



# ASHRAE eLearning Course Catalog

Web-based, On-Demand Training



**EDUCATION  
PARTNER**

**Corporate Discounts Available  
(see page 2)**



## 5 Great Reasons to Use ASHRAE eLearning:

**Easy Administration:** No special software required. Transcripts maintained automatically. Free tracking reports.

**Economical:** 12 months of access. No travel expenses. Save even more with corporate discounts.

**Effective:** Created by HVAC&R professionals using ASHRAE's extensive pool of knowledge.

**Convenient:** Employees can train around their work schedule from any computer with Internet access.

**Flexible:** Choose from more than 90 courses and a wide variety of 12 month subscription options, including individual Courses, Packages and Libraries.

*"A great resource. The short time spent taking the course at my own convenience is equal in value to months of working experience."*

—Brian Randleman, Design Specialist, Climatec BTG

# Course Packages

## Building Performance

PDHs: 10

Price: \$105 | ASHRAE Member: \$89

The following courses are included:

- Commissioning
- Integrated Design
- School of Hard Knocks: Controlling Moisture and Humidity in Buildings (Dual)

## System Design

PDHs: 5

Price: \$105 | ASHRAE Member: \$89

The following courses are included:

- Introduction to HVAC Design
- The Design Process
- HVAC System Selection Issues

## Sustainability

PDHs: 25.5

Price: \$210 | ASHRAE Member: \$176

The following courses are included:

- Basics of Sustainable Design
- Energy Conservation
- LEED Guidance
- Indoor Environmental Quality
- Ventilation and IAQ
- AEDG Small Office Building Lighting (I-P)
- AEDG Small Retail Buildings Design Strategies (I-P)

## Loads and Modeling

PDHs: 3.5

Price: \$70 | ASHRAE Member: \$59

The following courses are included:

- Building Information Modeling
- Load Calculations (I-P)

## Fundamentals: HVAC Systems

PDHs: 19.5

Price: \$270 | ASHRAE Member: \$227

The following courses are included:

- Introduction to HVAC Design
- Introduction to HVAC Systems
- Occupant Comfort and Health
- Load Calculations (I-P)
- HVAC&R Controls
- Humidity Control Design: Basic Principles, Loads and Equipment
- Ventilation and IAQ
- Thermal Comfort
- Ethics for the Built Environment Professional Engineer - (Dual)

## Components and Equipment

PDHs: 11.5

Price: \$180 | ASHRAE Member: \$152

The following courses are included:

- Air-Conditioning System Components: Heat Transfer Equipment
- Air-Conditioning System Components: Pumps, Valves, Piping and Ductwork
- Building Control
- Introduction to Zones
- Single Zone Air Handlers and Unitary Equipment
- Multiple Zone Air Systems

## System Essentials

PDHs: 10

Price: \$140 | ASHRAE Member: \$118

The following courses are included:

- Central Plants
- Air-and-Water Systems
- Controls
- Energy Conservation

## Air Systems

PDHs: 2.5

Price: \$105 | ASHRAE Member: \$89

The following courses are included:

- Introduction to All-Air Systems
- Dual-Duct and Multizone All-Air Systems
- Simple Rooftop All-Air Systems

## Hydronic Systems

PDHs: 11

Price: \$140 | ASHRAE Member: \$118

The following courses are included:

- All-Water Systems
- Hydronic Systems
- Hydronic Systems Architecture
- Controls

## Special Systems

PDHs: 7

Price: \$70 | ASHRAE Member: \$59

The following courses are included:

- Special HVAC Systems
- Special Applications

## HVAC Control Systems- I-P

PDHs: 36.5

Price: \$270 | ASHRAE Member: \$227

The following courses are included:

- Introduction to HVAC Control Systems
- Basics of Electricity
- Control Valves and Dampers
- Sensors and Auxiliary Devices
- Self-and System-Powered Controls
- Electric Controls
- Pneumatic Controls
- Control Diagrams and Sequences
- DDC Networks and Protocol

## HVAC Control Systems -SI

PDHs: 23.5

Price: \$175 | ASHRAE Member: \$147

The following courses are included:

- Basics of Electricity
- Control Valves and Dampers
- Control Diagrams and Sequences
- DDC Introduction to Hardware and Software
- DDC Specification, Installation and Commissioning

## DDC Controls -I-P

PDHs: 8

Price: \$70 | ASHRAE Member: \$59

The following courses are included:

