

PHCC Academy®

HVACR 201 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 or equivalent

Welcome to the PHCC Academy® Online Apprenticeship-Related Technical Instruction program for HVACR 201!

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 201 covers refrigeration and refrigerants, control systems, motors, commercial refrigeration, heating and humidification, indoor air quality and human comfort, and cooling systems.

Course Goals

- Prepare students to work on HVACR systems, components, and equipment
- Prepare students to use and safely handle refrigerants and lubricants
- Introduce students to installation and troubleshooting practices
- Introduce students to principles and practices related to human comfort and psychrometrics

Required Textbook (Purchased Separately)

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

Assignments

The HVACR 201 course is comprised of 30 modules including a course introduction and 29 learning content modules with supplementary resources, as well as 29 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 - Refrigeration Cycle Review
- Module 2 - Refrigerant & Oil Chemistry
- Module 3 - Refrigerant & Oil Management
- Module 4 - Charging a Refrigeration System
- Module 5 - Automatic Controls
- Module 6 - Troubleshooting Basic Controls
- Module 7 - Advanced Automatic Controls
- Module 8 - Types of Electric Motors
- Module 9 - Application of Motors
- Module 10 - Motor Controls
- Module 11 - Troubleshooting Electric Motors
- Module 12 - Evaporators
- Module 13 - Condensers
- Module 14 - Compressors
- Module 15 - Expansion Devices
- Module 16 - Special Refrigeration Components
- Module 17 - Applications of Refrigeration Systems
- Module 18 - Commercial Ice Machines
- Module 19 - Special Refrigeration Applications
- Module 20 - Troubleshooting for Commercial Refrigeration
- Module 21 - Electric Heat
- Module 22 - Gas Heat
- Module 23 - Oil Heat
- Module 24 - Hydronic Heat
- Module 25 - Indoor Air Quality
- Module 26 - Human Comfort & Psychrometrics
- Module 27 - Refrigeration Applied to A/C
- Module 28 - Air Distribution & Balance
- Module 29 - Equipment Installation
- Comprehensive Final Exam