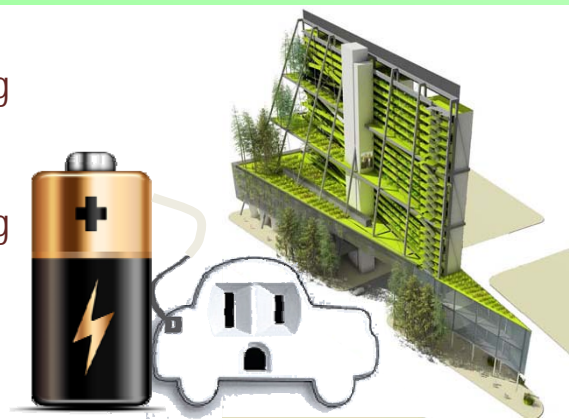


Professional Short Course in Electrical Engineering

Organized by:



The Professional Short Course in Electrical Engineering is a series of classes designed to cover different aspects of electrical systems in Hong Kong which are under active development and discussion. They are designed for engineers, both experienced and young, from different sectors of the electrical industry who seek to refresh or acquire emerging knowledge of the focus topics in electrical engineering. Facilitated by subject experts in practice, the professional short course will benefit the participants by learning through practical design experience sharing and case studies.



The 2012 Course comprises of 4 classes:

Class 1 – (A) Green Building Design Philosophy
(B) Statutory & Safety Requirements of Electric Works

Class 2 – Railway Signaling

Class 3 – Design & Maintenance of Standby Battery System

Class 4 – Electric Vehicle Propulsion Systems

Date

Class (1) 6 Mar 2012 (2) 8 Mar 2012
(3) 13 Mar 2012 (4) 15 Mar 2012

Time

7:00 – 9:00pm

Venue

Hong Kong Scout Centre, Austin Road,
Tsim Sha Tsui

Fee

\$450 (HKIE member) ; \$550 (non-HKIE member)

Registration

Prior registration is required. Members are welcome to enroll in any of the 4 classes. The class size is limited to 60. Applications will be accepted on a first-come first-served basis. Priority will be given to HKIE members.

For registration, please complete and return the Enrollment Form, with a crossed cheque made payable to "The HKIE – Electrical Division", to **UG8 Newport Centre, 116 Ma Tau Kok Road, To Kwa Wan, Kowloon (Attn: Ms. Pamela Cheng)** by 15 Feb 2012. Successful applicants shall be notified by email.

For enquiries, please contact Ir Mandy Leung at 9101-0339 or via email: mmyleung@clp.com.hk

Certificate

Attendance certificate will be issued for each class.

A short quiz will also be organized at the end of each class to reinforce the knowledge learnt in class. The top 4 outstanding students will be presented with an award at the HKIE-Electrical Division Annual Dinner 2012.

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Course Outline

Class 1 **Part A : Green Building Design Philosophy** **Part B : Statutory & Safety Requirements of Electric Works**

This class is divided into two parts .

Part A: Sustainable development is a critical issue and is leading to significant changes in the way engineers design and operate buildings. Hence it is important to develop a strategy and a series of deliberately ambitious objectives. Such a strategy should be aligned with policies on sustainable development and a consistent approach should be developed to realize the opportunity that each project offers. This class will lead through the guiding principles that make engineers easier to communicate, agree and implement more sustainable construction with clients and project teams, and shall help the design team to understand how their buildings perform in meeting the objectives including: Low carbon and energy efficiency; water reduction and recycling; sustainable built materials; compatibility with future climate change; enhancing the community and environment; and sustainability in operation.

Speaker: Engineer from Arup

Part B: Engineers and workers who conduct electrical work are required to apply for registration as Registered Electrical Worker with the Electrical and Mechanical Services Department (EMSD). With effect from 1 January 2012, all Registered Electrical Workers (REW) are required to complete a CPD training consisting of two modules namely, “Statutory and Safety Requirement” and “Technical knowledge” before registration renewal. This class will cover the Module 1 “Statutory and Safety Requirement” of the CPD training for REWs, which discusses the roles and responsibilities of REW and Registered Electrical Contractors (RECs) with focus on good practices and typical malpractice identified as to complying with the statutory and safety requirements stipulated in the Electricity Ordinance (Cap. 406).

