“This course presented a unique opportunity to learn from the best instructors in the field. Although I am not new in the field of HVAC, this course contained new and valuable information. I recommend this course for those who are getting started in the field, and also to those seeking to gain more knowledge and insight in the field.”

Abdelrahman O. - Cairo, Egypt

“ASHRAE Standard 90.1 training has enabled me to understand the performance of buildings and the various compliances that can be achieved using the standard to design better and more efficient buildings.”

Mohammed M. - Dubai, UAE

“I wanted to get into the HVAC industry and the ASHRAE training provided very good exposure to what is involved and what to expect in the field as an engineer. It refreshed some concepts as well as taught interesting new ideas.”

Shahrulk S. - Kuwait
The ASHRAE Global Training Center (GTC) offers a variety of full-day and multi-day courses to help you stay in the forefront of HVAC&R technology. GTC offers authoritative technical instructor-led training presented at

ASHRAE online course series
ASHRAE Chapter (upon request)
Companies (upon request)
Other industry meetings/conferences

ASHRAE is an approved Continuing Education provider for the American Institute of Architects (AIA) and a U.S. Green Building Council (USGBC) Education Partner. Continuing Education hours earned from ASHRAE courses and seminars may be applied toward renewal of state-licensed professionals and maintenance of LEED® professional credentials.

American Institute of Architects (AIA)
Green Building Certification Institute (GBCI)

Visit www.ashrae.org/gtc for more details and to register.
Courses subject to change without notice.
Designing High-Performance Healthcare HVAC (MENA)
This course provides a discussion of fundamentals of system design for healthcare facilities, design considerations, basic methodology of HVAC design, psychrometrics, energy, and sustainability goals of high-performance healthcare facilities. In addition, this course will cover definitions of the key elements of high-performance in healthcare, control sequences and set points, and energy conservation strategies and relationships to temperature/relative humidity requirements.

Instructor: Hesham Safwat, Ph.D., Member ASHRAE

District Cooling for Designers and Owners (MENA)
This course presents practical guidance contained in two ASHRAE publications: District Cooling Guide, Second Edition and Owner’s Guide for Buildings Served by District Cooling. District cooling systems, when designed and operated properly, can be an energy-efficient alternative to conventional in-building chilled water plant adding to an owner’s sustainability portfolio and allowing the building owner to focus on their own business, rather than operating and maintaining a chilled water plant. District cooling systems can provide buildings in a particular area with chilled water for comfort and process cooling with the benefits to the building owner of greatly reduced or eliminated maintenance cost, much lower space requirements, and no concerns as to plant capacity or load growth. This 6-hour course covers what designers and owners need to know about district cooling to enable it to provide energy efficiencies and reliable operation.

Topics covered include Planning, Central Plant Design, Distribution System Design, Building Interfaces, Thermal Energy Storage, and Operation and Maintenance from both the designer and owner perspectives. The instructors will take attendees through the guidance provided in these new tools made available from ASHRAE to advance the successful applications and use of district cooling technology.

Instructors: Gary Phetteplace, Ph.D., Fellow/Life Member ASHRAE; Brian Kirk, Member ASHRAE; and Steve Tredinnick, P.E., Member ASHRAE

Emerging Trends and Sustainable Design in Refrigeration and Cold Chain (MENA)
Refrigeration and the cold chain are part of a growing, worldwide industry. There is a need for facilities to be designed with energy-efficient and sustainable technologies to ensure proper storage while minimizing harm to the environment. This course provides insight into the fields of refrigeration and the cold chain, including the newest trends and the sustainable aspects of design. First, the course will look at the basics of refrigeration, as well as types of refrigerants and their use. Industry trends related to topics like thermal insulation, low-charge ammonia systems, material handling, and automation will be discussed. Next, the course will provide an introduction to cold chain, including various types of cold-chain routes paired with descriptions, photographs, diagrams, and illustrations. Concepts important to the sustainable design of cold chain facilities will be covered, including building layout, thermal insulation, energy-efficient refrigeration systems, heat recovery systems, water recycling, and renewable energy systems.

Instructors: Harshal Surange, Member ASHRAE

Effective Energy Management in New and Existing Building (MENA)
This course offers techniques for the adoption of energy optimization and the introduction of specialized energy-saving systems in the Middle East. The training weaves together energy management principles found in ASHRAE Handbook—HVAC Applications, U.S. ENERGY STAR® guidelines, and ASHRAE/IES Standard 100-2018, Energy Efficiency in Existing Buildings, a standard used internationally to guide organizations in reducing overall energy costs by providing procedures and programs essential for energy efficiency, maintenance, management, and monitoring. The course provides numerous how-to solutions from successful energy managers who achieved a reduction in energy consumption by implementing sustainable energy technologies. These solutions demonstrate how to take advantage of the ENERGY STAR Portfolio Manager for documented performance tracking and recognition as an ENERGY STAR in a hospital, high-rise building, bank, and a convention center. Among other course features are interactive exercises that uses data loggers to collect data during the course to demonstrate real-time logging of CO2, light, temperature, and relative humidity in the classroom, as well as the best ways to use data-logging instruments.

