

# ELECTRICAL ENGINEERING FOR NON-ELECTRICAL ENGINEERS



## WORKSHOP overview

This course is specifically designed for non-electrical engineers who would like to gain an understanding of the basic principles, theories and understanding of electrical engineering work. In this course, the participant will learn how to perform straightforward and common calculations associated with voltage, current, power and power factor. The basic concepts and working principles of electrical machines will also be introduced in this course. The participants will also gain a good understanding of the electrical generation, transmission and distribution systems. Some power quality issues, which is now becoming a big concern to power utility and manufacturers, will also be discussed in here. Some important concepts in electrical safety will also be included.

## WORKSHOP objectives

At the completion of the course, the participants will be able to:

- appreciate the history of electrical engineering
- apply the basic definition of electrical engineering in the work place
- compute the real, reactive and complex powers in three-phase systems
- identify the cause of low power factor
- apply the knowledge of three-phase circuits in electrical machines and power systems.
- list the types of dc motors
- analyse characteristics of dc motors and three-phase induction motors
- draw equivalent circuit and phasor diagram of three-phase induction motors.
- compute voltage regulation of a synchronous generator using simple equivalent circuit

## WHO should attend?

- Non-electrical engineering personnel responsible for electrical systems in building sites and commercial buildings, such as structural civil engineers and architects.
- Plant engineers, electrical contractors and utility engineers
- Jurutera loji, kontraktor elektrik and jurutera kegunaan.

## WORKSHOP outline

- Basic definition
- Basic AC & DC Electrical Theories
- Three Phase Balanced Systems
- Calculations for Real Power, Apparent Power & Power Factor Corrections
- Generation, Transmission, Distribution of Electrical Energy System
- Power Quality
- And more...

FOR MORE DETAILS, PLEASE CONTACT:

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