

# Energy Efficiency Management For Air-Conditioning And Mechanical Ventilation (ACMV) Training Course

ORGANISED BY :



SUPPORTED BY :



HRDCorp Claimable:



**HRDF Program ID:**

**10001238021**

**BEM CPD Points Applied**

**8 REEM CPD Approved**

**DATES :**

Intake 1: 8 - 9 Mar 2023

Intake 2: 5 - 6 July 2023

Intake 3: 8 - 9 Nov 2023

**TIME :**

8.30 am - 5.30 pm

**VENUE :**

MASHRAE Secretariat

Unit 518 Block A, Kelana Business  
Center, No 97 Jalan SS7/2, 47301  
Petaling Jaya, Selangor Darul Ehsan.

**REGISTRATION FEE**

**(inclusive of 6% SST) :**

MASHRAE Member : RM 954

Non MASHRAE Member : RM 1060

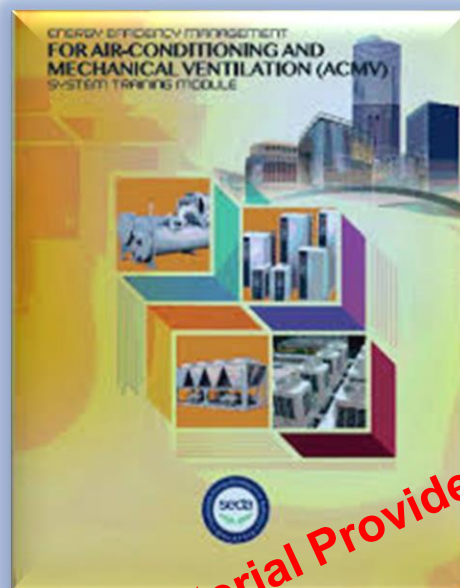
**CONTACT PERSON :**

1) 011-15744931 (Nur)

2) 012-3008893 (Keith Leow)

**Terms & Condition:**

- Registration is based on first-come-first-served basis.
- Course is subject to postponement due to unforeseen circumstance.



**Training Material Provided**

# Energy Efficiency Management For Air-Conditioning And Mechanical Ventilation (ACMV) Training Course

## Biodata of Speaker



### Ir. NG YONG KONG

- Ir. Ng Yong Kong has a B.Eng. (Hons in Mech.) 1985 from University of Malaya, Kuala Lumpur and an MBA (Hull, UK) 1997. He has more than 38 years experience in the HVAC industry having worked as a System and Application Engineer in two major chiller manufacturers, air diffusion and a control company.
- He was the Council Member of the Institution of Engineers, Malaysia (IEM) for 2019 – 2022 and was ASHRAE Director and Regional Chair (DRC) for Region XIII. He is a PEPC registered with the Board of Engineers, Malaysia (BEM) and is also the Council Member for Malaysia Green Building Council 2019 – 2022.
- He is a working group member for JKR/SIRIM Standard for IEQ in office buildings 2021, Guidance Note on Ventilation and IAQ for Non-Residential Setting and Industry Code of Practice on Indoor Air Quality 2022 under DOSH. He is currently the Malaysia Green Building Index Facilitator (GBIF), trainer and examiner. He is a frequent lecturer/trainer for HVAC System Design since 1990 for ASHRAE Malaysia Chapter, Association of Consulting Engineers, Malaysia (ACEM), JKR HQ, JKR Sarawak and MGBC.
- Ir. Ng is the Director of NYKK Engineering Group S/B and was also the Past President for Malaysia Air-Conditioning and Refrigeration Association (MACRA) 2001-2003. He is also a qualified HRDF trainer since 2014.