Instructors: Samir Traboulsi, Ph.D., P.Eng., Fellow Life Member ASHRAE; and Hassan Younes, Member ASHRAE, BEAP, BEMP, HBDP, CPMP, HFDP, OPMP

The Future of Refrigerants: Challenges and Opportunities (MENA)
This training provides a background review of international treaties and initiatives that support the transition from hydrochlorofluorocarbon (HCFC) and hydrofluorocarbon (HFC) refrigerants towards non-ozone-depleting, low-global-warming-potential substances. A review of proposed refrigerants and how they can be used in different HVAC&R applications based on theoretical and empirical analyses is discussed. Challenges and opportunities associated with the different types of refrigerants are presented, including hydrofluoroolefins and natural refrigerants. Current and future refrigerant options suit the region are covered, as well as related standards and codes of systems and substances. Finally, the course wraps up with a discussion on the systems perspective and how to best understand the opportunities for energy-efficiency improvements along with hands-on experience with free software, such as life-cycle climate performance web applications and the heat pump design models.

Instructors: Omar Abdelaziz, Ph.D., Member ASHRAE; and Karim Amrane, Ph.D., Member ASHRAE

Visit www.ashrae.org/gtc for more details and to register.
Courses subject to change without notice.
HVAC Design: Level I—Essentials (MENA)
The ASHRAE Global Training Center for Building Excellence is organizing a three-day HVAC Design Essentials training to provide intensive, practical training for HVAC designers and others involved in the delivery of HVAC services in the MENA region. In three days, gain real-world practical design skills and knowledge that can be put to immediate use in designing and maintaining HVAC systems. Developed by industry-leading professionals selected by ASHRAE and customized for the Middle East, the training provides the fundamental and technical aspects of designing and maintaining HVAC systems.

Instructors: Walid Chakroun, Ph.D., P.E., Fellow ASHRAE; Hassan Younes, Member ASHRAE, BEAP, BEMP, HBDP, CPMP, HFDP, OPMP; and Samir Traboulsi, Ph.D., P.Eng., Fellow Life Member ASHRAE

HVAC Design: Level II—Applications (MENA)
Gain advanced instruction on HVAC system designs for experienced HVAC designers or those who have completed the HVAC Design Essentials (MENA) training. This two-day training provides complex information about designing, installing, and maintaining HVAC systems, resulting in skills that can be put to immediate use. Gain an in-depth understanding of ASHRAE Standards 55, 62.1, 90.1, and ASHRAE’s Advanced Energy Design Guides.

Instructors: Walid Chakroun, Ph.D., P.E., Fellow ASHRAE; Hassan Younes, Member ASHRAE, BEAP, BEMP, HBDP, CPMP, HFDP, OPMP; and Samir Traboulsi, Ph.D., P.Eng., Fellow Life Member ASHRAE

Improving Existing Building Operation (MENA)
Improving Existing Building Operation (MENA) provides the fundamental and technical knowledge for the proper operation and maintenance of existing HVAC systems to maximize building performance. The training has been customized to take into account the special design requirements of the Middle East. This two-day Improving Existing Building Operation training focuses on the importance of proper operation and maintenance of existing HVAC systems. The training also introduces different methods for evaluating potential improvements to a building and its systems in the MENA region. Developed by industry-leading professionals selected by ASHRAE and customized for the Middle East, the training provides techniques to effectively select and communicate with consulting engineers and energy consultants.

Instructors: Hassan Younes, Member ASHRAE, BEAP, BEMP, HBDP, CPMP, HFDP, OPMP; and Hesham Safwat, Ph.D., Member ASHRAE

New Developments in Lower GWP Refrigerants (MENA)
This training provides a fast review of proposed refrigerants and how they can be used in different HVAC&R applications based on theoretical and empirical analyses. Challenges and opportunities associated with the different types of refrigerants are presented, including hydrofluoroolefins and natural refrigerants. Current and future refrigerant options suitable to the region are covered, as well as related standards and codes of systems and substances.

Instructor: Omar Abdelaziz, Ph.D., Member ASHRAE

Visit www.ashrae.org/gtc for more details and to register.
Courses subject to change without notice.