

# Operation & Maintenance of Air-Conditioning And Mechanical Ventilation (ACMV) Competency Course

**HRDF Claimable**

**Limited  
to 20 Pax**

**VENUE :** MASHRAE Secretariat

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

**Dates:** 24 & 25 June 2023

**Time:** 8.30 Am -5.30 Pm



**REGISTRATION FEE :**  
**RM 1300**

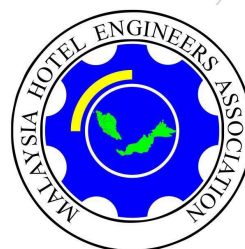
**CONTACT PERSON :**

- 1) 011- 15744931 (NUR HP))
- 2) 012- 2482689 (David Gan)

**ORGANISED BY :**



**SUPPORTED BY :**



# Operation & Maintenance of Air-Conditioning And Mechanical Ventilation (ACMV) Competency Course

## Biodata of Speaker



### TS. NG WEN BIN

*P.Tech, iCxS, MASHRAE, CSTP-I, Grad.Eng*

- ▶ Ng Wen Bin is presently employed at Universiti Kuala Lumpur Malaysia France Institute (UNIKL MFI) as a senior lecturer in the Heating, Ventilating, Air Conditioning, and Refrigerating sector. Additionally, he heads a Research Centre for Refrigeration Engineering and Indoor Environment. With over 25 years of experience in HVAC&R industry and vocational training, he possesses extensive expertise in the field.
- ▶ He is actively involved in ASHRAE activities since 2002. He served as the President of the ASHRAE Malaysia Chapter from 2019 to 2021. He was also actively involved in ASHRAE Technical Committees such as TC4.1 Cooling Load Data & Procedures, TC3.1 Refrigerants and Secondary Coolants, TC4.3 Ventilation Requirements & Infiltration and ASHRAE Standard 34: SSPC34 - Project Subcommittee Voting Member
- ▶ He is involved in the development of numerous National Skill Standards for air conditioning and refrigeration since 1999 with MLVK, JPK and CIDB. He also served on several working committees on developing the Training Manual for Technicians in Refrigeration & Air-Conditioning Sector for DOE, CIDB and developed standards and code of practice for SIRIM. He is appointed by DOE Malaysia as Master Trainer for Certified Service Technician Program(CSTP) and as a Speaker for a roadshow on Phaseout refrigerant supported by (HCFC) Phased-out Management Plan (HPMP Stage 2) (2017 – 2022)

# Operation & Maintenance of Air-Conditioning And Mechanical Ventilation (ACMV) Competency 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>- Refrigerants</li> <li>- Pressure – Enthalpy Chart</li> <li>- Psychometrics</li> <li>- Cooling Load Estimation &amp; Software</li> </ul>	1Hr 30Min
10.30-10.45am	Morning Tea Beak	15Min
10.45 – 11.15pm	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
11.15 -1.00 pm	Chapter 3: Refrigeration cycles and its components <ul style="list-style-type: none"> <li>- Single-stage cycle</li> <li>- Double-stage cycle</li> <li>- Cascade systems</li> <li>- Components</li> </ul>	1Hr 45Min
1.00-2.00pm	Lunch Break	1Hr
2.00-3.30pm	Chapter 4: Types of ACMV Tools and Equipment <ul style="list-style-type: none"> <li>- Basic ACMV Tools</li> <li>- ACMV Specialty Tools</li> <li>- Advanced ACMV Tools</li> <li>- ACMV Safety Tools</li> <li>- ACMV Utilities and Accessories</li> </ul>	1Hr 30Min
3.30-3.45pm	Afternoon Tea Break	15Min
3.45-5.15pm	Practical Activities <ul style="list-style-type: none"> <li>- Refrigeration cycle analysis</li> <li>- Charging procedures</li> </ul>	1Hr 15Min
5.15-5.30pm	Question & Answer	15Min
5.30pm	End Of Day 1	

# Operation & Maintenance of Air-Conditioning And Mechanical Ventilation (ACMV) Competency Course

## Day 2 Program

Time	Topic	Duration
8.30-8.40am	Participation Registration	15 Min
8.45-10.30am	Chapter 5: Air Conditioning and Mechanical Ventilation Systems <ul style="list-style-type: none"> <li>- Type of Air Conditioning system               <ul style="list-style-type: none"> <li>▪ Central air conditioning system</li> <li>▪ Window air conditioning unit</li> <li>▪ Split air conditioning system</li> <li>▪ Ductless mini-split air conditioning system</li> <li>▪ Packaged air conditioning system</li> <li>▪ Variable refrigerant flow (VRF) system</li> <li>▪ Chilled water system</li> <li>▪ Absorption cooling system</li> <li>▪ Heat pump system..</li> </ul> </li> <li>- Type of Mechanical Ventilation System               <ul style="list-style-type: none"> <li>▪ Exhaust-only ventilation</li> <li>▪ Supply-only ventilation</li> <li>▪ Balanced ventilation</li> </ul> </li> </ul>	1Hr 45Min
10.30-10.45am	Morning Tea Break	15Min
10.45-11.30am	Chapter 6: Water Distribution System -Piping, Valves, Pumps, Cooling Towers	45Min
11.30-1.00pm	Practical activities - Charging procedures	1Hr 30Min
1.00-1.55pm	Lunch Break	1Hr
1.55-2.00pm	Briefing	5Min
2.00-3.00pm	Examination	1Hr
3.00 – 3.45pm	Practical Assessment	45Min
3.45-4.00pm	Afternoon Tea Break	15Min
4.00-5.30pm	Practical Assessment	1Hr 30 Min
5.30pm	End of Day 2	

# REGISTRATION FORM FOR TWO-DAY ACMV Competency Course ASHRAE Malaysia Chapter

REGISTRATION FEE	RM1300		
NAME	ORGANISATION/POSITION/CONTACT/EMAIL	MASHRAE NO	FEE
	GRAND TOTAL		
	TOTAL PAYABLE		

Phone /Fax : Cik Nur +603-7887 5886

Email: mashrae.my@gmail.com

We are pleased to enclose herewith our \_\_\_\_\_cheque/money order amount RM \_\_\_\_\_issued in favour of “ASHRAE MALAYSIA CHAPTER” and crossed “A/C Payee Only” or make Telegraphic Transfer to MASHRAE Account “Public Bank Berhad, Acc. No. : **3229576731**”.

I/We understand that the fee is not refundable if I/We withdraw after my/our registration is accepted by the Committee but substitution of participants will be allowed. If I/We fail to attend the Seminar the fee paid would not be refunded.

NAME OF COMPANY : \_\_\_\_\_  
 CONTACT PERSON : \_\_\_\_\_  
 TEL : \_\_\_\_\_  
 MOBILE : \_\_\_\_\_  
 EMAIL : \_\_\_\_\_