Speaker: Engineer from EMSD of HKSAR Government

Class 2 **Railway Signaling**

This class introduces the basic concept of railway signaling system, its major subsystems and design considerations. Focus will be given to the signaling systems in Hong Kong. In particular for the future development of high speed rail network in Hong Kong, its corresponding challenges and requirements for the signaling will be discussed in class.

Speaker: Mr Alex Ng – Senior Engineer, Signaling, Projects Division of MTR Corporation

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Course Outline

Class 3 Design & Maintenance of Standby Battery System

Standby battery systems are widely used in uninterrupted power supply (UPS) and DC systems where critical loads are connected. Undoubtedly, reliability of the battery plays an important role in the overall reliability of the DC system. This class aims to provide the participants the basic understanding on the battery system and the following topics will be covered:

- Different types of rechargeable battery and their characteristics
- International standards and specifications of battery
- Design considerations in constructing a standby battery system
- Different types of charger design and the typical specifications
- Maintenance on the battery system
- Practical operation and maintenance considerations

Speaker: Ir KT Yeung – Senior Area Engineer, Transmission & Distribution Division of The Hongkong Electric Co., Ltd.

Class 4 Electric Vehicle Propulsion Systems

This class introduces different types of electric vehicles (EVs), including the battery EV, hybrid EV and fuel cell EV. Electric propulsion systems including the DC, induction and permanent magnet brushless types will also be discussed, with emphasis on their energy efficiency, power density and controllability. In addition, hybrid propulsion systems including the electronic-continuously variable transmission will also be included in the class, particularly on how to minimize the overall fuel consumption. Finally, some emerging EV propulsion technologies will be introduced.

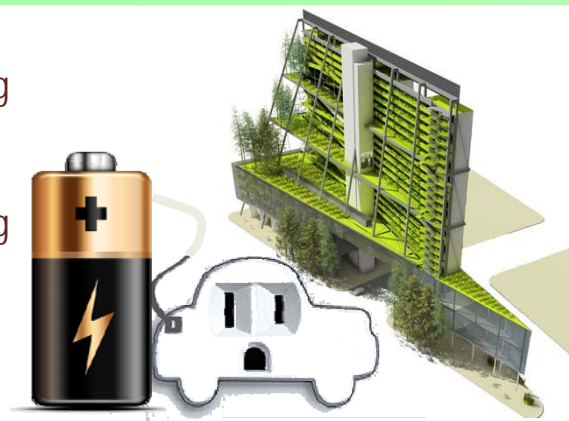
Speaker: Ir Professor KT Chau – Professor, Department of Electrical & Electronic Engineering & Director of the International Research Centre for Electric Vehicles at The University of Hong Kong.

Professional Short Course in Electrical Engineering

Organized by:

HKIE THE HONG KONG
INSTITUTION OF ENGINEERS
Electrical Division

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Enrollment Form

Title Dr. Ir Mr. Ms. Others: _____

Full Name _____ (English) _____ (Chinese)

Company _____

Position _____

Email _____ **Tel** _____

Address _____

HKIE member Non-HKIE member
(Membership no.: _____)

I would like to enroll the following class(es):

Class 1 Class 2 Class 3 Class 4 Total: _____ class(es)

Note:

1. Please complete this enrollment form, and return together with a crossed cheque made payable to "The HKIE-Electrical Division" to **UG8 Newport Centre, 116 Ma Tau Kok Road, To Kwa Wan, Kowloon (Attn: Ms. Pamela Cheng)** by 15 Feb 2012.
2. Application will be accepted on First-come first-served basis. Priority will be given to HKIE members.
3. Successful applications will be notified by email.