

REGISTRATION FORM
**2-Day Course on 'ELECTRICAL EQUIPMENT FOR NON-
 ELECTRICAL ENGINEERS' by Ir. LEE CHONG KIW**

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 ELECTRICAL ENGINEERS' by Ir. LEE CHONG KIW**

Organised by : IEM Training Centre Sdn Bhd

No	Name(s)	M'ship No.	Grade	Fee (RM)*
SUB TOTAL				
TOTAL PAYABLE				

**Course fee is inclusive of 6% SST and HRDF Claimable.*

Please Tick	Date	Venue
	27 & 28 May 2019	Wisma IEM,
	04 & 05 November 2019	Petaling Jaya

Grade	Offline Rate	*Online Rate
IEM Members	RM1,060.00	RM1,007.00
Non-IEM Member	RM1,590.00	RM1,537.00
*Online Rate - Please register at our website www.iemtc.com.		
BEM Approved CPD Hours = TBA / Ref. No: TBA		

Enclosed herewith a crossed cheque No: _____ for the sum of RM _____ issued in favour of "**IEM Training Centre Sdn Bhd**" and crossed 'A/C payee only'. I/We understand that the fee is not refundable if I/We withdraw after my/our application is accepted by the Organising Committee as stated in the **cancellation term**. If I/We fail to attend the seminar, the paid registration fee will not be refunded.

Contact Person: _____ Designation: _____

Name of Organization: _____

Address: _____

Telephone No.: _____ (O) _____ (Fax)

_____ (H) _____ (HP)

Email: _____

TERMS & CONDITIONS:

- Payment via CASH / CHEQUE / BANK-IN TRANSMISSION.
- Fee paid is not refundable. Registration fee includes lectures notes, refreshment.
- All registration fees must be FULLY paid before commencement of the course. Government agencies and Statutory Bodies are required to provide Local Orders. IEM Training Centre Sdn. Bhd. reserves the right to refuse entry for participant(s) who have not paid their registration fees to attend the course. **THIS REQUIREMENT WILL BE STRICTLY ENFORCED.** *Please be informed that the course will only be carried out if there is sufficient number of participants. The confirmation or cancellation email will be sent to the registered email address one or two weeks before the event dates.

PAYMENT METHOD

- Local Cheque / Banker's cheque made payable to "**IEM TRAINING CENTRE SDN BHD**".
- Directly bank in or online transfer to:- (Please forward soft copy of payment advice)

IEM TRAINING CENTRE SDN. BHD.
 Account no. 514169143176
 Malayan Banking Berhad

Signature & Stamp

Date

Photocopies are acceptable

Introduction

The purpose of the course is to enable participants who do not have an academic background in electrical engineering to understand the basic principles of the various electrical equipment that they may encounter in their working environment so that they can do a better job. The focus will be on medium voltage equipment between 1kV to 36kV.

TARGET AUDIENCE

- Non-electrical engineers who have a special interest in electrical engineering.
- Designers, chargemen and technicians who already have some experience in electrical engineering work.
- Young electrical engineers who wish to enhance their practical knowledge of electrical engineering

COURSE CONTENTS

Basic Electrical Technology

Conductors, insulators and semiconductors. Basic DC theory. Components. Voltage, current and resistance. Electrical measurements. Ohm's Law. Power and energy. Series and parallel connections. Open- and short-circuits.

Basic AC theory. Comparison with DC. Reasons for using AC. Advantage of using higher voltages. Use of transformers. Apparent, real and reactive power. Power flow and factor. Single- and three-phase systems. Use of neutral in three-phase supplies. Star and delta connections.

Equipment non-electrical ratings. Heating, cooling and efficiency. Insulation resistance. Voltage drop and dip. Power system harmonics.

Power Transformers

Basic principles. Voltage, current and power transformers. Dry and oil-filled transformers. Conservator and sealed type of transformers. Cooling of transformers. Use of tap-changers. Off-circuit and on-load tap-changers. Windings and vector groups. Accessories.

AC Generators

Basic principles. The "twins" of generators – Mechanical & electrical components, the two inputs, the two outputs and the two controls. The four quadrants of operation of synchronous and induction generators and motors. Effect of changes of mechanical input and excitation on MW, Mvar, voltage and frequency in standalone and synchronised machines. The two triangles of exciter – voltage – Mvar and mechanical input – frequency – MW. Capability curve.

Introduction to Medium Voltage Switchgear

Purpose. Types and functions of switchgear – circuit breaker, contactor, switch, earthing switch and disconnecter. LV CB – ACB, MCCB and MCB. MV CB – oil, minimum oil, vacuum and SF6. Ring main unit. LV air and MV vacuum contactors. Characteristics of CBs – opening, arcing and breaking times. Features, advantages and disadvantages of gas-insulated switchgear. Understanding various ratings of medium voltage switchgear. Factory acceptance tests.

Dangers of Electrical Arc Flash & Blast

Differences between and consequences of arc flash and blast. Need for arc flash studies based on IEEE 1584. Understanding the terms working distance, incident energy and flash protection boundary. Understanding the use of the various categories of PPE in limiting injuries to first degree burns.

Discussions of electrical systems

- Participants are free to bring any technical documents or single-line diagrams for any discussion

PROFILE OF COURSE FACILITATOR

Ir. Lee Chong Kiow is a 1974 electrical engineering graduate from Strathclyde University, Glasgow with more than 40 years of experience in the power supply industry.

- Specialises in providing technical training of electrical courses and performing power system studies.
- Previously the Engineering Manager of Tamco Corporate Holdings Sdn Bhd, which manufactures indoor medium- and low-voltage switchgear.
- More than 15 years working as a protection engineer in a Lembaga Letrik Negara and another five years in a large consultancy practice.
- Suruhanjaya Tenaga certified competent/services engineer up to 275kV.
- Since 1997, trained more than 6,500 participants from electricity utilities, petrochemical industry and multi-national companies throughout Malaysia as well as in Singapore, Brunei, Oman, China, Myanmar and Vietnam and three countries in Africa.
- Carried out various training programmes for Petronas Instep, Brunei Shell Petroleum, Brunei LNG, Petroleum Development Oman, Tenaga Nasional Berhad, SESCO and Intel.
- Topics include Power System Protection, Basic Electrical Engineering, Applications, Operation & Maintenance of Electrical Equipment, Commissioning of Power Transformers, Protection & Starting of Induction Motors, Medium & Low Voltage Switchgear, Electrical Safety & Competency Assessment and Electrical System Studies.