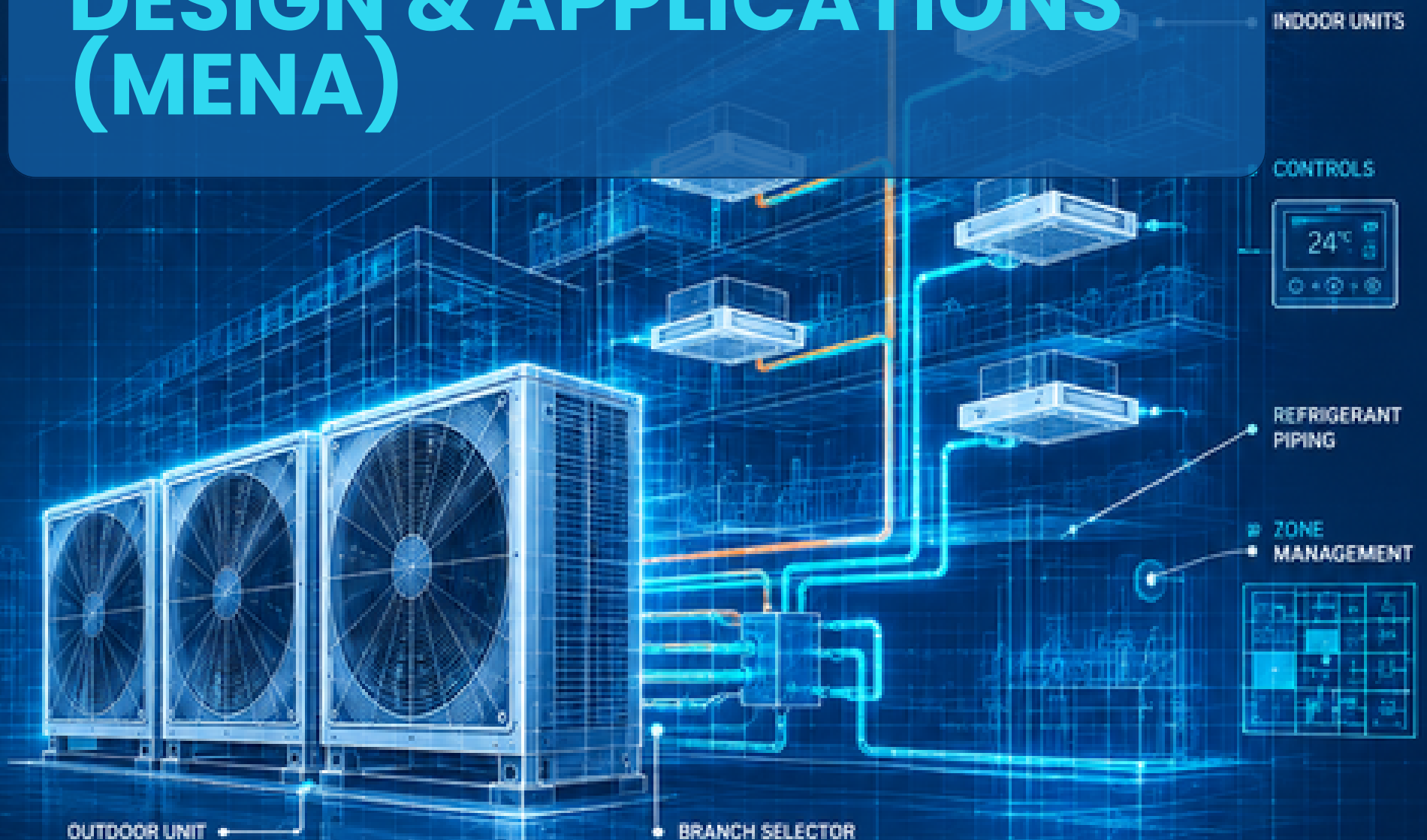


VRF Training Program

Variable Refrigerant Flow Systems: DESIGN & APPLICATIONS (MENA)



One-Day Intensive Training
6 Hours | 6 PDH



15 OCTOBER 2026



ASHRAE Pakistan Chapter

Bukhari Commercial - DHA-VI, Karachi.

