

Electrician Refresh/Update Course:

Many electricians need to refresh and extend on their existing knowledge and skills. This course will help these sparkies keep on top of their game. Continuing professional development is a must for all electricians as the industry is in a constant state of change and development.

The course involves 10 theory modules with an assessment to be completed at the end of each module. The course will take around 2 days to complete and read all material. Written notes and additional information should be retained as a valuable reference tool for the future.

Who should participate: electrical engineers, electrical fitter mechanics, installation inspectors, apprentices, etc.

This course can also be delivered in person with practical sessions included. Simply contact us to discuss.

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Electrician Refresh/ Update Course

Learn from the industry expert - personal delivery or online.

- ⚡ Help ensure safety
- ⚡ Revise electrical theory
- ⚡ Extend your knowledge
- ⚡ Help ensure compliance



**“A MUST FOR ALL
ELECTRICIANS AND
TEAM MEMBERS”**

⚡ PowerLogic

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COURSE CONTENT

Introduction to Electric Arcs

This module explains what happens in an arc, resulting injuries, causes, examples of poor installations and arc management using the hierarchy of safety controls including PPE (last line of defence).

Fault Loop Impedance

Loop impedance is fully explained in this module, including what it is, measurement methods, required test results, installation design with case study, other uses of loop tester, one loop tester explored, other tester options, and most importantly testing errors and problems and the management of these.

Residual Current Devices

RCD ins and outs are explored including RCD design/types, preventing problems for users, Rules and legislation requirements, test and tag requirements, additional tests, construction site requirements, causes of nuisance trips, user guide once tripped and what to do if an RCD is involved in a shock incident.

Voltage Quality Introduction

This introduction to voltage quality looks at the nominal voltage in Australia and NZ, allowable voltage range, measurement to the standard, and assessment of measurements for standards compliance.

Voltage Drop

This module looks at the how, why, Wiring Rules requirements for installation design and equipment selection, limits, practical installation design for compliance, stand-alone and extra LV requirements, methods of and how to calculate, case studies, & voltage drop versus loop impedance requirements.

Maximum Demand

Wiring Rules Part 1 & 2 requirements, after diversity maximum demand, allowable methods, domestic & non-domestic calculations, assessment, measurement, limitation, & examples including the floor space method for non-domestic installations are all explored. Spreadsheet calculator provided.

Current Carrying Capacity

The process for determining cable current-carrying capacity is explored in depth including conductor temperature limits, use of rating/derating tables depending on conditions & installation methods used, variations along a cable route & multiple conditions, use of capacity tables, & with examples provided.

Cable Selection

This module extends on maximum demand, current-carrying capacity, voltage drop, & fault loop impedance modules, & also explores relevant standards, cable colour coding, physical design of conductors, installation conditions & how this affects cable selection, short-circuit temperature requirements, lifetime cost of cables, & use of reputable cable suppliers/manufacturers.

Wiring Rules Verification

Legal requirements for verification, Wiring Rules' visual requirements & mandatory tests, sequence of tests, test equipment, test methods for compliance, additional tests to ensure safety, recording results, & other compliance standards are all investigated as part of this module.

Wiring Rules Test

This module will test your knowledge & ability to use the Rules, as well as perhaps introduce you to rules that you may not be familiar with by having to find the Rule.