

HVAC University Course Descriptions

Classes

- November 2 Proper Application and Specification of Ceiling Radiation Dampers and Ceiling Radiation
 Damper- Ceiling Exhaust Fan Combinations
- November 3 Make-Up Air Ventilation
- November 4 COVID Mitigation Strategies Utilizing HVAC Systems
- November 9 Laboratory Fume Exhaust
- November 10 Motor Technology in the HVAC Industry
- November 16 Warehouse Ventilation Strategies and Design Considerations

Proper Application and Specification of Ceiling Radiation Dampers and Ceiling Radiation Damper-Ceiling Exhaust Fan Combinations

An overview of the purpose of ceiling radiation dampers commonly utilized in commercial construction. This course discusses relevant test standards and third-party certification, including applications and design assemblies for ceiling radiation dampers. The application and proper specification of ceiling radiation dampers in conjunction with bathroom exhaust and ceiling exhaust fans is also explored.

Make-Up Air Ventilation

This course discusses make-up air systems used in commercial kitchens and industrial applications. Topics include heating and cooling technologies, energy reduction strategies, direct and indirect gas heating technology, controls, UL requirement for cooling in kitchens, demand-based ventilation for saving energy, processing make-up air, and building pressurization.

COVID Mitigation Strategies Utilizing HVAC Systems Understanding

This course examines the role of HVAC equipment and systems in mitigating the risk of air borne viruses such as COVID-19. Fundamental technology such as outdoor air, ventilation, humidification, and filtration are reviewed along with additive technologies such as electronic air cleaning devices. A case study of the re-opening of a commercial building with a focus on HVAC systems is presented.

Laboratory Fume Exhaust

This course is aimed at familiarizing participants with the basics of laboratory ventilation and emphasizing the importance of codes and standards for laboratory design. AMCA's Induced Flow Ratings Seal will be explained along with a discussion on airflow measurement and controls.

Motor Technology in the HVAC Industry

This course examines new and existing motor technology in the HVAC industry. A comparison of traditional AC induction motors, permanent magnet (PM) and electronically commutated (EC) motor technology is presented. The interactive demonstration illustrates the controllability, energy efficiency, reliability and payback of using EC motors in single phase applications. The demonstration will also introduce you to additional systems and applications for variable fan flow based upon pressure, temperature, humidity, volatile organic compounds (VOC), and carbon dioxide space control.

Warehouse Ventilation Strategies and Design Considerations

This course is intended to familiarize participants with typical heating and ventilation systems in warehouse applications. Topics include summer ventilation strategies, space heating systems, benefits of high volume, low speed (HVLS) fans for air circulation and life safety design considerations.