

### HVAC Technician V2

#### HVAC03\_02

Updated 2009

#### Focus Statement

A journey-level HVAC technician is able to work independently to do the following: install residential, commercial, and industrial HVAC systems and their components; use and apply trade math to daily applications; interpret mechanical drawings, symbols and their application; soldering, brazing, and piping practices; apply and install venting for fossil fuel appliances; apply and install gas-fired-heating equipment; understand furnace design and functions; understand commercial airside and hydronic systems including various types of boilers, piping, chilled-water systems, and their components; measurement and control of air temperature, humidity, pressure, and velocity; maintenance and repairs of diverse HVAC systems; troubleshoot heating, cooling, and heat pump systems; troubleshoot control circuits, electronic controls, and accessories; troubleshoot air quality and energy conservation equipment; refrigerant leak detection, evacuation, recovery, and charging.

#### Overview

- Two-hour closed-book examination
- May use a basic function, non-printing calculator
- No extra papers, books, notes or study materials are allowed

Minimum passing score is 70.

#### Performance Verification

A corresponding hands-on Performance Verification is available.

#### NCCER Curriculum

All NCCER knowledge assessments are referenced to NCCER's curriculum modules as listed on this specification sheet. You may order books and modules from Pearson by visiting [www.nccer.org/order-books-modules/](http://www.nccer.org/order-books-modules/).

#### Assessment Development

All questions are developed and approved by subject matter experts under the direction of NCCER.

#### Credentials

Upon successful completion of the knowledge assessment or performance verification, credentials can be viewed and printed by the individual or assessment program through their NCCER Account.

#### Score Report and Training Prescription

Each candidate will have online access to their assessment results including their overall score and recommended training through their NCCER Account.

#### Written Assessment Contents:

Module ID	Content Domain/Module Title	Number of Items
00101-04	Basic Safety	2
00106-04	Basic Rigging	2
03102-07	Trade Mathematics	4
03104-07	Soldering and Brazing	4
03105-07	Ferrous Metal Piping Practices	4
03107-07	Introduction to Cooling	6
03108-07	Introduction to Heating	5
03109-07	Air Distribution Systems	4

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**Written Assessment Contents:**

Module ID	Content Domain/Module Title	Number of Items
03201-07	Commercial Airside Systems	5
03202-07	Chimneys, Vents, and Flues	4
03205-07	Leak Detection, Evacuation, Recovery, and Charging	5
03206-07	Alternating Current	4
03208-07	Introduction to Control Circuit Troubleshooting	6
03209-07	Troubleshooting Gas Heating	4
03210-07	Troubleshooting Cooling	6
03212-07	Basic Installation and Maintenance Practices	5
03301-08	Refrigerants and Oils	4
03302-08	Compressors	4
03303-08	Metering Devices	4
03305-08	Commercial Hydronic Systems	4
03307-08	Planned Maintenance	5
03309-08	Troubleshooting Electronic Controls	4
03311-08	Troubleshooting Heat Pumps	5
03312-08	Troubleshooting Accessories	4
03401-09	Construction Drawings and Specifications	6
03402-09	Air System Balancing	4
03403-08	Indoor Air Quality	4
03406-09	System Startup and Shutdown	5
03407-09	Heating and Cooling System Design	4
03408-09	Commercial and Industrial Refrigeration Systems	4

**Total Number of Items**

**131**