### Ir. CHEN THIAM LEONG

- Ir. Chen Thiam Leong is a Past President of the Association of Consulting Engineers Malaysia (ACEM), the Institution of Fire Engineers Malaysia (IFEM) and the Malaysian Chapter of ASHRAE. He is also Advisor to the Malaysian Air-Conditioning & Refrigeration Association (MACRA) and the Building Automation System Association of Malaysia (BASAM).
- Chen is a practising Consulting Engineer and is the Managing Director of Primetech Engineers Sdn Bhd based in Kuala Lumpur. Notable projects include the New Securities Commission HQ which was Malaysia's first winner of the ASEAN Energy Award (where he introduced the concept of totally ductless and uninsulated floor plenum for comfort air-conditioning exceeding 600 sq.m. per zone) Energy Commission HQ, winner of the ASEAN Energy Award 2012, EMERSON CUP 2012 and ASHRAE Technology Award 2013 (2nd Place).
- Chen holds a 1st Class Hons Mechanical Engineering degree from the University of Leeds and has been involved in Energy Efficiency designs since the early 80s. He regularly lectures in the international circuit on the subjects of Sustainability and Energy Efficiency under the ASHRAE Distinguished Lecturer program and is Malaysia's first ASHRAE DL. Chen also specialises in Energy and Fire & Life Safety audits. He is involved in the development of numerous Malaysian Standards including MS1525 on EE and has authored/co-authored technical articles/papers which are regularly featured in technical publications. He is also a qualified HRDF Trainer.
- In recognition of his contribution to the engineering fraternity, he was honoured with the ACEM Gold Medal Award in 2010.

# Energy Efficiency Management For Air-Conditioning And Mechanical Ventilation (ACMV) Training Course

## Day 1 Program

Time	Topic	Duration
8.30-8.50am	Participation Registration	20 Min
8.50-9.00am	Opening Speech	10Min
9.00-10.30am	Chapter 1: Introduction to Air Conditioning & Mechanical Ventilation <ul style="list-style-type: none"> <li>- Principle of Refrigeration</li> <li>- Psychometrics</li> <li>- Cooling Load Estimation &amp; Software</li> <li>- Refrigerant Issue</li> <li>- Type of Air Conditioning system (Introductory)</li> <li>- Type of Mechanical Ventilation System (Introductory)</li> </ul>	1Hr 30Min
10.30-10.45am	Morning Tea Beak	15Min
10.45 – 12.30pm	Chapter 1: Continued	1Hr 45Min
12.30-1.00pm	Chapter 2: Factors Affecting Air Conditioning Design <ul style="list-style-type: none"> <li>- Human Comfort</li> <li>- Indoor Design Conditions</li> <li>- Outdoor Design Conditions</li> <li>- Ventilation Requirement</li> <li>- Heat Source (Radiation, Convection &amp; Conduction)</li> </ul>	30Min
1.00-2.00pm	Lunch Break	1Hr
2.00-2.30pm	Chapter 2: Continued	30Min
2.30-3.30pm	Chapter 3: Types of ACMV System – Design & Selection <ul style="list-style-type: none"> <li>- Design and Selection of ACMV</li> <li>- ACMV System</li> </ul>	1Hr
3.30-3.45pm	Afternoon Tea Break	15Min
3.45-5.15pm	Chapter 4: Understanding Cooling Load & Load Profile <ul style="list-style-type: none"> <li>- Peak Cooling Loads</li> <li>- Diversity Factors</li> <li>- Base Cooling Loads</li> <li>- Phantom Loads</li> <li>- Full Load and Part Load Operation</li> <li>- Chillers Configuration</li> <li>- Peak Load Shaving</li> </ul>	1Hr 30Min
5.15-5.30pm	Question & Answer	15Min
5.30pm	End Of Day 1	

# Energy Efficiency Management For Air-Conditioning And Mechanical Ventilation (ACMV) Training Course

## Day 2 Program

Time	Topic	Duration
8.30-8.45am	Participation Registration	15 Min
8.45-10.00am	Chapter 5: Water and Air Distribution System -Piping , Valves, Pumps, Cooling Towers, PAHUs, AHUs, FCUs and Fans.	1Hr 15Min
10.00-10.30am	Chapter 6: Energy Efficient Equipment Components - Variable Speed Drives(VSD) - Heat Recovery Wheel	30Min
10.30-10.45am	Morning Tea Break	15Min
10.45-11.30am	Chapter 6: Continued	45Min
11.30-1.00pm	Chapter 7: Testing & Commissioning and Sustainable Maintenance -Testing & Commissioning Sustainable Maintenance	1Hr 30Min
1.00-2.00pm	Lunch Break	1Hr
2.00-3.45pm	Chapter 8: Save Chiller Program Case Studies - Introduction - Case Study 1-Office Building - Case Study 2-Hotel - Case Study 3- Retail Mall	1Hr 45Min
3.45-4.00pm	Afternoon Tea Break	15Min
4.00-5.15pm	Chapter 8: Continued	1Hr 15 Min
5.15-5.30pm	Question & Answer	15Min
5.30pm	End of Day 2	