- DDC Networks and Protocols
- DDC Specification, Installation and Commissioning

## DDC Controls -SI

PDHs: 9

Price: \$70 | ASHRAE Member: \$59

The following courses are included:

- DDC Introduction to Hardware and Software
- DDC Specification, Installation and Commissioning

## AC and Refrigeration Principles

PDHs: 4

Price: \$105 | ASHRAE Member: \$89

The following courses are included:

- Psychrometrics
- Refrigeration System Parameters and Performance
- Compressors

## Electrical System Design

PDHs: 6.6

Price: \$175 | ASHRAE Member: \$147

The following courses are included:

- Power Distribution Applications
- Design for Building Electrical Systems
- Building Electrical Power Components
- The Electric Utility
- Direct Current Electrical Systems

## Refrigerants - (Dual)

PDHs: 4.5

Price: \$105 | Member Price: \$89

The following courses are included:

- Introduction to Refrigerants (Dual)
- Refrigerant Selection (Dual)
- Refrigerant Management (Dual)

## Standard 62.1: Ventilation for Acceptable Indoor Air Quality

PDHs: 10.1

Price: \$175 | ASHRAE Member: \$147

The following courses are included:

- Standard 62.1-2007: Natural Ventilation and Exhaust
- Standard 62.1-2013: Natural Ventilation Procedure
- Standard 62.1-2010 - Ventilation Rate Procedure
- Standard 62.1-2007: Recirculating and Treating Indoor Air
- Standard 62.1-2007: Moisture and Mold Control

## Standard 90.1: Energy Standard for Buildings

PDHs: 9.8

Price: \$140 | ASHRAE Member: \$118

The following courses are included:

- Standard 90.1-2004: Lighting - General and Mandatory Provisions
- Standard 90.1-2004: Energy Cost Budget Method
- Using Standard 90.1-2010 to Meet LEED Requirements
- Architects: Overview of Mechanical Systems

## Standard 189.1-2011 - High Performing Green Buildings

PDHs: 7.5

Price: \$105 | ASHRAE Member: \$89

The following courses are included:

- Standard 189.1-2011 - Water, Sites, and Materials
- Standard 189.1-2011 for High-Performance Green Buildings – Energy Efficiency
- Standard 189.1-2011 for High- Performance Green Buildings: Indoor Environmental Quality

## Data Center Design

PDHs: 5.5

Price: \$140 | ASHRAE Member: \$118

The following courses are included:

- Computer Cooling Equipment
- Airflow, Equipment Placement and Heat Release
- Liquid Cooling and Facility Cooling Systems
- Building Facility and Chilled-Water Systems

*“ASHRAE eLearning is a well put-together program. What makes the program unique is the immediate feedback system, which allows you to go back through the exercises and exams to help ensure your understanding of the topics covered. Most programs out there only provide you with a passing percentage once the course is over, not explaining what concepts you really understood.”*

—Huan Nguyen, Design Application Engineer, Climatec BTG



# Libraries

## HVAC Design and Operation

PDHs: 18.5

Price: \$224 | ASHRAE Member: \$189

The following packages are included:

- Building Performance
- System Design
- Loads and Modeling

## Advanced Technologies

PDHs: 31

Price: \$252 | ASHRAE Member: \$235

The following packages are included:

- Sustainability
- Data Center Design

## Fundamentals

PDHs: 39.5

Price: \$556 | ASHRAE Member: \$469

The following packages are included:

- Fundamentals: HVAC Systems
- Components and Equipment
- AC and Refrigeration Principles
- Refrigerants

## HVAC Systems

PDHs: 37.1

Price: \$504 | ASHRAE Member: \$425

The following packages are included:

- System Essentials
- Air Systems
- Hydronic Systems
- Special Systems
- Electrical System Design

## Control Systems

PDHs: 77

Price: \$468 | ASHRAE Member: \$394

The following packages are included:

- HVAC Control Systems- I-P
- HVAC Control Systems- SI
- DDC Controls- I-P
- DDC Controls- SI

