

PHCC Academy®

HVACR 301 Syllabus

Course Contact for Registration and Non-LMS Questions

State Chapter Partner

Refer to <https://phccacademy.org/state-chapter-partner-contacts/>

Course Contact for Technical Problems in Absorb LMS

PHCC Academy® Staff - AcademySupport@naphcc.org

Prerequisites

HVACR 101, 201, or equivalent

Welcome to the PHCC Academy® Online Apprenticeship-Related Technical Instruction program for HVACR 301!

The PHCC Educational Foundation's HVACR program is designed to provide students with the opportunity to learn the textbook fundamentals of the HVACR trade in a self-paced online format. This training course must be supplemented by employers, through both technical assistance and on-the-job training in each area of instruction to meet the apprenticeship training requirements.

HVACR 301 covers servicing and troubleshooting systems, testing and balancing systems, energy efficient mechanical systems, fluid handling systems, electrical and refrigeration problem solving, troubleshooting with the psychrometric chart, cooling towers and evaporative condensers, commercial air conditioning, water treatment, indoor air quality, and blueprint reading.

Course Goals

- Prepare students to service, troubleshoot, and test and balance HVACR systems
- Prepare students to solve electrical and refrigeration problems
- Prepare students to work on energy efficient mechanical systems, fluid handling systems, and commercial air conditioning equipment
- Prepare students to manage comfort, water treatment, and indoor air quality

Required Textbook (Purchased Separately)

Refrigeration and Air Conditioner Technology (RACT), 9th Edition. Copyright 2021.

Assignments

The HVACR 301 course is comprised of 19 modules including a course introduction and 18 learning content modules with supplementary resources, as well as 18 module assessments and a comprehensive final exam.

In each module you will be required to do the following:

- Read Chapter
- Watch Lesson
- Take Exam

Module Titles:

- Module 1 - Servicing & Troubleshooting HVACR Systems
- Module 2 - Testing & Balancing HVACR Systems
- Module 3 - Energy Efficient Mechanical Systems
- Module 4 - Fluid Handling Systems
- Module 5 - Electrical Problem Solving
- Module 6 - Refrigeration System Problem Solving
- Module 7 - Troubleshooting with the Psychrometric Chart
- Module 8 - Evaporative Cooling Fundamentals
- Module 9 - Air Conditioning Basics
- Module 10 - High- and Low-Pressure Chillers
- Module 11 - Absorption Chillers
- Module 12 - Cooling Towers
- Module 13 - Water Pumps and Treatment
- Module 14 - Operation, Maintenance & Troubleshooting
- Module 15 - Packaged Rooftop Systems
- Module 16 - Variable Air Volume & Refrigerant Flow Systems
- Module 17 - Water Treatment in HVACR Applications
- Module 18 - Indoor Air Quality
- Comprehensive Final Exam