PRECEDES

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16-17 OCTOBER 2026
Pearl Continental Hotel



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Variable Refrigerant Flow Systems: Design & Applications (MENA)

(1 day/ 6 hours – 6 PDH)

This course is designed for a global audience, specifically attendees in the Middle East, North Africa, and Asia. The course provides an overview of variable refrigerant flow (VRF) technology, including equipment and system types, heating/cooling operation, heat recovery, and the benefits of VRF systems. Also described is the VRF design process, including load profile analysis, unit sizing, ventilation air strategy, refrigerant piping design, and system monitoring/controls. Refrigerant safety considerations are explained, including a discussion of ASHRAE Standards 15 and 34. The course concludes with a focus on human comfort and sustainable design featuring example buildings, ventilation systems, and VRF system layouts.

Learning Objective:

- Provide overview of variable refrigerant flow (VRF) system technology, theory, and operation
- Discuss consideration for design and application of VRF systems in buildings including considerations specific to Middle East climates and operating conditions.
- Describe applicability of ASHRAE Standard 15, Safety Standard for Refrigeration Systems, requirements to VRF systems, including requirements related to new and emerging refrigerants.
- Review application of VRF systems in different building types

Agenda:

- **What is a Variable Refrigerant Flow System**
 - Principle and Theory
 - VRF System Types
- **VRF and AHRI Standard and Part Load Calculation**
 - VRF operation and control
 - Type of Heat Recovery Systems defrost, humidity control
- **System Design, Design Considerations and Design Example**
- **Air Ventilation Strategies**
- **VRF Ventilation LEV Kit**
 - Application
- **DOAS Unit Design Workshop Residential**
 - Application
- **Application #3 Safety Considerations for VRF Systems**
- **Application # 4 LEED Platinum Office Application Air-Source VRF**
- **Application # 5 High-Rise Residential Application Air-Source VRF**



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ASHRAE Course Instructor

Hesham Safwat, Ph.D., ASHRAE (DL) Speaker



Briography

Dr. Hesham Safwat has charted a distinguished career over the last two and a half decades, deeply immersed in the intricacies of Mechanical Power Engineering with a focus on HVAC systems, energy efficiency, and the sustainable design of building infrastructures. Educated at Cairo University, where he obtained both his Master's and Ph.D. in Mechanical Power Engineering, Dr. Safwat has built a robust foundation in both the theoretical and practical aspects of the discipline, underscored by his significant academic role as a Senior Lecturer at the British University in Egypt since 2014.

In his professional journey, Dr. Safwat has seamlessly blended academic rigor with industry relevance, marked by his tenure as a Technical Manager at Miraco – Carrier, Egypt, where he led initiatives to advance HVAC system designs and energy efficiency measures from 1996 to 2014. His consultancy work, which emphasizes energy modeling, LEED certifications, and the design of commercial systems, showcases his expertise in enhancing the sustainability and efficiency of HVAC systems, and is recognized and authorized by the Egyptian Syndicate of Engineers.

Dr. Safwat's contributions extend beyond the realms of academia and industry into the domain of standards and policy development, where he actively participates in the Refrigeration and Airconditioning Egyptian Code committee and serves as an ASHRAE Global Training instructor. This role highlights his dedication to elevating the standards and practices within the global HVAC industry.

Course Fee : PKR 15,000

ASHRAE and YEA Members : PKR 10,000

Registration Deadline: 05 October 2026

**LIMITED SEATS. CERTIFICATES AND PDHS
AWARDED UPON COMPLETION.**

For Details Contact:

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Chair YEA Committee

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For Registration Scan



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