

OVERVIEW

The main objective of the generic module is to give you the foundation knowledge and electrical 'vision' to fundamentally understand how and why an electrical system works and allow you to develop with confidence and competence.

DAY 1

Fundamentals of electricity:

- **Electron theory including atomic elements and free electrons • Charge and attraction • Coulomb's Law**
- **Conductors, Insulators and Semiconductors • Current • Voltage • Resistance • Electrical symbols and mathematical prefixes.**

DAY 2

Simple electrical circuit theory:

- **Ohm's Law • Using digital multimeters to measure resistance, voltage and current • Practical workshop including the building a simple electrical circuits calculating the expected value of current and measuring the actual resistance, voltage and current • DC series circuits, this follows the theory then practical route • DC parallel circuits, again this follows the theory then practical route reinforcing the use of previously learnt techniques.**

DAY 3

- **DC series – parallel circuits, following the same pattern as the previous day • Power, solving power problems using power formulae • Magnetism • Electromagnetism and electromagnets.**

DAY 4

- **Introduction to AC, sine waves, single and 3 phase supplies • AC generation • Frequency • Voltage and current, peak, instantaneous and RMS values • Relationship between line and phase voltage in a 3 phase system • Transformer theory, calculation and practical.**

DAY 5

- **Capacitance theory, calculation and practical • Inductance theory, calculation and practical • Impedance theory, and calculation of circuit impedance.**

COST: £625 (+ VAT)

PREREQUISITE: None

DURATION: 5 Days

BOOKINGS: Telephone 01246 810444 or Email enquiries@techniquetraining.co.uk