



5-DAY COURSE SYLLABUS

Codes and Standards of HVAC Systems

HVIN04-ONL26 · ONLINE (ZOOM)

This course covers the essential codes and standards for the design, maintenance, and operation of HVAC systems, ensuring compliance with evolving regulations. Participants will gain a comprehensive understanding of Provincial Building Codes and applicable standards such as ASHRAE 55, 62.1, and 90.1. Through case studies and workshops, the course demonstrates the use of prescriptive and performance compliance options. Recent changes to these codes and their impact on HVAC system design and operation are also discussed.

CEUS / PDHS	INSTRUCTOR	DAYS	PRICE	WORKSHOPS	SKILL LEVEL	COURSE CODE
2.8 / 28	Dr. Mohamed Hamed, PhD, P.Eng., FEC	5	\$2,495.00 CAD	3 workshops	Intermediate	HVIN04- ONL26

DESCRIPTION

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WHAT YOU WILL LEARN

- Identify and understand recent changes introduced in the codes/standards and their implications on HVAC equipment and system design/operation
- Plan and design HVAC systems in compliance with applicable codes and standards
- Apply procedures for efficient operation of HVAC systems under code requirements
- Determine which compliance option (prescriptive vs performance) is most suitable for given scenarios
- Recognize regulations that pertain to specific project situations
- Modify and adjust existing systems to achieve compliance

COURSE OUTLINE

- 01 Introduction – Psychrometric representation and analysis of commonly used HVAC cycles
- 02 Overview of various HVAC Systems
- 03 Building Code Sections pertaining to HVAC Systems
- 04 Codes and Standards applicable to the design and operation of HVAC Systems
- 05 ASHRAE Standard 55 – Thermal Environmental Conditions for Human Occupancy
- 06 ASHRAE Standard 62.1 – Ventilation for Acceptable Indoor Air Quality
- 07 ASHRAE Standard 90.1 – Energy Standard for Buildings Except for Low-Rise Residential Buildings

WHO SHOULD ATTEND

- Design and project engineers
- Technologists
- Plant and facility engineers
- Consultants
- Mechanical engineers and technologists
- Maintenance and operation personnel
- Other technical personnel needing to develop/upgrade/refresh their knowledge of HVAC systems

REGISTER NOW →

Customize this course — We can offer a customized version of this course, in terms of duration and content, upon request.

REQUEST CUSTOMIZATION

DAILY SCHEDULE

5-Day Course Schedule

START

10:00 AM EST

END

5:00 PM EST

FORMAT

Live Online

One-hour lunch break each day, plus refreshment and networking breaks each morning and afternoon session.

DAY	TOPIC	SUBTOPICS
DAY I	Introduction & Psychrometry	Psychrometric representation and analysis of HVAC cycles
	Overview of HVAC Systems	- Types of systems - Applications in residential - Applications in commercial - Applications in industrial
DAY II	Building Code Sections	- Review of relevant Provincial Building Codes - Case study discussions
	Codes and Standards Overview	- Applicability to HVAC system design - Applicability to HVAC operation
DAY III	ASHRAE Standard 55	- Thermal Environmental Conditions for Human Occupancy - Practical implications on system design
DAY IV	ASHRAE Standard 62.1	- Ventilation for Acceptable Indoor Air Quality - Strategies for compliance
	Workshop I	Hands-on exercises applying ASHRAE 62.1 to sample projects
DAY V	ASHRAE Standard 90.1	- Energy Standard for Buildings Except for Low-Rise Residential Buildings - Prescriptive compliance options - Performance compliance options
	Workshop II	Case study: evaluating prescriptive vs performance compliance
	Workshop III	System adjustment strategies to achieve compliance