

HVAC Technician

HVAC03_02

Updated November 2024

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. This assessment is referenced to NCCER's 5th edition of the HVAC curriculum. You may order books and modules from Pearson by visiting 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	Basic Safety	1
00106	Basic Rigging	2
03102	Trade Mathematics	3
03104	Soldering and Brazing	4
03105	Ferrous Metal Piping Practices	4
03107	Introduction to Cooling	6
03108	Introduction to Heating	5
03109	Air Distribution Systems	4

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Written Assessment Contents:

Module ID	Content Domain/Module Title	Number of Items
03201	Commercial Airside Systems	5
03202	Chimneys, Vents, and Flues	4
03205	Leak Detection, Evacuation, Recovery, and Charging	5
03206	Alternating Current	3
03108 03206 03314	Introduction to Control Circuit Troubleshooting	5
03209	Troubleshooting Gas Heating	2
03210	Troubleshooting Cooling	7
03215	Basic Installation and Maintenance Practices	4
03301	Refrigerants and Oils	4
03302	Compressors	4
03303	Metering Devices	4
03305	Commercial Hydronic Systems	4
03215 03403	Planned Maintenance	3
03314	Troubleshooting Electronic Controls	1
03311	Troubleshooting Heat Pumps	7
03312	Troubleshooting Accessories	3
03401	Construction Drawings and Specifications	4
03402	Air System Balancing	5
03403	Indoor Air Quality	8
03406	System Startup and Shutdown	6
03407	Heating and Cooling System Design	6
03408	Commercial and Industrial Refrigeration Systems	5

Total Number of Items

128