plugs, outlets wiring, Multi-meter testing for voltage, current, polarity and continuity. GFCI wiring to Duplex outlets,

Assessment Criteria

In order to achieve Learning Outcome...	The Learner must...
1 Color Coding	1.1 Identify the various colors used in single phase and three phase electrical installations conductors 1.2 Properly select and use electrical tape to color code wiring for identification based on local wiring codes
2 Grounding and Bonding Requirements	2.1 Be able to strip various electrical cables using the appropriate tools. 2.2 Perform correct sizing of all wiring conductors 2.3 Perform correct sizing of grounding conductor to meet local wiring codes 2.4 Perform correct installation of earth ground electrode 2.5 Perform correct earth and ground bonding in electrical installations
3 Ground Fault Circuit Interrupter (GFCI)	3.1 Properly identify where GFCI is required and installation method 3.2 Perform testing on GFCI
4 Electrical Installation work	4.1 Interpret and apply the appropriate standards and regulations as it applies to power and lighting circuits. 4.2 Interpret schematics diagrams which include simple lighting and power circuits. 4.3 Perform an offset conduit bend using PVC and EMT conduit & trunking 4.4 Perform electrical testing for verification of insulation resistance, polarity and simultaneous test

Essential Learning Resources:

Learners will need access to a range of various websites relating to electrical installation. These may include: publications, data sheets and supporting videos. These additional resources would be directed during the delivery of this course.

Textbooks and Manuals

1. Electrical Installation work (T.G Francis)
2. Electrical Installation theory and practice (E.L Donnelly)
3. T & TEC Power and Lighting