## Standards

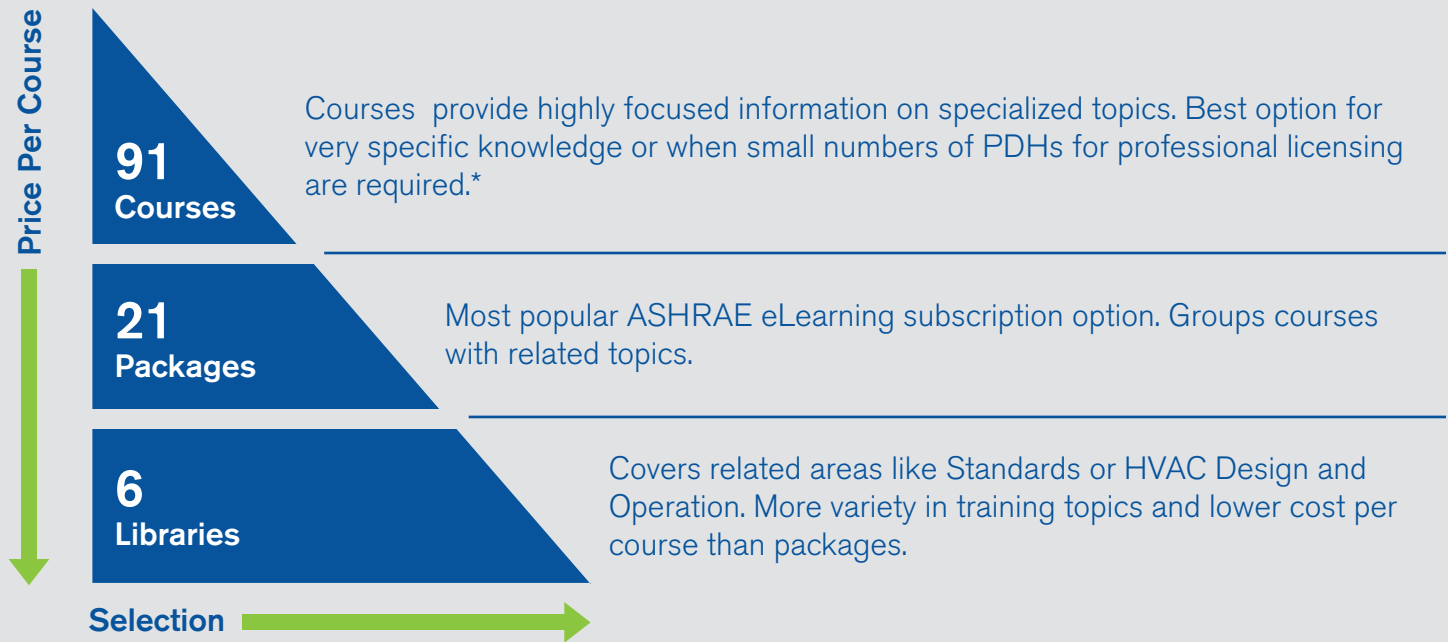
PDHs: 27.4

Price: \$336 | ASHRAE Member: \$284

The following packages are included:

- Standard 62.1: Ventilation for Acceptable Indoor Air Quality
- Standard 90.1: Energy Standard for Buildings
- Standard 189.1-2011 - High Performing Green Buildings





## How Customers Are Using ASHRAE eLearning

### Enhance and Extend In-Person Training

eLearning before, during, and after a face-to-face workshops helps trainees “hit the ground running,” improving their retention and learning times.

### Self-Guided Study

Used by thousands of engineers to advance their industry skills and knowledge.

### Just-In-Time and On-Demand Training

Authoritative, guidance for emerging projects requiring new knowledge.

### Extend the Lunch-n-Learn Session

eLearning at the end of lunch-n-learn sessions helps employees retain key knowledge.

### In-University Programs

Used in undergraduate mechanical and architectural engineering programs.

### Peer-to-Peer Collaboration

eLearning’s discussion forums allow colleagues to share ideas and solve problems.

## Purchasing Options

**Per Course Price:** \$50  
(\$42 ASHRAE members)

**Package Prices:** from \$70 to \$270 (\$59 to \$227 ASHRAE members)

**Library Prices:** from \$196 to \$504 (\$166 to \$425 ASHRAE members)

## Corporate Discounts

Businesses purchasing identical subscriptions for 5 or more people are eligible for these discounts:

5-9 users:.....10% off  
10-19 users:.....20% off  
20-49 users:.....30% off

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

Continuing Education (CE) hours earned from ASHRAE courses may be applied toward maintenance of state-licensed professionals (Architects and Professional Engineers), LEED credentials, and ASHRAE Certifications.

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