# PCE PART B- TUTORIAL **ON HYDRAULIC** SERVICES

Plumbing systems are essential building services for all categories of building. In order to produce a well-designed and economical, plumbing system, a design engineer has to acquire the fundamental knowledge of design criteria and applicable standards.

This course presents criteria pertinent to the design of the water supply and distribution system, hot water system and sanitary plumbing system.

TRAII MO PHYS

**Deadline for re** before



Scan to Register

### **OUR TRAINER**



Ir. Lam Kim Seong

Ir. Lam Kim Seong holds a Bachelor of Engineering (Hons.) Degree in Mechanical Engineering from the University of Malaya. He is a registered Professional Engineer with a practicing certificate with the Board of Engineers, Malaysia and is a GBI Accredited Facilitator. Ir. Lam is a Corporate Member of the Institution of Engineers, Malaysia (IEM), a member of the ASHRAE Malaysia Chapter, Association of Consulting Engineers Malaysia (ACEM) and Malaysia Green Building Council.

Ir. Lam is also active in various professional bodies. He is a board member and a past president of ASHRAE Malaysia Chapter. He also represents IEM, ACEM and MASHRAE in various technical working groups under SIRIM, Kementerian Tenaga, Teknologi Hijau dan Air (KeTTHA) and Suruhanjaya Perkhidmatan Air Negara (SPAN). He was a Trainer and Examiner in the GBI Facilitator course.

<b>10 AUGU</b> NING		IEMTA ng Academy Sdn Bhd	
DDE: SICAL <b>Thursda</b>	<b>y</b> (0) W	/isma IEM,	
egistration is one (1) week the training date.			
CLAIMABLE CLAIMABLE CLAIMABLE CLAIMABLE CLAIMABLE CLAIMABLE CLAIMABLE CLAIMABLE CLAIMABLE	IEM Members	Non-IEM Members	
Approved Duration: APPLYING HRD Corp Serial No: APPLYING	RM530	RM689	

OUR PROGRAMME		
<ul> <li>Overvier of standards and guidelines</li> <li>Water demand and storage determination</li> <li>Overview of water suppy distribution system</li> </ul>	9.00 am - 10.30 am	
Tea Break	10.30 am - 10.45 am	
<ul> <li>Transfer pump selection</li> <li>Pressure booster system sizing</li> <li>Distribution pipee sizing</li> </ul>	10.45 am - 1.00pm	
Lunch Break	1.00 pm - 2.00 pm	
<ul> <li>Water heaters selection and sizing</li> <li>Determination of heating energy</li> <li>Hot water recirculation system design</li> </ul>	2.00 pm - 3.30 pm	
Tea Break	3.30 pm - 3.45 pm	
<ul> <li>Concept of vented and unventilated discharge pipe system</li> <li>Discharge stack capacities/ sizing</li> <li>Below ground discharge system</li> <li>External sewer system design</li> </ul>	3.45 pm - 5.00 pm	

## **LEARNING OBJECTIVES**

To provide participants with the following knowledge and skills:

Water Supply System:

- Determine water demand in relation to building occupancy type.
- knowledge of different piping distribution system.
- Understand the concept of loading units in water pipe sizing
- Pressure boosting system design.

#### **Hot Water System:**

- Determination of hot water demand
- Understand the concept of storage and recovery rate for system sizing
- Hot water recirculation design

#### Sanitary Plumbing

- Understand the concept of discharge units in stack design
- Select the appropriate piping system
- Differentiation of ventilated and uncentilated discharge piping
- Correct and economical application ventilating pipes
- External sewer drainage.

### **WHO SHOULD ATTEND**

- Engineers and designers involved in delivery of cold & hot water and sanitary plumbing systems in buildings.
- Engineers pursuing the route to be a Profesional Engineers